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Final Early Works Report

Ontario Line Corktown Station Early Works

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Executive Summary

ES.1 Ontario Line Corktown Station Early Works

The Ontario Line Project (the Project) is being assessed in accordance with Ontario Regulation 341/20: Ontario Line Project under the Environmental Assessment Act. Ontario Regulation 341/20: Ontario Line Project outlines a Project-specific environmental assessment process that includes an Environmental Conditions Report, Environmental Impact Assessment Report, and an opportunity for Early Works Report(s) for assessment of works that are ready to proceed in advance of the Environmental Impact Assessment Report. The Environmental Conditions Report documents the local environmental conditions of the Ontario Line Study Area and provides a preliminary description of the potential environmental impacts from the Project. Information outlined in the Environmental Conditions Report is used to inform the Early Works Report(s) and Environmental Impact Assessment Report, which study environmental impacts in further detail and confirm and refine preliminary mitigation measures identified in the Environmental Conditions Report.

Ontario Line early works are components of the Project that are proposed to proceed before the completion of the Ontario Line environmental impact assessment process. An overview of the Project is provided in **Section 1.2**. Early works are defined in Ontario Regulation 341/20: Ontario Line Project under the Environmental Assessment Act as follows:

> "any components of the Ontario Line Project that Metrolinx proposes to proceed with before the completion of the Ontario Line assessment process, such as station construction, rail corridor expansion, utility relocation or bridge replacement or expansion."

Corktown Station early works are considered to be of strategic importance in enabling the timely implementation of the Project. The Corktown Station early works site has been identified as the launch site for the tunnel excavation equipment to complete tunnels and underground station spaces for the downtown and Don Yard segments and construction of the Corktown Station. The First Parliament site is located within the Corktown Station early works site and is a known archaeological site which requires additional archaeological studies ahead of any ground disturbance activities. The Corktown Station early works site will provide essential logistics support required for the Project's tunneling. To prepare this site, demolition of existing buildings and structures and completion of necessary archaeological studies is required. Completion of this preparatory work on an expedited basis is essential to allow for the timely delivery of the overall Project.

AECOM Canada Limited (AECOM) was retained by Metrolinx and Infrastructure Ontario to complete this Ontario Line Corktown Station Early Works Report (this Report) to document the assessment of Corktown Station early works (**Figure ES-1**).

The Corktown Station early works components and construction activities are further described in **Section 1.3**.

ES.2 Study Process

This Early Works Report has been completed in accordance with Ontario Regulation 341/20: Ontario Line Project under the Environmental Assessment Act and contains the information outlined in **Table ES-1**.

Table ES-1: Early Works Report Contents in Accordance with Ontario Regulation 341/20: Ontario Line Project

Reg. Section	Requirement	Report Section
Section 8(2)1	A description of the early works including a description of the alternatives that were considered.	**Section 1.3 and Section 3**
Section 8(2)2	The rationale for proceeding with the early works and a summary of background information relating to them.	**Section 1.3**
Section 8(2)3	A map showing the site of the early works.	**Figure 3-1**
Section 8(2)4	A description of the local environmental conditions at the site of the early works.	**Section 5 and Appendix A**
Section 8(2)5	A description of all studies undertaken in relation to the early works, including, i. a summary of all data collected or reviewed, and ii. a summary of all results and conclusions.	**Section 5, Section 6 and Appendix A**
Section 8(2)6	Metrolinx's assessment and evaluation of the impacts that the preferred method of carrying out the early works and other methods might have on the environment, and Metrolinx's criteria for assessment and evaluation of those impacts.	**Section 6 and Appendix A**
Section 8(2)7	A description of any measures proposed by Metrolinx for mitigating any negative impacts that the preferred method of carrying out the early works might have on the environment.	**Section 6 and Appendix A**
Section 8(2)8	A description of the means Metrolinx proposes to use to monitor or verify the effectiveness of mitigation measures proposed.	**Section 6 and Appendix A**
Section 8(2)9	A description of any municipal, provincial, federal or other approvals or permits that may be required for the early works.	**Section 7 and Appendix A**
Section 8(2)10	A consultation record, including, i. a description of the consultations carried out with Indigenous Nations and interested persons, ii. a list of the Indigenous Nations and interested persons who participated in the consultations, iii. summaries of the comments submitted by Indigenous Nations and interested persons, and iv. a summary of discussions that Metrolinx had with Indigenous Nations, and copies of all written comments submitted by Indigenous Nations.	**Section 8 and Appendix B**

Refer to **Section 2** of this Report for more information on the early works study process.

ES.3 Early Works Description

This Report documents the assessment of Corktown Station early works. The location and components of these early works are shown in **Figure ES-1**.

The Corktown Station early works include demolition of existing buildings, removal of other structures and asphalt where required, decommissioning of utilities, and soil removal and/or remediation where required. These activities will enable the completion of environmental due diligence investigations, including archaeological assessments.

Assessment of project operations and construction of Corktown Station and other project components will be documented in the Ontario Line Environmental Impact Assessment Report in accordance with Section 15 of Ontario Regulation 341/20: Ontario Line Project.

ES.4 Local Environmental Conditions

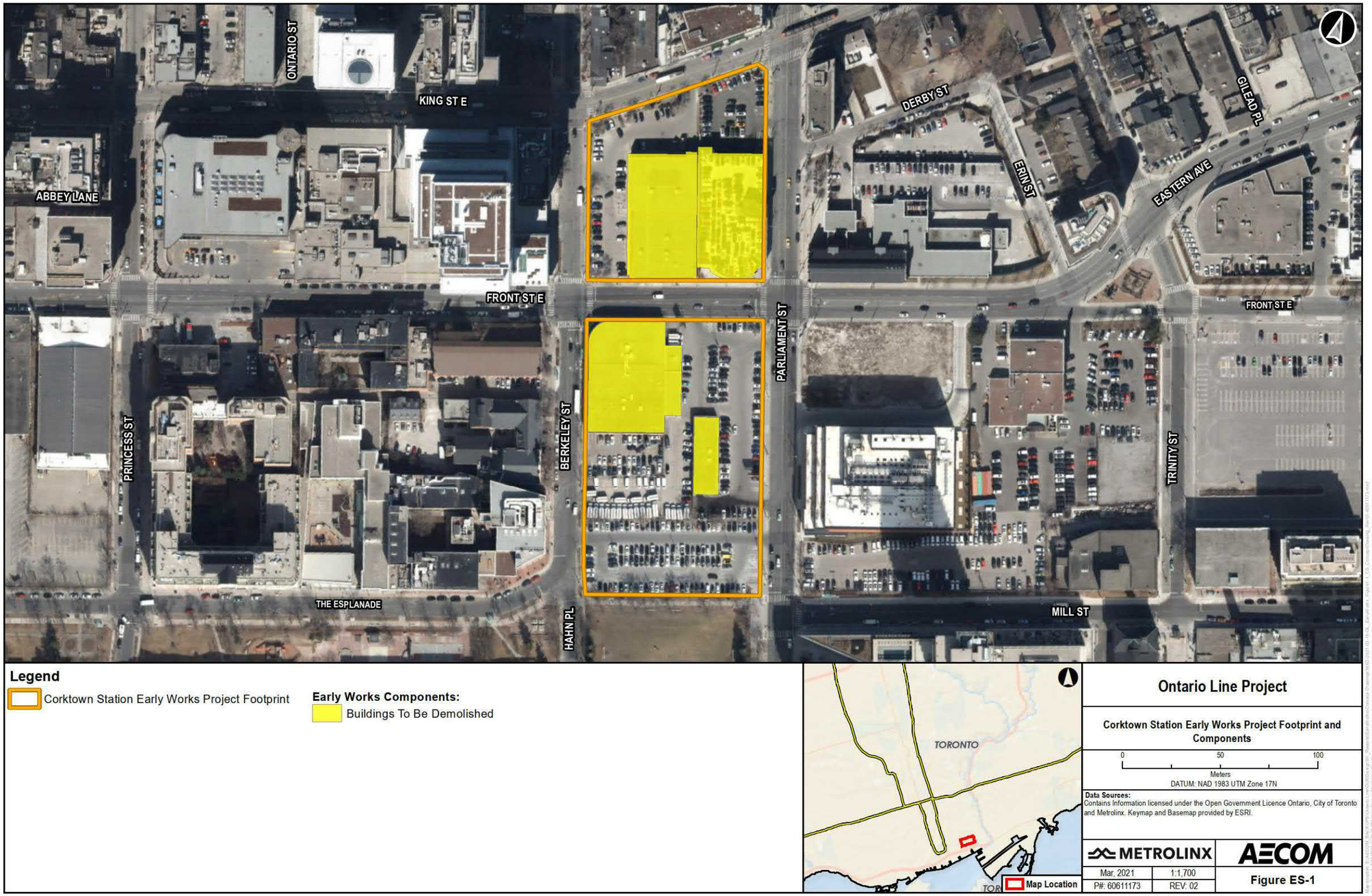
This section provides a summary of the existing natural, technical, socio-economic and cultural aspects of the existing environment in the context of Corktown Station early works. Information on the following environmental components is provided in the sections below, and where applicable, is supplemented with supporting detailed technical reports:

- Natural Environment — **Section 5.1** and **Appendix A1**
- Soil and Groundwater — **Section 5.2**
- Hydrology and Surface Water — **Section 5.3**
- Air Quality — **Section 5.4** and **Appendix A2**
- Noise and Vibration — **Section 5.5** and **Appendix A3**
- Socio-Economic and Land Use Characteristics — **Section 5.6**
- Built Heritage Resources and Cultural Heritage Landscapes — **Section 5.7** and **Appendix A4**
- Archaeological Resources — **Section 5.8**
- Traffic and Transportation — **Section 5.9** and **Appendix A5**
- Utilities — **Section 5.10**

The Ontario Line Final Environmental Conditions Report (AECOM, 2020a)[1] was reviewed to support the determination of local environmental conditions within the discipline-specific study areas developed for the Corktown Station early works. Where necessary, review of additional desktop and field information was undertaken. The local environmental conditions for the Corktown Station early works are summarized below.

1. The Ontario Line Final Environmental Conditions Report (AECOM, 2020) was published on November 30, 2020 in accordance with Ontario Regulation 341/20: Ontario Line Project.

Figure ES-1: Corktown Station Early Works Project Footprint and Components



Natural Environment

The Corktown Station Natural Environment Study Area, including the Corktown Station Early Works Project Footprint, is heavily urbanized with very limited, low-quality habitat for urban wildlife due to lack of naturalized areas, lack of connectivity to significant natural areas, presence of non-native and invasive plants, and noise and vibration from vehicle and pedestrian traffic.

There are no Provincially or Locally Significant Wetlands, significant valleylands or provincially significant Areas of Natural and Scientific Interest, Environmentally Significant Areas, woodlands, or unevaluated wetlands within the Corktown Station Natural Environment Study Area.

Candidate habitat for a Species of Conservation Concern, Common Nighthawk, may occur within the Corktown Station Natural Environment Study Area.

Chimney Swift and Bat Species at Risk including Eastern Small-footed Myotis, Little Brown Myotis, Northern long-eared Myotis and Tri-coloured Bat have a medium probability to occur within the Corktown Station Natural Environment Study Area.

The following Species at Risk have low probability to occur within the Corktown Station Natural Environment Study Area: Bank Swallow, Barn Swallow, Bobolink, Eastern Meadowlark, and Butternut.

There are no aquatic Species at Risk present given that there are no water features identified within the Corktown Station Natural Environment Study Area.

Soil and Groundwater

The Corktown Station Soil and Groundwater Study Area is within the Iroquois Plain physiographic region. The Iroquois Plain is a lowland mainly composed of sand extending north up to 10 km from the shoreline of Lake Ontario. The South Slope extends from the base of the Niagara Escarpment to the Iroquois Plain. It is characterized by low-lying moraine (mass of rocks and sediment deposited by glacier) and knolls (hills and mounds).

A review of the Ministry of the Environment, Conservation and Parks water well records database indicates that bedrock depths range from approximately 6.1 to 9.1 metres Below Ground Surface within the Corktown Station Soil and Groundwater Study Area. Overburden (above bedrock) geologic materials within the Corktown Soil and Groundwater Study Area consist primarily of clayey silt, sand, silty clay, sandy silt, and silty sand.

Source water areas/features as defined by the Ministry of the Environment, Conservation and Parks were reviewed and it was determined that the Corktown Station Soil and Groundwater Study Area overlaps with a Highly Vulnerable Aquifer, an aquifer that is susceptible to contamination due to its location near the ground surface or the surrounding soils.

Hydrology and Surface Water

Approximately 8% of the Corktown Station Hydrology and Surface Water Study Area at its eastern-most edge overlaps with the Toronto and Region Conservation Authority's Regulation Area (Toronto and Region Conservation Authority, 2020a) and, according to the Toronto and Region Conservation Authority's Floodplain Map Viewer, approximately 4% of the Corktown Station Hydrology and Surface Water Study Area overlaps with the Don River Floodplain(Toronto and Region Conservation Authority, 2020b). The Corktown Station Early Works Project Footprint is not within the Don River Floodplain.

Air Quality

Air quality measurements indicate there are existing exceedances of benzene and benzo(a)pyrene according to the Ambient Air Quality Criteria (Ministry of the Environment, Conservation and Parks, 2020) relevant to the Corktown Station Air Quality Study Area. Benzene has elevated annual contributions that exceed the threshold guideline from the Ambient Air Quality Criteria. Benzo(a)pyrene, the representative polycyclic aromatic hydrocarbon, shows elevated levels of concentration for both annual and daily provincial air quality thresholds. This is due mainly to high presence of regional air quality contributions, high traffic volumes within the Greater Toronto Area, and industrial contributions from Toronto, the Greater Toronto Area, and Hamilton.

The predominant wind direction, as taken from the Toronto City Centre meteorological station located on Toronto Island, is from the northeast towards the southwest. Secondary predominant winds blow from the west, northwest and southwest.

The nearest receptors include a condominium as well as an apartment building located to the northeast, at King Street East and Parliament Street, approximately 20 metres from the Project Footprint. Other nearby receptors are located to the southwest, approximately 100 to 300 metres from the Project Footprint, along The Esplanade and Lower Sherbourne Street. Additional nearby receptors include those along parts of Adelaide Street East, King Street East, Eastern Avenue, and Mill Street. These receptors are located approximately 250-350 metres from the Corktown Station Early Works Project Footprint.

Noise and Vibration

Noise measurements indicate that average existing daytime, evening, and night-time noise levels in the vicinity of the Corktown Station Noise and Vibration Study Area range as follows:

- **Daytime** (7 AM to 7 PM) Leq, 1hr: 61 dBA to 69 dBA;
- **Evening** (7 PM to 11 PM) Leq, 1hr: 61 dBA to 67 dBA; and,
- **Night-time** (11 PM to 7 AM) Leq, 1hr: 55 dBA to 63 dBA.

The local environment does not have any normally occurring sources of perceptible vibration; the most significant source of vibration near the early works site are the existing rail lines (i.e., King Street streetcar). Therefore, for the majority of the Corktown Station Noise and Vibration Study Area, existing vibration levels are expected to be below human perceptibility, except in close proximity to the existing rail lines. The construction vibration assessment in this Report uses absolute vibration levels, which are not affected by the existing vibration levels.

Socio-Economic and Land Use Characteristics

The lands within the Corktown Station Socio-Economic and Land Use Characteristics Study Area are designated as Regeneration Areas, Mixed Use Areas, Parks, Apartment Neighbourhoods, Neighbourhoods, and Utility Corridors in the Official Plan. Provincial and municipal policies applicable to the Corktown Station Socio-Economic and Land Use Characteristics Study Area have a shared objective of strengthening connections and access to economic opportunities through improved transit networks.

The Corktown Station Socio-Economic and Land Use Characteristics Study Area is characterized by four notable public realm elements: King Street Transit Priority Corridor, St. Lawrence Market Neighbourhood, Distillery District, and the West Don Lands.

There are several parks and open spaces and multiple community groups and institutional uses located within the Corktown Station Socio-Economic and Land Use Characteristics Study Area.

The Corktown Station Socio-Economic and Land Use Characteristics Study Area overlaps with the Moss Park and Waterfront Communities – The Island neighbourhoods in the City of Toronto. According to 2016 Census data, the Moss Park neighbourhood experienced a population increase from 2011 of approximately 25%; and the Waterfront Communities – The Island neighbourhood experienced a population increase from 2011 of approximately 52%.

Applications for proposed future development were reviewed to understand the scope of future development within the Corktown Station Socio-Economic and Land Use Characteristics Study Area. There were 22 active development applications identified within the Corktown Station Socio-Economic and Land Use Characteristics Study Area, as of February 26, 2021.

Built Heritage Resources and Cultural Heritage Landscapes

During the development of the Heritage Detailed Design Report, 14 built heritage resources and cultural heritage landscapes were identified within the Corktown Station Built Heritage Resources and Cultural Heritage Landscapes Study Area, consisting of:

- One Heritage Conservation District designated under Part V of the *Ontario Heritage Act*, under appeal (OLS-035);
- One National Historic Site designated under Part IV of the *Ontario Heritage Ace*, which is a potential Provincial Heritage Property of Provincial Significance, and is within a Heritage Conservation District, under study (OLS-029);
- Seven properties designated under Part IV of the *Ontario Heritage Act* (OLS-034, OLS-036, OLS-037, OLS-038, OLS-040, CS-002, and CS-003); one that is a potential Provincial Heritage Property of Provincial Significance, three with City of Toronto Heritage Easements, one within a Heritage Conservation District, under appeal (OLS-035), and four with Heritage Toronto Plaques;
- Four Listed properties (OLS-041, OLS-042, OLS-047, OLS-001), three with Heritage Toronto Plaques, and one within a Heritage Conservation District, under appeal (OS-035); and,
- One Ontario Heritage Trust Plaque (CS-004).

Archaeological Resources

As per the results of the Stage 1 archaeological assessment developed for the Project, the majority of the Corktown Station Early Works Project Footprint retains moderate to high archaeological potential, where deeply buried archaeological potential remains, such as for discovering pre-contact Indigenous materials and/or materials related to the early development and expansion of the City of Toronto. There are two registered archaeological sites within the Corktown Station Early Works Project Footprint: the First Parliament Site and Lime Kiln Works Site.

Traffic and Transportation

Existing elements of the transportation and transit networks within the Corktown Station Traffic and Transportation Study Area include:

- Seven arterial roads (i.e., Lake Shore Boulevard East, King Street East, Eastern Avenue, Adelaide Street, Front Street, Parliament Street, and Sherbourne Street), two collector roads (i.e., Cherry Street and The Esplanade), and three local roads (i.e., Berkeley Street, Trinity Street, and Mill Street);
- Sidewalks generally present on either side of the roads within the Corktown Station Traffic and Transportation Study Area;
- A recreational trail immediately south of the Corktown Station Early Works Project Footprint that provides connections between The Esplanade, Parliament Street and Mill Street;
- Cycle tracks on the south side of Adelaide Street and on either side of Sherbourne Street, as well as on-street bike lanes along either side of Cherry Street; and,
- Several bus and streetcar routes operated by Toronto Transit Commission (i.e., bus routes #65, #72, #75, #121, #142, #143, #144 and #145 and streetcar routes #304, #365, #503, and #504).

It should be noted that the rail network was not assessed since the Corktown Station early works do not include any works along the existing railway corridor, and hence no impacts are anticipated to the rail network. It should also be noted that the section of Gardiner Expressway between Cherry Street and Sherbourne Street was not considered part of the road network as it is not anticipated to be directly impacted by the Corktown Station early works or be part of the route for heavy construction vehicles.

The findings of the quantitative multi-modal level of service assessment of the existing transportation and transit networks within the Corktown Station Traffic and Transportation Study Area are summarized as follows:

- Automobiles experience acceptable Automobile Level of Service 'D'[2] or better at all the Corktown Station Traffic and Transportation Study Area intersections during both the AM and PM peak hours;
- Pedestrians experience critical Pedestrian Level of Service 'D' or worse at all the Corktown Station Traffic and Transportation Study Area intersections except at the intersection of Parliament Street and Mill Street where pedestrians experience acceptable Pedestrian Level of Service 'C'. Along road segments, pedestrians experience acceptable Pedestrian Level of Service 'C' or better along The Esplanade, Mill Street, Lake Shore Boulevard, Sherbourne Street, and Cherry Street. The remaining road segments have narrow sidewalk widths and thus operate at critical Pedestrian Level of Service 'E';
- Cyclists experience acceptable Bicycle Level of Service 'C' or better at the majority of the Corktown Station Traffic and Transportation Study Area signalized intersections. Cyclists accommodated through the cycling facilities along Adelaide Street, Lake Shore Boulevard, Sherbourne Street and Cherry Street and through the signed bike routes along The Esplanade and Mill Street experience excellent Bicycle Level of Service 'A' or 'B'. Along the remaining road segments, cyclists travel with a total of four to five mixed traffic lanes and hence experience critical Bicycle Level of Service 'D'; and,
- Transit vehicles operate at acceptable Transit Level of Service 'C' or 'D' during peak periods at all the signalized intersections within the Corktown Station Traffic and Transportation Study Area, except at the intersection of Adelaide Street and Sherbourne Street and the intersection of Lake Shore Boulevard and Lower Sherbourne Street where transit vehicles operate at critical Transit Level of Service 'E' and 'F', respectively. Along road segments, all transit vehicles experience an acceptable Transit Level of Service 'D' or

2. The level of service designation for all modes of travel range from level of service 'A' to level of service 'F' based on the relative attractiveness (e.g., the amount of average delay for automobile and transit users, the level of comfort, safety, and convenience experienced by pedestrians and cyclists) of the traffic and transportation elements within the Corktown Station Traffic and Transportation Study Area. A level of service target was set for each mode of travel to ensure that the respective mode users experience a minimum desirable level of service which is consistent with both the surrounding land use designation and the road classification. The levels of service targets set for motorized vehicles (i.e., automobiles and transit) and active transportation users are level of service 'D' and level of service 'C', respectively. This indicates that for motorized vehicles, level of service 'A' through 'D' typically indicate acceptable operations, while level of service 'E' or 'F' indicate critical operations. For active transportation users, level of service 'A' through 'C' indicate acceptable operations, while level of service 'D' through 'F' indicate critical operations.

better, meeting the minimum desirable Transit Level of Service for the studied sections. Transit vehicles travelling along the dedicated streetcar facility along Cherry Street experience excellent Transit Level of Service 'A'.

Utilities

Existing private and public utilities were reviewed within the Corktown Station Early Works Project Footprint. Private utilities include Rogers Communications Partnership, Telus Communications Company, and Enbridge. Public utilities within the Corktown Station Early Works Project Footprint include City of Toronto wastewater treatment infrastructure.

ES.5 Potential Impacts, Mitigation Measures and Monitoring Activities

Section 6 includes information related to potential impacts, mitigation measures, and monitoring activities.

Refer to **Table ES-2** for a complete list of potential impacts, mitigation measures, and monitoring activities for the Corktown Station early works.

Table ES-2: Potential Impacts, Mitigation Measures and Monitoring Activities for the Corktown Station Early Works

Discipline	Environmental Component	Potential Impact	Mitigation Measure(s)	Monitoring Activities
Natural Environment	▪ Designated Natural Areas	▪ No potential impacts as there are no Designated Natural Areas within 120 metres of the Corktown Station Early Works Project Footprint	▪ None Required	▪ None Required
Natural Environment	▪ Policy Area – City of Toronto Natural Heritage System and Ravine and Natural Feature Protection By-law Area	▪ No potential impacts as there are no City of Toronto policy areas within the Corktown Station Early Works Project Footprint	▪ None Required	▪ None Required
Natural Environment	▪ Policy Area – Toronto and Region Conservation Authority Regulated Areas	▪ No potential impacts as there are no Toronto and Region Conservation Authority regulated areas within the Corktown Station Early Works Project Footprint	▪ None Required	▪ None Required
Natural Environment	▪ Vegetation Communities	▪ City and private tree removal	▪ An Arborist Report by an International Society of Arboriculture Certified Arborist will be prepared, if required, in accordance with the Ontario Forestry Act R.S.O. 1990, and other regulations and best management practices as applicable. ▪ The Arborist Report will include, but not be limited to the individual identification of all trees within the Corktown Station early works construction areas including those that require removal or preservation, or trees that may be injured. Trees to be identified may include those on Metrolinx property, trees on public and private lands, and boundary trees. City of Toronto by-laws dictate the minimum area buffers to be inventoried and Diameter at Breast Height which requires inventory. ▪ Prior to the undertaking of tree removals, a Tree Removal Strategy/Tree Preservation Plan will be developed to document tree protection and mitigation measures that follow the City of Toronto Tree Protection Policy and Specifications for Construction Near Trees Guidelines (2016b) and adherence with best practices, standards and regulations on safety, environmental and wildlife protections. ▪ Compensation for tree removals will be undertaken in accordance with provisions outlined in the Metrolinx Vegetation Guideline (2020). ▪ Pruning of branches will be conducted through the implementation of proper arboricultural techniques. ▪ Tree Protection Zone fencing will be established to protect and prevent tree injuries. Tree Protection Zones will be clearly staked prior to construction using barriers in accordance with local by-law requirements.	▪ Regular inspection in areas of vegetation removal will be undertaken as required during construction to ensure that fencing is intact, only specified trees are removed and no damage is caused to the remaining trees and adjacent vegetation communities. ▪ On-site inspection will be undertaken to confirm the implementation of the mitigation measures and identify corrective actions if required. Corrective actions may include additional site maintenance and alteration of activities to minimize impacts. ▪ If required, the approach to compensation monitoring will be developed in accordance with Metrolinx's Vegetation Guideline (2020).
Natural Environment	▪ Vegetation Communities	▪ Soil contamination as a result of spills (e.g., grease and/or fuel) from equipment use ▪ Introduction or spread of invasive species	▪ A Spill Prevention and Contingency Plan will be developed and adhered to. Spills will be immediately contained and cleaned up in accordance with provincial regulatory requirements and the contingency plan. ▪ Refuelling shall be done within refuelling stations lined with appropriate material to prevent seepage and fuel discharge. ▪ All machinery, construction equipment and vehicles arriving on site should be in clean condition (e.g., free of fluid leaks, soils containing seeds of plant material from invasive species) and be inspected and washed in accordance with the Clean Equipment Protocol for Industry (Halloran et al., 2013) prior to arriving and leaving the construction site in order to prevent the spread of invasive species to other locations.	▪ On-site inspection will be undertaken to confirm the implementation of the mitigation measures and identify corrective actions if required. Corrective actions may include additional site maintenance and alteration of activities to minimize impacts. ▪ Ensure precautions are being taken to minimize the spread of invasive species by implementing the Clean Equipment Protocol for Industry (Halloran et al., 2013) on equipment and machinery prior to moving sites.

Discipline	Environmental Component	Potential Impact	Mitigation Measure(s)	Monitoring Activities
Natural Environment	■ Wildlife and Wildlife Habitat – General	■ Disturbance, displacement, or mortality of wildlife	■ Prior to construction, investigation of the Corktown Station early works construction areas for wildlife and wildlife habitat that may have established following the completion of previous surveys will be undertaken, as appropriate. ■ If wildlife is encountered, measures will be implemented to avoid destruction, injury, or interference with the species, and/or its habitat. For example, construction activities will cease or be reduced, and wildlife will be encouraged to move off-site and away from the construction area on its own.	■ Regular on-site inspection by on-site environmental workers or construction staff should occur within the construction area to ensure that no wildlife is trapped within the construction area. ■ On-site inspection will be undertaken to confirm the implementation of the mitigation measures and identify corrective actions if required. Corrective actions may include additional site maintenance and alteration of activities to minimize impacts.
Natural Environment	■ Significant Wildlife Habitat: Common Nighthawk	■ Removal of candidate nesting habitat for Common Nighthawk	■ Refer below to mitigation measures described for Migratory Breeding Birds and Nests. ■ Demolition of buildings should be scheduled outside of the breeding bird season of April 1 to August 31. If this is not possible and buildings must be demolished during this period, the following will be completed: - The roofs will be checked for presence of gravel. If gravel is not present, then the building is unlikely to provide suitable nesting habitat for Common Nighthawk. If gravel is present, a search for eggs and nesting activity for Common Nighthawk on the roof will be conducted. If nests or nesting activity of Common Nighthawk are confirmed, the building cannot be demolished until it is confirmed by a Qualified Biologist that young have fully fledged and left the nest.	■ Refer below for monitoring requirements described for Migratory Breeding Birds and Nests.
Natural Environment	■ Migratory Breeding Birds and Nests	■ Disturbance or destruction of migratory bird nests	■ All works must comply with the Migratory Birds Convention Act, including timing windows for the nesting period (April 1 to August 31 in Ontario). ■ If activities are proposed to occur during the general nesting period, a breeding bird and nest survey will be undertaken prior to required activities. Nest searches by an experienced searcher are required and will be completed by a qualified Biologist no more than 48 hours prior to vegetation removal. ■ If a nest of a migratory bird is found outside of this nesting period (including a ground nest) it still receives protection.	■ Regular monitoring (field observations, on-site inspections) will be undertaken to confirm that activities do not encroach into nesting areas or disturb active nesting sites.
Natural Environment	■ Species at Risk – General	■ Habitat loss, disturbance and/or mortality to Species at Risk	■ All requirements of the Endangered Species Act will be met. Species-specific mitigation measures will be developed in accordance with any registration and/or permitting requirements under the Endangered Species Act, recommended surveys undertaken prior to construction, and consultation with Ministry of Environment, Conservation and Parks.	■ On-site inspection will be undertaken to confirm the implementation of the mitigation measures and identify corrective actions if required. Corrective actions may include additional site maintenance and alteration of activities to minimize impacts. ■ Species-specific monitoring activities will be developed in accordance with any registration and/or permitting requirements under the Endangered Species Act.
Natural Environment	■ Wetlands and Waterbodies	■ No potential impacts as there are no wetlands or waterbodies present	■ None Required	■ None Required
Natural Environment	■ Fish and Fish Habitat	■ No potential impacts as there is no fish or fish habitat present	■ None Required	■ None Required
Soil and Groundwater	■ Soil Stability and Quality	■ Construction activities may cause displacement of the soils. Without mitigation, this may result in ground movement and settlement (e.g., during excavation/grading, demolition and removal or buildings, and/or dewatering activities). ■ Though no significant dewatering is anticipated to be required, dewatering activities can cause soil subsidence/settlement and impacts on surface/subsurface structures within the Zone of Influence.	■ Complete detailed soil investigations, as project planning progresses. ■ Excavation support systems will be employed, as required. ■ Use excavation/grading/dewatering equipment designed to reduce the potential for ground loss and the associated potential for settlement of the ground surface. ■ If dewatering is required to support the Early Works activities, and structures are identified within the anticipated dewatering Zone of Influence, potential subsidence/settlement impacts to existing structures can be mitigated with measures such as completion of pre-construction inspections of structures within the dewatering/construction Zone of Influence and implementation of a detailed settlement monitoring program complete with settlement triggers that result in changes to the dewatering/construction program if surpassed.	■ If required, develop, and conduct a settlement monitoring program to identify any construction effects, identify adverse trends and identify the need for additional mitigation measures. ■ Soil and groundwater sampling and monitoring plans shall be implemented as required prior to, during, and post construction. Track soil in registry as required by Ontario Regulation 406/19.

Discipline	Environmental Component	Potential Impact	Mitigation Measure(s)	Monitoring Activities
		■ Heaving of an excavation base may occur caused by groundwater pressures below the depth of excavation. This risk is typically low for shallow excavations. ■ Construction activities (e.g., excavation) could expose contaminated materials and/or result in the spreading of contaminated materials.	■ If anticipated to occur, the potential heave of an excavation base is mitigated through a groundwater depressurization program completed in advance of excavation that sufficiently lowers the potentiometric head in the confined groundwater system and stabilizes the soils being excavated. ■ Develop and implement remedial action plans, risk assessment and risk mitigation plans for encountering contamination, as necessary. ■ Develop a Soil and Excavated Materials Management Plan for the handling, management, and disposal of all excavated material (i.e., soil, rock, and waste) that is generated or encountered during the work. ■ Requirements of Ontario Regulation 406/19: On-Site and Excess Soil Management will be met. ■ If it is anticipated that contaminated soils will be encountered, the need for an Odour Management Plan and air quality monitoring will be confirmed as project planning and the implementation strategy progress and plans will be developed accordingly. ■ Known or suspected contaminants will be considered in environmental planning, including soil, water, and air quality monitoring, equipment, personnel management, and selection of appropriate worker personal protective equipment.	
Soil and Groundwater	■ Groundwater Quantity	■ Though no significant dewatering is anticipated to be required, construction dewatering may include impacts to private groundwater supply wells caused by a reduction in local groundwater levels ■ The volume of dewatering effluent can affect the discharge location and associated mitigation	■ No existing supply wells were identified in the reviewed background information. If dewatering is anticipated to be required, the absence of active supply wells within the anticipated dewatering Zone of Influence should be confirmed. If present, potential impacts to private groundwater supply well(s) can be mitigated with measures such as avoidance of dewatering requirements, minimizing dewatering, and/or utilizing groundwater cut-off techniques to physically exclude groundwater from flowing into excavations advanced for construction. ■ If dewatering is required for the Early Works construction, determination of water taking quantities, quality, and resultant dewatering Zone of Influence will be completed as project planning progresses, for example through completion of a site-specific Hydrogeological Investigation, Construction Dewatering Assessment and Groundwater Management Plan. ■ Prior to the outset of construction, the preparation of a Construction Dewatering Assessment and Groundwater Management Plan should be completed if required. ■ If required, the Construction Dewatering Assessment will be completed to: - Provide an estimate of groundwater and/or surface water taking rates and quantities; - Estimate a Zone of Influence for each dewatering area; - Characterize groundwater and/or surface water quality; - Recommend appropriate dewatering methodologies; - Provide an assessment of potential impacts related to the dewatering; and - Advise on associated permitting requirements. ■ If required, the Groundwater Management Plan will be completed to: - Evaluate potential groundwater discharge options (i.e., sanitary and/or storm sewer, natural environment, off-site disposal, etc.); - Identify effluent treatment requirements; - Outline monitoring, mitigation, and contingency program (if required); - Determine the potential need for regulatory approvals; and - Identify notification and reporting requirements. ■ Approvals for the discharge of dewatering effluent, such as Municipal Discharge Permits and/or Ministry of the Environment, Conservation and Parks Environmental Compliance Approval, may be required based on the	■ Regular site inspections and monitoring activities such as effluent discharge location(s), will be completed by qualified members of the construction team to ensure that mitigation measures are fulfilled and that all regulatory requirements are met.

Discipline	Environmental Component	Potential Impact	Mitigation Measure(s)	Monitoring Activities
			anticipated dewatering volumes, groundwater quality, and relative location of dewatering activities with respect to potential receiving infrastructure (i.e., sanitary and/or storm sewer). ■ Identification of site-specific mitigation measures inclusive of monitoring programs relating to private supply wells, and geotechnical heave/settlement within the anticipated dewatering Zone of Influence will be determined as project planning progresses.	
Soil and Groundwater	■ Groundwater Quality	■ Previous land use may have resulted in local contamination of groundwater which may be encountered during construction excavation and/or dewatering activities. ■ General construction activities such as vehicle and machinery operation have the potential to affect groundwater quality through minor contaminant releases. ■ Spills consisting of materials that constitute a contaminant may affect the surrounding groundwater quality and potential water quality in nearby supply wells (if present). ■ Improperly managed construction dewatering activities can result in accidental releases of contaminated groundwater to the environment and/or result in the migration of existing impacted groundwater. ■ The following materials may impact groundwater quality within the highly vulnerable aquifer: – Application of road salt; and ■ Storage/use of organic solvents and/or dense non-aqueous phase liquids.	■ The existing groundwater conditions within each potential construction dewatering area will be characterized prior to construction activities, during the development of the Groundwater Management Plan if required. ■ Pre-construction (baseline) groundwater quality testing should be performed at all construction dewatering locations before the outset of any discharge activities and compared to appropriate regulatory guidelines (i.e., storm and sanitary by-laws for discharge to municipal sewers). Appropriate water quality management (i.e., filtration systems and/or water treatment systems) will be required to be designed and implemented in the event that exceedances of regulatory guidelines or limits are detected in the influent groundwater quality. Discharge of dewatering effluent will be governed by the discharge approval(s) obtained for the Project, which could include one or a combination of Municipal Discharge Permits, and/or Ministry of the Environment, Conservation and Parks Environmental Compliance Approval. ■ If dewatering is required, conduct regular groundwater quality testing of discharge water as required. ■ On-site treatment of dewatering effluent, if required, such that parameters in excess of the established discharge criteria are removed/reduced and discharge can proceed. ■ Measures such as avoidance of dewatering requirements, minimizing dewatering, and/or utilizing groundwater cut-off techniques to physically exclude groundwater from flowing into excavations advanced for construction could be considered, when on-site treatment is not technically and/or financially feasible. The removal of water to an off-site disposal facility could also be considered. ■ A Spill Prevention and Response Plan, outlining the steps required to prevent and contain any contaminant releases and/or to avoid impacts to groundwater/surface water, is required to be developed prior to initiation of construction activities. This Spill Prevention and Response Plan should include a requirement for a spill kit to be maintained on-site at all times during construction. ■ Ensuring that machinery is maintained and free of leaks to reduce the possibility of fluid release and storing any potential contaminants (e.g., oils, fuels, and chemicals) in designated areas using appropriate secondary containment, where necessary. ■ Education of workers regarding appropriate chemical use, handling, storage and transportation procedures, including spill response and reporting requirements. ■ Conduct a review of Source Protection Plan policies and implement the following measures: - A Salt Management Plan that incorporates best management practices where the storage and application of road salt is required; - Best management practices if the handling and storage of dense non-aqueous phase liquids is required; and ■ Best management practices if the storage of an organic solvent is required.	■ Monitoring activities such as groundwater and dewatering effluent sample collection and measurement of groundwater parameters (e.g., pH) in the field will be completed as required by qualified members of the construction team. ■ Regular inspections of equipment for fuel/fluid leaks, dewatering equipment and containment tanks for leakage, and installed erosion and sediment control measures.

Discipline	Environmental Component	Potential Impact	Mitigation Measure(s)	Monitoring Activities
Hydrology and Surface Water	■ Surface Water/Stormwater and Drainage	■ Change in stormwater quality and quantity, including: - Erosion of exposed soil and increased sediment loading which may impact receiving waterbodies and/or municipal stormwater drainage system; and - Increased surface water/stormwater runoff.	■ The overall stormwater quality and quantity control strategy will be developed in accordance with all relevant municipal, provincial, and federal requirements, as amended. Stormwater management design will consider guidance provided by the Ministry of the Environment and Climate Change Stormwater Management Planning and Design Manual (2003) and Ministry of Transportation Drainage Management Manual (2008), and Toronto and Region Conservation Authority Stormwater Management Criteria (2012), as required. ■ The following stormwater management best management practices will be considered and implemented, as required: - Minimize clearing and amount of exposed soil; - Install key sediment control before grading/land alterations begin; - Sequence construction activities so that the soil is not exposed for long periods of time; - Protect storm drain inlets to filter out debris; and - Stabilize all exposed soil areas as soon as land alterations have been completed. ■ Prior to construction, a Stormwater Management Plan that will outline stormwater discharge management associated with construction activities, and an Erosion and Sediment Control plan will be developed. ■ If required, a Municipal Discharge Permit (City of Toronto Private Water Discharge Permit/Agreement) will be obtained to manage excess surface water/stormwater.	■ Monitoring activities will be implemented as outlined in the Stormwater Management Plan and/or Erosion and Sediment Control Plan and may include regular inspections and reporting on the performance of implemented erosion and sediment control measures, best management practices, and other monitoring activities, as required. ■ All monitoring procedures should stay in place throughout Corktown Station early works construction.
Air Quality	■ Construction Air Quality	■ Potential air quality impacts could include effects from diesel combustion and particulate emissions. Odour and visible dust may also cause public annoyance. ■ Exhaust emissions from construction vehicles may contribute to increased levels of nitrogen oxides, and volatiles such as benzene and benzo(a)pyrene, which given their existing background concentrations can contribute to existing levels of provincial criteria exceedance. ■ Certain construction activities are likely to emit particulates in higher quantities, which include site preparation and earth works activities, demolition activities, unpaved surfaces with heavy equipment travel, and uncovered soil storage piles. ■ Disruption of contaminated soils may release contaminants.	■ On-site construction vehicle activity shall be managed to control emissions of odourous contaminants and diesel exhaust, including benzene and benzo(a)pyrene emissions from exhaust. An Air Quality Management Plan will be developed to ensure consistent attention to mitigation of dust and particulates, including silica, from the construction site. The following mitigation measures should be considered in the Air Quality Management Plan: - All equipment complies with Canadian engine emissions standards. - All equipment visually inspected prior to use and properly maintained. - Implement a no idling policy on site (unless necessary for equipment operation). - Use of electricity from the grid over diesel generators wherever possible. - Retrofitting of combustion engines with specific exhaust emission control measures such as particulate traps. - If applicable, follow guidelines on hot mix asphalt outlined in the Ontario Hot Mix Producers Association's Environmental Practices Guide: Ontario Hot Mix Asphalt Plants, Fifth Edition (Ontario Hot Mix Producers Association, 2015). ■ Applicable mitigation measures from Environment Canada's Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities (Cheminfo Services Inc., 2005), the Ministry of Environment, Conservation and Parks' Technical Bulletin Management Approaches for Industrial Fugitive Dust Sources, shall be followed. The following mitigation measures should be considered in the Air Quality Management Plan: - Complete earthwork grading within 10 days of ceased active construction. - Temporary seeding or mulching of bare soil and storage piles, if possible. - Compression or clodding of soil surfaces and storage piles to reduce erosion. - Confine storage pile activity to downwind side of piles. - Reduction of activities during high wind conditions. - Full or partial enclosure of demolition activities. - Wind screens or barriers where possible or necessary.	■ The following monitoring activities should be considered in the development of the Air Quality Management Plan: - Baseline conditions should be established prior to construction for longer than one week to capture representative concentrations under varying meteorological conditions. - On-site meteorological monitoring in conjunction with real-time particulate monitoring representative of receptor impacts. - Place monitors both upwind and downwind of construction activities, where possible. - Application of threshold "Action Level" triggers for implementation of specific and increasing intensity mitigation activities linked to specific construction activities. - Reporting detailed results of ongoing monitoring and mitigation activities. - Monitoring at locations where there are persistent complaints, as required. ■ In addition, relevant construction monitoring activities from the following recommended guidelines will be implemented during construction: - Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities (Cheminfo Services Inc., 2005); and, - Operations Manual for Air Quality Monitoring in Ontario (Ministry of the Environment, Conservation and Parks, 2018).

Discipline	Environmental Component	Potential Impact	Mitigation Measure(s)	Monitoring Activities
			- Scheduling certain construction activities (i.e., site preparation and earth works activities, demolition activities, unpaved surfaces with heavy equipment travel, and uncovered soil storage piles) to periods of time when exposure to dust is expected to be limited (e.g., avoid scheduling activities during dry, windy weather conditions). - Landscaping materials ordered close to time of use to reduce on-site storage. - Application of soil stabilizers or dust control polymers where feasible. - Daily removal of accumulated mud, dirt and debris deposits on-site, and regular truck washing - Paved and unpaved roadway cleaning, watering or application of a non-chloride dust suppressant. - Minimize drop height of materials on-site. - Covering surface area of hauled bulk material. - Methods and equipment for clean-up of accidental spill of dusty materials. - Limit travel speeds on-site to a maximum of 16-24 kilometres per hour. ■ If disruption of contaminated soils is anticipated at any time, ensure that contaminants are not released. ■ Develop a communications protocol which includes timely resolution of complaints.	
Noise and Vibration	■ Construction Noise	■ Environmental noise may cause annoyance and disturb sleep and other activities. ■ The severity of the noise effects resulting from construction projects varies, depending on: – Scale, location and complexity of the Project – Construction methods, processes and equipment deployed – Total duration of construction near sensitive noise receivers – Construction activity periods (days, hours, time period) – Number and proximity of noise-sensitive sites to construction area(s)	■ Construction noise impact mitigation measures to be considered include but are not limited to the following: - Siting construction staging and laydown areas to avoid/reduce adverse impacts to sensitive receptors where possible. - Use construction equipment compliant with noise level specifications in Ministry of the Environment, Conservation and Parks guidelines NPC-115 and NPC-118. - Keep equipment in good working order and operate with effective muffling devices. - Enclosures for equipment such as generators and compressors. - Additional equipment silencers/mufflers. - Use of upgraded construction hoarding (considering requirements from CSA Z107.9 for noise barriers) between construction equipment and noise sensitive receivers. - Use of localized movable noise barriers/screens for specific equipment and operations. - Minimize simultaneous operation of equipment where possible. - Implement a no idling policy on site (unless necessary for equipment operation). - Restrict construction hours where possible: • Perform construction during daytime hours where possible. If nighttime construction is necessary, the activities with the highest noise levels should be conducted during daytime periods where possible. • If construction will occur outside of normal daytime hours, inform local residents before construction of type of construction and expected duration outside of daytime hours. - Consider operational duration limits for construction. - Limit the number of heavy trucks on site to the minimum required. - Stage construction vehicles away from noise sensitive locations if possible. - Establish and apply project-specific construction noise criteria. - Coordinate with the Canadian Opera Company (at the Joey and Toby Tanenbaum Opera Centre at 227 Front Street East) and Canadian Stage (located on 26 Berkeley Street) to avoid disturbance during performances. - Develop a communications protocol which includes timely resolution of complaints.	■ Noise levels will be monitored where the impact assessment indicates that noise limits may approach or exceed noise criteria, to identify if any additional mitigation is required and verify mitigation measure(s) effectiveness. ■ Monitoring at locations where there are persistent complaints, as required.

Discipline	Environmental Component	Potential Impact	Mitigation Measure(s)	Monitoring Activities
			- A plan that addresses noise and vibration will be developed as project planning progresses. - Additional mitigation measures not listed above may be considered.	
Noise and Vibration	■ Construction Vibration	■ Exposure to vibration may result in public annoyance and complaints. Vibration may also cause damage to buildings and other structures.	■ Construction vibration impact mitigation measures to be considered include but are not limited to the following to meet applicable vibration criteria: - Siting construction staging and laydown areas to avoid/reduce adverse impacts to sensitive receptors where possible. - Utilize equipment with low vibration emissions where possible. - Restrict construction hours: • Perform construction during daytime hours where possible. If nighttime construction is necessary, the activities with the highest vibration levels should be conducted during daytime periods where possible. - Confirm results, restrictions and monitoring requirements of vibration assessment based upon refined site staging, equipment, construction areas, updated information regarding sensitive structures/operations that may require more stringent vibration limits than the limits in City of Toronto By-law 514-2008 prior to the commencement of construction, and update as necessary. - Use alternative means of construction within 5.8 metres of structures so that the City of Toronto's prohibited vibration level limits are not exceeded. - Use alternative means of construction within 11.1 metres of structures so that the vibration level limits for buildings susceptible to vibration damage are not exceeded where applicable. - Review other applicable vibration limits that may apply, such as the City of Toronto Specification GN117SS. - Conduct monitoring and pre-construction inspections in accordance with City of Toronto By-law 514-2008. Monitoring and preconstruction requirements can be determined by calculation of Zone of Influence of construction equipment. - Provide smooth surfaces for trucks to travel and route heavily loaded trucks away from vibration sensitive sites where possible. - Operate construction equipment on lower vibration settings where available. - Maximize distance between equipment and sensitive receivers where possible. - Establish and apply project-specific construction vibration criteria limits. - Do not operate equipment where the City of Toronto By-law 514-2008 prohibited limits are predicted to be exceeded. Alternative construction methods and/or equipment with lower vibration emissions or power settings can be used if they do not exceed the City of Toronto's prohibited vibration limits. - Develop communications protocol which includes timely resolution of complaints. - Additional mitigation measures not listed above may be considered.	■ Monitoring will be undertaken at locations within the Zone of Influence to ensure compliance with the City of Toronto By-law 514-2008 and to identify the need for additional mitigation if required. ■ Monitoring will be undertaken to ensure compliance with other applicable vibration level limits identified, as required. ■ Monitoring will be undertaken to verify mitigation measure(s) effectiveness. ■ Pre-construction building inspection of potentially impacted buildings adjacent to the early works construction site are to be undertaken in accordance with City of Toronto By-law 514-2008. Continuous vibration monitoring along the construction site property lines closest to these structures will be initiated as warranted. ■ Monitoring at locations where there are persistent complaints, as required.
Socio-Economic and Land Use Characteristics	■ Property	■ Property acquisition – permanent and temporary	■ Specific property requirements associated with the early works activities will be minimized to the extent possible.	■ None identified.
Socio-Economic and Land Use Characteristics	■ All Land Uses and Adjacent Lands	■ Nuisance effects from construction activities	■ Mitigation measures related to potential nuisance effects are outlined in the Air Quality and Noise and Vibration potential impacts, mitigation measures, and monitoring activities. ■ An Erosion and Sediment Control Plan will be developed in accordance with the Greater Golden Horseshoe Area Conservation Authorities' Erosion and Sediment Control Guideline for Urban Construction (December 2006), as amended from time to time, that addresses sediment release to adjacent properties and roadways.	■ When applicable, monitoring related to potential nuisance effects are outlined in the Air Quality and Noise and Vibration potential impacts, mitigation measures, and monitoring activities. ■ Erosion and sediment control monitoring to be conducted (e.g., on-site inspection of erosion and sediment control measures).

Discipline	Environmental Component	Potential Impact	Mitigation Measure(s)	Monitoring Activities
Socio-Economic and Land Use Characteristics	■ All Land Uses and Adjacent Lands	■ Land use and access disruption	■ Provide well connected, clearly delineated, and appropriately signed walkways and cycling route options, with clearly marked detours where required. ■ Provide temporary walkways with a pedestrian clearway of 2.1 metres, where possible. Temporary walkways required during construction will also meet Accessibility for Ontarians with Disabilities Act requirements for universal accessibility. ■ Provide temporary lighting, as required, and wayfinding signs and cues for navigation around the construction site. ■ Regular (existing) access to businesses during working hours will be maintained, where feasible. Where regular access cannot be maintained, alternative access and signage will be provided. ■ Continue to engage with the City of Toronto and local school board(s) to confirm mitigation measures and to continue coordinating as planning of the bi-directional bike lane along Esplanade and Mill Street progresses.	■ Regular monitoring (e.g., on-site inspection) of temporary access paths, walkways, cycling routes and fencing to ensure effectiveness.
Socio-Economic and Land Use Characteristics	■ Visual Characteristics	■ Visual effects from construction activities/areas	■ Consult with the City of Toronto as project planning progresses. ■ Consideration will be given to providing temporary screens/ hoarding along the borders of the early works site.	■ Regular monitoring (e.g., on-site inspection) of construction visual effects mitigation measures to ensure effectiveness.
Socio-Economic and Land Use Characteristics	■ Light Pollution	■ Light trespass, glare and light pollution effects	■ Comply with all local applicable municipal by-laws and practices for lighting in areas near or adjacent to roadways regarding outdoor lighting for construction activities, and incorporate industry best practices provided in ANSI/IES RP-8-18 – Recommended Practice for Design and Maintenance of Roadway and Parking Facility Lighting. Obtrusive light with respect to adjoining residents, communities, and/or businesses will be limited. ■ Perform the work in such a way that any adverse effects of construction lighting are controlled or mitigated to avoid unnecessary and obtrusive light with respect to adjoining residents, communities and/or businesses.	■ Regular monitoring (e.g., on-site inspection) of light pollution mitigation measures to ensure effectiveness.
Socio-Economic and Land Use Characteristics	■ Public Realm	■ Potential temporary relocation or removal of streetscaping materials, furniture, and landscaping in the public realm	■ Minimize impacts which may result in the temporary relocation or removal of streetscaping materials, furniture, and landscaping in the public realm to the extent possible. Wherever possible, lands impacted by construction will be restored to the current City of Toronto standard following construction completion.	■ There are no monitoring activities associated with the public realm.
Built Heritage Resources and Cultural Heritage Landscapes	■ Direct Impacts to Built Heritage Resources and Cultural Heritage Landscapes	■ Removal / demolition of a building or structure on the property and/or any ground disturbance that has the potential to remove or demolish deeply buried archaeological remains is anticipated for OLS-034. ■ OLS-034 is entirely within the Corktown Station Early Works Project Footprint. All structures within the property will be demolished, including removal of the building foundations, as part of the early works, as shown on the Corktown Station Early Works Conceptual Design (**Figure 1-1**). ■ The buildings within OLS-034 are not heritage attributes of the properties. However, as the buildings are located on a Provincial Heritage Property of Provincial Significance, the removal of the buildings require Ministry of Heritage, Sport, Tourism and Culture Industries Minister's Consent.	■ Consult with City of Toronto's Heritage Planning as planning progresses regarding any physical impact to the property in order to determine and obtain any approval or permits required. ■ Consult with Ontario Heritage Trust as current owners of part of the property as planning progresses and if required, obtain approval/consent. ■ Metrolinx was granted Ministry of Heritage, Sport, Tourism and Culture Industries Minister's Consent on March 18, 2021, with conditions for the: - demolition and removal of the non-heritage buildings located at 265 Front Street East; and, - removal of the heritage attributes (i.e. archaeological excavation of the archaeological site [AjGu-41]) located on 265 Front Street East, 271 Front Street East and 25 Berkeley Street. ■ Metrolinx is committed to fulfilling the conditions outlined in the Minister's Consent, including completion of archaeological requirements.	■ Corktown Station early works will have no impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.

Discipline	Environmental Component	Potential Impact	Mitigation Measure(s)	Monitoring Activities
Built Heritage Resources and Cultural Heritage Landscapes	■ Direct Impacts to Built Heritage Resources and Cultural Heritage Landscapes	■ Impacts to properties that meet or have the potential to meet Ontario Regulation 10/06 under the Ontario Heritage Act anticipated for OLS-034 (First Parliament Site - 265 and 271 Front Street and 25 Berkeley Street).	■ Metrolinx was granted Ministry of Heritage, Sport, Tourism and Culture Industries Minister's Consent on March 18, 2021, with conditions for the: - demolition and removal of the non-heritage buildings located at 265 Front Street East; and, - removal of the heritage attributes (i.e. archaeological excavation of the archaeological site [AjGu-41]) located on 265 Front Street East, 271 Front Street East and 25 Berkeley Street. ■ Metrolinx is committed to fulfilling the conditions outlined in the Minister's Consent, including completion of archaeological requirements.	■ Corktown Station early works will have no impact to built heritage resources and cultural heritage landscapes that requires monitoring prior, during or post-construction of early works.
Built Heritage Resources and Cultural Heritage Landscapes	■ Direct Impacts to Built Heritage Resources and Cultural Heritage Landscapes	■ Potential to remove or demolish deeply buried archaeological remains as a result of removal ■ Demolition of a building or structure on the property and/or any ground disturbance is anticipated at OLS-034 (First Parliament Site - 265 and 271 Front Street and 25 Berkeley Street).	■ Consult with City of Toronto's Heritage Planning as planning progresses regarding any physical impact to the property in order to determine and obtain any approval or permits required. ■ Consult with Ontario Heritage Trust as current owners of part of the property as planning progresses and if required, obtain approval/consent. ■ Metrolinx was granted Ministry of Heritage, Sport, Tourism and Culture Industries Minister's Consent on March 18, 2021, with conditions for the: - demolition and removal of the non-heritage buildings located at 265 Front Street East; and, - removal of the heritage attributes (i.e. archaeological excavation of the archaeological site [AjGu-41]) located on 265 Front Street East, 271 Front Street East and 25 Berkeley Street. ■ Metrolinx is committed to fulfilling the conditions outlined in the Minister's Consent, including completion of archaeological requirements.	■ Corktown Station early works will have no impact to built heritage resources and cultural heritage landscapes that requires monitoring prior, during or post-construction of early works. ■ Refer to **Section 6.8** for further archaeological monitoring recommendations, if required.
Archaeological Resources	■ Archaeological Potential	■ Potential for the disturbance of registered archaeological sites and/or archaeological resources previously identified.	■ Areas identified as retaining archaeological potential in the Corktown Station Early Works Project Footprint, as per the Ontario Line South Stage 1 Archaeological Assessment Report (AECOM, 2020c), are shown in **Figure 5-17.** Work plans shall be developed for the next steps of archaeological work on the First Parliament and Lime Kiln Works Sites and will be made available for review by the City of Toronto Heritage Planning, in addition to ongoing consultation with the City of Toronto, Indigenous Nations and other parties. - The majority of the Corktown Station Early Works Project Footprint retains moderate to high archaeological potential where deeply buried archaeological potential remains, such as for discovering pre-contact Indigenous materials and/or materials related to the early development and expansion of the City of Toronto, including the First and Second Parliament Buildings, the Home District Gaol, the Consumers' Gas company buildings, and other registered archaeological sites. - The Ministry of Heritage, Sport, Tourism and Culture Industries' Archaeological Program Unit will be consulted prior to any ground disturbing activities within areas identified as having archaeological potential. ■ All archaeology on the First Parliament site on 265 Front Street East, 271 Front Street East and 25 Berkeley Street will be in accordance with the following conditions of the Minister of Heritage, Sport, Tourism and Culture Industries' Consent: - All archaeological assessments are undertaken in accordance with the Ontario Heritage Act, the 2011 Standards and Guidelines for Consultant Archaeologists, and in accordance with the recommendations of previously completed archaeological assessment reports. - Prior to commencing any archaeological fieldwork, the licensed consultant archaeologist will submit a detailed strategy for review and approval by the Ministry of Heritage, Sport, Tourism and Culture Industries' Archaeology Program Unit. Additionally, where new conditions or situations are encountered that are not covered by an approved strategy, a revised strategy will be submitted to the Ministry of Heritage, Sport, Tourism and Culture Industries' Archaeology Program Unit for approval prior to proceeding with fieldwork. - Any construction excavation must be preceded by archaeological fieldwork according to a strategy approved by the Ministry of Heritage, Sport, Tourism	■ None identified at this time. ■ Metrolinx will adhere to all recommendations in any subsequent archaeological assessments, including monitoring activities, as required.

Discipline	Environmental Component	Potential Impact	Mitigation Measure(s)	Monitoring Activities
			and Culture Industries' Archaeology Program Unit or must be accompanied by an excavation and monitoring strategy. - Excavation by a licensed consultant archaeologist or under the direction of a licensed consultant archaeologist will proceed to a point that is to the satisfaction of the Ministry of Heritage, Sport, Tourism and Culture Industries' Archaeology Program Unit. In the event that the Project will not require total excavation of the site, an avoidance and protection strategy must be implemented for the remainder of the archaeological site to the satisfaction of the Ministry. Archaeological assessments on other areas within the Corktown Station Early Works Footprint will be undertaken in accordance with the Ontario Heritage Act, the 2011 Standards and Guidelines for Consultant Archaeologists, and in accordance with the recommendations of the previously completed archaeological assessment reports and in advance of ground disturbance activities. ■ The Mississaugas of the Credit First Nations, and other Indigenous Nations will be invited to participate in archaeological fieldwork. All future archaeological assessment findings and reports will be shared with the Mississaugas of the Credit First Nation and other Indigenous Nations that were engaged during the Stage 1 archaeological assessment. ■ Metrolinx and the Ontario Heritage Trust will develop an Interpretation and Commemoration Plan for the First Parliament Site, in consultation with the City of Toronto Heritage Planning, as appropriate, with Indigenous communities and other parties.	
Archaeological Resources	■ Archaeological Resources	■ Potential recovery of unexpected archaeological resources during construction.	■ Should previously unknown or unassessed deeply buried archaeological resources be uncovered during construction activities, they may be a new archaeological site and therefore subject to Section 48(1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed archaeologist to carry out archaeological field work, in compliance with Section 48(1) of the Ontario Heritage Act. Any person discovering human remains must immediately cease work and notify the police or coroner and the Registrar of Cemeteries, Ministry of Government Services, in accordance with the Funeral, Burial, and Cremation Services Act. In addition, consultation with relevant Indigenous Nations will be initiated in the event that archaeological resources or human remains are discovered.	■ None identified at this time. ■ Metrolinx will adhere to all recommendations in any subsequent archaeological assessments, including monitoring activities, if required.
Traffic and Transportation	■ Transportation Network – Roads	■ Heavy construction vehicle traffic may impact traffic operations resulting in increased vehicular delays and queue lengths, especially at intersections where construction traffic is required to make left-turning movements. ■ Potential overlapping construction timelines with other planned projects (e.g., local developments) nearby may result in impacts to the transportation network and its road users. ■ Closure of the Green P municipal parking lots located within the Corktown Station Early Works Project Footprint.	■ A quantitative traffic impact assessment will be completed, if required, as project planning progresses to consider vehicular traffic impacts as a result of the Corktown Station early works ■ Develop and implement a Transit and Traffic Management Plan(s), which could include temporary changes to intersection lane configurations, traffic signal timing optimization, modifications to existing signal timing plans, etc. The Transit and Traffic Management Plan(s) will also address specific emergency services requirements in consultation with the City of Toronto. ■ Traffic signal timing optimization may be assessed/implemented to increase capacity of affected intersections and to aid in the movement of traffic. Traffic signal timing adjustments would require coordination between Metrolinx and City of Toronto, and will be undertaken if required, to determine appropriate changes to traffic signal timings. ■ Consider scheduling construction activities during off-peak periods and weekends to minimize disruptions to road users during the critical peak periods. ■ Co-ordinate with the City of Toronto regarding other ongoing construction projects when scheduling the early works activities to maintain the mobility of all road users (i.e., avoid closure of parallel corridors). ■ Consult with the City of Toronto and the Toronto Parking Authority with regards to the Green P municipal parking lot closure.	■ The effectiveness of the Transit and Traffic Management Plan(s) will be monitored throughout the construction period and adjustments will be made based on actual field observations, as needed.

Discipline	Environmental Component	Potential Impact	Mitigation Measure(s)	Monitoring Activities
Traffic and Transportation	■ Transportation Network – Active Transportation	■ Traffic congestion along Front Street and other adjacent roads, as a result of the increase in heavy vehicle traffic, could increase pedestrians' and cyclists' exposure to traffic. ■ Potential realignment/closure of sidewalks along Front Street, Berkeley Street, King Street, and Parliament Street may increase walking distances and compromise pedestrians' convenience.	■ Co-ordinate with the City of Toronto to minimize the interference with pedestrians and cyclists. This may include fencing, hoarding (minimum 2 metres high, solid and secured), shared-lane markings, signals, wayfinding signs, and lighting as required to provide pedestrians and cyclists with safe, accessible, and continuous routes. ■ Include safety precautions for nearby schools (e.g., having school crossing guards at nearby intersections) in the Transit and Traffic Management Plan(s) in consultation with the City of Toronto, and local school board(s). ■ Implement flagging where construction vehicles are present to ensure construction vehicle operators are aware of pedestrian and vehicular traffic within the construction area. ■ If required, ensure any modifications to pedestrian crossings distances at signalized intersections are reflected in revised pedestrian clearance timings. ■ Any temporary pedestrian crossing facilities including temporary or relocated Toronto Transit Commission transit stops will be designed to meet Toronto Transit Commission accessibility standards. ■ Mitigation measures will be considered (e.g., maintaining a minimum sidewalk width) in order to maintain pre-construction pedestrian levels of service. ■ Consult with the City of Toronto to minimize potential impacts during special events (e.g. Distillery District) should closures or long-term impacts be required.	■ The effectiveness of the Transit and Traffic Management Plan(s) will be monitored throughout the construction period and adjustments will be made based on actual field observations, as needed.
Traffic and Transportation	■ Transit Network	■ Impacts to surface transit routes (i.e., bus and streetcar) within the Corktown Station Study Area are not anticipated.	■ No mitigation measures are recommended.	■ Transit services will be monitored through actual field observations throughout the construction period and mitigation measures will be considered, as needed.
Utilities	■ Private Utilities	■ Utilities decommissioning, modification and/or relocation. ■ It is anticipated that there will be temporary impacts to existing utilities during early works, with potential relocations and associated disruptions to be determined. Temporary traffic detours may be needed during utility relocations. ■ Potential impacts to utilities are under review and will be confirmed as project planning progresses.	■ In-depth utility investigations, if required, will be undertaken as project planning progresses to confirm impacts. Any potential conflicts and association relocation requirements or mitigation measures will be identified in consultation with utility providers. ■ Utilities such as sewers, water, electrical, communications and gas located within Corktown Station Early Works Project Footprint may be relocated to facilitate the completion of the early works. ■ As project planning progresses, the potential impacts to utilities, relocations and mitigation measures will be further refined and confirmed through a subsurface utility engineering investigation. ■ Appropriate mitigation measures including next steps related to consultation with utility companies and stakeholders, and phasing plans will be determined once the impacts are confirmed. ■ Metrolinx will also consult with private utility companies for unexpected utility conflicts that may arise during project planning and/or implementation.	■ None identified.
Utilities	■ Public Utilities and Municipal Servicing	■ Utilities decommissioning, modification and/or relocation. ■ It is anticipated that there will be temporary impacts to existing utilities during the early works, with potential relocations to be determined. Temporary traffic detours may be needed during utility relocations. ■ Potential impacts to utilities are under review and will be confirmed during as project planning progresses.	■ In-depth utility-related investigations such as subsurface utility engineering investigations, if required, will be completed as project planning progresses. Metrolinx will consult with the City of Toronto during the development of these studies to ensure concerns are addressed. ■ Metrolinx will also consult with the City of Toronto and/or Toronto Hydro, as required, as project planning progresses regarding potential impacts to municipal infrastructure and servicing and ensure that applicable City standards, guidelines, and criteria are met.	■ None identified.

ES.6 Permits and Approvals

Section 7 includes a list of permits that may be required for the Corktown Station early works construction activities. These potential permitting requirements are summarized below.

Federal

No federal permits are anticipated to be required for the Corktown Station early works.

Provincial

A number of provincial permits and approvals have been identified as potentially required, which include, but are not limited to, the following:

- Under the Ontario Water Resources Act, 1990:
  - Registration through the Environmental Activity and Sector Registry in accordance with Ontario Regulation 63/16;
  - Category 3 Permit to Take Water from the Ministry of the Environment, Conservation and Parks for the taking of more than 400,000 L/day for construction dewatering; and,
  - Environmental Compliance Approval(s) for water discharge from the Ministry of the Environment, Conservation and Parks in accordance with the Ontario Water Resources Act, 1990.
- Under the Environmental Protection Act, 1990:
  - Environmental Compliance Approval(s) from the Ministry of the Environment, Conservation and Parks for equipment held by contractors, owners and operators of that equipment in advance of construction, as required.
- Under the Ontario Heritage Act, 1990:
  - Metrolinx has sought consent of the Minister of Heritage, Sport, Tourism, and Culture Industries for the First Parliament Site (OLS-034), and consent has been granted by the Minister of Heritage, Sport, Tourism, and Culture Industries. Metrolinx is committed to fulfilling all conditions outlined through the Minister of Heritage, Sport, Tourism, and Culture Industries' Consent for the First Parliament Site (OLS-034). Conditions from the Minister of Heritage, Sport, Tourism, and Culture Industries' Consent for the First Parliament Site (OLS-034) can be referenced in Table 5-1.

Conservation Authority

No authorization under Ontario Regulation 166/06 is required for the Corktown Station early works.

Municipal

A range of municipal permits and approvals (e.g., Permit to Injure or Remove Trees) may be required for the Project, particularly pertaining to municipally owned lands and infrastructure. Metrolinx will obtain all required permits and approvals.

Metrolinx as a Crown Agency of the Province of Ontario is exempt from certain municipal processes and requirements. In these instances, Metrolinx will engage with the City of Toronto to incorporate municipal requirements as a best practice, where practical, and may obtain associated permits and approvals.

Metrolinx shall continue to communicate and engage with the City of Toronto project planning progresses to address municipal concerns.

Water, sanitary, and storm servicing will be reviewed as project planning progresses. Metrolinx will consult with the City of Toronto as project planning progresses to address impacts to municipal water, sanitary, and storm sewer systems.

Consultation between Metrolinx and the City of Toronto Heritage Planning is ongoing regarding physical impacts to 265 and 271 Front Street and 25 Berkeley Street (OLS-034, the First Parliament Site - AjGu-41), the Lime Kiln Site (AjGu-61 and AjGu-64), and the St. Lawrence Neighbourhood Heritage Conservation District, as a result of Corktown Station early works.

Metrolinx will co-ordinate with the City of Toronto and Toronto Parking Authority for transportation related permits and approvals (e.g., street occupation permit) as project planning progresses, as required

ES.7 Consultation Process

The consultation program followed by Metrolinx for the early works is described in **Section 8** of this Report and all consultation materials are included in **Appendix B**.

The overall approach to consultation for the Project is outlined in Section 7.1.1 of the Ontario Line Final Environmental Conditions Report (AECOM, 2020a). To share information and collect feedback related to early works, Metrolinx has undertaken the following communication and engagement activities prior to the publication of the Final Corktown Station Early Works Report:

- Early Works specific updates on the Engagement webpage (Project website) (www.metrolinx.com/ontarioline) including:
    - Downtown segment neighbourhood updates (Corktown Station is located within the Downtown segment) – published on September 17, 2020 and updated on April 23, 2021, May 12, 2021 and June 17, 2021.

  - Downtown segment virtual presentation and live question and answer session hosted on April 26, 2021 (https://www.metrolinxengage.com/en/OLliveApril26).
  - Downtown segment virtual presentation and live question and answer session hosted on June 17, 2021 (https://www.metrolinxengage.com/en/OLLiveJune17).
  - Early works webpage (https://www.metrolinxengage.com/en/content/early-works) and environment webpage (https://www.metrolinxengage.com/en/content/ontario-line-environment) updates that includes information related to environmental reporting and timelines, early works timelines, scope overview and location and provides an option to learn more about each early works location – published on September 17, 2020 and updated on April 23, 2021, May 12, 2021, June 11, 2021, July 5, 2021 and July 15, 2021 to provide an overview of the Corktown Station early works.
- Mailings/notifications;
- Emails via the Project email address (ontarioline@metrolinx.com);
- E-newsletters to the Project Distribution List (see **Section 8.1.3** for more details);
- Newspaper advertisements;
- Elected officials briefings;
- Outreach to technical stakeholders and Indigenous Nations; and
- Online consultation via the Engagement webpage (Project website).

In accordance with Section 8(2)10 of Ontario Regulation 341/20: Ontario Line Project, the consultation record summarized in **Section 8** and provided in **Appendix B** summarizes the Corktown Station early works consultation activities carried out with members of the public, technical stakeholders, community stakeholders and groups, elected officials, Indigenous Nations, and other interested parties, including a summary of feedback and comments received.

On May 12, 2021, the Notice of Publication of the Draft Corktown Station Early Works Report was issued to commence the public review period, effective until June 11, 2021 along with the up to 65-day review and Issues Resolution Process period. The Notice was distributed via:

- Engagement webpage on the Project website (www.metrolinx.com/ontarioline);

- Email to individuals on the Project Distribution List, including community stakeholders and groups, government review agencies and other technical stakeholders, and Indigenous Nations;
- Mailed to 4,166 property owners within 30 metres of the Corktown Station Early Works Project Footprint and approximately 15,090[3] addresses (i.e., apartments, houses, businesses) within and surrounding the Corktown Station Study Area; and
- Newspaper advertisements in three major newspapers in English and French.

Following the consultation program described in **Section 8**, Notice of Publication of the Final Corktown Station Early Works Report was issued to the public on July 15, 2021 through a variety of media (Project website, registered mail, newspapers, and mail drop to nearby addresses). All parties notified of the Draft Early Works Report were notified of the publication of the Final Corktown Station Early Works Report and provided with access to a copy of it. Input/feedback received during the 30-day public review period of the Draft Corktown Station Early Works Report was incorporated into the Final Corktown Station Early Works Report.

Extensive consultation was also undertaken by Metrolinx for the overall Project, which is detailed in the Ontario Line Final Environmental Conditions Report (AECOM, 2020a), under separate cover.

3. The property list has been updated since publishing the Draft Corktown Station Early Works Report from 14,715 to 15,090 to accommodate the most recent Canada Post mail routes, which are updated on a monthly basis.

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Appendices

1 Introduction

1.1 Purpose of the Ontario Line Corktown Station Early Works

The Ontario Line Project (the Project) is being assessed in accordance with Ontario Regulation 341/20: Ontario Line Project under the Environmental Assessment Act. Ontario Regulation 341/20: Ontario Line Project outlines a Project-specific environmental assessment process that includes an Environmental Conditions Report, Environmental Impact Assessment Report, and an opportunity for Early Works Report(s) for assessment of works that are ready to proceed in advance of the Environmental Impact Assessment Report. The Environmental Conditions Report documents the local environmental conditions of the Ontario Line Study Area and provides a preliminary description of the potential environmental impacts from the Project. Information outlined in the Environmental Conditions Report is used to inform the Early Works Report(s) and Environmental Impact Assessment Report, which study environmental impacts in further detail and confirm and refine preliminary mitigation measures identified in the Environmental Conditions Report.

Ontario Line early works are components of the Project that are proposed to proceed before the completion of the Ontario Line environmental impact assessment process. An overview of the Project is provided in **Section 1.2**. AECOM Canada Limited (AECOM) was retained by Metrolinx and Infrastructure Ontario to complete this Ontario Line Corktown Station Early Works Report (this Report) for the Project. Early works are defined in Ontario Regulation 341/20: Ontario Line Project under the Environmental Assessment Act as follows:

> "any components of the Ontario Line Project that Metrolinx proposes to proceed with before the completion of the Ontario Line assessment process, such as station construction, rail corridor expansion, utility relocation or bridge replacement or expansion."

This Report documents the assessment of the Corktown Station early works. The rationale for proceeding with the Corktown Station early works is provided in **Section 1.3.1**. Corktown Station early works are described in detail in **Section 3**.

1.2 Ontario Line Project Overview

Metrolinx, an agency of the Province of Ontario, is proceeding with the planning and development of the Ontario Line, extending from Exhibition/Ontario Place to the Ontario Science Centre in the City of Toronto.

The Project is a new approximately 15.6-kilometre subway line with connections to Line 1 (Yonge-University) subway service at Osgoode and Queen Stations, Line 2 (Bloor-Danforth) subway service at Pape Station, and Line 5 (Eglinton Crosstown) light rail transit service at the future Science Centre Station. Fifteen stations are proposed, with additional connections to three GO Transit lines (Lakeshore East, Lakeshore West and Stouffville), and the Queen, King, Bathurst, Spadina, Harbourfront, and Gerrard/Carlton streetcar routes. The Project will reduce crowding on Line 1 and provide connections to new high-order rapid transit neighbourhoods. The Project will be constructed in a dedicated right-of-way with a combination of elevated (i.e., above existing rail corridor/roadway), tunnelled (i.e., underground), and at-grade (i.e., at grade with existing rail corridor) segments at various locations.

The Corktown Station early works location within the context of the Project is shown in **Figure 1-1**.

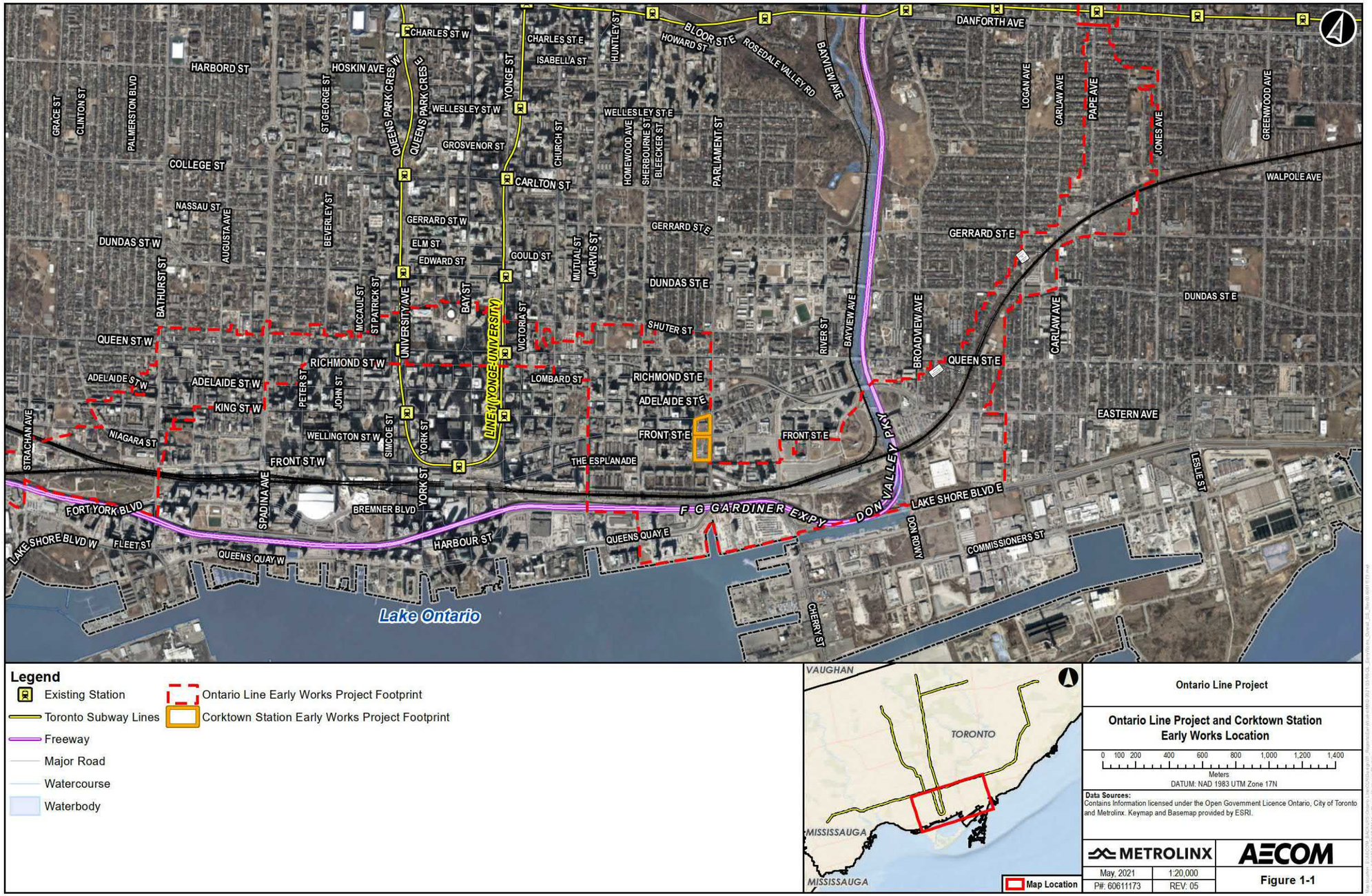
1.3 Early Works Overview

1.3.1 Rationale for Proceeding with the Corktown Station Early Works

The Corktown Station early works site has been identified as the launch site for the tunnel excavation equipment to complete tunnels and underground station spaces for the downtown and Don Yard segments and construction of the Corktown Station (further details provided in **Section 3**). The First Parliament site is located within the Corktown Station early works site and is a known archaeological site which requires additional archaeological studies ahead of any ground disturbance activities (more details provided in **Section 5.8** and **Section 6.8**). The Corktown Station early works site will provide essential logistics support required for the Project's tunneling. To prepare this site, demolition of existing buildings and structures (early works activities, as outlined in **Section 3.3)** and completion of necessary archaeological studies are required. Completion of this preparatory work on an expedited basis is essential to allow for the timely delivery of the overall Project.

The assessment of project operations and construction of Corktown Station and other project components will be documented in the Ontario Line Environmental Impact Assessment Report in accordance with Section 15 of Ontario Regulation 341/20: Ontario Line Project.

Figure 1-1: Ontario Line Project and Corktown Station Early Works Location



1.3.2 Summary of Background Information related to the Corktown Station Early Works

The Corktown Station site has been identified as the launch site for the tunneling equipment (tunnel boring machines, roadheaders[4]) to complete tunnels and underground station spaces for the downtown and Don Yard segments, and construction of the Corktown Station. Three launch site alternatives, Corktown Station site, Distillery Lane site and Don Yard (**Figure 1-2**), were evaluated.

The following criteria were used to evaluate the three potential tunnel boring machine launch sites:

- The site must be located on a straight segment of the proposed alignment to optimize tunnel boring machine launch conditions;
- The site must be of sufficient size to accommodate launch of the tunnel boring machine and all associated equipment and staging areas; and,
- The site must be within a location where open cut excavation is proposed (e.g. a station or emergency exit building), thereby reducing construction impacts to the surrounding community by reducing the amount of open cut excavation required.

The Distillery Lane location was considered but determined as unfeasible due to its location at a curved segment of the alignment, insufficient site size to accommodate all equipment and staging areas required for tunnel boring machine launch, and not within a location where open cut excavation is also proposed. In addition, the site's proximity to built heritage resources and cultural heritage landscapes, including the Distillery District National Historic Site, was considered to be unsuitable for tunnel boring machine launch.

The Don Yard location was also considered as a tunnel boring machine launch site. Although the site is located within a straight segment of the alignment and also in a location where open cut excavation is proposed, accommodating the required staging area at this location would require two staging sites, separated the GO Rail Corridor, presenting design challenges and conflicts with existing rail infrastructure which would reduce constructability. Given these constructability challenges, the site was considered to be unsuitable for tunnel boring machine launch.

4. Roadheaders are a type of excavation equipment used in tunnel boring which generally mines, extracts and moves materials out of the tunneling path.

The Corktown Station site was selected as the preferred location as it met the criteria described above: it is located in a straight section of the tunnel alignment and is sufficiently large to accommodate the tunnel boring machine entry point and support tunnelling-related work (e.g., tunnel liners[5] and soil handling, maintenance, administrative space, water treatment). In addition, the site is absent of any major utility conflicts, reducing construction complexity. This location will also serve as the future Corktown Station site. Tunneling activities, station construction and operation will be assessed as part of the forthcoming Environmental Impact Assessment Report.

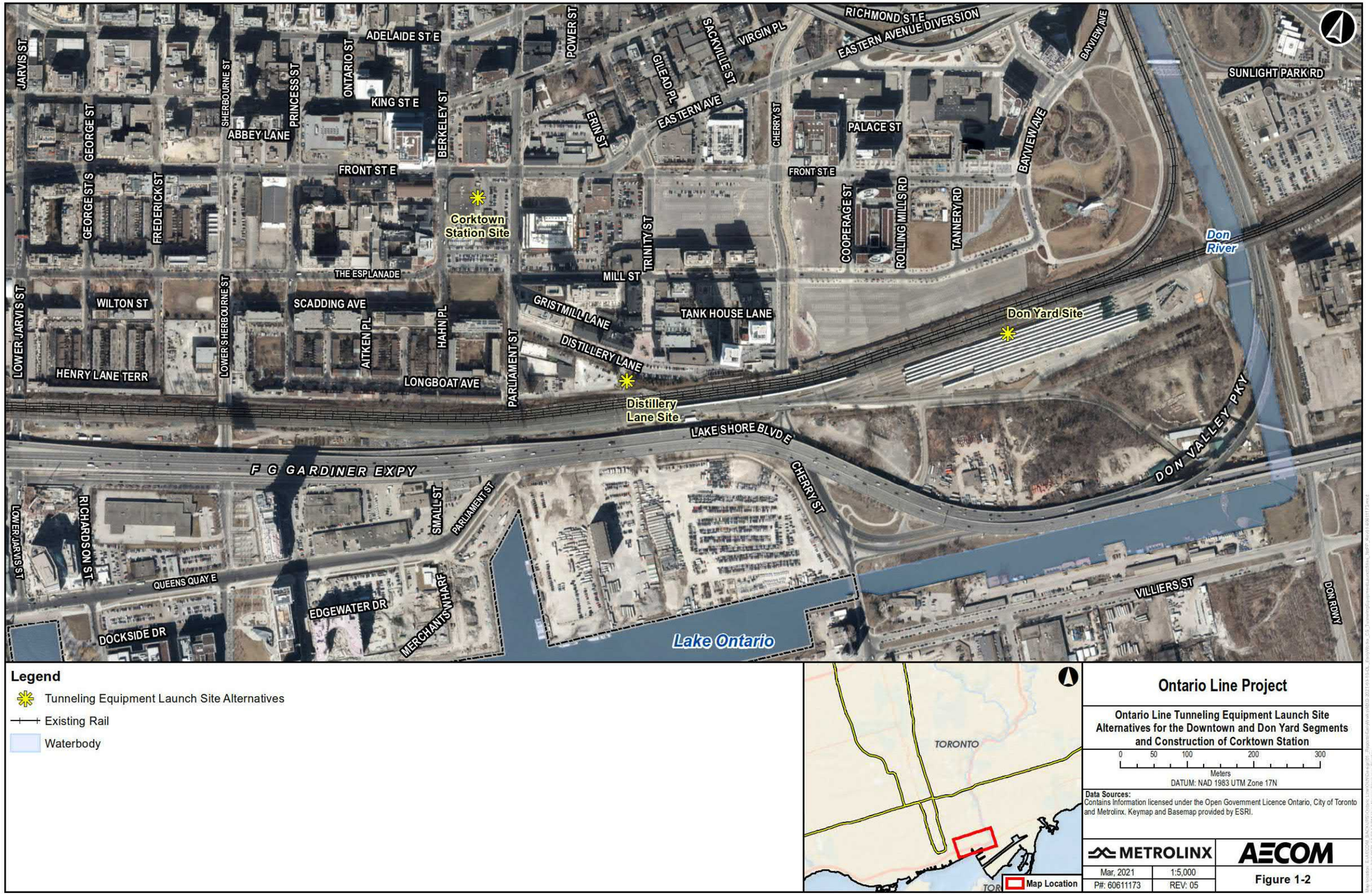
Corktown Station siting is discussed in detail in the Ontario Line Preliminary Design Business Case (Metrolinx, 2020), which includes a benefits analysis of station location alternatives. Siting of Corktown Station at this location provides connections to the Corktown community, the Distillery District, and the St. James Campus of George Brown College. It offers a connection to the eastern leg of the Toronto Transit Commission's King streetcar route and local bus services on Parliament Street. The station will service existing and planned residential developments in the area and provide relief to the King streetcar by diverting passengers onto the Ontario Line. Construction of the station at this location reduces construction impacts to the surrounding community by moving construction into an off-street location, which doubles as a work site for the tunnel boring machine launch and tunnel construction work.

1.3.3 Description of the Alternatives Considered

Metrolinx considered alternative methods of delivering the Project, including a non-phased approach to Project implementation. It has been determined that a phased approach to implementation – that is, proceeding with demolition of existing buildings and structures at Corktown Station as early works – is imperative for expedient completion of necessary environmental due diligence investigations.

5. A tunnel liner is a structural material (commonly metal or concrete) installed to define the inner surface of a tunnel; used to maintain dimensions and provide structural integrity.

Figure 1-2: Ontario Line Tunneling Equipment Launch Site Alternatives for the Downtown and Don Yard Segments and Construction of Corktown Station



Legend

- Tunneling Equipment Launch Site Alternatives
- Existing Rail
- Waterbody

Ontario Line Project

Ontario Line Tunneling Equipment Launch Site Alternatives for the Downtown and Don Yard Segments and Construction of Corktown Station

0 50 100 200 300
Meters
DATUM: NAD 1983 UTM Zone 17N

Data Sources:
Contains Information licensed under the Open Government Licence Ontario, City of Toronto and Metrolinx. Keymap and Basemap provided by ESRI.

METROLINX | AECOM

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Figure 1-2

2 Study Process

2.1 Ontario Regulation 341/20: Ontario Line Project

This Project is being assessed in accordance with Ontario Regulation 341/20: Ontario Line Project, under the Environmental Assessment Act. Ontario Regulation 341/20: Ontario Line Project provides a defined framework for the proponent to follow to conduct assessment and decision-making surrounding the potential environmental impacts of the Project.

Ontario Regulation 341/20: Ontario Line Project requires consultation with Indigenous Nations and interested persons, an Environmental Conditions Report, and an Environmental Impact Assessment Report. Ontario Regulation 341/20: Ontario Line Project provides opportunity for Metrolinx to prepare one or more early works reports.

2.1.1 Early Works Report

2.1.1.1 Draft Early Works Report

This Ontario Line Draft Corktown Station Early Works Report was prepared to satisfy the requirements of Section 8 of Ontario Regulation 341/20: Ontario Line Project. This Ontario Line Draft Corktown Station Early Works Report summarizes the local environmental conditions within the discipline-specific study areas developed for the Corktown Station early works. The local environmental conditions were characterized through a combination of desktop review and field studies by practitioners using industry standard techniques and provincial standards, protocols, and guidelines, where appropriate. A detailed description of local environmental conditions is documented in the Ontario Line Final Environmental Conditions Report (AECOM, 2020a)[6], prepared under a separate cover in accordance with Section 4 of Ontario Regulation 341/20: Ontario Line Project.

This Report also provides an assessment and evaluation of the impacts that the Corktown Station early works might have on the environment. Based on the potential impacts, a description of mitigation measures and monitoring activities were outlined. A list of any municipal, provincial, federal or other permits and approvals that may be required for the early works is also provided.

6. The Ontario Line Final Environmental Conditions Report (AECOM, 2020) was published on November 30, 2020 in accordance with Ontario Regulation 341/20: Ontario Line Project.

Discipline-specific assessment and evaluation of impacts were undertaken for the following disciplines:

- Natural Environment;
- Soil and Groundwater;
- Hydrology and Surface Water;
- Air Quality;
- Noise and Vibration;
- Socio-Economic and Land Use Characteristics;
- Built Heritage Resources and Cultural Heritage Landscapes;
- Archaeological Resources;
- Traffic and Transportation; and,
- Utilities.

Lastly, the Ontario Line Draft Corktown Station Early Works Report provides a consultation record including a description of the consultations carried out with Indigenous Nations and interested persons.

2.1.1.2 Consultation on Early Works Report

In order to build strong relationships, to develop an understanding of local issues in the surrounding communities, and to ensure communities stay engaged and informed, Metrolinx engages the public and a range of interested parties, including: Indigenous Nations, elected officials, regulatory agencies, community stakeholders and groups and other interested persons. The Corktown Station early works consultation activities are outlined below and further detailed in **Section 8** of this Report. All consultation materials are included in **Appendix B**.

The overall approach to consultation for the Project is outlined in Section 7.1.1 of the Ontario Line Final Environmental Conditions Report (AECOM, 2020a). To share information and collect feedback related to Corktown Station early works, Metrolinx has undertaken the following communication and engagement activities prior to the publication of the Final Corktown Station Early Works Report:

- Early works specific updates on the Engagement webpage (Project website) (www.metrolinx.com/ontarioline) including:
    - Downtown segment neighbourhood updates (Corktown Station is located within the Downtown segment) – published on September 17, 2020 and updated on April 23, 2021, May 12, 2021 and June 17, 2021.

  - Downtown segment virtual presentation and live question and answer session hosted on April 26, 2021 (https://www.metrolinxengage.com/en/OLliveApril26).
  - Downtown segment virtual presentation and live question and answer session hosted on June 17, 2021 (https://www.metrolinxengage.com/en/OLLiveJune17).
  - Early works webpage (https://www.metrolinxengage.com/en/content/early-works) and environment webpage (https://www.metrolinxengage.com/en/content/ontario-line-environment) updates that includes information related to environmental reporting and timelines, early works timelines, scope overview and location and provides an option to learn more about each early works location – published on September 17, 2020 and updated on April 23, 2021, May 12, 2021, June 11, 2021, July 5, 2021 and July 15, 2021 to provide an overview of the Corktown Station early works.
- Mailings/notifications;
- Emails via the Project email address (ontarioline@metrolinx.com);
- E-newsletters to the Project Distribution List (see Section 8.1.3 for more details);
- Newspaper advertisements;
- Elected officials briefings;
- Outreach to technical stakeholders and Indigenous Nations; and
- Online consultation via the Engagement webpage (Project website).

In accordance with Section 8(2)10 of Ontario Regulation 341/20: Ontario Line Project, the consultation record summarized in **Section 8** and provided in **Appendix B** summarizes the Corktown Station early works consultation activities carried out with members of the public, government review agencies and other technical stakeholders, community stakeholders and groups, elected officials, Indigenous Nations, and other interested parties, including a summary of feedback and comments received.

On May 12, 2021, the Notice of Publication of the Draft Corktown Station Early Works Report was issued to commence the 30-day public review period, effective until June 11, 2021, along with the 65-day review and Issues Resolution Process period. The Notice was distributed via:

- Engagement webpage on the Project website (www.metrolinx.com/ontarioline);

- Newspaper advertisements in three major newspapers in English and French;
- Email to individuals on the Project Distribution List, including community stakeholders and groups, government review agencies and other technical stakeholders, elected officials, and Indigenous Nations; and
- Mailed to all individuals on the Project Distribution List, approximately 15,090[7] properties (i.e., apartments, houses and businesses) within and surrounding the Corktown Station Study Area and 4,166 property owners within 30 metres of the Corktown Station Early Works Project Footprint.

Extensive consultation was also undertaken by Metrolinx for the overall Project, which is detailed in the Ontario Line Final Environmental Conditions Report (AECOM, 2020a), under separate cover.

2.1.1.2.1 Issues Resolution Process

In accordance with Section 10(6) of Ontario Regulation 341/20: Ontario Line Project, Metrolinx established an issues resolution process for the Corktown Station early works. Any concerns raised by Indigenous Nations and interested persons during the 30-day public review period of the Draft Early Works Report have been documented in **Section 8.7.1** of this Report, as required by Section 11(1)(b) of Ontario Regulation 341/20: Ontario Line Project. Concerns received after the 30-day public review period will be addressed outside of the issues resolution process.

2.1.1.3 Final Early Works Report

Following the consultation program described in **Section 2.1.1.2** and **Section 8**, the Notice of Publication of the Final Early Works Report was issued to the public on July 15, 2021 through a variety of media (Project website, registered mail, social media, newspapers, and mail drop to nearby addresses). All parties notified of the Draft Corktown Station Early Works Report were notified of the publication of the Final Early Works Report and provided with access to a copy of it. Input/feedback received during the 30-day public review period was incorporated into this Report.

Within 35 days after receipt of the Notice of Publication of the Final Early Works Report, the Minister may issue a notice to Metrolinx imposing conditions related to the early works, in accordance with Section 12 of the Ontario Regulation 341/20: Ontario Line Project.

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7. The property list has been updated since publishing the Draft Corktown Station Early Works Report from 14,715 to 15,090 to accommodate the most recent Canada Post mail routes, which are updated on a monthly basis.

After the 35-day Minister review period, Metrolinx will submit a Statement of Completion of the early works assessment process to the Directors of the Ministry's Environmental Assessment Branch and Central Region Office and post the Statement of Completion on the Project website. Metrolinx shall proceed in accordance with the Final Early Works Report, subject to any conditions imposed by the Minister.

2.1.2 Contents of the Early Works Report

This Report has been prepared in accordance with Section 8 of Ontario Regulation 341/20: Ontario Line Project and contains the information outlined in **Table 2-1**.

Table 2-1: Early Works Report Contents in Accordance with Ontario Regulation 341/20: Ontario Line Project

Reg. Section	Requirement	Report Section
Section 8(2)1	A description of the early works including a description of the alternatives that were considered.	**Section 1.3 and Section 3**
Section 8(2)2	The rationale for proceeding with the early works and a summary of background information relating to them.	**Section 1.3**
Section 8(2)3	A map showing the site of the early works.	**Figure 3-1**
Section 8(2)4	A description of the local environmental conditions at the site of the early works.	**Section 5 and Appendix A**
Section 8(2)5	A description of all studies undertaken in relation to the early works, including, i. a summary of all data collected or reviewed, and ii. a summary of all results and conclusions.	**Section 5, Section 6 and Appendix A**
Section 8(2)6	Metrolinx's assessment and evaluation of the impacts that the preferred method of carrying out the early works and other methods might have on the environment, and Metrolinx's criteria for assessment and evaluation of those impacts.	**Section 6 and Appendix A**
Section 8(2)7	A description of any measures proposed by Metrolinx for mitigating any negative impacts that the preferred method of carrying out the early works might have on the environment.	**Section 6 and Appendix A**
Section 8(2)8	A description of the means Metrolinx proposes to use to monitor or verify the effectiveness of mitigation measures proposed.	**Section 6 and Appendix A**
Section 8(2)9	A description of any municipal, provincial, federal or other approvals or permits that may be required for the early works.	**Section 7 and Appendix A**
Section 8(2)10	A consultation record, including, i. a description of the consultations carried out with Indigenous Nations and interested persons, ii. a list of the Indigenous Nations and interested persons who participated in the consultations,	**Section 8 and Appendix B**

Reg. Section	Requirement	Report Section
	iii. summaries of the comments submitted by Indigenous Nations and interested persons, and iv. a summary of discussions that Metrolinx had with Indigenous Nations, and copies of all written comments submitted by Indigenous Nations.	

2.2 Planning Context

The Province of Ontario and City of Toronto have plans and policies which are relevant to the development of the Project. An overview of the Project is provided in **Section 1.2**. These plans and policies serve as important elements of the planning framework and provide insight into key provincial and municipal objectives, while encouraging strategic transportation development.

The following sections provide an overview of the planning policies affecting the Project. These individual plans and policies, as well as other planning considerations such as municipal strategies and guidelines, and relevant environmental assessment studies, are described in more detail in **Section 5.6** of this Report.

2.2.1 Provincial

2.2.1.1 Provincial Policy Statement, 2020

The Provincial Policy Statement, 2020 is issued under Section 3 of the Planning Act and provides policy direction on matters related to land use planning and development. The Provincial Policy Statement is premised upon the efficient use of land and infrastructure, the protection of environmental resources, and ensuring sufficient land is available for the development of future employment and residential uses.

Of relevance to the Corktown Station Study Area are policies that relate to transportation systems and infrastructure, long-term economic prosperity, and the protection of natural, cultural, and built heritage. In particular, the Provincial Policy Statement promotes:

- Healthy and active communities by facilitating active transportation and community connectivity (Provincial Policy Statement, 2020, Section 1.5.1);
- The planning for and protection of transportation infrastructure and transit to meet current and projected needs (Provincial Policy Statement, 2020, Section 1.6.8.1);

- Providing safe, energy efficient, integrated, and reliable multimodal transportation systems which facilitate the movement of people and appropriately address projected needs (Provincial Policy Statement, 2020, Section 1.6.7);
- Maintaining or restoring the diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of natural heritage systems (Provincial Policy Statement, 2020, Section 2.1.2);
- Restricting development and site alteration in, or adjacent to, significant wetlands, woodlands, valley lands, wildlife habitat, and Areas of Natural and Scientific Interest, unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions (Provincial Policy Statement, 2020, Sections 2.1.4 and 2.1.5);
- Restricting development and site alteration in habitat of endangered or threatened species except in accordance with Provincial and Federal requirements (Provincial Policy Statement, 2020, Section 2.1.7); and
- Restricting development and site alteration in or near sensitive surface or groundwater features such that their features and related hydrological functions will be protected, improved, or restored (Provincial Policy Statement, 2020, Section 2.2.2).

The Project is consistent with the objectives of the Provincial Policy Statement as it supports the expansion and optimization of a multi-modal transportation system that provides connectivity to existing local and regional transit and supports long-term economic prosperity. The Project will also support areas that are planned for residential and employment growth and the potential to support multiple modes of travel, foster improved connectivity, and allow for the development of compact, mixed-use communities.

As noted in **Section 1.3.1**, the Corktown Station early works support the timely implementation of the Project, and are therefore also consistent with the objectives of the Provincial Policy Statement.

2.2.1.2 A Place to Grow: Growth Plan for the Greater Golden Horseshoe

A Place to Grow: Growth Plan for the Greater Golden Horseshoe, 2020 (Growth Plan) is a long-term plan for Ontario designed to promote economic growth, increase housing supply, create jobs, and build communities that make life easier, healthier, and more affordable for people of all ages. As one of the most dynamic and fast-growing regions in North America, the Greater Golden Horseshoe is a designation for many people and businesses relocating from other parts of Canada and around the world. To

accommodate such growth, an integral part of the Plan's vision is focused on investing in transit infrastructure to support the regional transit network.

The Project is consistent with the relevant policies of the Growth Plan by extending the higher-order transit network into existing residential and employment areas, which optimizes the efficiency and viability of existing and planned transit and help develop more vibrant and complete communities.

The Growth Plan identifies Downtown Toronto as an "urban growth centre" and the GO Transit rail lines and subway lines within the Downtown Toronto area "priority transit corridors" (Province of Ontario, 2020). The Growth Plan notes that urban growth centres will be planned:

a) as focal areas for investment in regional public service facilities, as well as commercial, recreational, cultural, and entertainment uses;

b) to accommodate and support the transit network at the regional scale and provide connection points for inter- and intra-regional transit;

c) to serve as high-density major employment centres that will attract provincially, nationally, or internationally significant employment uses; and,

d) to accommodate significant population and employment growth.

Each "urban growth centre" is given a minimum density target to achieve by 2031. The minimum density target for Downtown Toronto is 400 residents and jobs combined per hectare. To support these growth and density targets, "priority transit corridors" are identified with policies for infrastructure development, such as requiring municipalities to recognize these areas in their official plans to implement the policies of the Growth Plan.

The Project promotes the Growth Plan's policies by providing Downtown Toronto with improved regional connections that will accommodate the increased population and employment to be achieved by the density targets.

As noted in **Section 1.3.1**, the Corktown Station early works support the timely implementation of the Project, and are therefore also consistent with the objectives of the Growth Plan.

2.2.1.3 2041 Regional Transportation Plan

The 2041 Regional Transportation Plan is a strategic, long-term vision for interconnected transportation in the Greater Toronto and Hamilton Area. The Regional Transportation Plan was adopted by Metrolinx in March 2018. The Regional Transportation Plan is the successor to Metrolinx's first long-term transportation plan, The Big Move (2008).

The Regional Transportation Plan identifies the following five key strategies:

1. Complete delivery of current regional transit projects.
2. Connect more of the region with frequent rapid transit.
3. Optimize the transportation system.
4. Integrate transportation and land use.
5. Prepare for an uncertain future.

Under Strategy 1, the Regional Transportation Plan notes that planning is underway for 13 rapid transit projects including the Relief Line Subway, which is described as a "new subway line linking downtown Toronto, the Bloor-Danforth Subway and Sheppard Avenue" and "will manage congestion along the Yonge Subway Line, from Osgoode Station to Sheppard Avenue East in Toronto" (Metrolinx, 2018). The Relief Line Subway is listed under "Projects in Development" and Relief Line Subway West Extension (Osgoode Station – Bloor West) is listed under "Projects beyond 2041" (Metrolinx, 2018). The Regional Transportation Plan notes that earlier planning will occur for the West Extension (Metrolinx, 2018).

The Project meets the intent of the Regional Transportation Plan, as it will provide a new subway connecting downtown Toronto and providing relief to the existing Yonge-University Subway (Line 1). As noted in **Section 1.3.1**, the Corktown Station early works support the timely implementation of the Project, and are therefore also consistent with the objectives of the Regional Transportation Plan.

2.2.1.4 The Greenbelt Plan, 2017

The Greenbelt Plan, 2017, identifies where urbanization should not occur in order to provide permanent protection to the agricultural land base and the ecological and hydrological features, areas, and functions occurring within the Greater Golden Horseshoe landscape (Province of Ontario, 2017). The Greenbelt Plan was introduced in 2005 under the Greenbelt Act, 2005, and includes lands within, and builds upon the ecological protections provided by, the Niagara Escarpment Plan and the Oak Ridges Moraine Conservation Plan[8]. The Greenbelt Plan, together with the Growth Plan, builds on the Provincial Policy Statement to establish a land use planning framework for the Greater Golden Horseshoe that supports a thriving economy, a clean healthy environment, and social equity (Province of Ontario, 2017).

8. The Corktown Station Study Area does not fall within the protections of the Niagara Escarpment Plan or Oak Ridges Moraine Conservation Plan.

A portion of the Project is located within the Greenbelt Area (i.e., the Don River); however, the Corktown Station Early Works Project Footprint is located within the "Settlement Areas Outside of the Greenbelt" (Province of Ontario, 2017).

2.2.1.5 Conservation Authorities Act, 1998

The Corktown Station Early Works Project Footprint falls under the jurisdiction of the Toronto and Region Conservation Authority. Ontario Regulation 166/06 under Section 28 of the *Conservation Authorities Act* (1998), establishes regulated areas within Toronto and Region Conservation Authority's jurisdiction where development could be subject to flooding, erosion or dynamic beaches, or where interference with wetlands and alterations to shorelines and watercourses might have an adverse effect on those environmental features. The Corktown Station Early Works Project Footprint is not located within the Toronto and Region Conservation Authority Regulation Limit.

2.2.2 Municipal

2.2.2.1 City of Toronto Official Plan

The City of Toronto Official Plan (Official Plan) is intended to ensure that the City of Toronto evolves, improves, and realizes its full potential in areas such as transit, land use development, and the environment. Chapters 1 to 5 of the Official Plan contain city-wide policies that guide new development and related decision-making. As a municipal document, the Official Plan reflects provincial policies, plans, and initiatives (as described in **Section 2.2.1**) for effective implementation at the city level.

Further to the Official Plan's city-wide policies, Chapter 6 of the Official Plan is dedicated to Secondary Plans, which are more detailed local development policies to guide growth and change in a defined area of the City. Each Secondary Plan focuses on a key area, community, or neighbourhood to implement visions and objectives specific to these areas.

The following three City of Toronto secondary plans are applicable to the Corktown Station Study Area

- King-Parliament City of Toronto Secondary Plan;
- Central Waterfront Secondary Plan; and,
- Downtown Plan.

Refer to **Section 5.6** for description of the secondary plans relative to the Corktown Station early works.

2.2.2.2 Port Lands Planning Framework

The City of Toronto and Waterfront Toronto developed the Port Lands Planning Framework in 2017 as a 50-plus year vision to help guide the transformation of the Port Lands from a predominantly industrial district into a modern and vibrant extension of the city (City of Toronto, 2017a). The framework defines one vision for the transformation with six essential elements to ground the vision and define the Port Lands character, seven transformation moves to unlock the potential of the Port Lands and twelve objectives to define what is to be achieved and measure success. The framework includes comprehensive directions and recommendations related to land use, parks and open spaces, cultural heritage, complete and inclusive communities, movement and access, built form, arts and culture, sustainability, biodiversity, servicing and implementation.

The twelve objectives of the framework include (City of Toronto, 2017a):

1. Ensure land use across the Port Lands and associated development is diverse with beautifully designed buildings, and where appropriate, capable of adaptive reuse.
2. Actively pursue land use that will shape prosperity and increase Toronto's global competitiveness and drive a strong, production-oriented, digitally-connected, innovative and diverse economy.
3. Optimize maritime industries and support the working port while managing neighbourhood interface.
4. Create a diverse and multi-functional public realm with activated public spaces, the highest caliber of urban design, and that showcases stormwater as a resource.
5. Celebrate and conserve the unique history of the Port Lands to create new experiences and bolster character both within and from afar.
6. Connect the Port Lands to the city and achieve a fine-grained public street network over time for easy, seamless access with an emphasis on transit and active transportation while maintaining goods movement.
7. Create inclusive, social places with a range of housing choice, rich amenity and activity for healthy, prosperous and resilient lifestyles for all Torontonians.
8. Embrace the wild, natural areas and provide access for wildlife to enable abundant biodiversity.

9. Ensure the transportation is globally significant and showcases approaches embodying the cultural and technological shifts necessary for climate change resiliency and mitigation.
10. Ensure orderly development in lock-step with infrastructure improvements.
11. Create destinations for Torontonians, building on legacies and implement early activation projects to kick-start the transformation and enhance public access.
12. Strategically consolidate and relocate some existing uses to create opportunity and improve public access while also wisely managing land to support future evolutionary potential.

2.2.3 Applicable Environmental Assessments and Planning Studies

2.2.3.1 First Parliament Project

The City of Toronto, in partnership with the Province of Ontario and Ontario Heritage Trust, is undertaking the First Parliament Project to determine how to best develop the First Parliament site. The First Parliament Project consists of two phases (City of Toronto, 2021b):

- Phase 1: Heritage Interpretation Strategy
- Phase 2: Master Plan

Phase 1 was completed in 2020 when the City released the Heritage Interpretation Strategy, which outlines a brief history of the site, interpretation framework, identifies a core message, and the future of the strategy (City of Toronto, 2020e). Phase 2 will build on the heritage values identified in the Heritage Interpretation Strategy to prepare a plan to develop the site over the next 10 to 20 years and identify proposed uses for the site (City of Toronto, 2019e). The Master Planning process will include engaging stakeholders, identifying partnerships and developing an overall vision and implementation plan for the site (City of Toronto, 2021b).

2.2.3.2 Waterfront Transit Reset – Waterfront East Light Rail Transit

The City of Toronto, in partnership with the Toronto Transit Commission and Waterfront Toronto, is undertaking the Waterfront Transit “Reset” study, including a comprehensive assessment of needs and options to enhance transit connections along Toronto’s waterfront. The Waterfront Transit Reset study area extends from the Long Branch GO Station and the Mississauga border in the west to Woodbine Avenue in the east, and

south of the Queensway/Queen Street corridor to Lake Ontario, overlapping with the Corktown Station Study Area.

The Phase 1 study was completed in 2016 and the Phase 2 study was completed in 2018. City Council endorsed the overall Waterfront Transit Network Plan on January 31, 2018 and directed City staff to proceed with detailed planning and design studies (City of Toronto, 2019a). Consultation activities are currently underway for detailed design between Union Station and Cherry Street (City of Toronto, 2019a).

2.2.3.3 Gardiner Expressway Strategic Rehabilitation Plan

The City of Toronto developed the Gardiner Expressway Strategic Rehabilitation Plan to establish the immediate and long-term rehabilitation needs of the Gardiner Expressway, improve transportation corridors within the area, and provide more efficient public transit connections (City of Toronto, n.d.c). The rehabilitation is being completed in seven sections, two of which are within the Corktown Station Study Area:

- The segment between Jarvis Street and Cherry Street with a projected timeline of planned construction between 2018 and 2021 (City of Toronto, n.d.c); and
- The segment between Cherry Street and east of the Don Valley Parkway at Logan Avenue with a projected timeline of planned construction between 2026 and 2029 (City of Toronto, n.d.c).

The City of Toronto's website notes that the planned construction timelines are subject to change (City of Toronto, n.d.c).

2.2.3.4 Union Station Rail Corridor East Enhancements Environmental Project Report

The Union Station Rail Corridor East Enhancements Project Environmental Project Report was completed in 2018 as part of the Transit Project Assessment Process (AECOM, 2018). The purpose of the Union Station Rail Corridor East Enhancement Project is to provide additional mainline track capacity, increased train storage capacity and increased track speed capabilities along the east side of the Union Station Rail Corridor. The Union Station Rail Corridor East Enhancements Environmental Project Report assessed the following components:

- New track on the north side;
- New tracks on the south side;
- Wilson Yard Layover Facility;

- Bridge Extensions;
- Retaining walls on the north side of the rail corridor; and
- Relocation of the Cherry Street Interlocking Tower.

The Union Station Rail Corridor East Enhancements Environmental Project Report study area overlaps with the Corktown Station Study Area. The Environmental Assessment was completed in 2018, and detailed design for the Project is currently underway.

2.2.3.5 West Don Lands Class Environmental Assessment Master Plan

The West Don Lands Class Environmental Assessment Master Plan supports the West Don Lands precinct (City of Toronto; Toronto Waterfront Revitalization Corporation, 2005). The West Don Lands precinct is a 32-hectare area located generally east of Parliament Street, south of King Street East, west of the Don River, and north of the Gardiner Expressway. The West Don Lands Class Environmental Assessment Master Plan study area overlaps with the Corktown Station Study Area.

The site is being transformed from former industrial lands into a sustainable, mixed-use, pedestrian-friendly, riverside community. The West Don Lands is a large precinct with some developments complete (i.e., River City) and others under construction in 2020 (i.e., West Don Lands Block 8). Development is currently ongoing in support of the West Don Lands Class Environmental Assessment Master Plan (City of Toronto; Toronto Waterfront Revitalization Corporation, 2005).

2.2.3.6 Don Mouth Naturalization and Port Lands Flood Protection Project

The Corktown Station Study Area is within the boundary of the Don Mouth Naturalization and Port Lands Flood Protection Project (Toronto and Region Conservation Authority, 2014a).

Toronto and Region Conservation Authority, on behalf of and in cooperation with Waterfront Toronto and the City of Toronto, completed an Individual Environmental Assessment for the Don Mouth Naturalization and Port Lands Flood Protection Project. The environmental assessment study was approved by the Minister of the Environment, Conservation and Parks (formerly the Minister of the Environment and Climate Change) in March 2014. Construction commenced in the Port Lands in late 2018.

2.2.3.7 Parkland Strategy

The City of Toronto’s Parkland Strategy is a 20-year plan that guides the long-term planning for new parks, and expansion and accessibility to existing parks within the City

(City of Toronto, 2019d). The Parkland Strategy includes a set of strategic actions that will inform future parkland priorities and guide proactive park planning, including the following:

- New methodology for measuring parkland provision and needs;
- Priorities for the development of City-initiated local-level park plans in areas of need;
- Areas for parkland acquisition and shared-use agreements with public agencies;
- Framework to evaluate development review applications and support the City of Toronto Official Plan;
- Framework to inform studies including new and underway Secondary Plans and Site and Area Specific Studies;
- Strategic development of partnerships to leverage opportunities to support the City of Toronto's parks system; and,
- Support future community benefit strategy work.

The Parkland Strategy aims to expand and improve Toronto's park system as the city grows to ensure parks are accessible, functional, connected and resilient (City of Toronto, 2019d).

2.2.3.8 David Crombie Park Revitalization Design

The City of Toronto has undertaken a study for the revitalization of David Crombie Park, including preparing a conceptual design and implementation plan, for improvements to the park to address current and future needs of the community. The revitalization plan includes the existing David Crombie Park as well as the existing Parliament Square Park, south of the First Parliament Site. The final report is available on the project website https://www.toronto.ca/wp-content/uploads/2021/05/9852-david-crombie-park-revitalization-final-report-2021.pdf.

2.2.3.9 Downtown Parks and Public Realm Strategy

The City of Toronto's Downtown Parks and Public Realm Plan is a 25-year plan developed as an implementation tool for the City's Downtown Plan, described in **Section 5.6.1.1.3**, and aims to improve the quality and connectivity of public spaces (City of Toronto, 2017b). The Downtown Parks and Public Realm Plan provides a set of transformative ideas and initiatives to inform decision making about land acquisition, budgets, programming and design of new streets, parks and open spaces, and identifies improvement priorities for downtown Toronto (City of Toronto, 2017b).

2.2.3.10 Downtown Mobility Strategy

The City of Toronto developed the Downtown Mobility Strategy to enable the growing population and visitors in downtown Toronto to travel safely, efficiently and more sustainably (City of Toronto, 2018b). The Downtown Mobility Strategy presents a series of actions that align infrastructure planning with the Downtown Parks and Public Realm Plan, described in **Section 2.2.3.9** above (City of Toronto, 2018b).

The Downtown Mobility Strategy outlines the following priorities:

- **Complete Streets:** identify potential streets as candidates for a 'shared street' re-design, and street typologies and modal priorities.
- **Walking:** prioritize pedestrians and improve connectivity and safety on sidewalks and walkways including improving safety at busy intersections.
- **Cycling**: continue advancing and improving cycling initiatives already planned and in place.
- **Public Transit:** continue with transit improvements to accommodate growth Downtown, including physical and operational improvements along busy surface transit routes.
- **Motor Vehicles:** implement and promote projects that use alternative delivery methods (e.g. bicycles, smaller delivery vehicles), and incorporate new features into street designs that support other road users (e.g. conduits for wiring within the Downtown Film Precinct, plug in locations for tour buses) and multi-modal facilities.

3 Early Works Description

3.1 Project Description

The Corktown Station early works include demolition of existing buildings, removal of other structures and asphalt where required, decommissioning of utilities, and soil removal and/or remediation where required. These activities will enable the completion of environmental due diligence investigations, including archaeological assessments. These activities will occur on properties within the Corktown Station Early Works Project Footprint, as shown in **Figure 3-1**.

3.2 Early Works Project Footprint and Study Area

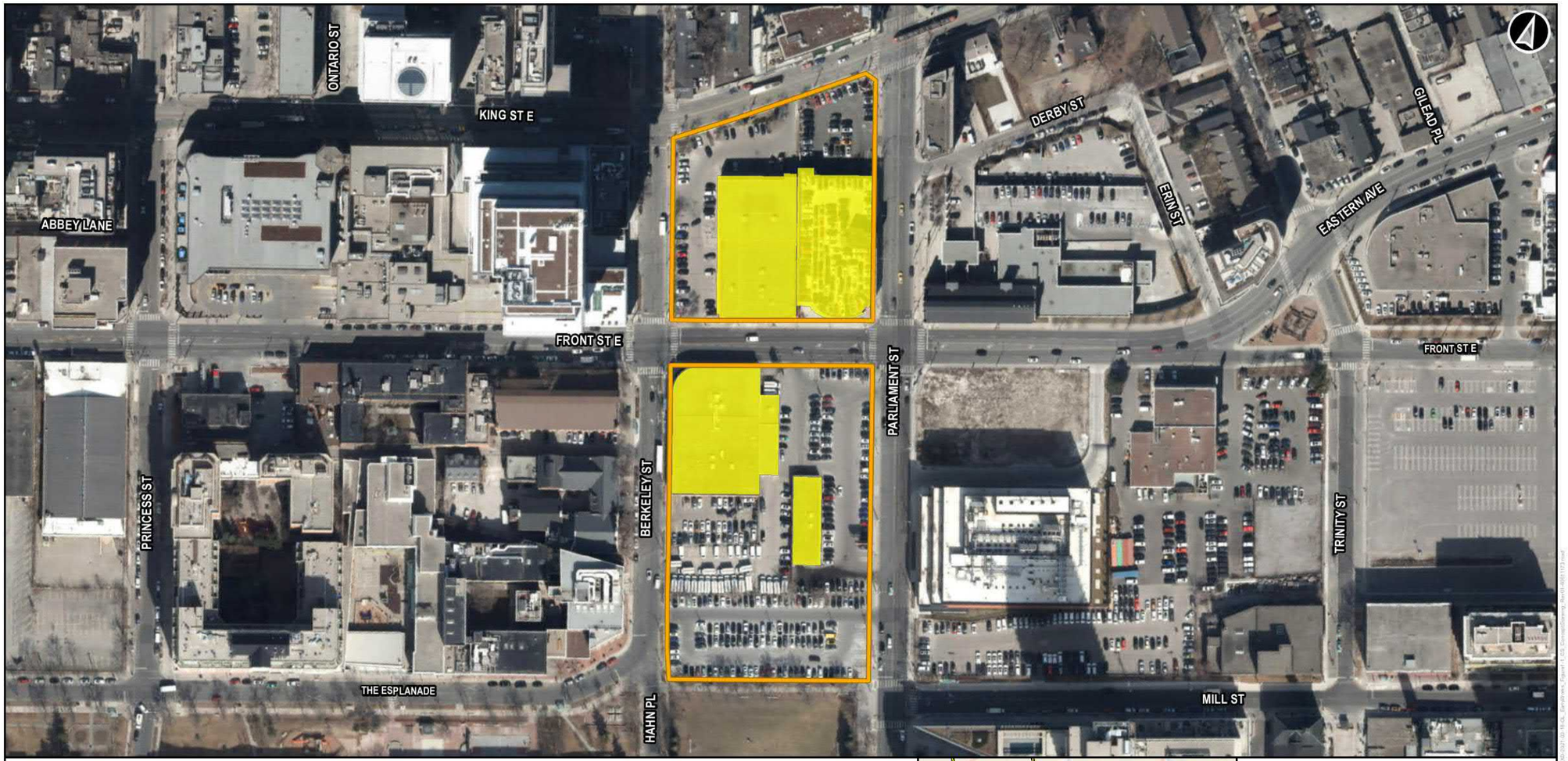
The Corktown Station Early Works Project Footprint, shown in **Figure 3-1**, is defined as the area of direct disturbance associated with the early works activities. The site is bound by King Street East to the north, Parliament Street to the East, Berkeley Street to the West and Parliament Square Park to the south. The project footprint may be revised as project planning progresses.

The Corktown Station Study Area, shown in **Figure 3-2**, includes the Corktown Station Early Works Project Footprint and a 500 metre buffer which was identified for assessment of potential impacts of the Corktown Station early works. As shown in **Table 4-1**, select discipline-specific study areas were identified for assessment of the discipline-specific potential impacts of the Corktown Station early works.

3.3 Construction Activities

Table 3-1 provides a description of the anticipated construction activities for the Corktown Station early works. These typical activities serve as the basis for the assessment of construction-related potential environmental effects. These activities may be expanded, further refined, or found to be unnecessary as early works planning progresses.

Figure 3-1: Corktown Station Early Works Project Footprint and Components

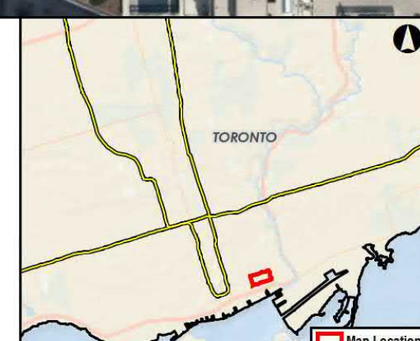


Legend

Corktown Station Early Works Project Footprint

Early Works Components:

Buildings To Be Demolished



Ontario Line Project

Corktown Station Early Works Project Footprint and Components

0 50 100
Meters
DATUM: NAD 1983 UTM Zone 17N

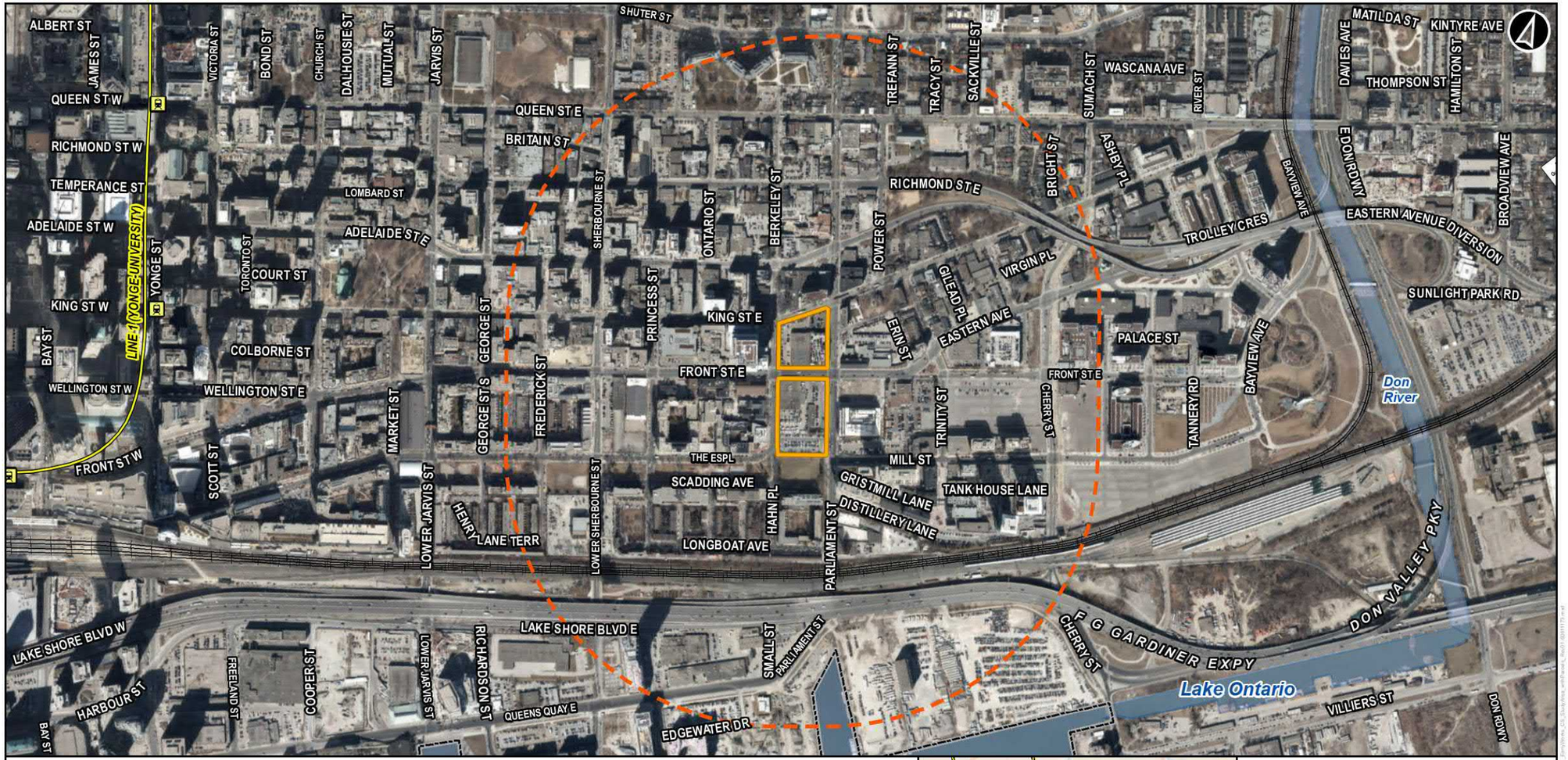
Data Sources:
Contains Information licensed under the Open Government Licence Ontario, City of Toronto and Metrolinx. Keymap and Basemap provided by ESRI.

METROLINX | AECOM

Mar, 2021	1:1,700
P#: 60611173	REV: 02

Figure 3-1

Figure 3-2: Corktown Station Early Works Project Footprint and Study Area



Legend

- Existing Station
- Toronto Subway Lines
- Existing Rail
- Waterbody
- Corktown Station Early Works Project Footprint
- Corktown Station Study Area

Ontario Line Project

Corktown Station Early Works Project Footprint and Study Area

0 50 100 200 300 400 500
Meters
DATUM: NAD 1983 UTM Zone 17N

Data Sources:
Contains Information licensed under the Open Government Licence Ontario, City of Toronto and Metrolinx. Keymap and Basemap provided by ESRI.

METROLINX | AECOM

Mar, 2021	1:7,000
P#: 60611173	REV: 05

Figure 3-2

Table 3-1: Anticipated Construction Activities for the Ontario Line Corktown Station Early Works

Anticipated Construction Activity	Description	Associated Equipment
Site Preparation	■ Mobilization of equipment and temporary facilities to the site. ■ Clearing and grubbing of vegetation, tree removal and protection. ■ Erection of temporary fences. ■ Installation of environmental management features (e.g., erosion and sediment controls). ■ Dewatering works. ■ Demobilization. ■ Temporary signs. ■ Locates and surveys. ■ Notices. ■ Site specific documents (safety, approvals, permit etc.).	■ Site compaction equipment and grading equipment. ■ Vegetation removal equipment. ■ Excavation equipment. ■ Haulage/dump trucks. ■ Dewatering equipment (pumps etc.). ■ Hand tools. ■ Surveying equipment. ■ Flatbed truck. ■ Forklift.
Site Servicing/ Removals/ Demolition	■ Decommissioning, relocation and/or extension of services and utilities on the site, which may include both underground and aerial services and utilities (e.g., sewers, water, electrical, communications, gas). This may also involve installation of utilities within the site. ■ Removal of paved driveways, parking areas, and sub-surface foundations and footings. ■ Demolition and removal of buildings. ■ Removal/remediation of contaminated soil.	■ Excavation/demolition equipment including backhoe, dump trucks, spoils removal equipment, jackhammers. ■ Hand tools. ■ Mobile crane. ■ Flatbed trucks. ■ Boom truck.
Excavating and Grading	■ Excavation and grading activities may involve earth-moving activities and stockpiling, as applicable. Excavated material will be accommodated on-site on the degree practicable; however, where necessary, surplus material will be disposed of off-site to an approved facility. ■ Any off-site disposal shall be done in compliance with applicable regulations, including as it relates to contaminated material that may be encountered. ■ Any groundwater encountered will be managed and disposed of in accordance with applicable regulations.	■ Site compaction equipment and general grading equipment, dump trucks, soil removal equipment. ■ Groundwater pumping equipment. ■ Excavation equipment including backhoe, dump trucks, soil removal equipment, and jack hammers.

Anticipated Construction Activity	Description	Associated Equipment
Temporary Road Closures	▪ All road closures will follow standard traffic control management guidelines.	▪ Temporary traffic control devices such as signs, signals, barriers, traffic barrels, plate tampers.
Management of Stormwater	▪ All precipitation falling within the site will be managed as stormwater within a designed system of collection, conveyance, retention and discharge features, as required. The system will be designed and operated in compliance with applicable standards and regulatory requirements. Surface flows within the site will be managed within the site to ensure discharge to off-site receivers (i.e., municipal storm sewers) is appropriate in terms of water quantity and quality.	▪ Site compaction equipment and general grading equipment. ▪ Groundwater pumping.

4 Methodology

This Report documents the potential impacts, mitigation measures, and monitoring activities associated with Corktown Station early works. Potential impacts, mitigation measures, and monitoring activities associated with Project operations and construction of other Project components, except those components that may be advanced as early works, will be documented in the Ontario Line Environmental Impact Assessment Report in accordance with Section 15 of Ontario Regulation 341/20: Ontario Line Project.

As noted in **Section 3.2**, the Corktown Station Early Works Project Footprint represents the area of primary disturbance which may result from any anticipated early works activities. Discipline-specific study areas were developed for some environmental disciplines to account for potential impacts from the early works activities. The Corktown Station study areas for each discipline are defined in **Table 4-1**. Methodology used to define the local environmental conditions and complete the impact assessment for each discipline is described in **Section 4.1** to **Section 4.10**.

Table 4-1: Corktown Station Study Area Definition by Discipline

Discipline	Study Area Definition Approach
Natural Environment	■ The Corktown Station Natural Environment Study Area includes the Corktown Station Early Works Project Footprint and a 120-metre buffer. This buffer has been applied in accordance with the Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, Second Edition (Ministry of Natural Resources and Forestry, 2010).
Soil and Groundwater	■ The Corktown Station Soil and Groundwater Study Area includes the Corktown Station Early Works Project Footprint and a 500-metre buffer. This buffer has been applied in accordance with the Hydrogeological Assessment Submissions Conservation Authority Guidelines for Development Applications (Toronto and Region Conservation Authority, 2013), which recommends well data for private wells within 500 metres be used for impact assessment.
Hydrology and Surface Water	■ Review of hydrology and surface water was limited to the Corktown Station Early Works Project Footprint and a 500-metre buffer. Based on the Toronto and Region Conservation Authority's Stormwater Management Criteria (Toronto and Region Conservation Authority, 2012), the zone of potential impacts is defined by presence of waterbodies. This buffer has been applied to include the Toronto and Region Conservation Authority Regulation Limit and Don River Floodplain based scale and significance of the Don River, and to consider surrounding floodplain initiatives. (**Figure 3-2**).

Discipline	Study Area Definition Approach
Air Quality	■ The Corktown Station Air Quality Study Area includes the Corktown Station Early Works Project Footprint and a 500-metre buffer. This buffer has been applied in accordance with the Ministry of Transportation's Environmental Guide for Assessing and Mitigating the Air Quality Impact and Greenhouse Gases of Provincial Transportation Projects (Ministry of Transportation, 2020) which states that for major roads, a distance of 500 metres is expected to capture the maximum pollutant concentrations
Noise and Vibration	■ The Corktown Station Noise and Vibration Study Area includes the Corktown Station Early Works Project Footprint and an approximately 250 metre buffer. This buffer was developed using noise and vibration screening areas which were determined by calculating the distances where the applicable criteria are predicted to be met, using a conservative approach where it was assumed that all construction equipment listed in **Table 3-1** would be simultaneously active. The approximately 250 metre nighttime noise screening area was the largest and was thus used to define the Study Area. This buffer distance is also in accordance with the United States Federal Transit Administration Transit Noise and Vibration Impact Assessment Manual (2018), and City of Toronto By-law 514 (2008).
Socio-Economic and Land Use Characteristics	■ The Corktown Station Socio-Economic and Land Use Characteristics Study Area includes the Corktown Station Early Works Project Footprint and a 500-metre buffer. This buffer has been applied in socio-economic studies for approved transit project environmental assessments of similar scope (e.g., Lawrence-Kennedy SmartTrack Station – Socio-Economic and Land Use Study (4Transit, 2018) and Barrie Rail Corridor Expansion Volume 2: Spadina-Front GO Station Design and Technical Studies – Socio-Economic and Land Use Study (4Transit, 2018)).
Built Heritage Resources and Cultural Heritage Landscapes	■ The Corktown Station Built Heritage Resources and Cultural Heritage Landscapes Study Area includes the Corktown Station Early Works Project Footprint, plus adjacent properties[9] to account for potential indirect impacts, and properties within 11.1 metres of the Corktown Station Early Works Project Footprint to account for potential structural impacts to built heritage resources and cultural heritage landscapes that may result from vibration. The distance of 11.1 metres from the Corktown Station Early Works Project Footprint was included in the Corktown Station Built Heritage Resources and Cultural Heritage Landscapes Study Area to account for potential vibration impacts to buildings extremely susceptible to vibration damage (including heritage buildings and their foundations) in accordance with the Ontario Line Corktown Station Early Works – Noise and Vibration Report (AECOM, 2021).

9. Adjacent is defined in Section 3.1.5 (Heritage Conservation) of the City of Toronto's Official Plan as "those lands adjoining a property of the heritage register or lands that are directly across from and near to a property on the heritage register and separated by land used as a private or public road, highway, street, lane, trail, right-of-way, walkway, green space, park and/or easement, or an intersection of any of these; whose location has the potential to have an impact on a property on the heritage register; or as otherwise defined in a Heritage Conservation District Plan adopted by by-law" (City of Toronto, 2019d).

Discipline	Study Area Definition Approach
Archaeological Resources	▪ Review of archaeological resources was limited to the Corktown Station Early Works Project Footprint. Based on the Standards and Guidelines for Consultant Archaeologists (Ministry of Tourism and Culture, 2011), only areas of direct construction impacts are subject to further archaeological assessment.
Traffic and Transportation	▪ The Corktown Station Traffic and Transportation Study Area includes the Corktown Station Early Works Project Footprint and adjacent road segments and intersections which meet either of the following criteria: – Directly impacted by the early works within the Corktown Station Early Works Project Footprint; or – Provides connection to the Corktown Station Early Works Project Footprint (i.e., Front Street, King Street East, Adelaide Street, The Esplanade, Lake Shore Boulevard, Parliament Street, Berkeley Street, Sherbourne Street, and Cherry Street) and therefore may be considered as a route for heavy construction vehicles.
Utilities	▪ Review of utilities was limited to the Corktown Station Early Works Project Footprint. This approach captures potential direct impacts to private and public utilities as a result of the early works activities.

Background information and documentation relevant to the Corktown Station Study Areas is contained within the Ontario Line Final Environmental Conditions Report (AECOM, 2020a) prepared for the Project. Information sourced from the Ontario Line Final Environmental Conditions Report (AECOM, 2020a) was used to establish local environmental conditions within the Corktown Station Study Area for each environmental discipline within this Report. Where necessary, review of additional desktop and field information was undertaken.

Preliminary potential impacts and mitigation measures identified in the Ontario Line Final Environmental Conditions Report (AECOM, 2020a) were reviewed and expanded upon in further detail specific to the Corktown Station early works by considering the following:

- Early works components as described in **Section 3.1**;
- Corktown Station Early Works Project Footprint as described in **Section 3.2;**
- Construction activities as described in **Section 3.3**; and
- Local environmental conditions within the Corktown Station Study Areas as described in **Section 5**.

Mitigation measures and monitoring activities for each environmental discipline have been recommended to mitigate the identified potential negative impacts.

4.1 Natural Environment

4.1.1 Local Environmental Conditions

A review of available background information was conducted to establish local natural environment conditions within the Corktown Station Natural Environment Study Area. The following aspects of the natural environment were examined:

- Designated Natural Areas and Planning Policy Areas;
- Vegetation Community and Plant Inventory;
- Fish and Fish Habitat;
- Wildlife and Wildlife Habitat; and,
- Significant Wildlife Habitat and Species at Risk.

For the purpose of the background information review, terrestrial and aquatic features and functions were identified within the boundaries of the Corktown Station Natural Environment Study Area through a desktop review of available secondary sources. The natural environment background information review included information from the following sources contained within the Ontario Line Final Environmental Conditions Report (AECOM, 2020a):

- Ontario Ministry of Natural Resources and Forestry Ontario GeoHub base mapping data (Ministry of Natural Resources and Forestry, 2020; Land Information Ontario, 2017; Ministry of Natural Resources and Forestry, 2017a; Ministry of Natural Resources and Forestry, 2017b);
- Wildlife atlases;
- Planning documents and guidelines;
- Open Data Portals;
- Reports; and,
- Aerial photography.

Ecological Land Classification mapping from 2003 and 2017 was also downloaded from Toronto and Region Conservation Authority's open data portal and used to supplement data gaps within the Ontario Line Study Area.

Field investigations of the Corktown Station Natural Environment Study Area were completed on February 26, 2021. The focus of the investigations was to confirm the vegetation information gathered through desktop exercises and to confirm that no major

changes had been made to the surrounding area. Ecological Land Classification surveys following Lee *et al.* (1998) were not conducted as there were no natural or naturalized areas within the Corktown Station Natural Environment Study Area greater than 0.5 hectares in size to be considered for vegetation studies. The buildings and structures within the Corktown Station Early Works Project Footprint were also investigated for the presence of potential Species at Risk and Species of Conservation Concern habitat. Detailed methodology for establishing local natural environment conditions is provided in **Appendix A1**. Local natural environment environmental conditions are described in **Section 5.1**.

4.1.2 Impact Assessment

As noted in **Table 4-1**, potential natural environment impacts within 120 metres of the Corktown Station Early Works Project Footprint were assessed. The natural environment preliminary potential impacts, mitigation measures and monitoring activities to verify the effectiveness of mitigation measures identified in the Ontario Line Final Environmental Conditions Report (AECOM, 2020a) were reviewed and expanded upon in further detail specific to the Corktown Station early works by considering the early works components (described in **Section 3.1**), Corktown Station Early Works Project Footprint (described in **Section 3.2**), and anticipated construction activities (outlined in **Table 3-1**).

For the purpose of the impact assessment, as a conservative approach, all buildings and their foundations within the Corktown Station Early Works Project Footprint were assumed to be permanently removed during the construction phase.

Detailed methodology for the natural environment impact assessment is provided in **Appendix A1**. The results of the natural environment impact assessment are provided in **Section 6.1**.

4.2 Soil and Groundwater

4.2.1 Local Environmental Conditions

A review of available information was conducted to establish soil and groundwater existing conditions within the Corktown Station Soil and Groundwater Study Area. The following aspects of soil and groundwater were examined:

- Geological setting, including physiography and topography, surficial geology, quaternary geology, and bedrock geology;

- Hydrogeological setting, including hydrostratigraphy and regional groundwater flow; and,
- Groundwater resources, including source water protection features and Ministry of the Environment, Conservation and Parks water well records.

The soil and groundwater background information review included information contained within the Ontario Line Final Environmental Conditions Report (AECOM, 2020a) from the following sources:

- Ministry of the Environment, Conservation and Parks open data catalogue resources, including the Water Well Records database and Source Water Protection Information Atlas;
- Toronto and Region Conservation Authority reports and plans, including the Source Water Protection Conceptual Understanding of the Water Budget Report (2007) and Toronto and Region Source Protection Area, Approved Updated Assessment Report (2015); and,
- Ontario Geological Survey resources, including The Physiography of Southern Ontario, Third Edition (1984), Paleozoic Geology of Southern Ontario (2007), and Metropolitan Toronto Bedrock Contours (1961).

Local soil and groundwater conditions are described in **Section 5.2**.

4.2.2 Impact Assessment

As noted in **Table 4-1**, potential soil and groundwater impacts within 500 metres of the Corktown Station Early Works Project Footprint were assessed. The soil and groundwater preliminary potential impacts and mitigation measures identified in the Ontario Line Final Environmental Conditions Report (AECOM, 2020a) were reviewed and expanded upon in further detail specific to the Corktown Station early works by considering the early works components (described in **Section 3.1**), Corktown Station Early Works Project Footprint (described in **Section 3.2**), and anticipated construction activities (outlined in **Table 3-1**).

The results of the soil and groundwater impact assessment are provided in **Section 6.2**.

4.3 Hydrology and Surface Water

4.3.1 Local Environmental Conditions

A review of available background information was conducted to establish existing hydrology and surface water conditions within the Corktown Station Early Works Project Footprint, including:

- Toronto and Region Conservation Authority's Regulated Area online mapping (Toronto and Region Conservation Authority, 2021a);
- Toronto and Region Conservation Authority's Floodplain online mapping (Toronto and Region Conservation Authority, 2021b); and,
- Toronto and Region Conservation Authority's Watersheds online mapping (Toronto and Region Conservation Authority, 2021c).

Local hydrology and surface water conditions are described in **Section 5.3**.

4.3.2 Impact Assessment

As noted in **Table 4-1**, potential hydrology and surface water impacts within 500 metres of the Corktown Station Early Works Project Footprint were assessed. The hydrology and surface water impact assessment considered the early works components (described in **Section 3.1**), Corktown Station Early Works Project Footprint (described in **Section 3.2**), and anticipated construction activities (outlined in **Table 3-1**).

The results of the hydrology and surface water impact assessment are provided in **Section 6.3**.

4.4 Air Quality

4.4.1 Local Environmental Conditions

Local environmental conditions within the Corktown Station Air Quality Study Area were established through a review of relevant background information, a definition of appropriate air quality contaminants, and determining existing concentrations of the air quality contaminants from local monitoring stations. Existing air quality is also defined by volume of traffic within the Corktown Station Air Quality Study Area. Higher volume of traffic results in higher local air quality contaminant concentrations. The existing levels of air quality contaminant concentrations were compared to federal and provincial standards for acceptable levels of air quality concentration to determine which

contaminants exceed standard thresholds within the Corktown Station Air Quality Study Area.

Background information and documentation relevant to the Corktown Station Air Quality Study Area is contained within the Ontario Line Final Environmental Conditions Report (AECOM, 2020a)[10], which includes:

- Identification of air quality representative receptors within the Corktown Station Air Quality Study Area;
- Determination of representative background air quality monitoring stations within the National Air Pollution Surveillance network for the Corktown Station Air Quality Study Area. Appropriate representation was based on proximity to the Corktown Station Air Quality Study Area, availability of contaminant monitoring data, and proximity to similar nearby air quality sources as those existing within the Corktown Station Air Quality Study Area;
- Traffic peak levels and/or annual average daily traffic volumes along primary routes of travel within the Corktown Station Air Quality Study Area were reviewed, where available; and,
- Review of existing meteorological data representative of the Corktown Station Air Quality Study Area.

Emissions from diesel trains traversing the Corktown Station Air Quality Study Area were not assessed due to the relatively low contribution of air contaminants. For example, the Air Quality Assessment Report prepared for the Union Station Rail Corridor East Enhancements Transit Project Assessment Process (AECOM, 2018) included a quantitative assessment of downtown Toronto air quality sources and project source impacts where it was shown that hourly road air contaminant contributions were exponentially higher than those of both GO Train emission contributions and VIA/Canadian National contributions (e.g., 23.9 g/hour of carbon monoxide from roads, compared with 2.0 g/hour from GO rail and 0.05 g/hour from VIA/Canadian National rail). Certain contaminants had a higher contribution from the Metrolinx GO network within the Union Station Rail Corridor East Enhancements study area, such as NO_X and fine particulate matter ($PM_{2.5}$). These emissions were not specifically quantified in the air quality assessment, however it should be noted that diesel rail traffic can present as a minor source of air quality contamination for these two specific contaminants.

Based on recommendations within the Ministry of Transportation's Environmental Guide for Assessing and Mitigating the Air Quality Impacts and Greenhouse Gas Emissions of

10. The Ontario Line Final Environmental Conditions Report (AECOM, 2020) was published on November 30, 2020 in accordance with Ontario Regulation 341/20: Ontario Line Project.

Provincial Transportation Projects (Ministry of Transportation, 2020), this air quality early works assessment includes the following criteria air contaminants from vehicle emissions:

1. Nitrogen dioxide, NO_2 (assessed over 1-hour, 24-hour, and annual averaging periods);
2. Carbon monoxide, CO (assessed over 1-hour and 8-hour averaging periods);
3. Sulphur Dioxide, SO_2 (assessed over 1-hour, 24-hour, and annual averaging period);
4. Particulate matter (less than 10 microns), PM_{10} (assessed over 24-hour and annual averaging periods);
5. Particulate matter (less than 2.5 microns), $PM_{2.5}$ (assessed over 24-hour and annual averaging periods);
6. Acetaldehyde (assessed over 30-minute and 24-hour averaging period);
7. Acrolein (assessed over 1-hour and 24-hour averaging periods);
8. Benzene (assessed over 24-hour and annual averaging periods);
9. Benzo(a)pyrene, B(a)P (assessed over 24-hour and annual averaging periods);
10. Formaldehyde (assessed over 24-hour averaging period); and,
11. 1,3-butadiene (assessed over 24-hour and annual averaging periods).

The applicable standards for the criteria air contaminants are established by the Ministry of the Environment, Conservation and Parks and Canadian Council of Ministers of the Environment as the Ambient Air Quality Criteria (Ministry of the Environment, Conservation and Parks, 2020) and Canadian Ambient Air Quality Standards (Canadian Council of Ministers of the Environment, 2012), respectively, as shown in **Table 4-2**.

Table 4-2: Summary of Applicable Guidelines and Standards

Criteria Air Contaminant	Source of Standard	Averaging Period	Air Quality Threshold Value (µg/m^3)
NO_2	Ambient Air Quality Criteria	One hour	400
NO_2	Ambient Air Quality Criteria	24 hours	200
NO_2 (1)	Canadian Ambient Air Quality Standards	One hour (2020)	113
NO_2 (1)	Canadian Ambient Air Quality Standards	Annual (2020)	32
NO_2 (1)	Canadian Ambient Air Quality Standards	One hour (2025)	78
NO_2 (1)	Canadian Ambient Air Quality Standards	Annual (2025)	22
CO	Ambient Air Quality Criteria	One hour	36,200
CO	Ambient Air Quality Criteria	Eight hours	15,700
SO_2 (2)	Ambient Air Quality Criteria	10-minute	178
SO_2 (2)	Ambient Air Quality Criteria	One hour	106
SO_2 (2)	Ambient Air Quality Criteria	Annual	11

Criteria Air Contaminant	Source of Standard	Averaging Period	Air Quality Threshold Value (µg/m³)
SO_2 (3)	Canadian Ambient Air Quality Standards	One hour (2020)	183
SO_2 (3)	Canadian Ambient Air Quality Standards	Annual (2020)	13
SO_2 (3)	Canadian Ambient Air Quality Standards	One hour (2025)	170
SO_2 (3)	Canadian Ambient Air Quality Standards	Annual (2025)	10
PM_{10} (4)	Ambient Air Quality Criteria	24 hours	50
$PM_{2.5}$ (5)	Canadian Ambient Air Quality Standards	24 hours (2020)	27
$PM_{2.5}$ (5)	Canadian Ambient Air Quality Standards	Annual	8.8
Acetaldehyde	Ambient Air Quality Criteria	30-minute	500
Acetaldehyde	Ambient Air Quality Criteria	24 hours	500
Acrolein	Ambient Air Quality Criteria	One hour	4.5
Acrolein	Ambient Air Quality Criteria	24 hours	0.4
Benzene	Ambient Air Quality Criteria	24 hours	2.3
Benzene	Ambient Air Quality Criteria	Annual	0.45
Benzo(a)pyrene	Ambient Air Quality Criteria	24 hours	0.00005
Benzo(a)pyrene	Ambient Air Quality Criteria	Annual	0.00001
1,3-Butadiene	Ambient Air Quality Criteria	24 hours	10
1,3-Butadiene	Ambient Air Quality Criteria	Annual	2
Formaldehyde	Ambient Air Quality Criteria	24 hours	65

Notes: (1) The Canadian Ambient Air Quality Standards air quality threshold for nitrogen dioxide is based on the three-year average of the annual 98th percentile of the daily maximum one-hour average concentrations.

(2) The Ambient Air Quality Standards for SO_2 are reported in parts per billion and converted using the factor 2.66 µg/m³ of SO_2 per 1 ppb of SO_2 (at 20.0°C and 1 atmosphere, rounded).

(3) The Canadian Ambient Air Quality Standards Air Quality threshold for sulphur dioxide is based on the three-year average of the annual 99th percentile of the daily maximum one-hour average concentrations.

(4) The value of 50 µg/m³ (24 hr) is an interim Ambient Air Quality Criteria and is provided as a guide for decision making.

(5) The Air Quality threshold for fine particulate ($PM_{2.5}$) is based on the 98th percentile ambient measurement (24-hour), annually averaged over three years.

The existing ambient air quality levels were quantified using publicly available historical data from ambient air quality monitoring stations from the National Air Pollution Survey network within Toronto. Data utilized matched datasets previously used for the Ontario Line Final Existing Conditions Report[11] (**Appendix A2**). The following National Air Pollution Surveillance Air Quality monitoring stations were selected as representative of the ambient air quality of the Corktown Station Air Quality Study Area:

- Toronto West (National Air Pollution Surveillance ID 60430);
- Toronto Downtown (National Air Pollution Surveillance ID 60433);

11. National Air Pollution Survey data used was from 2017. Traffic data used to estimate existing conditions was determined from traffic counts from 2017, 2018, and 2019. An annual growth rate of 1% was applied to 2017 and 2018 data to produce comparable 2019 AADTs.

- Gage Institute Station (National Air Pollution Surveillance ID 60427); and,
- Roadside Wallberg (University of Toronto) Station (National Air Pollution Surveillance ID 60439).

These stations are located nearest to the Corktown Station Air Quality Study Area and monitored (in combination) all relevant contaminants for the assessment, since a single station is unable to monitor all contaminants. Where multiple stations were found to monitor a common contaminant, the closest representative station was selected for the assessment.

One-hour, eight-hour, and 24-hour ambient concentrations for the contaminants were obtained from the 90th percentile of hourly measurements from the representative air quality monitoring stations (the average value was calculated from the available years). The 90th percentile of available background data was used following the methodology outlined in the Ministry of Transportation's Environmental Guide for Assessing and Mitigating the Air Quality Impacts and Greenhouse Gas Emissions of Provincial Transportation Projects (Ministry of Transportation, 2020).

Detailed methodology for establishing local air quality conditions is provided in **Appendix A2**. Local air quality conditions are described in **Section 5.4**.

4.4.2 Impact Assessment

As noted in **Table 4-1**, potential air quality impacts within 500 metres of the Corktown Station Early Works Project Footprint were assessed. The air quality preliminary potential impacts and mitigation measures identified in the Ontario Line Final Environmental Conditions Report (AECOM, 2020a) were reviewed and expanded upon in further detail specific to the Corktown Station early works by considering the early works components (described in **Section 3.1**), Corktown Station Early Works Project Footprint (described in **Section 3.2**), and anticipated construction activities (outlined in **Table 3-1**).

Land use within the Corktown Station Socio-Economic and Land Use Characteristics Study Area was reviewed to identify existing and planned future developments that are considered sensitive or critical receptors. The Ministry of Transportation's Environmental Guide for Assessing and Mitigating the Air Quality Impacts and Greenhouse Gas Emissions of Provincial Transportation Projects defines a sensitive receptor as a "residential dwelling" and a critical receptor as a "retirement home, hospital, childcare centre, school, or similar institutional building" (Ministry of Transportation, 2020).

Representative receptors within the Corktown Station Socio-Economic and Land Use Characteristics Study Area were selected based on proximity to emission sources (i.e.,

the Corktown Station Early Works Project Footprint) and distribution of surrounding emission sources to account for variability in wind directions based on guidance from the Ministry of Transportation's Environmental Guide for Assessing and Mitigating the Air Quality Impacts and Greenhouse Gas Emissions of Provincial Transportation Projects (Ministry of Transportation, 2020).

Detailed methodology for the air quality impact assessment is provided in **Appendix A2**. The results of the air quality impact assessment are provided in **Section 6.4**.

4.5 Noise and Vibration

4.5.1 Local Environmental Conditions

Baseline noise and vibration measurements were collected, as described in the Ontario Line Final Environmental Conditions Report (AECOM, 2020a), to characterize the existing noise and vibration levels within the Ontario Line Study Area. Data relevant to the Corktown Station early works construction have been excerpted from the Ontario Line Final Environmental Conditions Report (AECOM, 2020a) and provided in **Section 5**.

Baseline conditions methodology specific to noise and vibration are described in **Section 4.5.1.1** and **Section 4.5.1.2** below, respectively. Detailed methodology for establishing local noise and vibration conditions is provided in **Appendix A3**. Local noise and vibration conditions are described in **Section 5.5**.

4.5.1.1 Noise

Continuous noise measurements were collected over several days at locations representative of noise sensitive receivers. Noise measurements were collected using Quest SoundPro Type 1 and 2 sound level meters. Data collected during inclement weather conditions were discounted from statistical analysis.

4.5.1.2 Vibration

Baseline vibration measurements were not required, as the construction vibration assessment in this Report uses absolute limits that do not change based upon the existing vibration levels. The local environment does not have any normally occurring sources of perceptible vibration; the most significant source of vibration near the early works site are the existing rail lines (i.e., King Street streetcar). Thus, for the majority of the Corktown Station Noise and Vibration Study Area, existing vibration levels are expected to be below human perceptibility, except in close proximity to the existing streetcar rail lines.

4.5.2 Impact Assessment

As noted in **Table 4-1**, potential noise and vibration impacts within 250 metres of the Corktown Station Early Works Project Footprint were assessed. The noise and vibration preliminary potential impacts and mitigation measures identified in the Ontario Line Final Environmental Conditions Report (AECOM, 2020a) were reviewed and expanded upon in further detail specific to the Corktown Station early works by considering the early works components (described in **Section 3.1**), Corktown Station Early Works Project Footprint (described in **Section 3.2**), and anticipated construction activities (outlined in **Table 3-1**).

Impact assessment methodology specific to noise and vibration are described in **Section 4.5.2.1** and **Section 4.5.2.2** below, respectively. Detailed methodology for the noise and vibration impact assessment is provided in **Appendix A3**. The results of the noise and vibration impact assessment are provided in **Section 6.5**.

Noise and vibration criteria from various sources – City of Toronto, the Ministry of the Environment, Conservation and Parks, and the United States Federal Transit Administration – were reviewed for applicability to the Project.

4.5.2.1 Noise

A noise screening was conducted to determine if receptor-specific noise predictions were required. The noise screening was completed by determining the distances where the day or night time criteria are predicted to be met, assuming all construction equipment in **Table 3-1** was active, using a conservative approach to determine the screening distance, which assumed flat ground and no shielding or other noise attenuation effects. The screening distances were then used to create screening areas on maps to determine if any possible sensitive receivers were located within the screening areas. Assessed representative receptors were selected based upon their location within the noise screening area and their proximity to the Corktown Station Early Works Project Footprint.

Noise predictions at selected representative receptors included the modelling of various scenarios, using noise calculation algorithms which account for building and geometric noise shielding effects, ground effects, and air attenuation. The receptor-specific noise predictions were conducted for the nearest (to the Corktown Station Early Works Project Footprint) noise sensitive (closest and with highest noise exposures) receivers. Potential noise sensitive receivers further away will have lower construction noise exposures.

An acoustic model using the ISO 9613 (International Organization for Standardization, 1996) prediction algorithms was prepared. As the construction equipment cannot all operate in the same physical position, the equipment was modelled as operating over an area closest to the assessed representative receiver.

The predicted construction noise levels are estimates based on conservative assumptions, reference equipment noise levels and the Corktown Station early works information (Corktown Station Early Works Project Footprint and construction activities) available to date. Results were compared to guideline limits and mitigation recommendations were made to reduce the noise impacts. The impact assessment and assumptions shall be reviewed prior to the commencement of construction using the most up-to-date information on construction methods and techniques, equipment, and refined construction areas, and updated if required.

4.5.2.2 Vibration

The assessment of construction vibration was based on the City of Toronto's definition of Zone of Influence - the area (zone) in which vibration levels are predicted to be at or above the screening threshold. Zone of Influence mapping determines which locations may be above the applicable vibration criteria and where vibration controls may need to be implemented.

The Corktown Station early works vibration Zone of Influence was calculated using the Federal Transit Administration Guide's construction vibration propagation equations to calculate the distances where the screening threshold is met. These distances define the Zone of Influence.

A conservative approach was used, where construction equipment operations within the construction areas were assumed to be unrestricted to specific areas, and the equipment with the maximum vibration levels was used as the basis of assessment. As a result, Corktown Station early works vibration Zone of Influence is based upon the equipment with the highest vibration levels operating at the edge of the Corktown Station Early Works Project Footprint.

Screening distances for the other applicable vibration criteria (City of Toronto By-law prohibited limit, Federal Transit Administration Guide limit for buildings extremely susceptible to building damage, and human perceptibility) were also mapped. Structures within the Corktown Station Early Works Project Footprint were assumed to be the responsibility of Metrolinx and have not been included as receivers in this analysis. Socio-Economic and Land Use Characteristics.

4.6 Socio-Economic and Land Use Characteristics

4.6.1 Local Environmental Conditions

A review of available background information was conducted to establish local socio-economic and land use characteristics within the Corktown Station Socio-Economic and Land Use Characteristics Study Area. The following aspects of the socio-economic environment were examined:

- Land use designations and applicable secondary plans under the City of Toronto Official Plan;
- Physical neighbourhood composition, including existing land use and built form patterns, transit and transportation network, and public realm characteristics;
- Community amenities, including institutional uses, parks and recreational uses, community groups and resources, and planned services and facilities;
- Neighbourhood demographics; and,
- Future development.

The background information review of socio-economic and land use characteristics included information contained within the Ontario Line Final Environmental Conditions Report (AECOM, 2020a) from the following sources:

- Provincial planning and policy documents, including the Provincial Policy Statement (Ontario Ministry of Municipal Affairs and Housing, 2020), Growth Plan (Province of Ontario, 2019), 2041 Regional Transportation Plan (Metrolinx, 2018), Greenbelt Plan (Province of Ontario, 2017), and Conservation Authorities Act (Province of Ontario, 1998);
- Municipal land use and development planning and policy documents, including the City of Toronto Official Plan and secondary plans (City of Toronto, 2019d), and Waterfront Transit Reset (City of Toronto, 2019a);
- City of Toronto open data portal (City of Toronto, 2020b);
- Statistics Canada, 2016 Census of Population (City of Toronto, 2018a); and,
- City of Toronto Application Information Centre (City of Toronto, 2020c).

Future development includes recent, ongoing, and proposed development within the Corktown Station Socio-Economic and Land Use Characteristics Study Area based on

active development applications listed in the City of Toronto's Application Information Centre online database (City of Toronto, 2020c) as of February 26, 2021.

Local socio-economic and land use characteristics are described in **Section 5.6**.

4.6.2 Impact Assessment

As noted in **Table 4-1**, potential socio-economic and land use characteristics impacts within 500 metres of the Corktown Station Early Works Project Footprint were assessed. The socio-economic and land use characteristics preliminary potential impacts and mitigation measures identified in the Ontario Line Final Environmental Conditions Report (AECOM, 2020a) were reviewed and expanded upon in further detail specific to the Corktown Station early works by considering the early works components (described in **Section 3.1**), Corktown Station Early Works Project Footprint (described in **Section 3.2**), and anticipated construction activities (outlined in **Table 3-1**).

The results of the socio-economic and land use characteristics impact assessment are provided in **Section 6.6**.

4.7 Built Heritage Resources and Cultural Heritage Landscapes

4.7.1 Local Environmental Conditions

Background information and documentation relevant to the Corktown Station Built Heritage Resources And Cultural Heritage Landscapes Study Area is contained within the Ontario Line Final Environmental Conditions Report (AECOM, 2020a) prepared for the Project and was reviewed prior to commencing the assessment of built heritage resources and cultural heritage landscapes contained in this Report.

The Ontario Line Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment (hereafter the 'Ontario Line Cultural Heritage Report') (AECOM, 2020b), completed as part of the Ontario Line Final Environmental Conditions Report (AECOM, 2020a), was used as a primary source of background information for the following:

- Existing cultural heritage conditions within the Corktown Station Built Heritage Resources and Cultural Heritage Landscapes Study Area, including a historical summary of the development of neighbourhoods, and provides the locations of known, previously identified and potential built heritage resources/cultural heritage landscapes within the Corktown Station Built Heritage Resources and Cultural Heritage Landscapes Study Area.

Following the background information review, utilizing the 40-year-old threshold[12], Criteria Checklist for Evaluating Potential for built heritage resources and cultural heritage landscapes (hereafter Criteria Checklist) (Ministry of Heritage, Sport, Tourism and Culture Industries, 2016), and professional judgement, a field review was conducted to document the existing conditions of the properties within the Corktown Station Built Heritage Resources and Cultural Heritage Landscapes Study Area in order to confirm the presence and/or changes to any known and previously identified built heritage resources/cultural heritage landscapes that were documented in the Ontario Line Cultural Heritage Report (AECOM, 2020b), and to identify potential built heritage resources/cultural heritage landscapes and interpretive and commemorative features such as plaques, that were not identified in the Ontario Line Cultural Heritage Report (AECOM, 2020b).

Detailed methodology for establishing local environmental conditions for built heritage resources and cultural heritage landscapes is provided in **Appendix A4**. Local built heritage resources and cultural heritage landscapes are described in **Section 5.7**.

4.7.2 Impact Assessment

As noted in **Table 4-1**, the Corktown Station Built Heritage Resources and Cultural Heritage Landscapes Study Area includes the Corktown Station Early Works Project Footprint, adjacent properties[13] to account for potential indirect impacts, and properties within 11.1 metres of the Corktown Station Early Works Project Footprint to account for potential structural impacts to built heritage resources and cultural heritage landscapes that may result from vibration. The built heritage resources and cultural heritage landscapes preliminary potential impacts and mitigation measures identified in the Ontario Line Final Environmental Conditions Report (AECOM, 2020a) were reviewed and expanded upon in further detail specific to the Corktown Station early works by considering the early works components (described in **Section 3.1**), Corktown Station Early Works Project Footprint (described in **Section 3.2**), and anticipated construction activities (outlined in **Table 3-1**).

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12. The 40-year-old threshold may be used an indicator that a property may be of cultural heritage value or interest. While identification of a built heritage resources/cultural heritage landscapes that is 40 years old or older does not confer outright heritage significance, the 40-year-old threshold provides a means to collect information about resources that may retain cultural heritage value or interest. Similarly, if a built heritage resource/cultural heritage landscape is less than 40 years old, this does not preclude the resource from retaining cultural heritage value or interest.
13. Adjacent is defined in Section 3.1.5 (Heritage Conservation) of the City of Toronto's Official Plan as "those lands adjoining a property of the heritage register or lands that are directly across from and near to a property on the heritage register and separated by land used as a private or public road, highway, street, lane, trail, right-of-way, walkway, green space, park and/or easement, or an intersection of any of these; whose location has the potential to have an impact on a property on the heritage register; or as otherwise defined in a Heritage Conservation District Plan adopted by by-law" (City of Toronto, 2019d).

The proposed impacts of early works have been evaluated according to the Ministry of Heritage, Sport, Tourism and Culture Industries *Information Bulletin 3: Heritage Impact Assessments for Provincial Heritage Properties*.

Detailed methodology for the built heritage resource and cultural heritage landscape impact assessment is provided in **Appendix A4**. The results of the built heritage resources and cultural heritage landscapes impact assessment are provided in **Section 6.7**.

4.8 Archaeological Resources

4.8.1 Local Environmental Conditions

A number of archaeological assessments within the Corktown Station Early Works Project Footprint have been completed by AECOM (AECOM, 2020c), Archeoworks (2009), and Archaeological Services Inc. (ASI, 2001, 2003, 2012a, 2012b). The Ontario Line South Stage 1 Archaeological Assessment Report (AECOM, 2020c) includes the Corktown Station Early Works Project Footprint and was entered into the Ontario Public Register of Archaeological Reports on July 24, 2020, in support of the Ontario Line Final Environmental Conditions Report.

The Corktown Station Early Works Project Footprint was overlaid with the archaeological mapping prepared for the Ontario Line South Stage 1 Archaeological Assessment Report (AECOM, 2020c) to determine the areas retaining archaeological potential within the Corktown Station Early Works Project Footprint. Local archaeological resources are described in **Section 5.8**.

4.8.2 Impact Assessment

As noted in **Table 4-1**, the archaeological resources impact assessment was limited to the Corktown Station Early Works Project Footprint. The preliminary potential impacts and mitigation measures related to archaeological resources that were identified in the Ontario Line Final Environmental Conditions Report (AECOM, 2020a) were reviewed and expanded upon by considering the early works components (described in **Section 3.1**), Corktown Station Early Works Project Footprint (described in **Section 3.2**), and anticipated construction activities (outlined in **Table 3-1**). In addition, recommended methods of completing further archaeological assessments were briefly outlined.

The results of the archaeological resources impact assessment are described in **Section 6.8**.

4.9 Traffic and Transportation

4.9.1 Local Environmental Conditions

The following traffic and transportation elements within the Corktown Station Traffic and Transportation Study Area were assessed:

- Transportation network:
  - Road Network
  - Pedestrian Network
  - Cycling Network
- Transit network.

The types and sources of traffic data collected for the above-noted transportation elements are summarized in **Appendix A5**. The methodology and assumptions followed in the quantitative assessment of the transportation elements in the existing conditions are discussed in detail in **Appendix A5**.

It should be noted that the rail network was not assessed in this Report since the Corktown Station early works do not include any works along the existing rails, and hence no impacts are anticipated to the rail network.

Available Turning Movement Count data at intersections within the Corktown Station Traffic and Transportation Study Area were provided by the City of Toronto, consisting of eight-hour counts of vehicles (cars, trucks, and buses), pedestrians, and bicycles and collected at 15-minute intervals during the weekday peak periods. In addition, the signal timing plans for the signalized intersections within the Corktown Station Traffic and Transportation Study Area were provided by the City of Toronto.

A desktop background review of secondary source information was completed to complement the data provided by the City of Toronto and establish local traffic conditions within the Corktown Station Traffic and Transportation Study Area. The desktop resources included the following:

- City of Toronto's Open Data Portal (City of Toronto, 2020b) to obtain mapping data related to roads, pedestrian and cyclist routes related to the Corktown Station Traffic and Transportation Study Area;
- City of Toronto's Road Classification System Update (City of Toronto, 2018) and Vision Zero Mapping Tool (City of Toronto, 2020d) to obtain road classification and speed information related to roads within the Corktown Station Traffic and Transportation Study Area; and,

- Toronto Transit Commission website (Toronto Transit Commission, 2019) to obtain transit schedule and route data related to the Corktown Station Traffic and Transportation Study Area.

The Ontario Line Final Environmental Conditions Report (AECOM, 2020a) notes that turning movement counts and signal timing plans were not available at some intersections within the Ontario Line Study Area, and were not collected through new traffic surveys considering the uncharacteristic traffic conditions as a result of the COVID-19 pandemic. As a result of the noted data limitations related to the identified road network within the Corktown Station Traffic and Transportation Study Area, a quantitative traffic assessment of some intersections within the Corktown Station Traffic and Transportation Study Area could not be undertaken.

The intersection capacity analyses for the intersections within the Corktown Station Traffic and Transportation Study Area were completed using Synchro 9 capacity analysis software in accordance with the methodologies outlined in the Highway Capacity Manual (Transportation Research Board, 2000) and in line with the capacity analysis guidelines outlined in the City's Guidelines for Using Synchro 9 (City of Toronto, 2016). Synchro models were developed to replicate local traffic conditions within the Corktown Station Traffic and Transportation Study Area as the 2020 Existing Traffic Conditions[14] (herein referred to as Existing Traffic Conditions) during the AM and PM peak hours on a typical weekday.

Detailed methodology for establishing local traffic and transportation conditions is provided in **Appendix A5**. Local traffic and transportation conditions are described in **Section 5.9**.

4.9.2 Impact Assessment

As noted in **Table 4-1**, potential traffic and transportation impacts within the Corktown Station Early Works Project Footprint and adjacent road segments and intersections to capture the transportation and transit network elements were assessed. Refer to **Section 5.9.1.1** for a list of studied road segments.

The traffic and transportation potential impacts and mitigation measures identified in the Ontario Line Final Environmental Conditions Report (AECOM, 2020a) were reviewed and expanded upon in further detail specific to the Corktown Station early works by considering the early works components (described in **Section 3.1**), Corktown Station

14. Traffic data were collected between 2017 and 2019 and were projected to year 2020 using an annual growth rate of 1% to account for the ambient growth in traffic volumes. The observed turning movement counts from 2017 and 2019 and the assumptions used in the analysis, including the adopted growth rate are presented in **Appendix A5**.

Early Works Project Footprint (described in **Section 3.2**), and anticipated construction activities (outlined in **Table 3-1**).

Mitigation measures and monitoring activities have been recommended to mitigate the identified potential negative impacts within the Corktown Station Traffic and Transportation Study Area. The results of the impact assessment are provided in **Section 6.9**.

A quantitative impact assessment was not completed at this stage as the detailed construction staging schemes that describe the potential modifications to the existing transportation network were not available. The quantitative impact assessment will be completed, as required, once project planning progresses to the point when this information becomes available. The quantitative impact assessment may include a larger study area. As Project planning progresses, Transit and Traffic Management Plan(s) shall be developed to provide more specific mitigation measures and monitoring activities. Transit and Traffic Management Plan(s) will outline the potential haul routes, staging and laydown areas, construction access, and road closures and potential detour routes. Detailed methodology for the traffic and transportation impact assessment is provided in **Appendix A5**. The results of the traffic and transportation impact assessment are provided in **Section 6.9**.

4.10 Utilities

4.10.1 Existing Conditions

Private and public utilities within the Corktown Station Early Works Project Footprint were identified in **Section 5.10**. This list will be confirmed and refined as project planning progresses.

4.10.2 Impact Assessment

As noted in **Table 4-1**, the utilities impact assessment was limited to the Corktown Station Early Works Project Footprint. The utilities preliminary potential impacts and mitigation measures identified in the Ontario Line Final Environmental Conditions Report (AECOM, 2020a) were reviewed and expanded upon in further detail specific to the Corktown Station early works by considering the early works components (described in **Section 3.1**), Corktown Station Early Works Project Footprint (described in **Section 3.2**), and anticipated construction activities (outlined in **Table 3-1**).

The results of the utilities impact assessment are provided in **Section 6.10**.

5 Local Environmental Conditions

This section describes the existing natural, technical, socio-economic and cultural aspects of the existing environment in the context of the Corktown Station early works. Information on the following environmental components is provided in the sections below and where applicable, is supplemented with supporting detailed technical reports:

- Natural Environment — **Section 5.1** and **Appendix A1**
- Soil and Groundwater — **Section 5.2**
- Hydrology and Surface Water — **Section 5.3**
- Air Quality — **Section 5.4** and **Appendix A2**
- Noise and Vibration — **Section 5.5** and **Appendix A3**
- Socio-Economic and Land Use Characteristics — **Section 5.6**
- Built Heritage Resources and Cultural Heritage Landscapes — **Section 5.7** and **Appendix A4**
- Archaeological Resources — **Section 5.8**
- Traffic and Transportation — **Section 5.9** and **Appendix A5**
- Utilities — **Section 5.10**

5.1 Natural Environment

5.1.1 Designated Natural Areas/Planning Policy Areas

According to the Ministry of Natural Resources and Forestry's GeoHub Mapping (2020), there are no Provincially Significant Wetlands, Locally Significant Wetlands, significant valleylands or provincially significant Areas of Natural and Scientific Interest within the Corktown Station Natural Environment Study Area. In addition, there are no woodlands or unevaluated wetlands within the Corktown Station Natural Environment Study Area. According to the City of Toronto Interactive Map (City of Toronto, 2020a), there are no Environmentally Significant Areas within the Corktown Station Natural Environment Study Area, nor does the Corktown Station Natural Environment Study Area overlap with the City's Natural Heritage System or Ravine and Natural Feature Protection By-law Area or Toronto and Region Conservation Authority's Terrestrial Natural Heritage System and regulation limits.

5.1.2 Ecological Land Classification and Plant Inventory

Ecological Land Classification is the provincially-accepted standard for classifying vegetation communities in Ontario. This protocol uses a series of six nested levels (i.e., Site Region, System, Community Class, Community Series, Ecosite, and Vegetation Type) to describe the ecological form and function of a vegetation community in a spatial context, from largest to smallest scale.

The majority of the Corktown Station Natural Environment Study Area is urbanised with many commercial businesses, and the limited amount of vegetation that is present consists of streetscapes (e.g., street trees, treed fence lines, manicured lawns, parks) and planted hedgerows. No natural or naturalized communities of 0.5 ha or greater in size were present within the Corktown Station Natural Environment Study Area; therefore, no Ecological Land Classification and associated mapping was conducted.

There were no butternuts (*Juglans cinerea*) or any other plant Species at Risk, provincially significant or Regional Species of Conservation Concern plants identified in the Corktown Station Natural Environment Study Area.

5.1.3 Fish and Fish Habitat

There were no waterbodies identified within the Corktown Station Natural Environment Study Area; therefore, fish and fish habitat assessments were not required.

5.1.4 Wildlife and Wildlife Habitat

The Corktown Station Natural Environment Study Area, including the Corktown Station Early Works Project Footprint, is heavily urbanized with very limited, low-quality habitat for urban wildlife due to lack of naturalized areas, lack of connectivity to significant natural areas, presence of non-native and invasive plants, and noise and vibration from vehicle and pedestrian traffic. However, it is important to note that isolated trees and shrubs and anthropogenic structures (e.g., buildings) can provide nesting habitat for many migratory birds, which are protected under the Migratory Birds Convention Act. Although there is limited potential for migratory birds to nest on the buildings within the Corktown Station Early Works Project Footprint due to the lack of suitable ledges and overhangs, an awning with a broken grate may provide suitable nesting habitat for opportunistic migratory or non-migratory birds. There are no suitable movement corridors nor significant natural areas for wildlife within the Corktown Station Natural Environment Study Area.

Incidental wildlife species encountered during site investigations on February 26, 2021 included: Rock Pigeon (*Columba livia*), European Starling (*Sturnus vulgaris*) and Eastern Gray Squirrel (*Sciurus carolinensis*). No other signs of mammal species were observed in the Corktown Station Natural Environment Study Area during the site investigations; however, the general area likely supports a range of mammals often found in urban environments, including: Common Raccoon (*Procyon lotor*), Eastern Cottontail (*Sylvilagus floridanus*), Striped Skunk (*Mephitis mephitis*), and a number of small mammals that often go undetected (e.g., shrews, voles, mice) (Dobbyn, 1994).

5.1.5 Significant Wildlife Habitat

Significant Wildlife Habitat, including habitats for Species of Conservation Concern, receive protection under the Provincial Policy Statement and should thus be considered when corridors and right-of-way for significant transportation are being planned according to Section 1.6.8.6 of the Provincial Policy Statement. Species of Conservation Concern may also be afforded protection under the Migratory Birds Convention Act or Ontario Fish and Wildlife Conservation Act, 1997.

Significant Wildlife Habitat screening and habitat screening for Species of Conservation Concern were completed for the Corktown Station Natural Environment Study Area following the methods described in **Section 4.1**. Species with historical records were deemed unlikely to persist in the general area given the vast urbanization within the City of Toronto and for this reason were not included in the Species of Conservation Concern screening. Refer to **Appendix A1** for the complete Significant Wildlife Habitat screening and **Appendix A1** for the complete Species of Conservation Concern habitat screening.

Based on review of the Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E (Ministry of Natural Resources and Forestry, 2015), the following Significant Wildlife Habitat type may occur within the Corktown Station Natural Environment Study Area.

- **Habitats of Species of Conservation Concern:**
  - **Candidate Habitat for Species of Conservation Concern** (refer to **Appendix A1** for the complete Species of Conservation Concern habitat screening)**:**
    - Common Nighthawk – This species may nest on the flat, gravel rooftops of buildings in urban areas (Brigham et al., 2011). There are four flat roofed buildings located within the Corktown Station Early Works Project Footprint and many others within the Corktown Station Natural Environment Study Area, including a building with a

green roof at 318-326 King Street East that may provide suitable nesting habitat. This species is protected by the Migratory Birds Convention Act.

There were no candidate or confirmed seasonal concentration areas, rare vegetation communities, specialized habitat for wildlife or animal movement corridors identified within the Corktown Station Natural Environment Study Area (refer to **Appendix A1** for the complete Significant Wildlife Habitat screening). In addition, there were no confirmed Species of Conservation Concern habitats identified within the Corktown Station Natural Environment Study Area.

5.1.6 Species at Risk Habitat Screening

A habitat screening for Species at Risk was completed following the methods described in **Section 4.1** and provided in **Appendix A1**. Of note, species with historical records were deemed unlikely to persist in the general area given the vast urbanization within the City of Toronto and for this reason were not included in the Species at Risk screenings.

There are no Species at Risk identified with high probability of occurring within the Corktown Station Natural Environment Study area. The following Species at Risk have a medium probability of occurring within the Corktown Station Natural Environment Study Area:

- **Chimney Swift** – This species is listed as Threatened and receives protection under the provincial Endangered Species Act, as well as the federal Migratory Birds Convention Act. None of the buildings proposed to be demolished within the Corktown Station Early Works Project Footprint contained any suitable, uncapped chimneys and therefore these buildings do not provide suitable habitat for Chimney Swifts. However, Chimney Swifts were observed in the City of Toronto downtown core within the Ontario Line Study Area (AECOM, 2020a) and therefore, may occur within the Corktown Station Natural Environment Study Area. A potentially uncapped chimney is present within the Corktown Station Natural Environment Study Area along the north side of King Street East which may provide suitable nesting and roosting habitat for Chimney Swift but is not proposed for demolition as part of the early works. Therefore, the probability of Chimney Swift habitat occurring within the Corktown Station Natural Environment Study Area is medium, but there are no suitable chimneys (i.e., habitat) for this species on the buildings proposed to be demolished within the Corktown Station Early Works Project Footprint.

- **Bat Species at Risk, including Eastern Small-footed Myotis (Myotis leibii), Little Brown Myotis (Myotis lucifugus), Northern Long-eared Myotis (Myotis septentrionalis) and Tri-colored Bat (Perimyotis subflavus)** – Bat Species at Risk are listed as Endangered and receive protection under the Endangered Species Act. Little Brown Myotis and Northern Myotis may roost in trees that are hollow, have cavities or loose bark. Tri-coloured bats are known to roost in dead leaf clusters while Eastern Small-footed Myotis are known to roost in rocky outcrops and talus slopes. All bat Species at Risk are known to roost in anthropogenic structures such as buildings in crevice-like spaces; under sidings, eaves, roof tiles or shingles or behind shutters or sliding doors, between building wings, cracks and crevices in walls, wall coatings, hollow mortice joints, rain gutters and chimneys; and/or in attics (Bat Conservation Trust, 2012; Ministry of Natural Resources and Forestry, 1984; Humphrey, 2017; Humphrey and Fotherby, 2019). There were no hibernacula identified within the Corktown Station Natural Environment Study Area, and there is a distinct lack of treed areas that could serve as possible maternity roosting habitat within 120 metres of the Corktown Station Early Works Project Footprint. Buildings with potential entry/exit points may be used by bat Species at Risk for roosting within the Corktown Station Natural Environment Study Area, however the buildings and structures within the Corktown Station Early Works Project Footprint were deemed to have low probability to support habitat for roosting bat Species at Risk as the buildings appeared to be intact and unsuitable for roosting (i.e., well maintained and in good form) based on field observations.

The remaining Species at Risk (listed below) identified had low probability of occurrence within the Corktown Station Natural Environment Study Area are as follows:

- Bank Swallow (Riparia riparia);
- Barn Swallow;
- Bobolink (Dolichonyx oryzivorus);
- Eastern Meadowlark (Sturnella magna); and,
- Butternut.

In addition, there are no aquatic Species at Risk present and no potential for Blanding's Turtles to occur given that there are no water features identified within the Corktown Station Natural Environment Study Area. Please refer to **Appendix A1** for the full Species at Risk habitat screening.

5.2 Soil and Groundwater

5.2.1 Geological Setting

5.2.1.1 Physiography and Topography

The Corktown Station Soil and Groundwater Study Area is situated within the Iroquois Plain physiographic region, as mapped by Chapman and Putnam (1984). A physiographic map of the area is provided in **Figure 5-1**.

According to the Physiography of Southern Ontario (Chapman and Putnam, 1984), the Iroquois Plain occurs as a lowland bordering the western component of Lake Ontario, extending from the Niagara River to the Trent River over a distance of approximately 305 kilometres. The Iroquois Plain represents the historic bottom of glacial Lake Iroquois and stands in striking contrast to the shoreline areas (and their identifiable features) of the former glacial lake situated farther inland (Chapman and Putnam, 1984). Across its length, the width of the Iroquois Plain varies from only a few hundred metres up to about 13 kilometres. In the vicinity of the City of Toronto, the Iroquois Plain is approximately three kilometres wide and is cut into previously deposited clay and till; being partly floored with glaciolacustrine sand deposits.

The ground surface topography within the Corktown Station Soil and Groundwater Study Area is shown in **Figure 5-2**. Elevation ranges from approximately 80 to 85 metres above sea level. The topography in the Corktown Station Soil and Groundwater Study Area is highly affected by the extensive local development and shows moderate to flat relief, with a regional downward slope in the direction of Lake Ontario.

There are no mapped watercourses in the Corktown Station Soil and Groundwater Study Area as land drainage is generally directed to the City storm sewer network. The southern component of the Corktown Station Soil and Groundwater Study Area overlaps with Lake Ontario, the ultimate receiver of local storm drainage.

5.2.1.2 Surficial Geology

The surficial geology within the Corktown Station Soil and Groundwater Study Area is shown in **Figure 5-3**. Identified surficial soils consist of *Till Deposits* (undifferentiated older tills, may include stratified deposits) and *Coarse-textured Lacustrine Deposits* (sand, gravel, minor silt and clay derived from littoral deposits).

Figure 5-1: Physiography Within the Corktown Station Soil and Groundwater Study Area

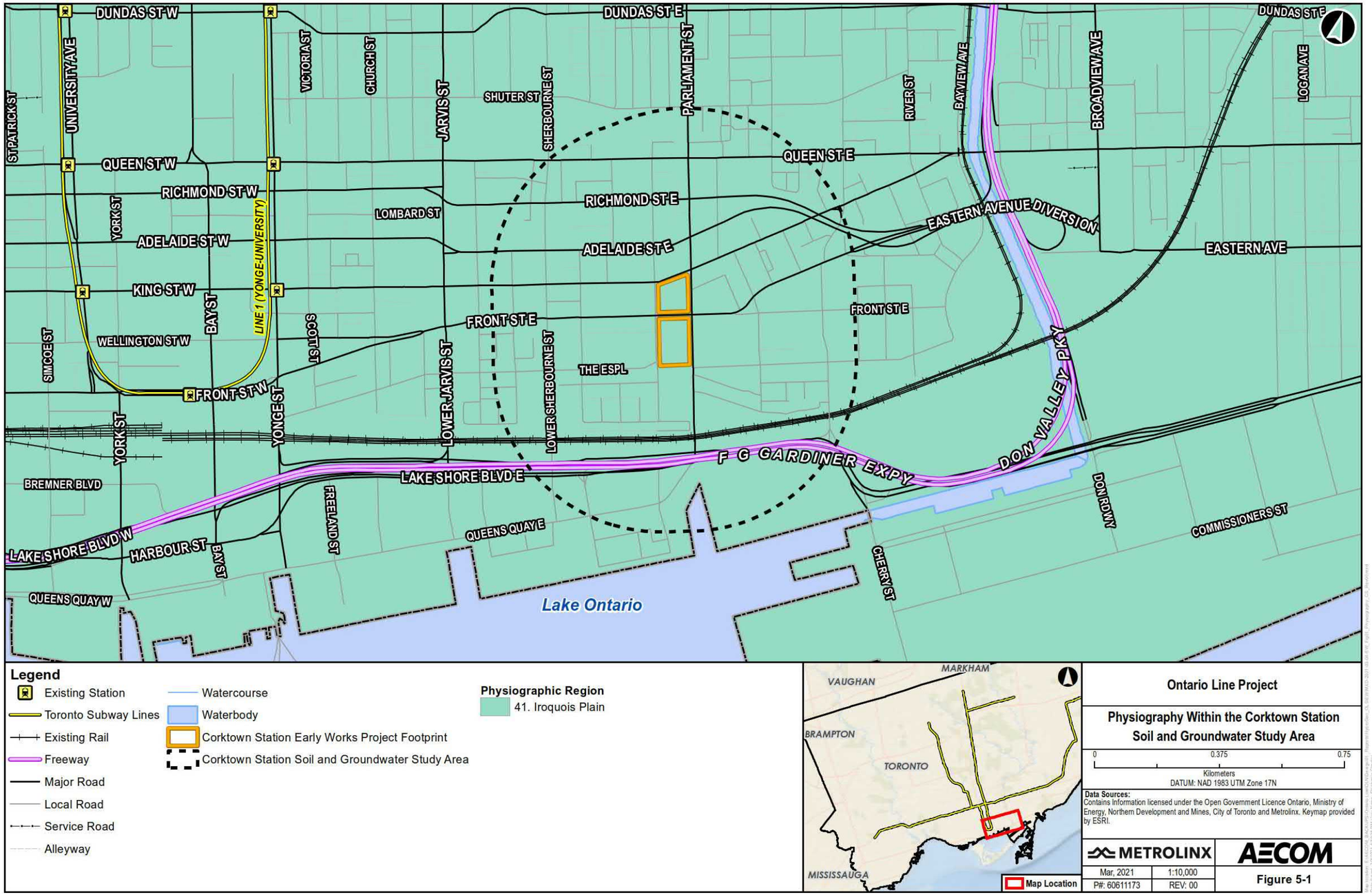


Figure 5-2: Topography and Drainage Within the Corktown Station Soil and Groundwater Study Area

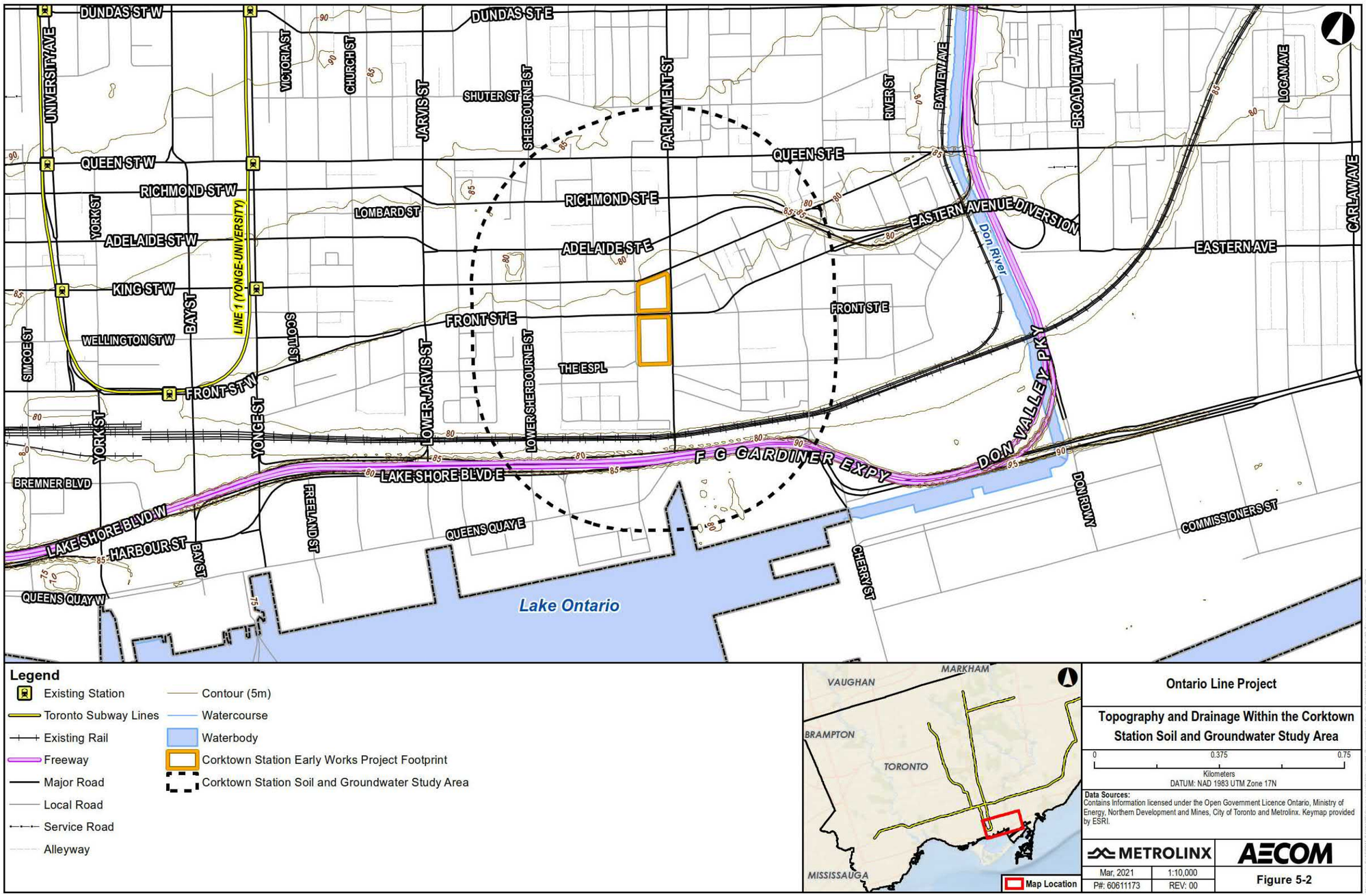
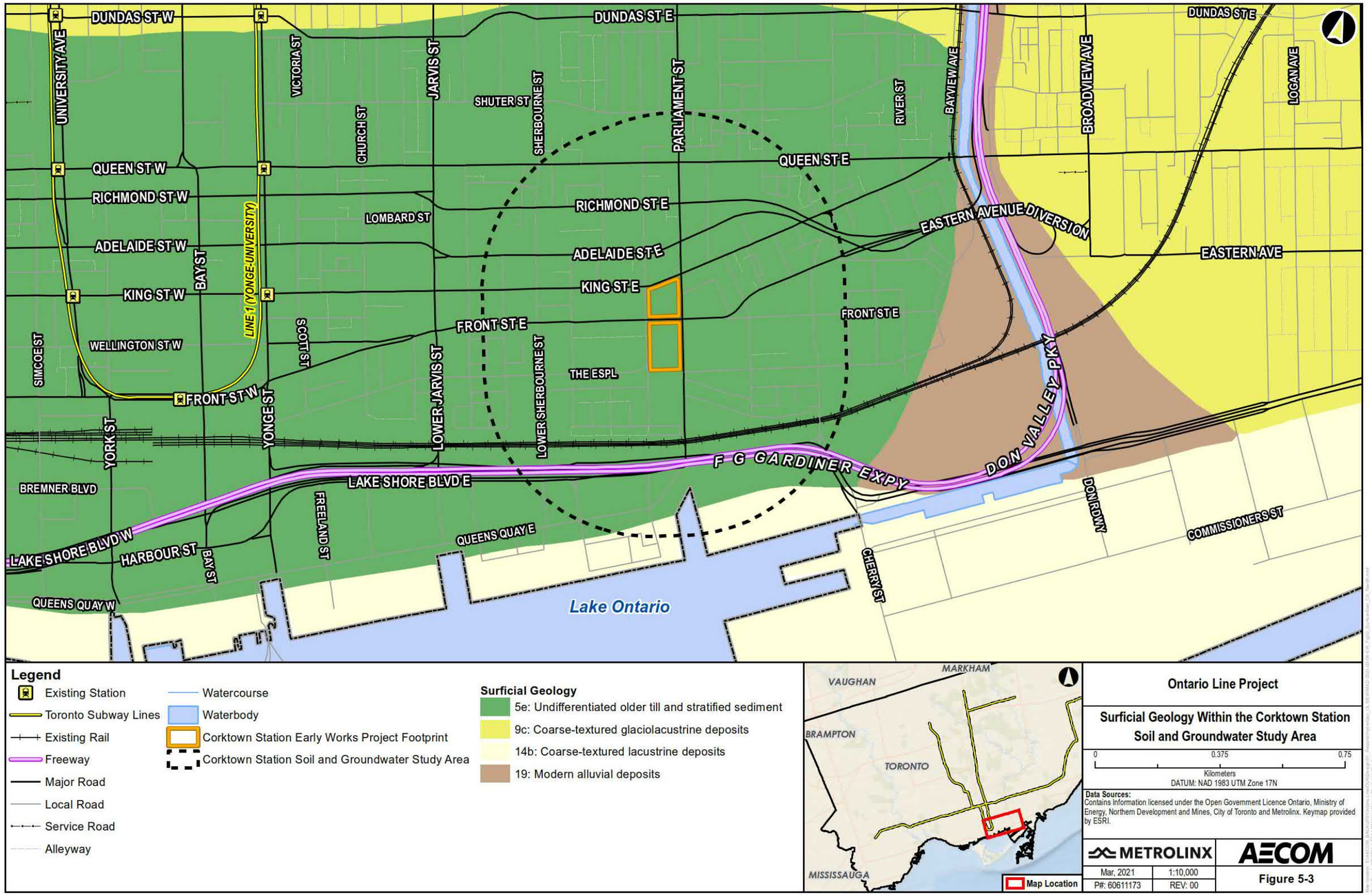


Figure 5-3: Surficial Geology Within the Corktown Station Soil and Groundwater Study Area



5.2.1.3 Quaternary Geology

The Quaternary geology within the Corktown Station Soil and Groundwater Study Area is shown in **Figure 5-4**. A review of Quaternary geology mapping, available at a smaller scale than the Surficial Geology mapping, indicates that the primary surficial deposits within the Corktown Station Soil and Groundwater Study Area are Till Deposits with sandy silt to silt matrix, commonly rich in clast and often high in total matrix carbonate content.

5.2.1.4 Bedrock Geology

Bedrock geology within the Corktown Station Soil and Groundwater Study Area is shown in **Figure 5-5**. Based on this Ontario Geological Survey regional mapping, the uppermost bedrock is composed of shale and limestone of the Georgian Bay Formation from the Upper Ordovician period (Armstrong, D.K. and Dodge, J.E.P., 2007).

Based on the Metropolitan Toronto Bedrock Contours map (Rogers et al. 1961), the bedrock surface elevation ranges from approximately 67 to 73 metres above sea level within the Corktown Station Soil and Groundwater Study Area.

5.2.2 Hydrogeological Setting

Hydrostratigraphy is the classification of major stratigraphic units into aquifers and aquitards, with some simplification or combination of units with similar properties. An aquifer is classically defined as a geological unit that is sufficiently permeable to permit the extraction of a useable supply of water. Based on the Overburden Thickness map (Toronto and Region Source Protection Area, 2015) and typical north-south cross-sections along Yonge Street provided by Toronto and Region Conservation Authority as part of the Conceptual Understanding Water Budget Report (Puopolo, J. and Usher, S., 2007), and the Humber River State of the Watershed Report (Toronto and Region Conservation Authority, 2008), the overburden thickness within the Corktown Station Soil and Groundwater Study Area is approximately 10 metres to 20 metres, with thinner overburden deposits observed along the southern portion of the Corktown Station Soil and Groundwater Study Area.

A review of the Ministry of the Environment, Conservation and Parks water well records database indicates that the overburden geologic materials within the Corktown Station Soil and Groundwater Study Area consist primarily of clayey silt, sand, silty clay, sandy silt, and silty sand. Bedrock was encountered in some of the reviewed Ministry of the Environment, Conservation and Parks well records, at depths ranging from approximately 6.1 to 9.1 metres below ground surface within the Corktown Station Soil and Groundwater Study Area.

Figure 5-4: Quaternary Geology Within the Corktown Station Soil and Groundwater Study Area

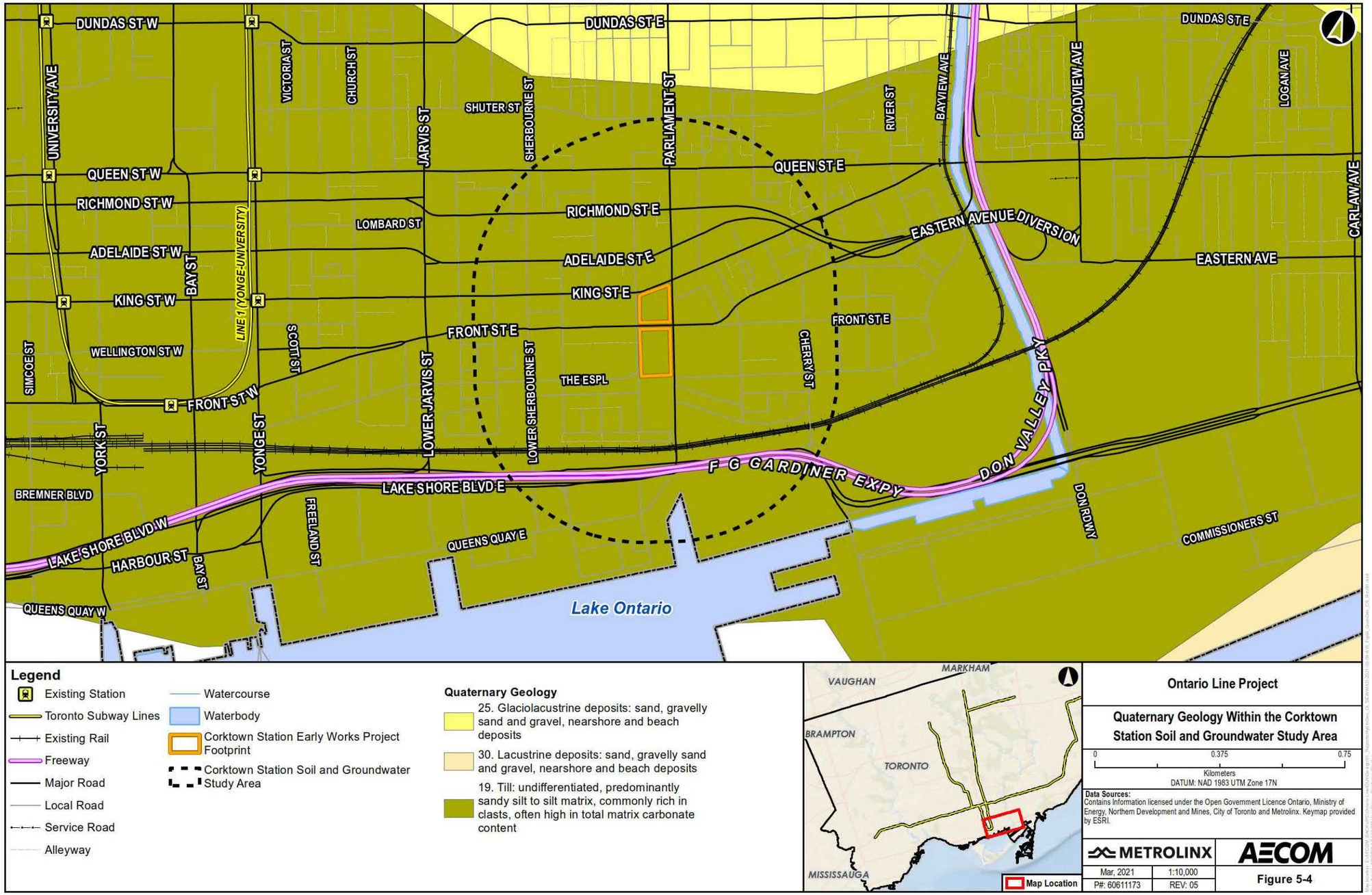
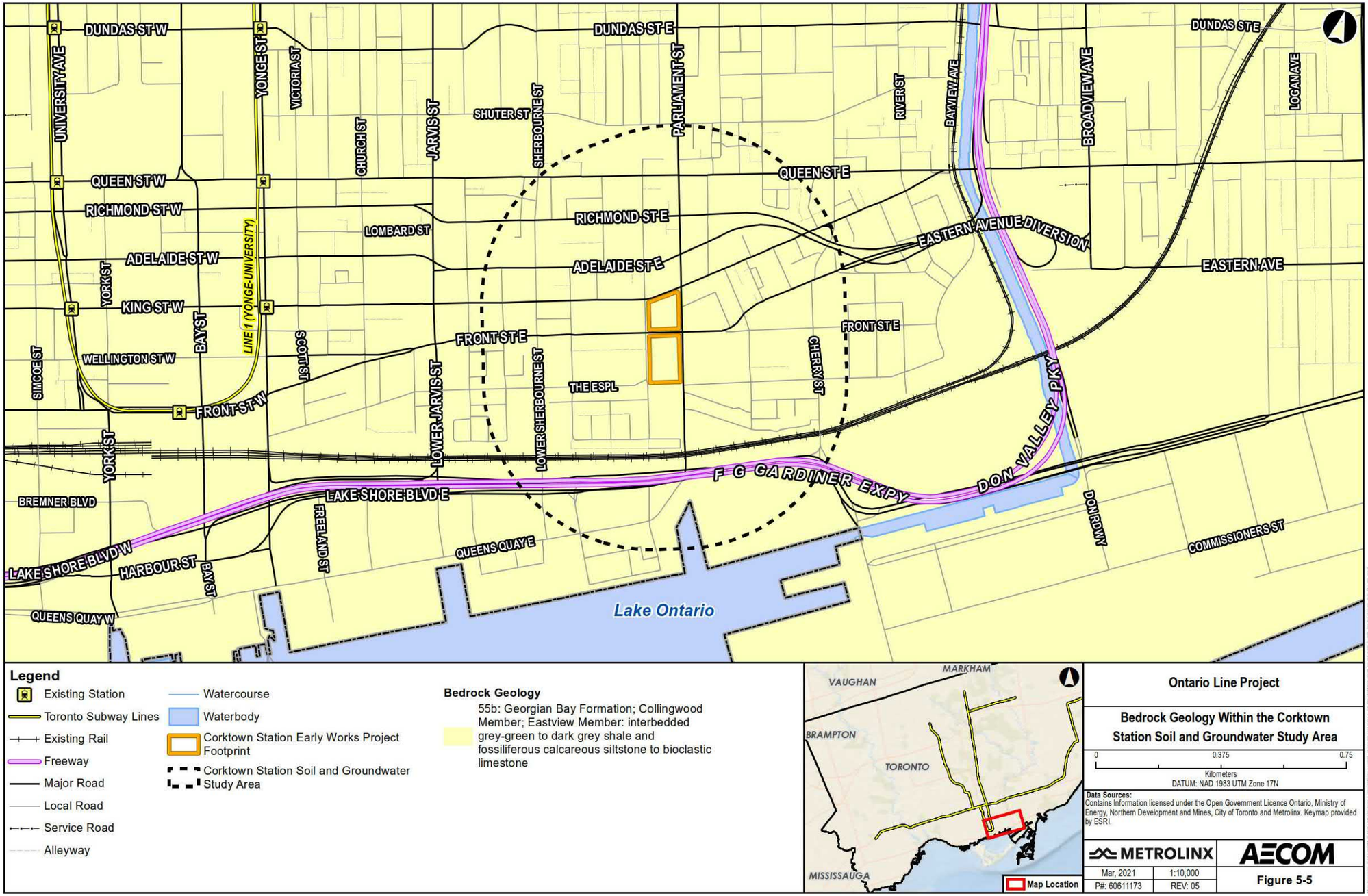


Figure 5-5: Bedrock Geology Within the Corktown Station Soil and Groundwater Study Area



The well-established hydrostratigraphic framework for the Greater Toronto Area is summarized in **Table 5-1** (Toronto and Region Conservation Authority, 2015).

Table 5-1: Hydrostratigraphic Units of the GTA (Toronto and Region Conservation Authority, 2015)

Age	Geological Units	Hydrostratigraphic Units (Aquifer)	Hydrostratigraphic Units (Aquitard)
Late Wisconsin Glacial Complex	Glaciolacustrine Deposits and Recent Sediments	Surficial Aquifer	N/A
Late Wisconsin Glacial Complex	Halton Till	N/A	Halton Aquitard
Late Wisconsin Glacial Complex	Oak Ridges Moraine/Mackinaw Interstadial Deposits	Oak Ridges Aquifer Complex	N/A
Late Wisconsin Glacial Complex	Newmarket (Northern) Till	N/A	Newmarket Aquitard
Early-Mid Wisconsin Glacial Lake Deposits	Thorncliffe Formation	Thorncliffe Aquifer Complex	N/A
Early-Mid Wisconsin Glacial Lake Deposits	Sunnybrook Drift	N/A	Sunnybrook Aquitard
Early Wisconsin Delta	Scarborough Formation	Scarborough Aquifer Complex	N/A
Sangamon Interglacial Illinoian Glaciation	Don Formation	N/A	N/A
Sangamon Interglacial Illinoian Glaciation	York Till	N/A	N/A
Late Ordovician Bedrock	Georgian Bay Formation	N/A	Bedrock Aquitard

Based on north-south cross-sections in the vicinity of the Corktown Station Soil and Groundwater Study Area, (Puopolo, J. and Usher, S., 2007; Toronto and Region Conservation Authority, 2008), the Scarborough Aquifer Complex (organic-rich sands over silts and clays) is the primary Hydrostratigraphic Unit is present within the Corktown Station Soil and Groundwater Study Area. Other units that may be present include the Sunnybrook Aquitard and a Surficial Aquifer (depending on the composition of Recent Deposits).

5.2.2.1 Regional Groundwater Flow

In general, the dynamics of shallow groundwater flow within the overburden deposits is related to the surface topography with flow directed to topographic lows, wetlands, and surface watercourses. The deeper aquifer systems, including bedrock aquifer(s), tend to be more uniform and are less influenced by topographic variations. Groundwater flow in shallow aquifer(s) will be primarily horizontal with a minor vertical component (flow rate

depends on the hydraulic conductivity and hydraulic gradient within the unit). Flow within aquitard units tends to be primarily downward towards deeper units. Variations to the flow direction will change depending on proximity to surface watercourses/water bodies and subsurface geology.

The surficial/shallow groundwater system within the Corktown Station Soil and Groundwater Study Area is influenced by surface topography and likely flows from the Study Area towards the Don River and Lake Ontario.

5.2.3 Groundwater Resources

5.2.3.1 Source Water Protection

The Corktown Station Soil and Groundwater Study Area is located within the Credit Valley, Toronto and Region, and Central Lake Ontario Source Protection Region. The Credit Valley, Toronto and Region, and Central Lake Ontario Source Protection Region is responsible for undertaking a technical assessment of municipal water sources to identify potential vulnerabilities and for developing a Source Protection Plan. The Ministry of the Environment, Conservation and Parks defines several source water areas/features that are of relevance to the Corktown Station Soil and Groundwater Study Area, which are described below.

5.2.3.1.1 Intake Protection Zone

The southern portion of the Corktown Station Soil and Groundwater Study Area is located within an Intake Protection Zone 3 (IPZ-3), as shown in **Figure 5-6**. The Intake Protection Zone applies to those areas of land and water that contribute source water to a surface water drinking water system intake within a specified distance, period of flow time, and/or watershed area and within which it is desirable to regulate or monitor drinking water threats.

5.2.3.1.2 Event Based Area

An Event Based Area is an area within a watershed where a spill could pollute the surface water drinking supply. The southern portion of the Corktown Station Soil and Groundwater Study Area is located within an Event Based Area for Stored/Transported Fuel/Oil Spill; Pipeline Fuel/Oil Spill; and Wastewater Treatment Plant/Sanitary Sewer.

5.2.3.1.3 Highly Vulnerable Aquifer

The Corktown Station Soil and Groundwater Study Area overlaps with a regional Highly Vulnerable Aquifer feature, shown in **Figure 5-7**. A Highly Vulnerable Aquifer is an aquifer that is susceptible to contamination due to its location near the ground surface,

or the type of material found in the ground around the aquifer provides little barrier to contamination. A summary of source water protection details for the Corktown Station Soil and Groundwater Study Area is included in **Table 5-2**.

Table 5-2: Source Water Protection Details for the Corktown Station Soil and Groundwater Study Area

Source Water Protection Feature	Present	Source Protection Plan Policies[15]	Legal Effect of Policy
Highly Vulnerable Aquifer	Yes, Highly Vulnerable Aquifer; Vulnerability Score of 6	Related Source Protection Plan policies[1]: SAL-10, SAL-11, SAL-12, SAL-13, DNAP-3, OS-3	Listed policies include both legally binding and non-binding examples
Intake Protection Zone	Yes, Zone 3	No policies related to IPZ-3 are specified in the SPP	-
Event Based Area	Yes	Related Source Protection Plan policies[1]: LO-G-1, LO-G-2, LO-G-3, LO-NGS-1, LO-SEW-1, LO-SEW-2, LO-PIPE-1, LO-FUEL-1, LO-FUEL-2	Listed policies include both legally binding and non-binding examples

Notes: 1 – SAL-10: Threat – Application of Road Salt; Implementing Body – Planning Approval Authority; Source Water Protection Area: Highly Vulnerable Aquifer

SAL-11: Threat – Application of Road Salt; Implementing Body – Ministry of the Environment, Conservation and Parks; Source Water Protection Area: Highly Vulnerable Aquifer

SAL-12: Threat – Application of Road Salt; Implementing Body – Municipality; Source Water Protection Area: Highly Vulnerable Aquifer

SAL-13: Threat – Application of Road Salt, and Handling and Storage of Road Salt; Implementing Body – Source Protection Authority) and Municipality; Source Water Protection Area: Highly Vulnerable Aquifer

DNAP-3: Threat – Handling and Storage of a Dense Non-Aqueous Phase Liquid; Implementing Body – Municipality; Source Water Protection Area: Highly Vulnerable Aquifer

OS-3: Threat – Handling and Storage of an Organic Solvent; Implementing Body – Municipality; Source Water Protection Area: Highly Vulnerable Aquifer

LO-G-1: Threat – All Lake Ontario Threats; Implementing Body – Ministry of the Environment, Conservation and Parks; Source Water Protection Area: Event Based Area

LO-G-2: Threat – All Lake Ontario Threats; Implementing Body – Ministry of the Environment, Conservation and Parks; Source Water Protection Area: Event Based Area

LO-G-3: Threat – All Lake Ontario Threats; Implementing Body – Municipality (Peel, Toronto, Durham); Source Water Protection Area: Event Based Area

LO-NGS-1: Threat – Spill of Tritium From Nuclear Generating Station; Implementing Body – Ministry of the Environment, Conservation and Parks; Source Water Protection Area: Event Based Area

15. With the location of the Corktown Station Soil and Groundwater Study Area within a Highly Vulnerable Aquifer, there are several Source Protection Plan policies that may be relevant to the early works construction.

LO-SEW-1: Threat – The Establishment, Operation or Maintenance of a System That Collects, Stores, Transmits, Treats or Disposes of Sewage; Implementing Body – Ministry of the Environment, Conservation and Parks; Source Water Protection Area: Event Based Area

LO-SEW-2: Threat – Spill From a Sanitary Trunk Sewer Break; Implementing Body – Ministry of the Environment, Conservation and Parks; Source Water Protection Area: Event Based Area

LO-PIPE-1: Threat – Pipelines Transporting Petroleum Product (Containing Benzene) Crossing Tributaries of Lake Ontario; Implementing Body – Ministry of the Environment, Conservation and Parks; Source Water Protection Area – Event Based Area

LO-FUEL-1: Threat – Handling and Storage of Fuel (Petroleum Tank Farm Spill); Implementing Body – Ministry of the Environment, Conservation and Parks; Source Water Protection Area – Event Based Area

LO-FUEL-2: Threat – Handling and Storage of Fuel (Spill From Petroleum Storage Tanks); Implementing Body – Ministry of the Environment, Conservation and Parks; Source Water Protection Area – Event Based Area

5.2.3.2 Ministry of the Environment, Conservation and Parks Water Well Records

An inventory of local private water wells (i.e., domestic, commercial, industrial, etc.) was prepared within the Corktown Station Soil and Groundwater Study Area by searching the Ministry of the Environment, Conservation and Parks Water Well Information System database. Results are shown in **Figure 5-8**, along with the primary use of each well. A total of 471 water well records were found located within the Corktown Station Soil and Groundwater Study Area.

As shown in **Figure 5-8**, available well records indicate that approximately 54% of groundwater use within the Corktown Station Soil and Groundwater Study Area is for monitoring and test hole purposes.

Fifty-five abandonment records (approximately 12%) are within the Corktown Station Soil and Groundwater Study Area and eight wells are identified as ‘Not Used’ (approximately 2%). Approximately 33% (or 154 wells) of the Ministry of the Environment, Conservation and Parks water well records did not specify the well use and therefore are classified as ‘Unknown’. The dataset is inconclusive in terms of the primary water supply source(s) within the Corktown Station Soil and Groundwater Study Area, with both overburden and bedrock sources identified.

Table 5-3: Summary of Ministry of the Environment, Conservation and Parks Water Well Record Information for the Corktown Station Soil and Groundwater Study Area

Primary Water Use	Number of Well Records	Well Depth Range (m)	Primary Well Type
Abandoned	55	0 – 28.65	1 Overburden, 1 Bedrock, 53 Unknown
Unknown	154	0 – 21.79	3 Overburden, 151 Unknown
Monitoring and Test Hole	254	0 - 70	5 Overburden, 1 Bedrock, 248 Unknown
Not Used	8	0 – 10.30	3 Overburden, 5 Unknown

Figure 5-6: Intake Protection Zone Within the Corktown Station Soil and Groundwater Study Area

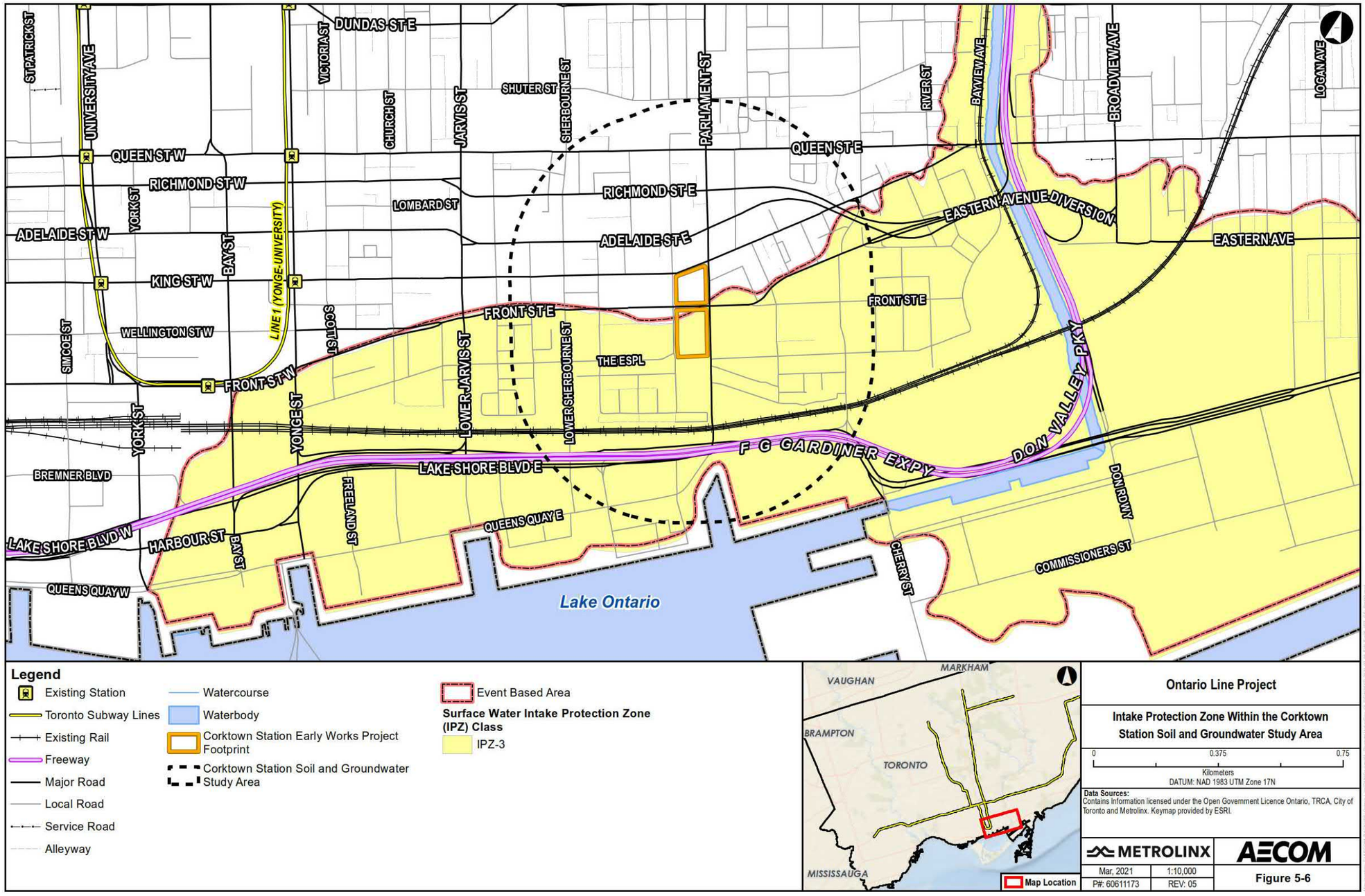
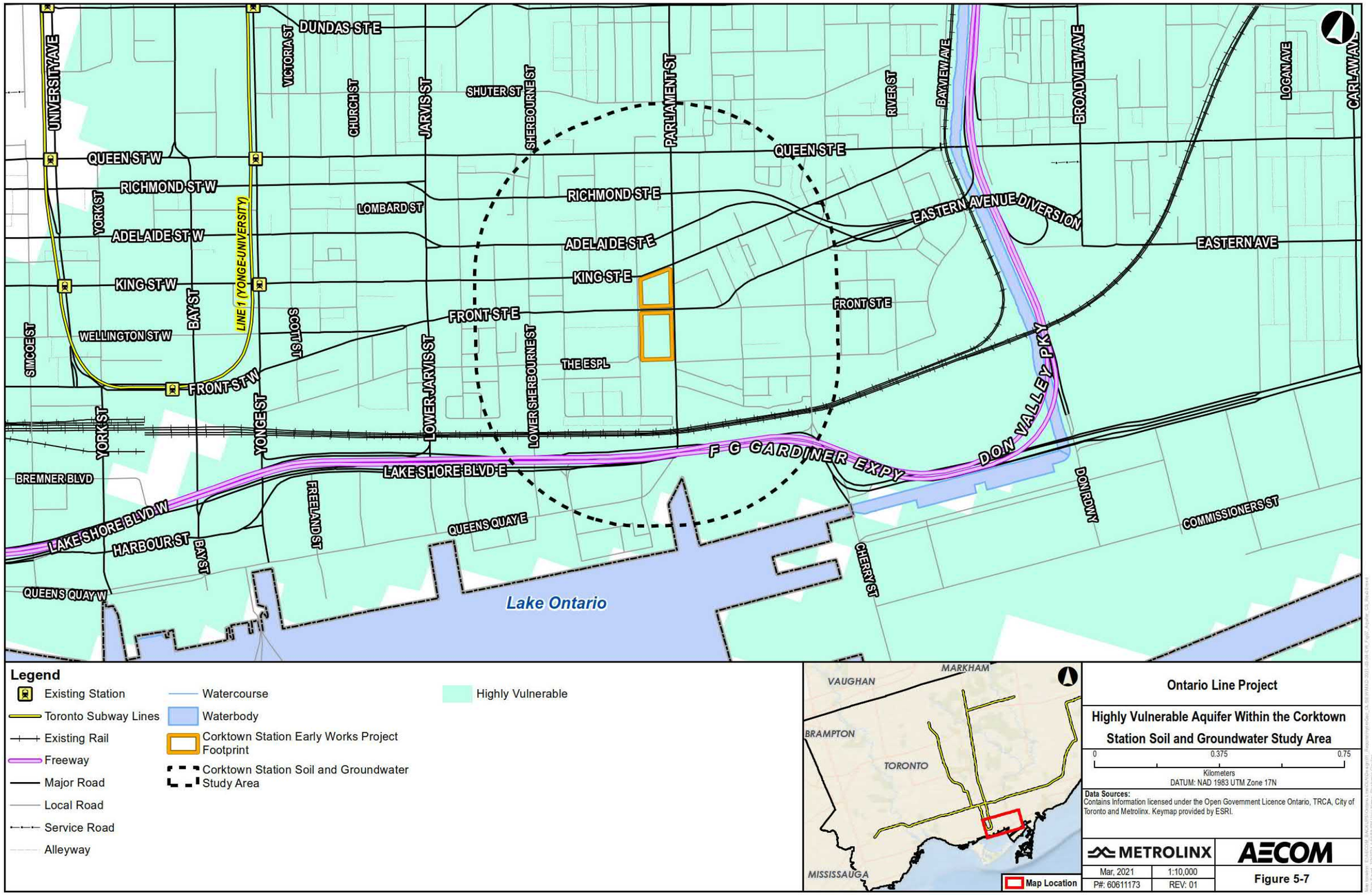


Figure 5-7: Highly Vulnerable Aquifer Within the Corktown Station Soil and Groundwater Study Area



5.2.3.3 Ministry of the Environment, Conservation and Parks Permit to Take-Water and Environmental Activity and Sector Registry Summary

A search of the Ministry of the Environment, Conservation and Parks Permit to Take Water database returned 22 results within the Corktown Station Soil and Groundwater Study Area, all of which have expired with the exception of four active records for dewatering or construction dewatering purposes.

A search of Ministry of the Environment, Conservation and Parks Environmental Activity and Sector Registry database returned eight results within the Corktown Station Soil and Groundwater Study Area. Six active Environmental Activity and Sector Registry records were identified for construction dewatering purposes.

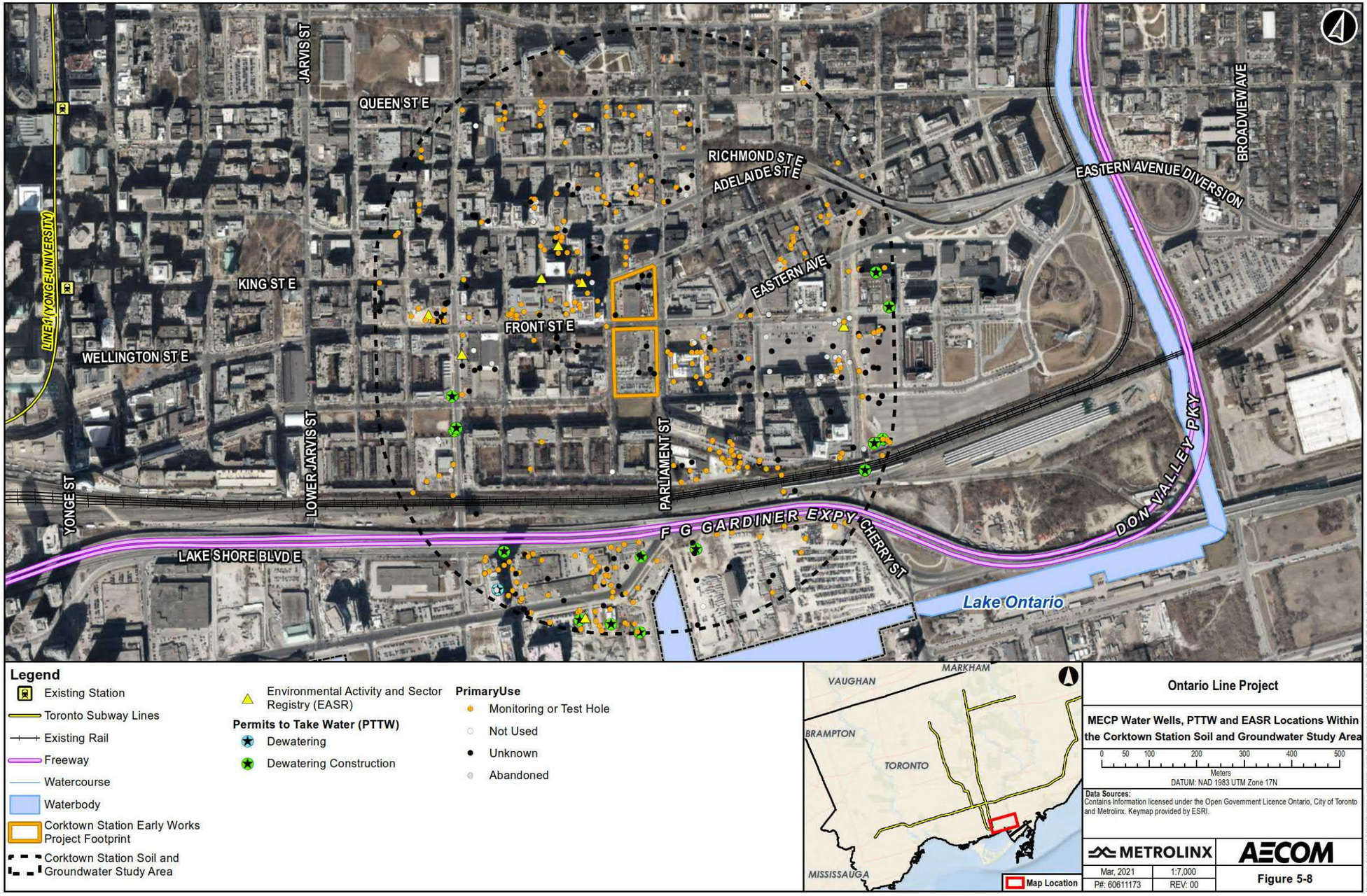
The referenced location for each Permit to Take Water and Environmental Activity and Sector Registry within the Corktown Station Soil and Groundwater Study Area is shown in **Figure 5-8**.

5.2.3.4 Water Level Data

A total of seven Ministry of the Environment, Conservation and Parks water well records were identified that report a static water level. These reported water levels represent either the water table position or the potentiometric surface depending on whether a given well is installed within an unconfined or confined aquifer. Ministry of the Environment, Conservation and Parks water well records do not provide sufficient information to confirm aquifer conditions. Static water levels reported on the identified well records range between 1.34 metres and 4.00 metres below ground surface.

Static water levels may fluctuate considerably in response to changes in precipitation patterns, seasonal fluctuations and temporal variability.

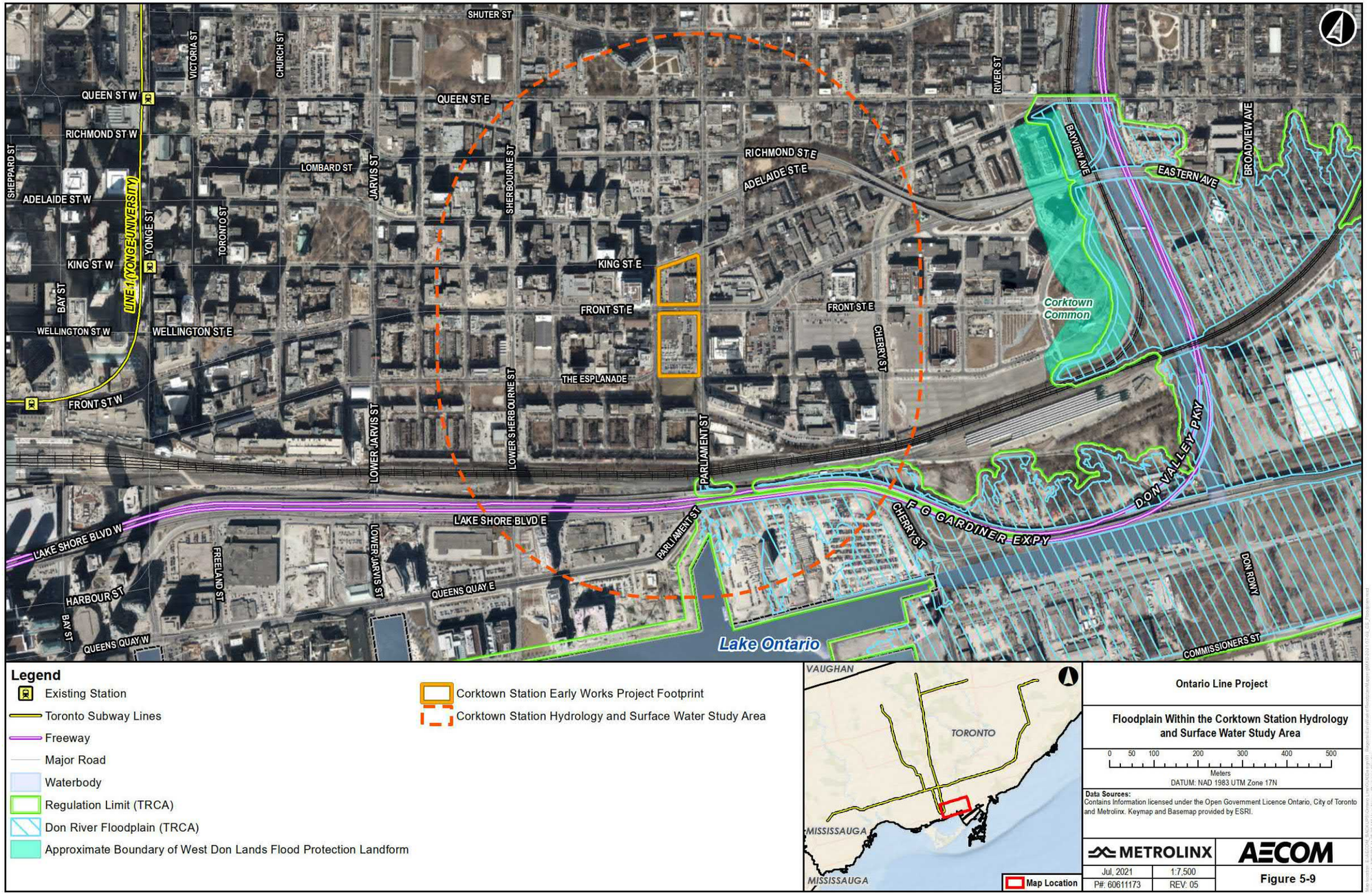
Figure 5-8: Ministry of the Environment, Conservation and Parks Water Wells, Permit to Take Water and Environmental Activity and Sector Registry Locations Within the Corktown Station Soil and Groundwater Study Area



5.3 Hydrology and Surface Water

Approximately 8% of the Corktown Station Hydrology and Surface Water Study Area at its eastern-most edge overlaps the Toronto and Region Conservation Authority's Regulation Area (Toronto and Region Conservation Authority, 2021a) and, according to the Toronto and Region Conservation Authority's Floodplain Map Viewer, approximately 4% of the Corktown Station Hydrology and Surface Water Study Area overlaps the Don River Floodplain (Toronto and Region Conservation Authority, 2021b). The Corktown Station Early Works Project Footprint is not within the Don River Floodplain.

Figure 5-9: Floodplain Within the Corktown Station Hydrology and Surface Water Study Area



Legend

- Existing Station
- Toronto Subway Lines
- Freeway
- Major Road
- Waterbody
- Regulation Limit (TRCA)
- Don River Floodplain (TRCA)
- Approximate Boundary of West Don Lands Flood Protection Landform
- Corktown Station Early Works Project Footprint
- Corktown Station Hydrology and Surface Water Study Area

Ontario Line Project

Floodplain Within the Corktown Station Hydrology and Surface Water Study Area

0 50 100 200 300 400 500
Meters
DATUM: NAD 1983 UTM Zone 17N

Data Sources:
Contains Information licensed under the Open Government Licence Ontario, City of Toronto and Metrolinx. Keymap and Basemap provided by ESRI.

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Figure 5-9

5.4 Air Quality

5.4.1 Existing Ambient Air Quality

Representative data for all criteria air contaminants within the Corktown Station Air Quality Study Area were identified as follows for the averaging period combinations listed in **Table 5-4:**

- 1-hour, 8-hour, and 24-hour ambient concentrations for the contaminants were obtained from the 90th percentile of hourly measurements from the representative air quality monitoring stations (the average value was calculated from the available years). The 90th percentile of available background data was used following the methodology outlined in the Ministry of Transportation's "Environmental Guide for Assessing and Mitigating the Air Quality Impacts and Greenhouse Gas Emissions of Provincial Transportation Projects" (Ministry of Transportation, 2020).
- Annual ambient concentrations for the contaminants were obtained from the mean measurements from the representative air quality monitoring station (the average value was calculated from the available years).

The averaged background concentrations for each contaminant were compared to the applicable federal and provincial standards for all of the applicable time averaging periods and percentile concentrations.

The approach to calculating the overall 90th percentile for the data set was to calculate the individual year's 90th percentile data, provided in a 1-year format from the National Air Pollution Surveillance Monitoring online data portal, then to determine the average of a selection of the most recent and complete five years' 90th percentile data.

As shown in **Table 5-4**, there are several air quality threshold exceedances within the monitored existing ambient air quality data. Benzene has elevated annual contributions which exceed the threshold guideline from the Ambient Air Quality Criteria. Benzo(a)pyrene, the representative polycyclic aromatic hydrocarbon, shows elevated levels of concentration for both annual and daily provincial air quality thresholds. This is due mainly to high presence of regional air quality contributions, high traffic volumes within the Greater Toronto Area, and industrial contributions from Toronto, the Greater Toronto Area, and Hamilton.

Table 5-4: Comparison of Existing Air Quality to Standards

Criteria Air Contaminant	Station Identification	Averaging Period	Years	Average of Background Data (µg/m^3)	Statistical Measure	Standard Threshold (µg/m^3)	Standard Source	% of Standard Threshold
NO_2	60433	One hour	2013-2017	49.50	90th Percentile	400	Ambient Air Quality Criteria	12%
NO_2	60433	One hour	2013-2017	49.50	90th Percentile	113	Canadian Ambient Air Quality Standards	44%
NO_2	60433	24 hours	2013-2017	41.75	90th Percentile	200	Ambient Air Quality Criteria	21%
NO_2	60433	Annual	2013-2017	26.68	Mean	32	Canadian Ambient Air Quality Standards	83%
CO	60430	One hour	2013-2017	446	90th Percentile	36,200	Ambient Air Quality Criteria	1%
CO	60430	8 hours	2013-2017	419	90th Percentile	15,700	Ambient Air Quality Criteria	3%
SO_2 (2)	60430	10-min.	2013-2017	9.11	90th Percentile	178	Ambient Air Quality Criteria	5%
SO_2	60430	One hour	2013-2017	5.51	90th Percentile	106	Ambient Air Quality Criteria	6%
SO_2	60430	Annual	2013-2017	1.84	Mean	11	Ambient Air Quality Criteria	17%
PM_{10} (3)	60433	24 hours	2013-2017	25.78	90th Percentile	50	Ambient Air Quality Criteria	51%
$PM_{2.5}$	60433	24 hours	2013-2017	13.89	90th Percentile	27	Canadian Ambient Air Quality Standards	51%
$PM_{2.5}$	60433	Annual	2013-2017	7.94	Mean	8.8	Canadian Ambient Air Quality Standards	90%
Acetaldehyde (4)	60439	30-min.	2014-2017	5.00	90th Percentile	500	Ambient Air Quality Criteria	1%
Acetaldehyde	60439	24 hours	2014-2017	1.69	90th Percentile	500	Ambient Air Quality Criteria	0%
Acrolein (5)	60439	One hour	2014-2017	0.17	90th Percentile	4.5	Ambient Air Quality Criteria	4%
Acrolein	60439	24 hours	2014-2017	0.07	90th Percentile	0.4	Ambient Air Quality Criteria	17%
Benzene	60427	24 hours	2011-2014	0.92	90th Percentile	2.3	Ambient Air Quality Criteria	40%
Benzene	**60427**	**Annual**	**2011-2014**	**0.61**	**90th Percentile**	**0.45**	**Ambient Air Quality Criteria**	**134%**
Benzo(a)-pyrene	**60427 60439**	**24 hours**	**2011-2015**	**1.21E-04**	**90th Percentile**	**0.00005**	**Ambient Air Quality Criteria**	**242%**
Benzo(a)-pyrene	**60427 60439**	**Annual**	**2011-2015**	**6.72E-05**	**90th Percentile**	**0.00001**	**Ambient Air Quality Criteria**	**672%**
1,3-Butadiene	60427	24 hours	2011-2014	0.10	90th Percentile	10	Ambient Air Quality Criteria	1%
1,3-Butadiene	60427	Annual	2011-2014	0.06	90th Percentile	2	Ambient Air Quality Criteria	3%
Formaldehyde	60439	24 hours	2014-2017	3.16	90th Percentile	65	Ambient Air Quality Criteria	5%

Notes: (1) Exceedances of the Ambient Air Quality Criteria and Canadian Ambient Air Quality Standards are shown in red.

(2) Concentrations of sulphur dioxide (SO_2) are measured on an hourly basis, background concentrations for the 30-minute averaging period have been converted using the Ministry of the Environment, Conservation and Parks' conversion factor where $C_{0.5hr} = C_{1hr} \times (1hr/0.5hr)^{0.28}$.

(3) PM_{10} was not included in National Air Pollution Surveillance air quality monitoring station measurements, and therefore was estimated using PM2.5 measurements, assuming a ratio of 1 µg/m3 PM10 per 0.54 µg/m3 of PM2.5 as per Lall et al. publication in Atmospheric Environment, Estimation of historical annual $PM_{2.5}$ exposures for health effects assessment (Lall et al., 2004).

(4) Concentrations of acetaldehyde are measured on a 24 hour basis, background concentrations for the 30-minute averaging period have been converted using the Ministry of the Environment, Conservation and Parks' conversion factor where $C_{0.5hr} = C_{24hr} \times (24hr/0.5hr)^{0.28}$.

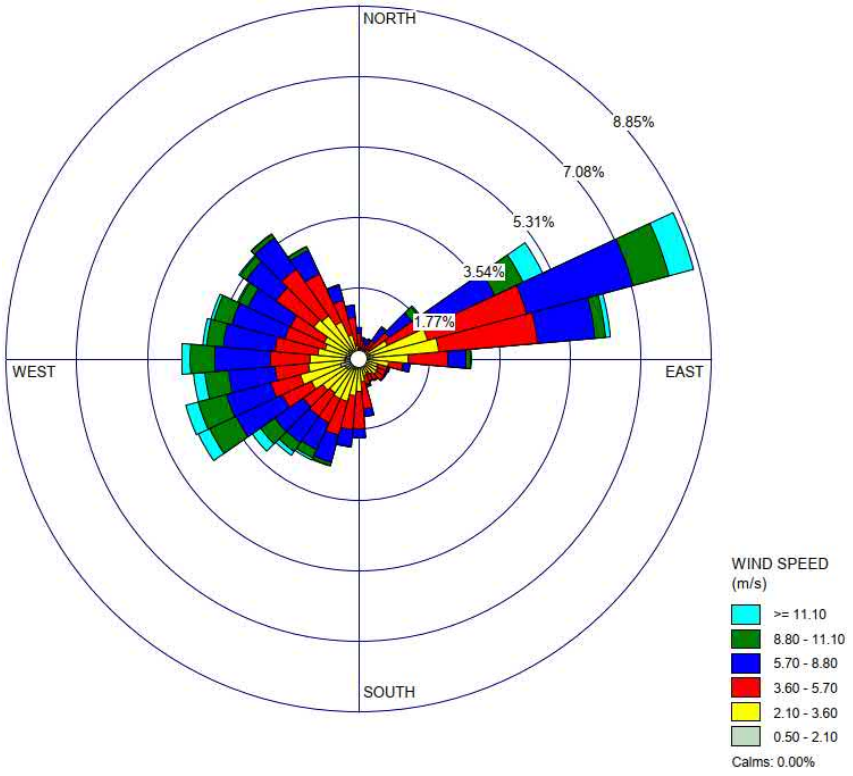
(5) Concentrations of acrolein are measured on a 24 hour basis, background concentrations for the hourly averaging period have been converted using the Ministry of the Environment, Conservation and Parks' conversion factor where $C_{1hr} = C_{24hr} \times (1hr/24hr)^{0.28}$.

5.4.2 Meteorological Conditions

The local air quality is influenced by both ambient conditions and contributions from traffic and construction activities, and is affected by the local and regional meteorological conditions. Predominant wind speeds and wind directions within the Corktown Station Air Quality Study Area will determine the likely areas of most common impacts, and the potential areas of greatest impact. High impact conditions from construction and traffic emissions are created from low speed surface air movement towards a nearby receptor. Additionally, high impact conditions may also form by high-speed surface air movement due to an increase in fugitive dust emissions from unpaved surfaces, stockpiles, and material handling.

Local surface station meteorological data was used to anticipate areas of high probability impact. The closest representative meteorological station for the Corktown Station Air Quality Study Area was identified as the Toronto City Centre station located on Toronto Island (Station Identification 71265). This station captures the meteorological effects from Lake Ontario which impact the air quality conditions of the Corktown Station Air Quality Study Area. The wind rose for the five-year meteorological period (2015-2019) showing the wind direction and wind speed is presented in **Figure 5-10**. The wind rose shows that the predominant wind direction is from the northeast. Secondary predominant winds blow from the west, northwest and southwest.

Figure 5-10: Wind Rose Representative of Meteorological Conditions in the Corktown Station Air Quality Study Area



5.4.3 Traffic Assessment

Major traffic sources within the Corktown Station Air Quality Study Area include the following major roadways:

- Sherbourne Street;
- Parliament Street;
- Cherry Street;
- Queen Street East;
- Richmond Street East;
- Adelaide Street East;
- King Street East;
- Front Street East;
- Eastern Avenue;
- Berkeley Street;
- The Esplanade;
- Lakeshore Blvd; and,
- Gardiner Expressway.

There is also transient and local traffic on Mill Street, providing northern access points to the Distillery District. **Table 5-5** shows the summary of annual average daily traffic data for cars, trucks, and buses (where available) along the major roads within the Corktown Station Air Quality Study Area. Raw turning movement counts of traffic representative of the Corktown Station Air Quality Study Area are included in **Appendix A2**.

The purpose of providing representative annual averaged daily traffic data is to demonstrate the relative contribution from each major roadway within the Corktown Station Air Quality Study Area. The data presented in **Table 5-5** indicates that the Gardiner Expressway has the greatest traffic levels and is likely to have the greatest impact on local air quality.

Table 5-5: Representative Traffic Data Within the Corktown Station Air Quality Study Area

Road Segment	2019 Annual Averaged Daily Traffic: Cars	2019 Annual Averaged Daily Traffic: Trucks	2019 Annual Averaged Daily Traffic: Bus
Sherbourne Street	7,748	470	56
Parliament Street	9,950	794	140
Cherry Street North of Mill Street	3,404	376	56
Cherry Street South of Mill Street	4,820	508	--
Queen Street East	10,568	172	--
Richmond Street East	16,962	966	--
Adelaide Street East	16,962	966	--
King Street East	15,640	702	--
Front Street East	14,318	438	84
Eastern Avenue	10,768	168	28
Berkeley Street	1,328	48	84
The Esplanade	1,732	104	140
Mill Street	2,452	160	56
Lakeshore Blvd E	20,157	884	72
Gardiner Expressway	51,846	3,111	--

5.4.4 Representative Receptors

There is a diverse range of land uses within the Corktown Station Air Quality Study Area. This includes residential apartments and complexes, commercial buildings, schools, day-care centres, and mixed-use land uses.

Several critical and sensitive receptors were identified within the Corktown Station Air Quality Study Area.

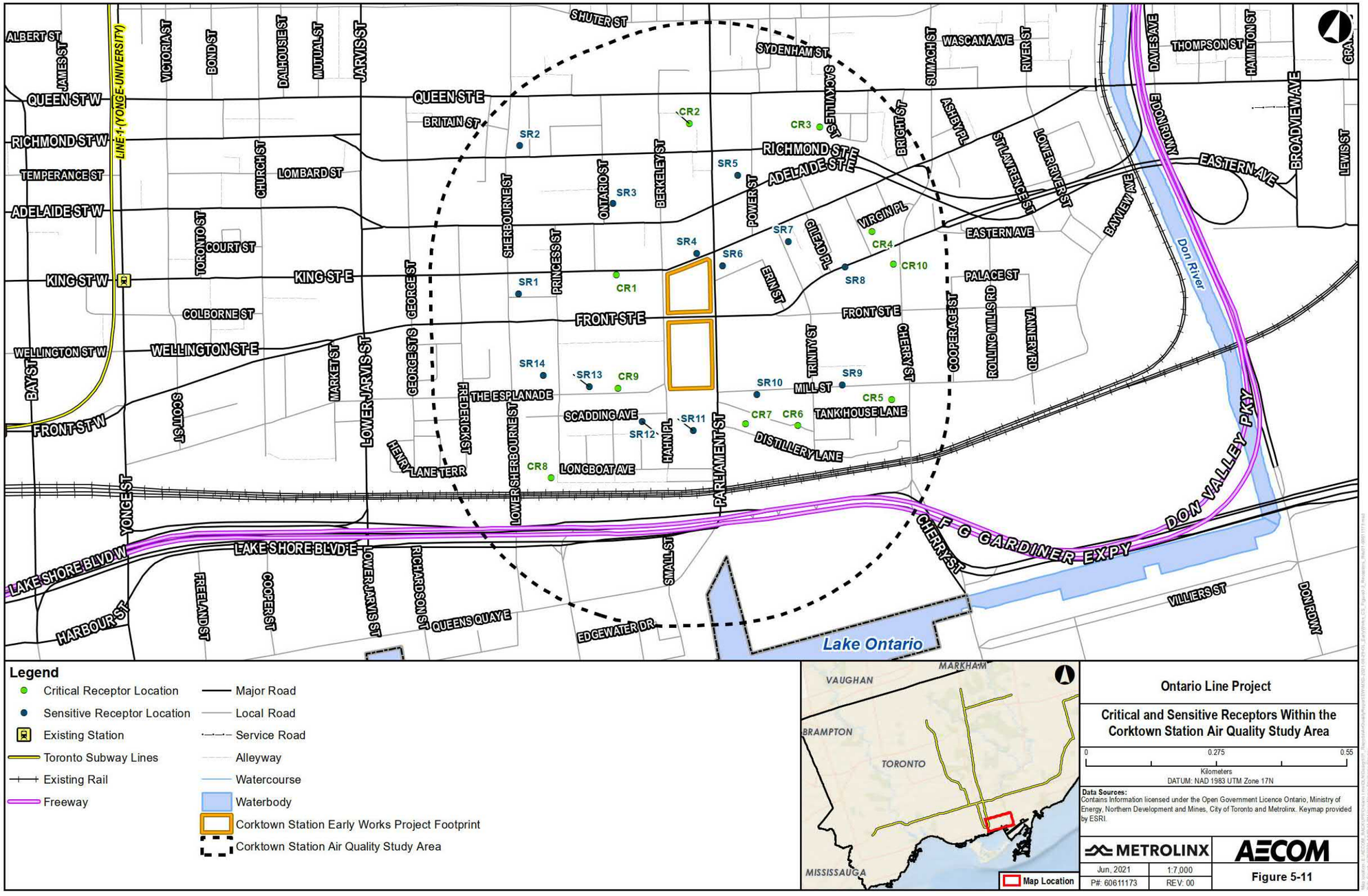
There are future condominium complex developments (i.e., planned or under active construction) within the Corktown Station Air Quality Study Area (e.g. the condominium complex buildings under construction at Adelaide Street East at Power Street, Eastern Avenue at Sackville Street and Front Street at Princess Street). These future developments were identified and included as representative sensitive receptors within the Corktown Station Air Quality Study Area. Additionally, there is a new long-term care home being proposed at 55 Eastern Avenue, which was included as a critical receptor. Representative receptors are listed in **Table 5-6**.

A list of sensitive receptors within the Corktown Station Air Quality Study Area is provided in **Table 5-6** and shown in **Figure 5-11**.

Table 5-6: Critical and Sensitive Receptors Within the Corktown Station Air Quality Study Area

Receptor Identification	Receptor Type	Address	Description	UTM Easting (m)	UTM Northing (m)
CR1	Critical	341 King Street East, Toronto	George Brown College	631798.00	4834498.00
CR2	Critical	162 Parliament Street, Toronto	Liberty Prep, Montessori School	631863.00	4834848.00
CR3	Critical	80 Sackville Street, Toronto	St. Pauls Catholic School	632128.00	4834922.00
CR4	Critical	19 Sackville Street, Toronto	Inglenook Community High School	632297.00	4834743.00
CR5	Critical	50 Tank House Lane, Toronto	George Brown Theatre School	632441.00	4834417.00
CR6	Critical	50 Gristmill Lane, Toronto	Voice Integrative School	632268.00	4834306.00
CR7	Critical	8 Distillery Lane, Toronto	Distillery District Early Learning Centre (Daycare	632161.00	4834277.00
CR8	Critical	2 Princess Street, Toronto	St. Lawrence Co-Op Day Care Inc	631802.00	4834049.00
CR9	Critical	246 The Esplanade, Toronto	Market Lane Junior and Senior Public School	631882.00	4834271.00
CR10	Critical	55 Eastern Avenue, Toronto	Cherry Place Long-term Care Home	632360.00	4834691.00
SR1	Sensitive	39 Sherbourne Street, Toronto	Apartment/condo building	631623.00	4834399.00
SR2	Sensitive	320 Richmond Street East, Toronto	Apartment/condo building	631534.00	4834699.00
SR3	Sensitive	75 Ontario Street, Toronto	Apartment/condo building	631758.00	4834640.00
SR4	Sensitive	318 King Street East, Toronto	Apartment/condo building	631957.00	4834591.00
SR5	Sensitive	46-48 Power Street, Toronto	Apartment/condo building	631992.00	4834774.00
SR6	Sensitive	393 King Street East, Toronto	Apartment/condo building	632017.00	4834583.00
SR7	Sensitive	115 Trinity Street Toronto	Residential Townhouse	632135.00	4834671.00
SR8	Sensitive	28 Eastern Avenue, Toronto	Apartment/condo building	632265.00	4834655.00
SR9	Sensitive	70 Mill Street, Toronto	Apartment/condo building	632332.00	4834415.00
SR10	Sensitive	33 Mill Street, Toronto	Apartment/condo building	632179.00	4834345.00
SR11	Sensitive	33 Hahn Place, Toronto	Apartment/condo building	632055.00	4834243.00
SR12	Sensitive	125 Scadding Avenue, Toronto	Apartment/condo building	631946.00	4834226.00
SR13	Sensitive	222 The Esplanade, Toronto	Apartment/condo building	631811.00	4834247.00
SR14	Sensitive	177 Front Street East, Toronto	Apartment/condo building	631729.00	4834240.00

Figure 5-11: Critical and Sensitive Receptors Within the Corktown Station Air Quality Study Area



5.5 Noise and Vibration

5.5.1 Noise

Baseline noise measurements were conducted as part of the Ontario Line Final Environmental Conditions Report (AECOM, 2020a) to characterize the existing noise levels throughout the Ontario Line Study Area. **Table 5-7** presents the baseline noise measurements relevant to the Corktown Station early works. The monitoring locations are shown in **Figure 5-12**.

5.5.2 Vibration

Baseline vibration measurements were not required, as the construction vibration assessment completed as part of the Corktown Station Early Works Noise and Vibration Report (AECOM, 2021a) uses absolute limits that do not change based upon the existing vibration levels.

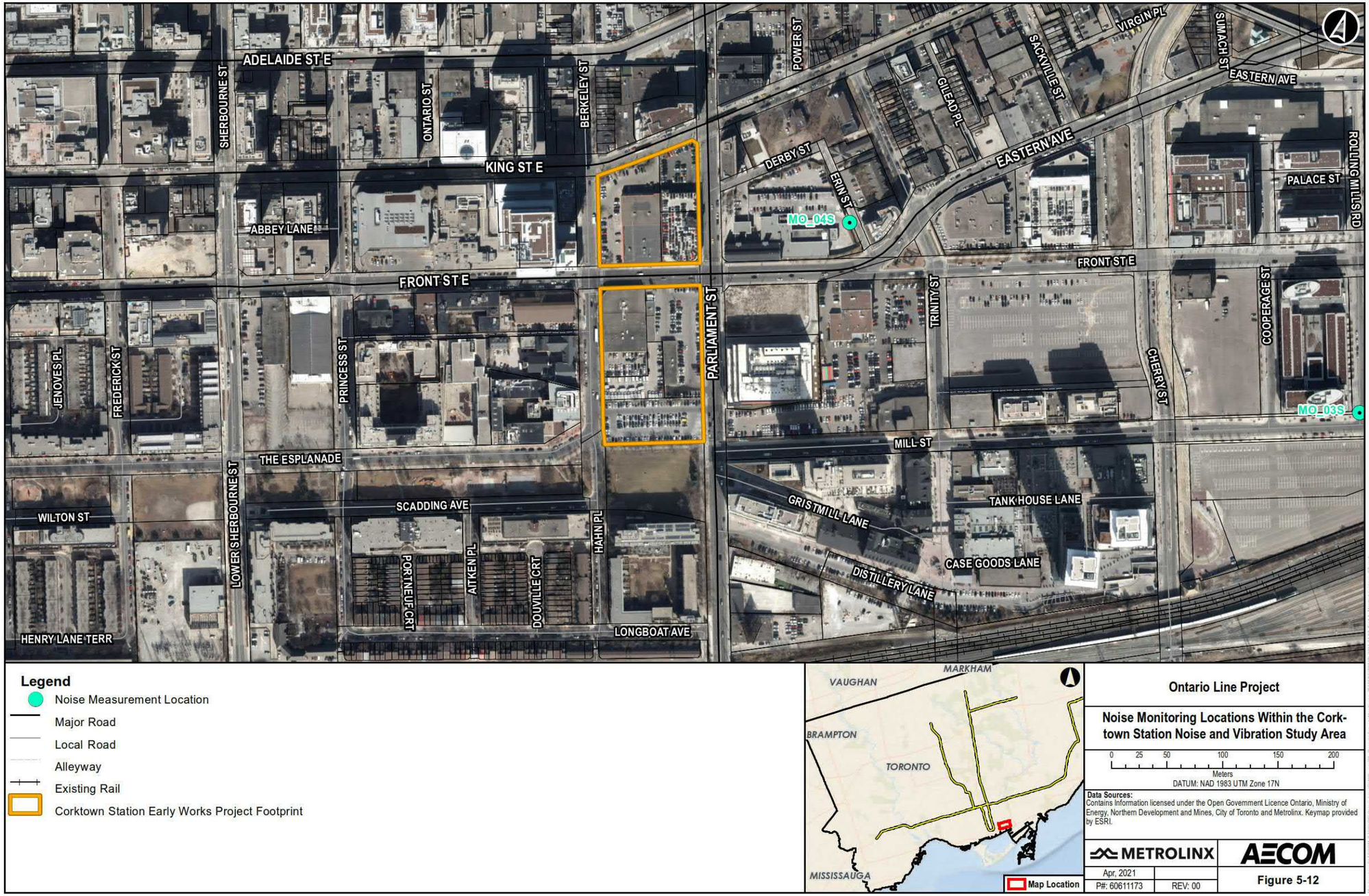
Table 5-7: Relevant Baseline Noise Measurement Data

Monitoring Location	Associated Study Area	Daytime (07:00-19:00) Average $L_{eq, 1hr}$ (dBA)	Daytime (07:00-19:00) Minimum $L_{eq, 1hr}$ (dBA)	Daytime (07:00-19:00) Maximum $L_{eq, 1hr}$ (dBA)	Evening (19:00-23:00) Average $L_{eq, 1hr}$ (dBA)	Evening (19:00-23:00) Minimum $L_{eq, 1hr}$ (dBA)	Evening (19:00-23:00) Maximum $L_{eq, 1hr}$ (dBA)	Night (23:00-07:00) Average $L_{eq, 1hr}$ (dBA)	Night (23:00-07:00) Minimum $L_{eq, 1hr}$ (dBA)	Night (23:00-07:00) Maximum $L_{eq, 1hr}$ (dBA)
MO_04S Erin Street	Corktown Station	64	61	69	62	61	67	58	55	63

Note: 1. L_{eq} is the value of a constant sound pressure level which would result in the same total sound energy as the measured time-varying sound pressure level over equivalent time duration. The $L_{eq,1hr}$, for example, describes the equivalent continuous sound level over a 1-hour period.

dBA represents A-weighted decibels. The A-weighting Network is a frequency weighting network intended to represent the variation in the ear's ability to hear different frequencies. Overall sound levels calculated or measured using the A-weighting network are indicated by dBA rather than dB.

Figure 5-12: Noise Monitoring Locations Within the Corktown Station Noise and Vibration Study Area



5.6 Socio-Economic and Land Use Characteristics

5.6.1 Physical Neighbourhood Composition

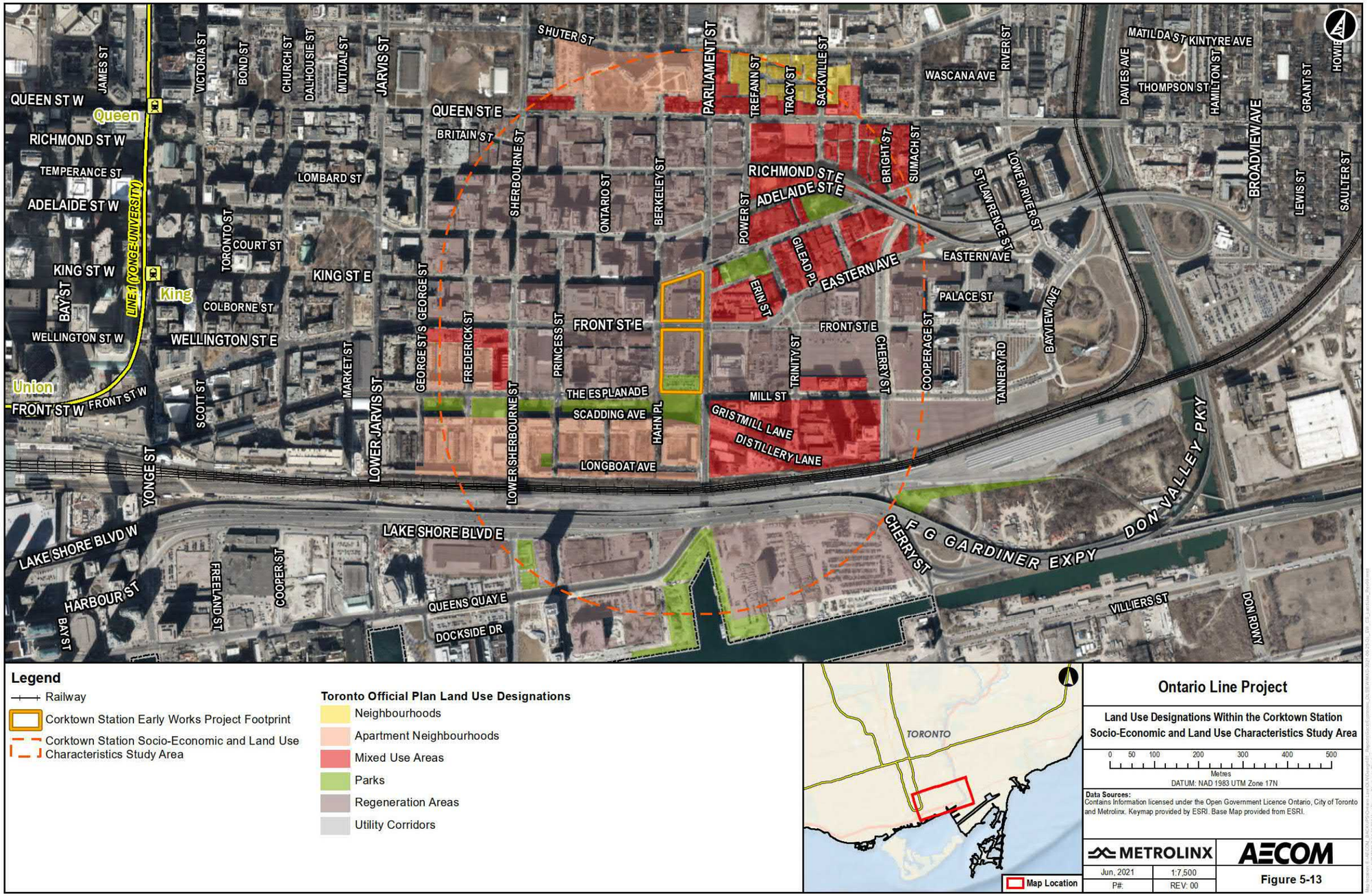
5.6.1.1 Land Use and Built Form Patterns

The lands within the Corktown Station Socio-Economic and Land Use Characteristics Study Area are designated by the Toronto Official Plan as Regeneration Areas, Mixed Use Areas, Parks, Apartment Neighbourhoods, Neighbourhoods, and Utility Corridors (see **Figure 5-13**). According to the Toronto Official Plan, Regeneration and Mixed-Use Areas are targeted for growth and development within Toronto. Regeneration Areas are primarily former manufacturing areas and are encouraged to develop as mixed-use places, with Secondary and Precinct Plans that generally focus on the creation of vibrant, pedestrian-friendly, mixed-use neighbourhoods that are well-served by transit.

Within the Corktown Station Socio-Economic and Land Use Characteristics Study Area, there are multiple Regeneration Areas on the east and west side of the Corktown Station Early Works Project Footprint, and south of the Gardiner Expressway. Located directly south of the Corktown Station Early Works Project Footprint is Parliament Square Park, designated as parks and open space. South of Parliament Square Park and north of the Gardiner Expressway are apartment neighbourhoods and mixed use areas. Between Eastern Avenue and Shuter Street are apartment and mixed use neighbourhoods, with pockets of residential neighbourhoods and parks.

As mentioned in **Section 2.2.2.1**, the Corktown Station Socio-Economic and Land Use Characteristics Study Area is within the King-Parliament Secondary Plan (City of Toronto, n.d.), Central Waterfront Secondary Plan (City of Toronto, 2006), and the Downtown Plan (City of Toronto, n.d.) development policy areas.

Figure 5-13: Land Use Designations Within the Corktown Station Socio-Economic and Land Use Characteristics Study Area[16]



5.6.1.1.1 King-Parliament Secondary Plan

The King-Parliament Secondary Plan area is roughly bounded by Queen Street East to the north, Jarvis Street to the west, the Don River to the east and the Metrolinx rail tracks to the south (City of Toronto, n.d.c). The City is currently undergoing a review of the King-Parliament Secondary Plan to build on the planning framework of the Downtown Plan and provide specific direction on built form, heritage and the public realm.

Key objectives of the King-Parliament Secondary Plan include:

- New investment will be attracted to King-Parliament;
- Growth of commercial, institutional, industrial, light industrial, entertainment, recreational, residential and live/work activities;
- The retention and re-use of existing buildings, specifically heritage buildings;
- Creation of good quality working and living environments; and
- Retaining the physical character, including structure of its public streets and open spaces.

As noted in **Section 5.6.1.1**, the Corktown Station Socio-Economic and Land Use Characteristics Study Area consists of Regeneration Areas. The King-Parliament Secondary Plan has been developed for the Regeneration Areas within the Corktown Station Socio-Economic and Land Use Characteristics Study Area and focuses on the urban structure and built form of the area. The King-Parliament Secondary Plan acknowledges the unique physical characteristics of the following streets and stresses the importance of maintaining and enhancing their quality, role and character:

- Parliament Street, which connects with the waterfront and emerging areas of new development such as the Gooderham & Worts Special Identity Area;
- Berkeley Street with its small scale, fine grained character; and,
- King Street East which connects King-Parliament to the downtown.

The King-Parliament Secondary Plan is currently under review since its original adoption in 1996. In October 2019, the City considered a Proposed Secondary Plan amendment for the King-Parliament Secondary Plan which built on the framework of the Downtown Plan (Official Plan Amendment 406) adopted by City Council in May 2018. Following the recommendation for further public and stakeholder consultation, a Recommended Secondary Plan and Zoning By-law will be considered by City Council for adoption. The following objectives may supersede those of the current King-Parliament Secondary Plan, if approved:

- Support and enhance the employment cluster in the King-Parliament area;
- Conserve heritage properties.

- Improve and expand park and the public realm;
- Optimizing and enhancing pedestrian and cycling connectivity across the First Parliament site and between the site and area parks, open spaces and circulation routes; and,
- Simplify interpretation of overlapping policies and frameworks.

The proposed amendments also acknowledge the First Parliament Site and historical significance, indicating that the site will be developed in a manner appropriate to its intended role as a public community resource and will be configured to accommodate services and amenities for the growing number of residents, workers and visitors in the area.

5.6.1.1.2 Central Waterfront Secondary Plan

The Central Waterfront Secondary Plan includes policies that promote waterfront renewal. The development of this area focuses mainly on lands categorized as commercial, residential, industrial, park and open space, and institutional uses (City of Toronto, 2006) The four core principles of the Central Waterfront Secondary Plan include:

- Removing Barriers/Making Connections;
- Building a Network of Spectacular Waterfront Parks and Public Spaces;
- Promoting a Clean and Green Environment; and,
- Creating Dynamic and Diverse New Communities.

The Central Waterfront Secondary Plan was adopted by City Council in 2003 as Official Plan Amendment 257 and has since been under appeal.

5.6.1.1.3 Downtown Plan

The Downtown Plan area is roughly bounded by Dupont Street, Bloor Street, and the Don River Valley to the north, the Don River to the west, Bathurst Street to the east and the Toronto waterfront to the south (City of Toronto, n.d.c).

The main objectives of the Downtown Plan include:

- Creating a diverse community with easy access to local amenities;
- Enhancing the strong employment base, and make Downtown Toronto an economic driver for the City, Region, Province and Country;
- Access to a varied and extensive network of parks and public spaces;
- Conservation of heritage buildings, and creating new buildings that are built and scaled to fit within their setting;

- Provision of a range of housing options, including shelters, affordable housing and program and facilities to support the vulnerable population;
- A reliable surface transit network and an expanded subway system;
- Reliable and cost-effective networks of water, wastewater and stormwater infrastructure; and,
- Varied streetscapes featuring iconic architecture, layered on centuries of development, that promote public life.

The City of Toronto's Downtown Parks and Public Realm Strategy was developed as an implementation tool for the Downton Plan. Refer to **Section 2.2.3.9** for further details on the Downton Parks and Public Realm Strategy.

5.6.1.2 Transit and Transportation Network

Existing elements of the transportation and transit networks within the Corktown Station Socio-Economic Study Area include:

- One highway (i.e., Gardiner Expressway), eight arterial roads (i.e., Lake Shore Boulevard East, King Street East, Eastern Avenue, Adelaide Street, Richmond Street, Front Street, Parliament Street, and Sherbourne Street), two collector roads (i.e., Cherry Street and The Esplanade), and eighteen local roads (i.e., Berkeley Street, Trinity Street, Mill Street, Sackville Street, Bright Street, Gilead Place, Erin Street, Power Street, Princess Street, Frederick Street, Ontario Street, Distillery Lane, Gristmill Lane, Longboat Avenue, Scadding Avenue, Hahn Place, Trefann Street, Tracy Street);
- Sidewalks generally present on either side of the roads within the Corktown Station Traffic and Transportation Study Area;
- A recreational trail immediately south of the Corktown Station Early Works Project Footprint that provides connections between The Esplanade, Parliament Street and Mill Street;
- Cycle tracks on the south side of Adelaide Street and on either side of Sherbourne Street, as well as on-street bike lanes along either side of Cherry Street; and,
- Several bus and streetcar routes operated by Toronto Transit Commission (i.e., bus routes #65, #72, #75, #121, #142, #143, #144 and #145 and streetcar routes #304, #365, #503, and #504).

Refer to **Section 5.9** for a description of local environmental conditions related to transit and transportation networks.

5.6.1.3 Public Realm Characteristics

The Corktown Station Socio-Economic and Land Use Characteristics Study Area is located within Old Town Toronto. Old Town is a district defined as Church Street to the west, Queen Street East to the north, Parliament Street to the east, and Front Street to the south; and is mainly comprised of buildings only two or three storeys tall. Old Town is made up of the St. Lawrence Market Neighbourhood, the historic Town of York Neighbourhood, King East Design District, Corktown, Historic Queen East, and the Distillery District (Old Town Toronto, 2020).

Old Town had the first Parliament buildings of Upper Canada until they were destroyed in the War of 1812. Old Town still has one of the largest concentrations of 19th century buildings in Ontario (Old Town Toronto, 2020). Along Front Street East, King Street East, and Queen Street East are numerous first floor restaurants and stores with walk-up apartments on the upper floors. The area also has numerous older warehouses that have been converted to lofts or offices. Several new developments have been built in Old Town, such as the Globe and Mail Centre, a 17-storey office complex completed in 2016 (Urban Toronto, 2013).

The Corktown Station Socio-Economic and Land Use Characteristics Study Area is characterized by four notable public realm elements: St. Lawrence Market Neighbourhood, Distillery District, the West Don Lands, and Corktown Neighbourhood.

5.6.1.3.1 St Lawrence Market Neighbourhood

St. Lawrence Market Neighbourhood is a historic district in Toronto bounded by Yonge Street to the west, King Street East and Front Street East to the north, Parliament Street to the east, and the Gardiner Expressway to the south. The Esplanade runs through the middle of the neighbourhood and is comprised of residential, institutional and civic uses, and notably David Crombie Park. This area is mostly known to locals and tourists for the St. Lawrence Market farmer’s market, which originated through the construction of Market Square in 1803 at King Street East and Jarvis Street, and currently has over 200 food vendors. This area features historic brownfield sites that were repurposed into commercial buildings and event space.

In 2015, the St. Lawrence Market Neighbourhood BIA published a Public Realm Master Plan to improve the public realm, promote the neighbourhood, and support local businesses while maintaining the historic architecture. The plan’s strategies included a comprehensive vision for boulevards, street trees, mid-block connections, parks, cycling, public art, and special street treatments.

The initiative was successful in revitalizing the St. Lawrence Market Neighbourhood, as these aspects can all be observed in the existing condition. For example, Market Street

(**Image 1**) was the model for the special streets network throughout the neighbourhood. The street is an active lane defined by the St. Lawrence Market on the east side and a continuous series of historic commercial buildings along the west, which have been re-purposed into restaurants and boutiques. This “flexible street” allows vehicles; however, it encourages pedestrian-dominant movement with wide walking areas and no curbs to indicate shared roads. The sidewalk area is also occupied by outdoor restaurant patios, and the pedestrian sidewalk spills out into the winter parking lane as seasonal transformation is made possible through removable bollards and, as mentioned above, the absence of traditional stepped curbs between vehicles and pedestrians. These streets also have special paving with brick patterns which is another defining feature of this public realm.

Image 1: St. Lawrence Market Neighbourhood, Market Street[17]

The St. Lawrence Market Neighbourhood is a family-friendly neighbourhood in a former industrial area that has been transformed into a vibrant, walkable area lined with restaurants, cafes, and hotels and serves as a destination for both tourists and Toronto locals. The neighbourhood includes the ten original blocks of the Town of York. Many of the existing low-rise yellow and red brick buildings in this 19th century core exhibits a distinctive historic character. focal point of this neighbourhood is the St. Lawrence Community Centre. The community centre shares its space with the Market Lane Public School and the St. Lawrence Community Day Care. It offers a full range of

17. Image source: DTAH, n.d. Available: https://dtah.com/work/market-street

programming for families, children, adults and seniors. David Crombie Park across the street from the community centre along The Esplanade provides residents with plenty of greenspace and recreation.

The St. Lawrence Neighbourhood Association is an association of residents in the area, established in 1982. The St. Lawrence Neighbourhood Association advocates for responsible development, public safety, and champions the neighbourhood's interests with all levels of development (St. Lawrence Neighbourhood Association, n.d.).

5.6.1.3.2 Distillery District

The Distillery District is a neighbourhood bounded by Parliament Street to the west, Mill Street to the north, Gardiner Expressway to the south, and Cherry Street to the east. The Distillery District (**Image 2**), similar to St. Lawrence Market, is comprised of historic industrial buildings that have been re-purposed into commercial uses with ample public space. The once derelict collection of Victorian industrial buildings was transformed from historic sites into one of the most unique and vibrant villages within the city – with art galleries, restaurants, breweries, event spaces, and businesses. The vision was to "combine the romance and relaxing atmosphere of European walking and patio districts with the hip, cool dynamic of an area like New York City's SoHo or Chelsea, where creative minds get together, and you feel as if anything could happen." (The Distillery District, n.d.). See **Image 3** below for an example of iconic public art located in the Distillery District.

The Gooderham and Worts Distillery was founded in 1832 and closed in 1990 as a result of deindustrialization of the area. The site was purchased by Cityscape Holdings Inc. in 2001 and was reopened to the public in 2003 as the Distillery Historic District and is now regarded as a premier arts, culture, and entertainment destination. The Distillery District revitalization allowed for newer additions up to 35 storeys and incorporated public realm aspects such as brick walkways, pedestrian plazas, and permanent art installations. It is also well connected to surrounding neighbourhoods – St. Lawrence, Corktown, and the West Don Lands – as well as the waterfront.

The Gooderham and Worts Neighbourhood Association is a group of local residents that provide a unified voice that serves the interests and enhances the quality of life of all residents of the Distillery Historic District (Gooderham and Worts Neighbourhood Association, n.d.).

Image 2: Distillery District[18]

Image 3: Distillery District, Public Art[19]

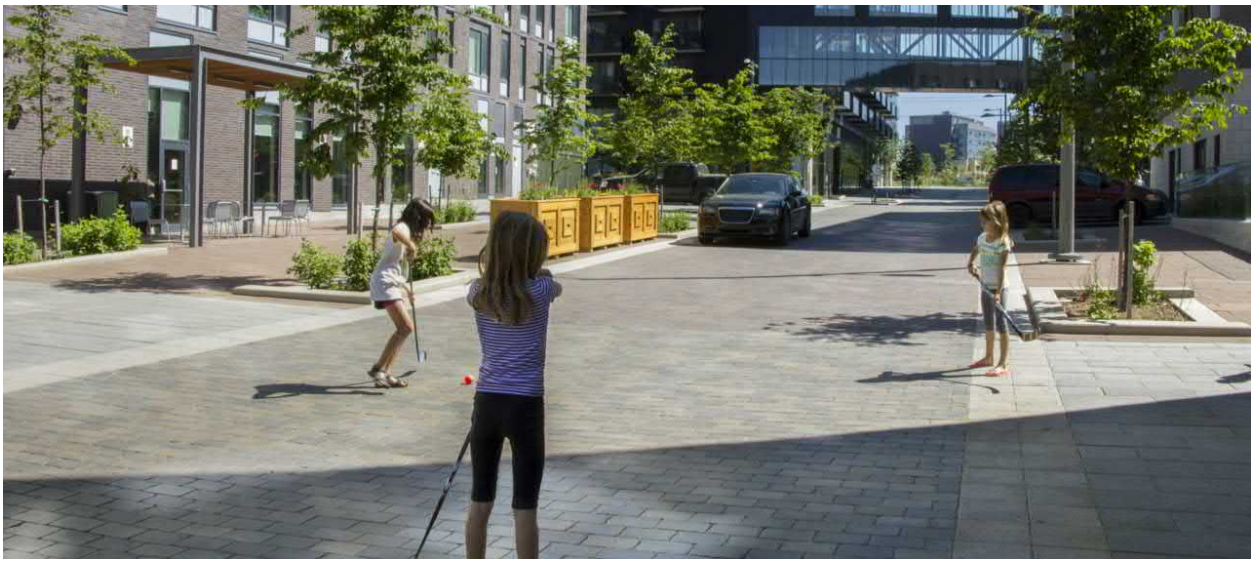
18. Image source: The Distillery District, n.d. Available: https://www.thedistillerydistrict.com/gallery/
19. Image source: The Distillery District, n.d. Available: https://www.thedistillerydistrict.com/gallery/

5.6.1.3.3 West Don Lands

The West Don Lands are a neighbourhood bounded by King Street East in the north, the Lakeshore East rail corridor in the south, the Lower Don River in the east, and Parliament Street in the west (Toronto Waterfront Revitalization Corporation, 2006). The West Don Lands have been undergoing a transformation from the former brownfield into a sustainable, mixed-use, pedestrian-friendly community surrounding Corktown Common park following Waterfront Toronto's West Don Lands Precinct Plan. The first phase of redevelopment was focused on the main parks, Underpass Park and Corktown Common, which both opened in 2015. Development of the community has been accelerated because a portion of the site was developed for use as the Athletes' Village for the Toronto 2015 Pan/Parapan American Games. Five historic buildings in the West Don Lands, located on Eastern Avenue, Cherry Street, and Trinity Street, have been preserved, giving the neighbourhood a mix of old and new.

Woonerfs, commonly found in Europe, have been installed in some of the area's local internal streets as an innovative street design. These woonerfs in the West Don Lands are the first in Toronto (**Image 4**). Woonerfs are pedestrian-oriented roads that provide a common public space shared by pedestrians, cyclists, and low-speed motor vehicles and encourages slow traffic and prioritization of other modes aside from cars. This design concept is similar to the "flexible streets" implemented in the St. Lawrence Market Neighbourhood (**Section 4.3.2.1**).

Image 4: West Don Lands, Woonerf[20]



20. Image source: FORREC, n.d. Available: https://www.forrec.com/studio/landscape-architecture/projects/mixed-use-communities/west-don-lands-block-1/

The development integrated public art features to enhance the public space in the new community and create a sense of place. The public realm was focused on developing streetscape and safe, accessible connections from the Distillery District and Corktown Common to the Lower Don Trail, tying in the city with nature. See **Image 5** below for an example of an artist rendering called The Water Guardians, implemented through the West Don Lands Public Art Strategy as a playful gateway feature to the West Don Lands neighbourhood. **Image 6** below shows a unique public art lamp, also implemented through the West Don Lands Public Art Strategy.

Image 5: West Don Lands, Gateway Art Rendering[21]

21. Image source: Waterfront Toronto Blog, 2015. Available: http://blog.waterfrontoronto.ca/nbe/portal/wt/home/blog-home/posts/virtual-tour-west-don-lands-public-art

Image 6: West Don Lands, Public Art Lamp[22]

The West Don Lands Committee is a coalition of residents', business and civil society organizations in, or nearby, the West Don Lands, founded in 1997. The West Don Lands Committee is devoted to the positive redevelopment of Toronto's West Don Lands and neighbouring Regeneration Areas of Toronto's waterfront.

5.6.1.3.4 Corktown Neighbourhood

Corktown is a neighbourhood bounded by Queen Street East in the north, Jarvis Street in the west, Front Street and Eastern Avenue in the south, and the Don River in the east. Corktown features historic, commercial and residential buildings. Many of Corktown's commercial buildings have been converted into condominiums, studios, and professional offices making the neighbourhood attractive for young professionals working in downtown Toronto (Neighbourhood Guide, n.d.).

22 Image source: Waterfront Toronto Blog, 2015. Available: http://blog.waterfrontoronto.ca/nbe/portal/wt/home/blog-home/posts/virtual-tour-west-don-lands-public-art

The historic Little Trinity Church, built in 1843, is situated on King Street East within the Corktown neighbourhood. The Enoch Turner Schoolhouse (**Image 7**), located just south of Little Trinity Church, is a notable historic building in the City owned by the Ontario Heritage Trust (Neighbourhood Guide, n.d.). The schoolhouse was built in 1848 and was the first free school in Toronto. Today, the schoolhouse has been converted into a museum designed as a 19th century classroom, and still provides educational services to adults and children (Neighbourhood Guide, n.d.).

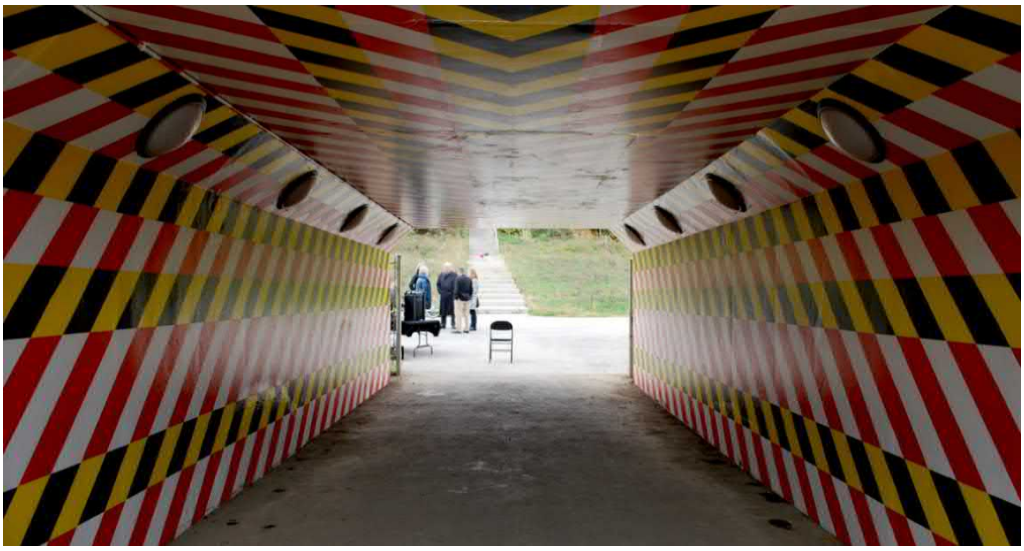
Image 7: Enoch Turner Schoolhouse[23]

Corktown Common and Underpass Park are also within the Corktown neighbourhood. Corktown Common is an 18-acre park located at Lawren Harris Square and Bayview Avenue (see **Image 8** below). Corktown Common was built on remediated industrial lands in 2013 and provides a community meeting space featuring playground areas, a splash pad, and specialized organic landscape. Corktown Common connects to the Lower Don Trail through the Bala Underpass (see **Image 9** below).

[23] Image source: Enoch Turner Schoolhouse Foundation, n.d. Available: https://enochturnerschoolhouse.ca/

Image 8: View of Corktown Common within Toronto's Downtown[24]

Image 9: Bala Underpass connection between Corktown Common and the Lower Don Trail[25]



24. Image source: Blanthorn, 2016. Parks and Regeneration: Corktown Common Park and Pavilion, West Don Lands, Toronto, Ontario. Canadian Architect. Available: https://www.canadianarchitect.com/parks-and-regeneration/

25 Image source: Mitanis, 2015. Bala Underpass Mural Adds Colour to Lower Don River Trail. Urban Toronto. Available: https://urbantoronto.ca/news/2015/10/bala-underpass-mural-adds-colour-lower-don-river-trail

Overpass Park is located under the Eastern Avenue, Adelaide Street and Richmond Street overpasses, and is one of the most extensive parks built under an overpass in Canada (Waterfront Toronto, n.d.; **Image 10**). The park was designed as part of an effort to transform pockets of unused urban spaces along the Lower Don River into valued public recreational amenities (Waterfront Toronto, n.d.). The park contains a playground, basketball courts, an extensive skatepark, park benches, public art elements, and flexible community open space that can be used for markets, festivals and other community events (Waterfront Toronto, n.d.).

Image 10: Underpass Park[26]

5.6.2 Community Amenities

5.6.2.1 Existing Services and Facilities

5.6.2.1.1 Institutional Uses

According to relevant datasets from the City of Toronto's Open Data Portal (City of Toronto, 2020b), there are 12 institutional uses located within the Corktown Station Socio-Economic and Land Use Characteristics Study Area. These amenities are listed in **Table 5-8** and shown in **Figure 5-14**.

26. Image source: Waterfront Toronto, n.d. Available: http://www.explorewaterfrontoronto.ca/design/underpass-park-2/

Table 5-8: Institutional Uses Within the Corktown Station Socio-Economic and Land Use Characteristics Study Area

Map ID	Feature Name	Address
1	Church in the City	160 The Esplanade
2	Toronto Public Library - St. Lawrence Branch	171 Front Street East
9	Market Lane Junior and Senior Public School	246 The Esplanade
11	Mother of God of Proussa Greek Orthodox Church	461 Richmond Street East
16	George Brown College – St. James Campus – A Building	200 King Street East
21	Liberty Prep School Parliament	162 Parliament Street
23	St Paul's Church	93 Power Street
27	Grace Toronto Church	95 Trinity Street
28	Little Trinity Church	417 King Street East
30	Riverside Church	456 King Street East
31	Inglenook Community School	19 Sackville Street
37	Voice Integrative School	50 Gristmill Lane

Note: Data retrieved from City of Toronto Open Data Portal 2020b: Open Data Portal. Accessed in March 2021 from: https://open.toronto.ca/

5.6.2.1.2 Recreational Uses, Parks and Open Space

According to relevant datasets from the City of Toronto's Open Data Portal (City of Toronto, 2020b), there are 11 recreational uses, parks or open spaces within the Corktown Station Socio-Economic and Land Use Characteristics Study Area. These amenities are listed in **Table 5-9** and shown in **Figure 5-14**.

Table 5-9: Recreational Uses, Parks and Open Spaces Within the Corktown Station Socio-Economic and Land Use Characteristics Study Area

Map ID	Feature Name	Address
3	David Crombie Park	131 The Esplanade
4	Princess Street Park	18 Princess Street
8	Courtyard Open Space	N/A – northwest corner of Berkeley Street and The Esplanade
10	David Crombie Park Basketball Court	115 Scadding Avenue
13	Courtyard at Centres D'accueil Heritage Les	33 Hahn Place
12	Parliament Square Park	44 Parliament Street
29	Little Trinity Church Park	417 King Street East
32	Sackville Playground	420 King Street East
33	Orphan's Green	51 Power Street
34	St Lawrence Community Recreation Centre	230 The Esplanade

Note: Data retrieved from City of Toronto Open Data Portal 2020b: Open Data Portal. Accessed in March 2021 from: https://open.toronto.ca/

5.6.2.1.3 Community Groups and Resources

According to relevant datasets from the City of Toronto's Open Data Portal (City of Toronto, 2020b), there are 14 community groups and resources within the Corktown Station Socio-Economic and Land Use Characteristics Study Area. These amenities group is listed in **Table 5-10** and shown in **Figure 5-14**.

Table 5-10: Community Groups and Resources Within the Corktown Station Socio-Economic and Land Use Characteristics Study Area

Map ID	Feature Name	Address
5	St. Lawrence Co-op Daycare	2 Princess Street
6	New Visions Toronto	222 The Esplanade #10
7	Ontario Federation of Indigenous Friendships Centre	219 Front Street
14	Harmony B Housing Co-operative	150 Longboat Avenue
15	Distillery District Early Learning Centre	8 Distillery Lane
17	Woodsworth Housing Co-operative Inc.	133 Wilton Street
18	Anishnawbe Health Toronto	225 Queen Street East
19	Fred Victor Housing	248 Queen Street East
20	Sojourn House	101 Ontario Street
22	Pasan Social Services Organization	526 Richmond Street East
24	Good Shepherd Ministries	412 Queen Street East
25	Jessie's – The June Callwood Centre for Young Women	205 Parliament Street
26	Future site of the Cherry Place Long-term Care Home	55 Eastern Avenue
35	JVS Employment Source Toronto Centre	184 Front Street East #203
36	Windmill Line Co-Operative Homes Inc	125 Scadding Avenue

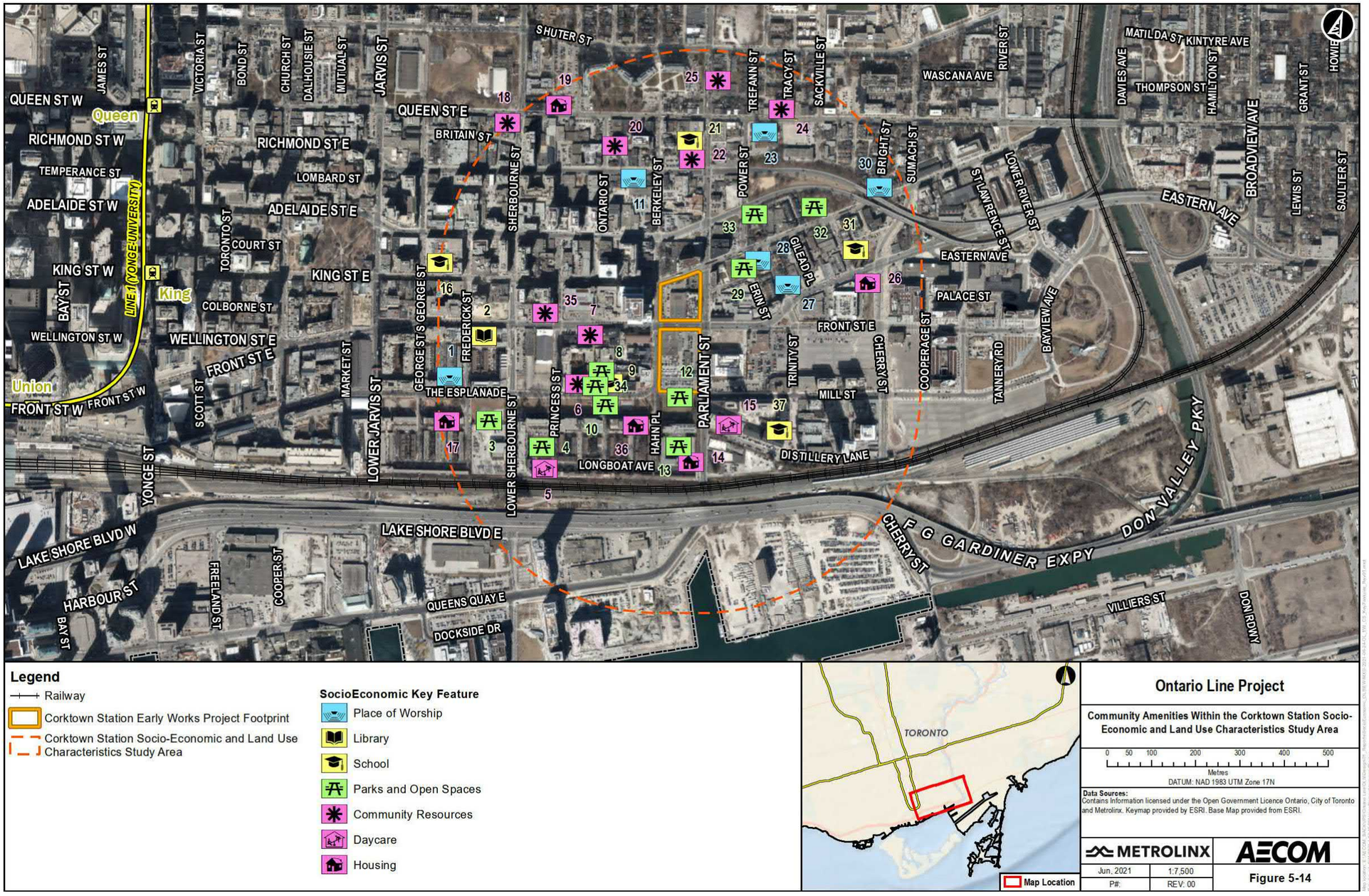
Note: Data retrieved from City of Toronto Open Data Portal 2020b: Open Data Portal. Accessed in March 2021 from: https://open.toronto.ca/

5.6.2.2 Planned Services and Facilities

Within the Corktown Station Socio-Economic and Land Use Characteristics Study Area there are plans for new or expanded community service facilities as part of the First Parliament Project and the David Crombie Park Revitalization. Refer to **Section 2.2.3** for further details on applicable environmental assessments and planning studies within the Corktown Station Study Area.

The City of Toronto has planned a bi-directional cycle track along Esplanade and Mill Street, to be installed between Lower Sherbourne Street and Bayview Avenue in 2021, and between Lower Sherbourne Street and Yonge Street in 2022. The cycle track is proposed south of the Corktown Station Early Works Project Footprint on the north side of Parliament Square Park (City of Toronto, 2021d).

Figure 5-14: Community Amenities Within the Corktown Station Socio-Economic and Land Use Characteristics Study Area[27]



27. Source of community amenities information: City of Toronto, 2020b: Open Data Portal. Accessed in March 2021 from: https://open.toronto.ca/

5.6.3 Neighbourhood Demographics

The Corktown Station Early Works Project Footprint is located within Ward 13 – Toronto Centre in the City of Toronto and the Moss Park and Waterfront Communities-The Island neighbourhoods. See **Table 5-11** for an overview of population, immigration rate, and household size and income information.

Table 5-11: Moss Park and Waterfront Communities – The Island Neighbourhood Profiles

Profile	Moss Park Neighbourhood	Waterfront Communities – The Island Neighbourhood	City of Toronto
Population Change 2011-2016	+25.8%	+52.0%	+4.5%
Population Density (people per square kilometres)	14,753	8,943	4,334
Children (Age 0 to 14)	7.7%	5.5%	14.6%
Youth (Age 15 to 24)	10.8%	11.9%	12.5%
Working (Age 25 to 64)	72.7%	75.6%	57.3%
Seniors (Age 65+)	8.8%	7.0%	15.6%
Immigrants	35.1%	36.3%	51.2%
Household Size	1.60	1.61	2.42
Median Household Income	$52,490	$78,479	$65,829

Note: Data retrieved from City of Toronto, 2018a: Statistics Canada, 2016 Census of Population. Available: https://www.toronto.ca/city-government/data-research-maps/neighbourhoods-communities/neighbourhood-profiles/

The Moss Park Neighbourhood, according to 2016 Census data (Statistics Canada, 2018), has a population density of 14,753 people per square kilometre. Almost 73% of the population in this neighbourhood is working age (between 25 and 64), which is higher than the City overall (57% for this age group). Based on the Neighbourhood Profile compared with the City as a whole, the Moss Park Neighbourhood has a lower median household income than the average for the rest of the City.

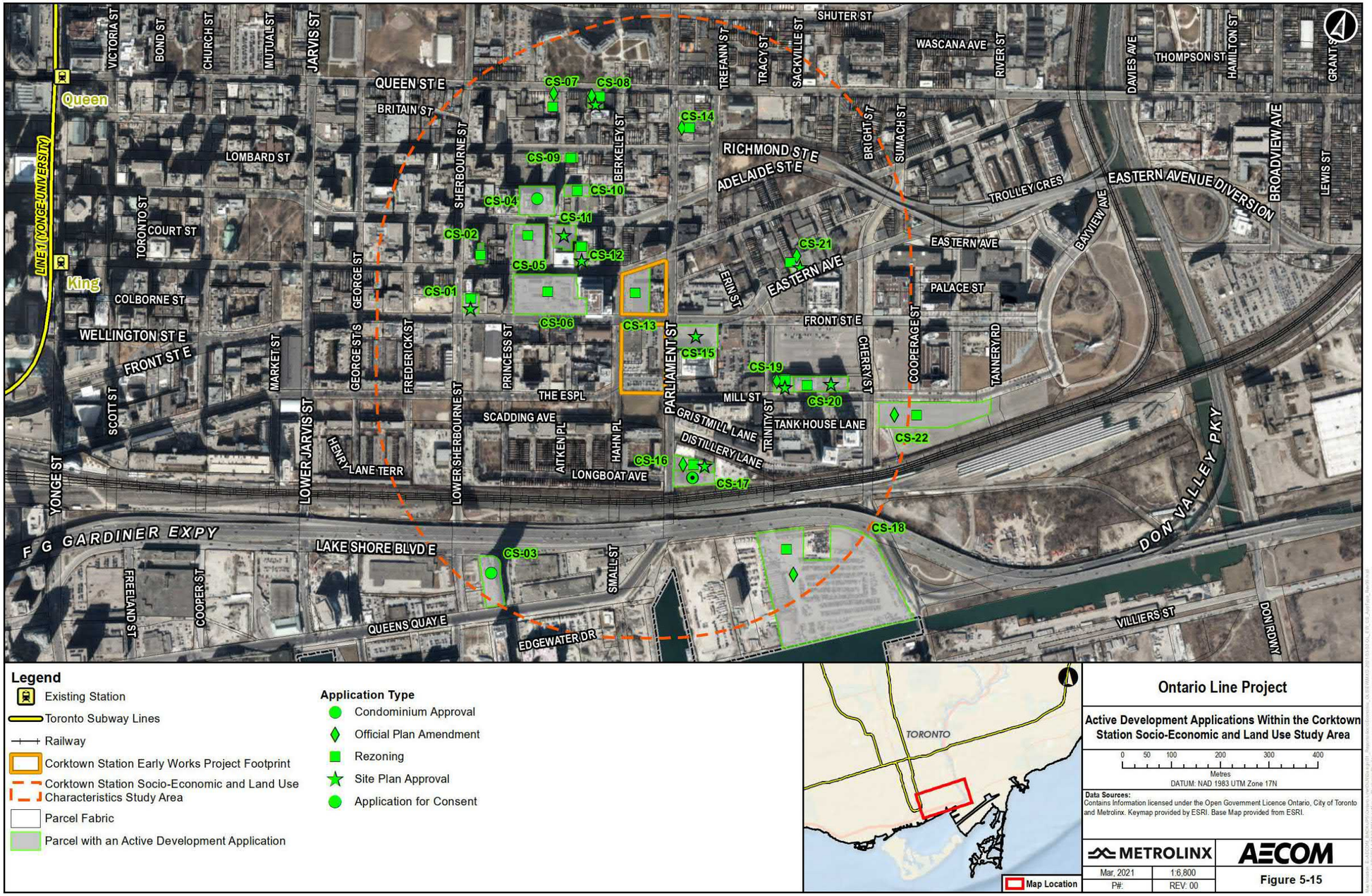
The Waterfront Communities-The Island Neighbourhood, according to 2016 Census data (Statistics Canada, 2018), has a population density of 8,943 people per square kilometre. Almost 76% of the population in this neighbourhood is working age (between 25 and 64), which is higher than the City overall (57% for this age group). Based on the Neighbourhood Profile compared with the City as a whole, the Waterfront Communities-The Island neighbourhood has a higher median household income than the average for the rest of the City.

Both the Moss Park and Waterfront Communities-The Island neighbourhoods also has a primarily middle-aged population with more Canadian-born residents than the average for the rest of the City.

5.6.4 Future Development

The City of Toronto's online database for Development Applications (City of Toronto, 2021a) was reviewed and it was found that there are 22 development applications within the Corktown Station Socio-Economic and Land Use Characteristics Study Area, as of February 26, 2021. These properties are shown in **Figure 5-15**. See **Table 5-12** for the status of each application.

Figure 5-15: Active Development Applications Within the Corktown Station Socio-Economic and Land Use Characteristics Study Area[28]



28. Source of active development applications information: City of Toronto, 2021: Development Applications. Available: http://app.toronto.ca/DevelopmentApplications/mapSearchSetup.do?action=init

Table 5-12: Active Development Applications as of February 26, 2021 for the Corktown Station Socio-Economic and Land Use Characteristics Study Area

Map ID #	Address and File Number	Application Type	Application Details	Status
CS-01	■ 33 Sherbourne Street ■ 19 124407 STE 13 OZ ■ 19 215419 STE 13 SA	■ Rezoning ■ Site Plan Approval	■ Revised Zoning By-law Amendment to permit a 38-storey building consisting of a 2-storey base building and a 35-storey tower with an overall height of 126.4 metres (including mechanical penthouse). The application proposes 439 residential units and 1,383 square metres of retail uses. A total of 91 vehicle parking spaces will be provided in 3 levels of underground parking. ■ Site Plan Approval Application to permit a 37-storey building consisting of a 2-storey base building and a 35-storey tower with an overall height of 126.4 metres (including mechanical penthouse). The application proposes 439 residential units and 1,371 square metres of retail uses.	■ Council Approved ■ Under Review
CS-02	■ 236 King Street East ■ 20 233160 STE 13 OZ	■ Rezoning	■ Zoning By-law Amendment to facilitate redevelopment of the site with a 40-storey mixed-use building: 488 units, 33,242.40 square metre residential gross floor area, 604.50 square metre retail gross floor area. The front portions of the existing heritage property at 234- 236 King Street and the properties at 240 and 242 King Street will be conserved and incorporated into the development. Site includes 162 Princess Street.	■ Under Review
CS-03	■ 12 Bonnycastle Street ■ 19 183030 STE 10 CD	■ Condominium Approval	■ Draft Plan of Condominium application for a recently constructed mixed-use building containing 550 dwelling units	■ Draft Plan Approved
CS-04	■ 424 Adelaide Street East ■ 18 127975 STE 28 CD ■ 18 127990 STE 28 CD	■ Condominium Approval	■ Draft plan of Standard Condominium application for commercial component of a recently constructed 21 and 19 storey mixed-use building containing 8 commercial units with 3 levels of below-grade parking.	■ Draft Plan Approved
CS-05	■ 254 King Street East ■ 16 232831 STE 28 OZ	■ Rezoning	■ The proposed mixed-use redevelopment consists of two residential towers with a unified base building with tower heights of 34 and 36 storeys. The base building includes ground floor retail and second floor office space.	■ Appeal Received
CS-06	■ 333 King Street East ■ 18 196225 STE 28 OZ	■ Rezoning	■ Zoning By-law Amendment application to permit two new buildings on the block containing the Globe and Mail Centre (to be retained). On the west side of the block is a 37-storey residential building (134.1 metres) containing 314 dwelling units with a residential gross floor area of 21,378 square metres. The existing Coca-Cola/George Brown building would remain in place. In the middle of the block is a 25-storey office building (111 metres) with a gross floor area of 54,317 square metres. The footprint of the new office building would replace some of the existing retail uses fronting on Front Street East. The existing buildings fronting on King Street East would remain in place. A 1,200 square metre privately-owned publicly accessible space is proposed fronting onto Front Street East. A total of 259 new parking spaces and 562 new bicycle parking spaces are proposed to support the new development.	■ Under Review
CS-07	■ 285 Queen Street East ■ 16 118638 STE 28 OZ	■ Official Plan Amendment and Rezoning	■ This is a revised Official Plan and Zoning By-law amendment to permit a mixed-use development consisting of three towers of 24, 16 to 28 and 37 storeys. The base building heights range from 3 to 5 storeys, with certain massing components that are 12 storeys. The revised proposal includes 1,468 dwelling units, 124 hotel rooms, 54,702 square metres of non-residential space, 821 vehicular parking spaces, and 1,687 bicycle parking spaces. A 1,400 square metre public park is proposed fronting on Queen St. E., along with a proposed privately-owned publicly accessible space (POPS) in the form of a walkway to connect Queen St. E. to Richmond St. E. The Official Plan amendment has been revised to include an amendment to policy 3.2.1.6 to allow for the proposed rental replacement units. This application is associated with the Rental Housing Demolition application, file no. 17 160339 STE 28 RH. On August 23, 2017, the LPAT approved a settlement for three towers of 25, 24 and 32 storeys.	■ Ontario Municipal Board Appeal
CS-08	■ 301 Queen Street East ■ 16 161250 STE 28 OZ ■ 16 161258 STE 28 SA	■ Official Plan Amendment and Rezoning ■ Site Plan Approval	■ Official Plan Amendment and Rezoning to permit the development of a 25-storey mixed-use building: 206 dwelling units, 6 levels of below-grade parking, total combined gross floor area 15,711 square metres. ■ Site Plan Approval to permit the development of a 25-storey mixed-use building: 206 dwelling units, 6 levels of below-grade parking, total combined gross floor area 15,711 square metres.	■ Ontario Municipal Board Appeal ■ Under Review
CS-09	■ 75 Ontario Street ■ 19 265929 STE 13 OZ	■ Rezoning	■ Zoning By-law amendment to permit a 35-storey building (113.85 metres including the mechanical penthouse) containing: 16,431.5 square metres of residential space resulting in 251 dwelling units; 384.4 square metres of retail space; and 58 parking spaces.	■ Under Review
CS-10	■ 49 Ontario Street ■ 19 244188 STE 13 OZ	■ Rezoning	■ Zoning By-law Amendment application for three buildings of 12, 29 and 36 storeys containing 643 square metres of retail, 13,138 square metres of office, and 52,241 square metres of residential resulting in 881 dwelling units. 149 parking spaces are proposed within a 2-level underground garage.	■ Under Review
CS-11	■ 25 Ontario Street ■ 11 327912 STE 29 SA	■ Site Plan Approval	■ Revised Site Plan Application for the approved rezoning proposal for a 23-storey office building containing 41,089 square metres of office space, 341 square metres of retail space, 155 vehicular parking spaces and 183 bicycle parking spaces.	■ Notice of Approval Conditions Issued
CS-12	■ 284 King Street East ■ 17 175826 STE 28 OZ ■ 18 127432 STE 28 SA	■ Rezoning ■ Site Plan Approval	■ Zoning By-law Amendment to permit the construction of a 30-storey residential mixed-use building, with a height of 95.05 metres (101.05 metres including the mechanical penthouse), containing 205 residential units and 177 square metres (1,905 square feet) of retail space on the ground floor. ■ Site Plan Control application for the development of a 30-storey mixed-use building: 14,617.0 square metres residential gross floor area (205 dwelling units); 181.0 square metres retail gross floor area; 48 parking spaces.	■ Ontario Municipal Board Approved
CS-13	■ 250 Front Street East ■ 17 269658 STE 28 OZ	■ Rezoning	■ Zoning By-law Amendment to permit a 19-storey mixed-use building (75.5 metres including mechanical penthouse) with street related retail uses and residential dwelling units above. The proposed development is comprised of a total gross floor area of approximately 45,824 square metres, including 6,197 square metres of retail gross floor area that is distributed between the first two levels of the building.	■ Under Review

Map ID #	Address and File Number	Application Type	Application Details	Status
CS-14	■ 161 Parliament Street ■ 18 136695 STE 28 OZ	■ Official Plan Amendment and Rezoning	■ Official Plan and Zoning By-law Amendment application to permit the development of a residential/mixed-use building that is comprised of a 6-storey base building with street level retail uses, a 16-storey residential mid-rise element and a 29-storey residential tower element. The development has a gross floor area of (44361 square metres) including (3736 square metres) of retail uses divided over 2 levels. There will be a total of 584 dwelling units and a 300 square metres parkette that is proposed at the Queen Street East and Power Street intersection.	■ Appeal Received
CS-15	■ 281 Front Street East ■ 20 148542 STE 13 SA	■ Site Plan Approval	■ Site Plan Approval for a 4-storey (38.5 metre) data processing centre with a total non-residential gross floor area of 13,220 square metres.	■ Under Review
CS-16	■ 33 Parliament Street ■ 17 219060 STE 28 OZ ■ 19 240782 STE 10 SA	■ Official Plan Amendment and Rezoning ■ Site Plan Approval	■ On May 22, 2018, a with prejudice set of plans were submitted showing a 34-storey mixed-use building with a total height of 116 metres, a gross floor area of 37,000 square metres and a privately-owned publicly accessible space at grade of 300 square metres. ■ Revised Site Plan Approval application for a proposed 9-storey and 32-storey mixed-use building containing approximately 1,839 square metres of non-residential gross floor area, 485 residential dwelling units, and 213 below grade parking spaces.	■ Ontario Municipal Board Appeal ■ Under Review
CS-17	■ 31 Parliament ■ 17 242625 STE 28 CO	■ Application for Consent	■ To obtain consent to create an easement/right of way for vehicular access.	■ Ontario Municipal Board Appeal
CS-18	■ 324 Cherry Street ■ 97 036282 STE 28 OZ	■ Official Plan Amendment and Rezoning	■ To construct a retail warehouse (Home Depot).	■ Ontario Municipal Board Appeal
CS-19	■ 60 Mill Street ■ 11 219591 STE 28 OZ ■ 19 264586 STE 13 OZ ■ 20 105467 STE 13 SA	■ Official Plan Amendment and Rezoning ■ Rezoning ■ Site Plan Approval	■ Official Plan Amendment and Rezoning application to construct new 6-storey hotel within existing heritage building (Rack House D, at northeast corner of Mill Street and Trinity Street) and construct an additional 28 stories above for new condominium tower; 34 stories in total. A total of 88 hotel rooms and 246 residential condo units are proposed, with retail uses at-grade, and 166 parking spaces leased off-site. On May 15, 2017, the Ontario Municipal Board approved a 7-storey addition to the existing Rack House D Building, resulting in a 12-storey building. ■ Zoning By-law Amendment to permit a 31-storey hotel tower with a total building height of 115.1 metres (inclusive of mechanical penthouse). A total of 392 hotel suites are proposed with a total gross floor area of approximately 26,944 square metres. The existing heritage Rack House D building is proposed to be incorporated as part of the proposal. ■ Site Plan Approval to permit a 31-storey hotel tower with a total building height of 115.1 metres (inclusive of mechanical penthouse). A total of 392 hotel suites are proposed with a total gross floor area of approximately 26,944 square metres. The existing heritage Rack House D building is proposed to be incorporated as part of the proposal.	■ Ontario Municipal Board Appeal ■ Appeal Received ■ Under Review
CS-20	■ 90 Mill Street ■ 19 228307 STE 10 OZ ■ 20 138382 STE 13 OZ ■ 20 138391 STE 13 SA	■ Rezoning ■ Site Plan Approval	■ Revised Zoning By-law Amendment application to permit the development of two 13-storey and one 11-storey mixed use buildings on Blocks 3,4,7 in the West Don Lands. The revised proposal consists of 3,080 square metres of retail space, 839 residential units (252 of which are affordable units). A Site Plan Application is also submitted to implement this revised Zoning By-law amendment application. ■ Site Plan application to permit the development of two 13-storey and one 12-storey mixed use buildings on Blocks 3,4,7 in the West Don Lands. The proposal consists of 3,125 square metres of retail space, 485 square meters of community space, and 855 residential units (257 of which are affordable units). The zoning by-law amendment was approved via MZO O. Reg. 596/20 on October 22, 2020.	■ Under Review
CS-21	■ 18 Eastern Avenue ■ 16 216777 STE 28 OZ ■ 19 264378 STE 13 SA	■ Official Plan Amendment and Rezoning ■ Site Plan Approval	■ Ontario Municipal Board approval rezoning application for a new mixed-use building: 12 storeys plus mechanical penthouse, 379 dwelling units, 24,671 square metres of residential gross floor area and 892 square metres of retail. ■ Site Plan Approval for new mixed-use building: 12 storeys plus mechanical penthouse, 379 dwelling units, 24,671 square metres of residential gross floor area and 892 square metres of retail.	■ Ontario Municipal Board Approved ■ Under Review
CS-22	■ 125R Mill Street ■ 20 151415 STE 10 OZ	■ Official Plan Amendment and Rezoning	■ Official Plan and Zoning by-law Amendment application to facilitate the development of the site for 45-storey and 32-storey mixed-use towers atop a 6-storey podium. A total of 24,353 square metres of non-residential gross floor area, and 54,455.0 square metres of residential gross floor area with 661 residential dwelling units are proposed. Zoning was approved via a Minister's Zoning Order, O. Reg. 594/20 on October 22, 2020.	■ Council Approved

Note: Data retrieved from City of Toronto Development Applications, 2021: Development Applications. Available: http://app.toronto.ca/DevelopmentApplications/mapSearchSetup.do?action=init

5.7 Built Heritage Resources and Cultural Heritage Landscapes

Based on data collection, including the review of the Ontario Line Cultural Heritage Report (AECOM, 2020b), the 40-year-old threshold, the Criteria Checklist (Ministry of Heritage, Sport, Tourism and Culture Industries, 2016), and the field reviews conducted for early works by a qualified cultural heritage professional on February 25, 2021, a list of known, previously identified and potential built heritage resources/cultural heritage landscapes in the Corktown Station Built Heritage Resources and Cultural Heritage Landscapes Study Area was compiled, as documented in **Table 5-13**. The built heritage resources/cultural heritage landscapes are mapped in **Figure 5-16**.

In summary, a total of 14 built heritage resources/cultural heritage landscapes are within the Corktown Station Built Heritage Resources and Cultural Heritage Landscapes Study Area consisting of:

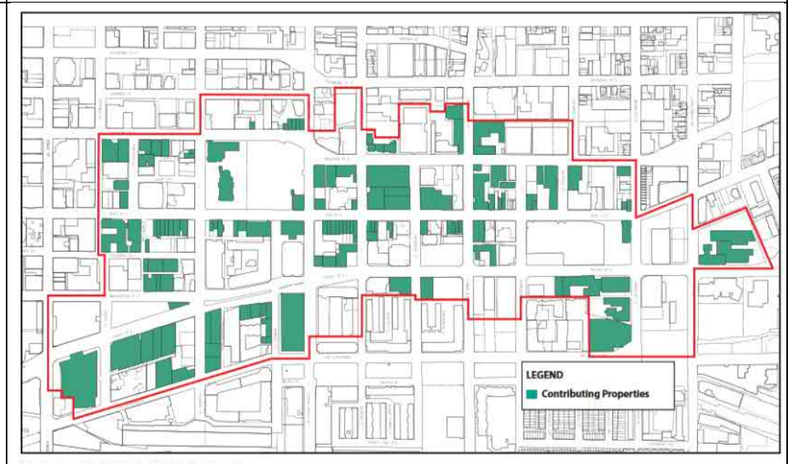
- One designated Part V Heritage Conservation District, under appeal (OLS-035);
- One National Historic Site which Designated Part IV, is a potential Provincial Heritage Property of Provincial Significance, and is within Heritage Conservation District, under study (OLS-029);
- Seven Designated Part IV properties (OLS-034, OLS-036, OLS-037, OLS-038, OLS-040, CS-002, and CS-003); one that is a potential Provincial Heritage Property of Provincial Significance, three with City of Toronto Heritage Easements, one within a Heritage Conservation District, under appeal (OLS-035), and four with Heritage Toronto Plaques;
- Four Listed properties (OLS-041, OLS-042, OLS-047, OLS-001), three of which with Heritage Toronto Plaques, and one within a Heritage Conservation District, under appeal (OS-035); and,
- One Ontario Heritage Trust Plaque (CS-004).

Table 5-13: Description of Known, Previously Identified and Potential Built Heritage Resources/Cultural Heritage Landscapes Within the Corktown Station Built Heritage Resources and Cultural Heritage Landscapes Study Area

Cultural Heritage Report Reference #[29]	Type of Property	Location/Address	Heritage Recognition	Description of Known or Potential Cultural Heritage Value or Interest and Heritage Attributes	Photographs/Digital Image
OLS-029 (includes CS-003)	■ Cultural Heritage Landscape- National Historic Site	■ Distillery District - National Historic Site ■ Gooderham & Worts Distillery National Historic Site ■ (and Distillery District Heritage Conservation District Under Study)	■ Designated Part IV of the Ontario Heritage Act (By-law 154-76- designation for the complex) ■ National Historic Site ■ Listed on the Canadian Register ■ City of Toronto Heritage Easement Agreement CA397773, CA397771, CA397781, CA397779, CA397777, CA397775, CA397783, AT228498. ■ HCD Study complete, Plan under study	■ Gooderham & Worts Distillery National Historic Site and Distillery District Heritage Conservation District (Under Study) ■ The Gooderham and Worts Complex was designated as a site of national historic and architectural importance because it is an imposing landmark, containing a number of buildings that collectively bear witness to the evolution of the Canadian distilling industry. ■ The heritage value of the Gooderham and Worts Complex resides in the unique sense of history and place created by: – The completeness of the complex in illustrating the entire distillery process, from the processing of raw materials, to the storage of finished products for export; the physical evidence that it provides about the history of Canadian business, the distilling industry and 19th-century manufacturing processes; the architectural cohesiveness of the site characterized by a high degree of conformity in the design, construction and craftsmanship of its constituent buildings; and the physical relationships among the buildings and between the site and the railway to the south **Potential to meet Ontario Regulation 10/06: Yes (Criteria 1, 2, 4, 5)** **Heritage Attributes (from historicplaces.ca):** ■ Existing spatial arrangement of the buildings on the site arrayed along lanes and streets; Industrial skyline of pitched roofs, turrets, chimney stacks and parapets ■ Coordinated palette of material and paint colours throughout ■ Large scale of the complex; Functional spatial organization, apparent in the rectilinear alignment of buildings along Mill Street; Isolation of storage buildings from one another ■ Location of the complex adjacent to rail line and former shoreline of Toronto Bay; Alignment and connection of buildings with one another to create continuous articulated facades, especially those of: the malthouse and office block (buildings 28 and 31-36) and the water tank, still rooms, bottling/mixing room and warehouse (buildings 53-59); Unity of design through consistent exterior use of brick, limestone and formal motifs ■ Use of Italianate detailing throughout, including round-arched openings; segmented-arch windows ordered facades; corbelled brickwork and symmetrical arrangement of openings and organization of elevations ■ High level of craftsmanship in the brickwork, stone masonry and timber framing ■ Provision of natural light through the extensive use of multi-pane glazing ■ Survival of numerous functional building types ■ Neoclassical design of the four-storey distillery and mill building (buildings 2-5), with segmented-arched windows; pedimented gable ends, limestone stringcourses, stone quoins, and symmetrically arranged openings	 Image of the interactive site plan map of the 2008 Historical Site Map DHD (http://distilleryheritage.com/maps_page2.html)

29. For consistency and ease, the built heritage resource/cultural heritage landscape reference numbers were retained from those resources excerpted from the Existing Conditions tables in the Ontario Line Cultural Heritage Report (AECOM, 2020b).

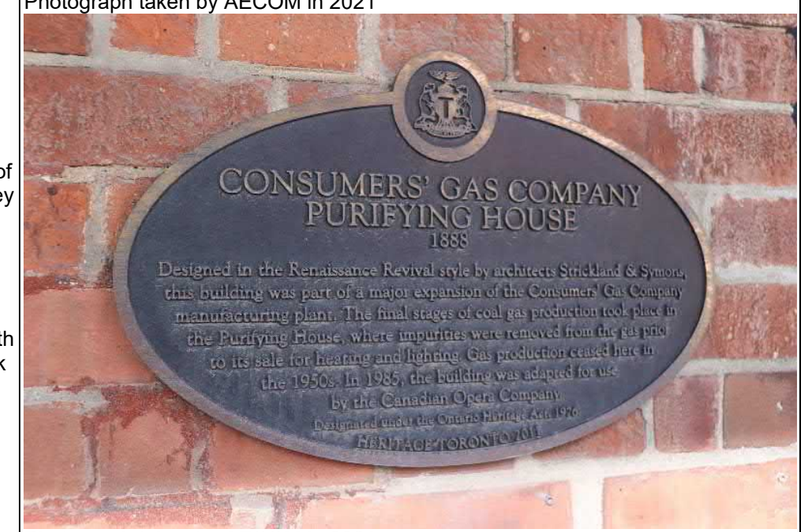
Cultural Heritage Report Reference #[29]	Type of Property	Location/Address	Heritage Recognition	Description of Known or Potential Cultural Heritage Value or Interest and Heritage Attributes	Photographs/Digital Image
				■ Reinforced construction of the distillery building (buildings 2-5) with thick stone walls, metal braces and timber framing ■ Italianate treatment of the malthouse/office block (buildings 28 and 31-36), with façade symmetry, corbelled brickwork, pilasters, and pedimented entrance bay ■ Neoclassical cupola of the of the office building (building 31) ■ Solid masonry construction, buttresses, heavy doors, and substantial wooden windows and shutters of the tank houses and warehouses (buildings 42, 43, 44, 47-50, 59, 61-65, 75) ■ Massive scale and extensive fenestration of the six-storey rack warehouse (building 42) ■ Functional design of the rack warehouse with solid brick walls reinforced with buttresses, punctuated by a highly symmetrical arrangement of segmented-arched windows (building 42) ■ High quality of the masonry of the rack warehouse (building 42), evident in: corbelled brickwork along the cornice; brick voussoirs over each window; brick buttresses; limestone lintels; limestone trim at the foundation ■ Substantial, fortified exterior treatment of the rack warehouse, as evidenced in: iron bars on windows; timber exterior shutters; iron hardware on windows and doors ■ Scale and functional design of the malthouse (buildings 35 and 36), with specialized spaces located on each of its three storeys and its attic ■ Interior detailing of the malthouse (buildings 35 and 36), including its small windows, cast-iron columns, roof vents, brick vaults, malting floors, and granary ■ Full-storey multi-paned windows with large transoms on each storey of the west elevations of the pure spirits building block (buildings 53-57 and 61-62) ■ Cast-iron facades with the elaborate iron railing on the second storey of the four connected structures comprising the pure spirits building (buildings 53-57 and 61-62) ■ All connecting conveyance ways, for pedestrians and materials, located at the second storey and above ■ Entire complement of supporting buildings in their massing, materials and detailing, including the machine shop (building 8), molasses tank (building 9), cooperage (building 34), steam fitter's shop (building 45), lunch room (building 45a), boiler house (building 46), stable/garage (building 52), bottling/tank house (building 58), pumphouse (building 60) and case warehouse (building 74)	

Cultural Heritage Report Reference #[29]	Type of Property	Location/Address	Heritage Recognition	Description of Known or Potential Cultural Heritage Value or Interest and Heritage Attributes	Photographs/Digital Image
OLS-034	■ Civic	■ 265 and 271 Front Street East and 25 Berkeley Street	■ Designated Part IV of the *Ontario Heritage Act* (By-law 091-1997)	■ First Parliament Buildings Site- 265 and 271 Front Street East and 25 Berkeley Street[30] **Design or Physical Value:** ■ N/A- deeply buried registered archaeological site **Historical or Associative Value:** ■ Built in 1796- Two brick buildings joined by a covered walkway (demolished) ■ Now the site of a car wash, car-rental agency and Nissan dealership ■ Site of where Upper Canada's first Parliament Buildings once stood- From 1797 until they burned in War of 1812, and again in 1824. Moved to new location Front Street in 1829 ■ Home District Gaol (Jail) constructed on this site in 1837-1840 ■ Property occupied by various Consumers Gas buildings from the late 19th century to the 1960s **Contextual Value:** ■ Location at the southeast corner of Parliament Street and King Street, at the foot of Berkeley Street **Potential to Meet Ontario Regulation 10/06**: **Yes (Criteria 2)** **Heritage Attributes:** ■ Archaeological resources associated with the First and Second Parliament Buildings of Upper Canada ■ Archaeological resources associated with the Home District Gaol ■ Archaeological resources associated with the Consumers Gas Company	 Photograph taken by AECOM in 2021
OLS-035	■ Cultural Heritage Landscape (Heritage Conservation District)	■ St. Lawrence Neighbourhood Heritage Conservation District	■ Designated Part V of the *Ontario Heritage Act* (by-law 1328-2015) ■ St. Lawrence Neighbourhood Heritage Conservation District, under appeal (Council adopted, approved by the Ministry of Heritage, Sport, Tourism, and Culture Industries with modifications, and the majority of which is in force and effect) Note, the Heritage Conservation District boundary map was revised and available	■ St. Lawrence Neighbourhood Heritage Conservation District ■ The history and identity of the St. Lawrence Neighbourhood Heritage Conservation District result from: – One of Toronto's oldest neighbourhoods – Landscape and potential archaeological resources that reflect the evolution of Toronto, from the founding of the Town of York to the contemporary city of today – The St. Lawrence Market and major landmark buildings such as St. James Cathedral and the Flatiron Building – Numerous educational and theatrical institutions that helped to revitalize the area in the latter half of the 20th century – Two historical building typologies exemplify the District's physical character and historical evolution- Commercial Warehouse typology and the Industrial building typology **Potential to Meet Ontario Regulation 10/06:** No **Heritage Attributes (Section 2.1, page 33-35 of the Heritage Conservation District Plan):** ■ The District heritage attributes may be considered in terms of five categories – Built Form – Landscape	 Map 8: Properties identified as Contributing Properties Map of properties identified as Contributing Properties in the St. Lawrence Neighbourhood Heritage Conservation District, based on the 2015 boundary (City of Toronto 2015)

30. OLS-034 included 269 Front Street East in the Ontario Line Cultural Heritage Report (AECOM, 2020b) as it is included on the Heritage Register. It does not exist in Teranet or in the designation by-law 091-1997 and therefore has been removed from OLS-034 in the Heritage Detailed Design Report (AECOM, 2021b).

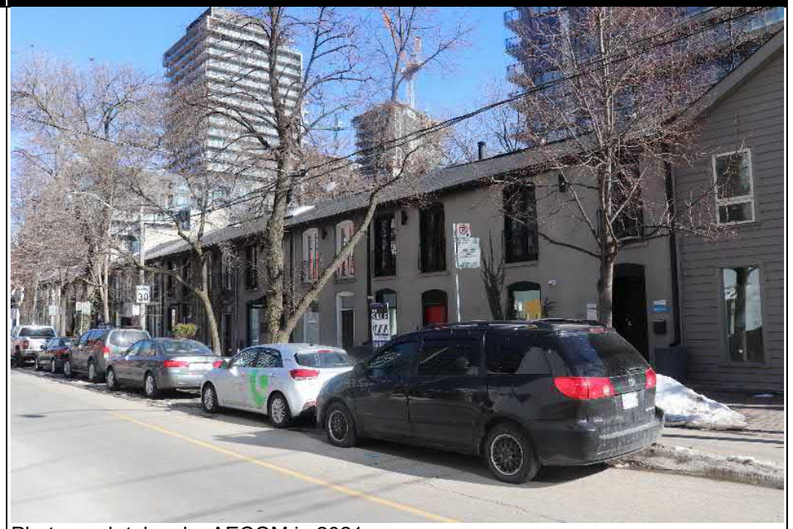
Cultural Heritage Report Reference #[29]	Type of Property	Location/Address	Heritage Recognition	Description of Known or Potential Cultural Heritage Value or Interest and Heritage Attributes	Photographs/Digital Image
			to the public on April 22, 2021.	– Streetscape – Function – Archaeological resources ■ Based on the 2015 Heritage Conservation District Contributing Properties map, 78 Contributing Properties are located within the boundaries of the St. Lawrence Neighbourhood Heritage Conservation District (Map on page 51 of the Heritage Conservation District Plan). 65 of these properties are individually designated under Part IV of the Ontario Heritage Act, 45 are listed on the City of Toronto's Heritage Register, and there are four National Historic Sites. There are no contributing properties within the Corktown Station Early Works Project Footprint.	
OLS-036	■ Residential/ ■ Former Industrial	■ 2 Berkeley Street and 248, 250, 252, 254, 256, 258, 260, 262, and 264 The Esplanade	■ Designated Part IV of the *Ontario Heritage Act* (By-law 665-80) ■ City of Toronto Heritage Easement Agreement, CT4950	■ Toronto Knitting & Yarn Factory- 2 Berkeley Street ■ Now named the Berkeley Castle **Design or Physical Value:** ■ Six-building complex with commercial and office use with industrial architecture constructed over an extended period of time which forms a unique courtyard **Historical or Associative Value:** ■ Built in 1866; additions by C.J. Gibson in 1896 (architect for 5 of the buildings), 1898, 1905, 1909, 1910; remodeled by A.J. Diamond & Partners in 1979-82 ■ First industrial building was at 2 Berkeley Street ■ Josephs Simpson bought his knitting and yarn works to this corner in 1874. He had an interest in architectural uniformity ■ Adaptively reused for residential purposes **Contextual Value:** ■ Location on the east side of Berkeley Street, north side of The Esplanade **Potential to Meet Ontario Regulation 10/06**: No **Potential Heritage Attributes:** ■ Scale, form, massing of the six-building former industrial complex the forms unique courtyard, brickwork (including header courses), stone sills, large multi-paned rectangular windows, architectural details on façade indicative of industrial architecture	 Photograph taken by AECOM in 2021

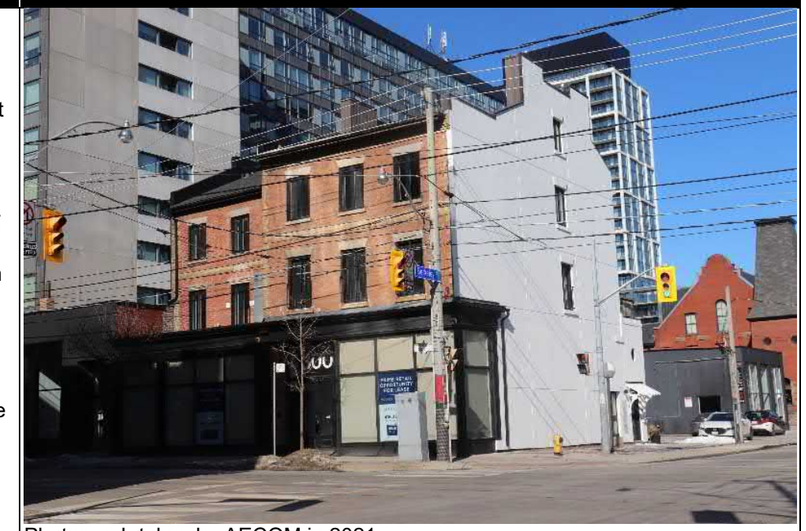
Cultural Heritage Report Reference #[29]	Type of Property	Location/Address	Heritage Recognition	Description of Known or Potential Cultural Heritage Value or Interest and Heritage Attributes	Photographs/Digital Image
OLS-037	■ Industrial	■ 26 Berkeley Street	■ Designated Part IV of the *Ontario Heritage Act* (By-law 122-76 and 638-80)	■ Consumers' Gas Co. Station A, Engine and Condensing Houses (Toronto Free Theatre)- 26 Berkeley Street ■ Heritage Toronto Plaque Location **Design or Physical Value:** ■ Industrial complex with red brickwork and stone detailing **Historical or Associative Value:** ■ Built in 1887-88, Architect Edmund Burke ■ Strickland & Symons, architects ■ Petroleum and coal products facility ■ Associated with development of the City and an important well-preserved 19th century industrial complex that was given both architectural dignity and form by one of Toronto's most important architects **Contextual Value:** ■ Location on the east side of Berkeley Street, north side of The Esplanade and south of Front Street ■ Importance on the streetscape and relation to other 19th industry in the area- Consumers Gas Company purifying house (251 Front Street) **Potential to Meet Ontario Regulation 10/06**: No **Potential Heritage Attributes:** ■ Scale, form, massing of the industrial complex with red brickwork and stone detailing, round arched windows, Classical style parapet, brick pilasters, vehicle entrance ground level, round arched entrance with decorative brickwork and stone surround	 Photograph taken by AECOM in 2021  Photograph taken by AECOM in 2021

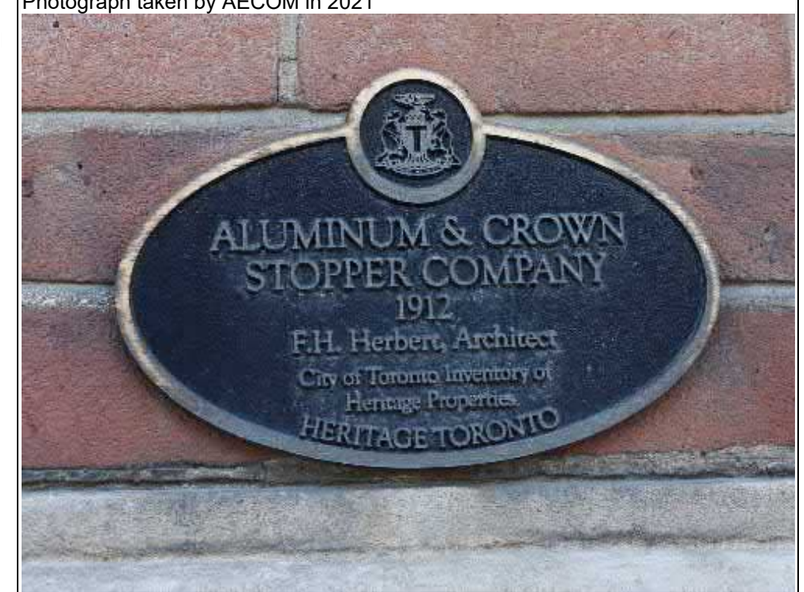
Cultural Heritage Report Reference #[29]	Type of Property	Location/Address	Heritage Recognition	Description of Known or Potential Cultural Heritage Value or Interest and Heritage Attributes	Photographs/Digital Image
OLS-038	■ Residential/ ■ Former Industrial	227 Front Street East ■ (formerly 223 and 251 Front St. E.)	■ Designated Part IV of the *Ontario Heritage Act* (By-law 592-85, 123-76, 639-80) ■ City of Toronto Heritage Easement Agreement CT850259 (February 19, 1987)	■ Standard Woolen Mills/Consumers Gas Station A Purifying House (now Joey and Toby Tannenbaum Opera Centre)– Combined confirmed municipal address for properties formerly known as 223 and 251 Front Street East ■ Heritage Toronto Plaque Location **Design or Physical Value:** ■ Industrial style building with symmetrical façade and ordered fenestration with segmental brick arches and corbelled brickwork on the cornice ■ Former Consumers Gas Purifying House **Historical or Associative Value:** ■ Standard Wollen Mills building built in 1882 and designed by Architect E. J. Lennox; eastern addition, 1893; 4th floor added 1897; 4-storey brick storehouse 1899 ■ Consumers Gas Purifying House designed by David B. Dick, constructed 1887-88 ■ Complex renovated for Canadian Opera Company by Bregman & Hamman with Arcorp Architects, 1985-87 ■ Historic role in the industrialization of the District in the 19th century, and its relation to 19th century industrial structures ■ Associated historically with Consumer's Gas Company, Standard Woolen Mills, and contemporary association with Canadian Opera Company **Contextual Value:** ■ Location on the south side of Front Street East between Princess Street and Berkeley Street ■ Important in context with adjacent buildings that form an integral part of the significant architectural character of the block of Front and Berkeley streets **Potential to Meet Ontario Regulation 10/06**: No **Potential Heritage Attributes:** ■ Scale, form, massing of the industrial complex with red brickwork and stone detailing, Classical style parapet, brick pilasters, fenestration with segmental brick arches, corbelled brickwork beneath the cornice, brick and stone of raised base	 Photograph taken by AECOM in 2021  Photograph taken by AECOM in 2021

Cultural Heritage Report Reference #[29]	Type of Property	Location/Address	Heritage Recognition	Description of Known or Potential Cultural Heritage Value or Interest and Heritage Attributes	Photographs/Digital Image
OLS-040	■ Residential/ ■ Former Industrial	■ 54 Berkeley Street, 359, 361 King Street East	■ Designated Part IV of the *Ontario Heritage Act* (By-law 682-84) ■ City of Toronto Heritage Easement Agreement, Reg. CT697089, (December 20, 1984) ■ Designated Part V of the *Ontario Heritage Act*, St. Lawrence Neighbourhood Heritage Conservation District, under appeal (by-law 1328-2015)	■ Reid Lumber Company- 54 Berkeley Street, 359 and 361 King Street East (Designation by-law under 359 King Street East) ■ Heritage Toronto Plaque Location **Design or Physical Value:** ■ Four-storey industrial style building with an eclectic Victorian design with an unusual variety of window details and street façade divided into irregular bays ■ The façade of the building has been conserved and incorporated as the podium for a high-rise **Historical or Associative Value:** ■ Built in 1891-1892 to accommodate offices and halls for lumber merchants, John B. and George W. Reid **Contextual Value:** ■ Location on the north side of King Street East and west side of Berkeley Street ■ Prominent corner building which contributes to streetscape of King and Berkeley streets ■ Located within the Original 10 Blocks of the Town of York ■ Contributing property located within the St. Lawrence Neighbourhood Heritage Conservation District **Potential to Meet Ontario Regulation 10/06**: No **Potential Heritage Attributes:** ■ Scale, form, massing of the four-storey building, eclectic Victorian design, irregular bays and window details, course rock-faced rubble sandstone base, arched brickwork lintels, decorative band courses, scalloped shingles on fourth floor	 Photograph taken by AECOM in 2021  Photograph taken by AECOM in 2021

Cultural Heritage Report Reference #[29]	Type of Property	Location/Address	Heritage Recognition	Description of Known or Potential Cultural Heritage Value or Interest and Heritage Attributes	Photographs/Digital Image
OLS-041	■ Residential/ ■ Commercial	■ 302-306 King Street East	■ Listed on Municipal Heritage Register (June 20, 1973)	■ Tavern/Garibaldi House- 302 and 306 King Street East ■ Heritage Toronto Plaque Location **Design or Physical Value:** ■ Vernacular two-storey structure with an end gable roof, clad in horizontal vinyl siding (new vinyl windows) **Historical or Associative Value:** ■ Built in 1859, alteration 1872 ■ Connected to the row houses at 53-79 Berkeley Street **Contextual Value:** ■ Location at the northeast corner of King Street East and west side of Berkeley Street **Potential to Meet Ontario Regulation 10/06**: No **Potential Heritage Attributes:** ■ Scale, form, massing of the two-storey building with end gable roof, flat-headed windows with a segmental arch window surround, entrance with transom, corner storefront windows	 Photograph taken by AECOM in 2021  Photograph taken by AECOM in 2021

Cultural Heritage Report Reference #[29]	Type of Property	Location/Address	Heritage Recognition	Description of Known or Potential Cultural Heritage Value or Interest and Heritage Attributes	Photographs/Digital Image
OLS-042	■ Residential	■ 53-79 Berkeley Street, 535 Adelaide Street East	■ Listed on Municipal Heritage Register (June 20, 1973)	■ Row Housing- 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, and 79 Berkeley Street, 535 Adelaide Street East ■ Heritage Toronto Plaque Location **Design or Physical Value:** ■ Two storey 14-row houses, clad in stucco with segmentally arched window opening **Historical or Associative Value:** ■ Built in 1871, altered 1969 ■ Connected to 320-306 King Street East ■ Typical of modest workers houses identified with the development of the Corktown neighbourhood in the 19th century **Contextual Value:** ■ Location on the north side of King Street East and west side of Berkeley Street **Potential to Meet Ontario Regulation 10/06**: No **Potential Heritage Attributes:** ■ Harmonious (shared) scale, form, massing of the two-storey 14-row houses, segmentally arched window openings, transoms over doors, west elevation as mirror images, Juliet balconies with iron railings	 Photograph taken by AECOM in 2021  Photograph taken by AECOM in 2021

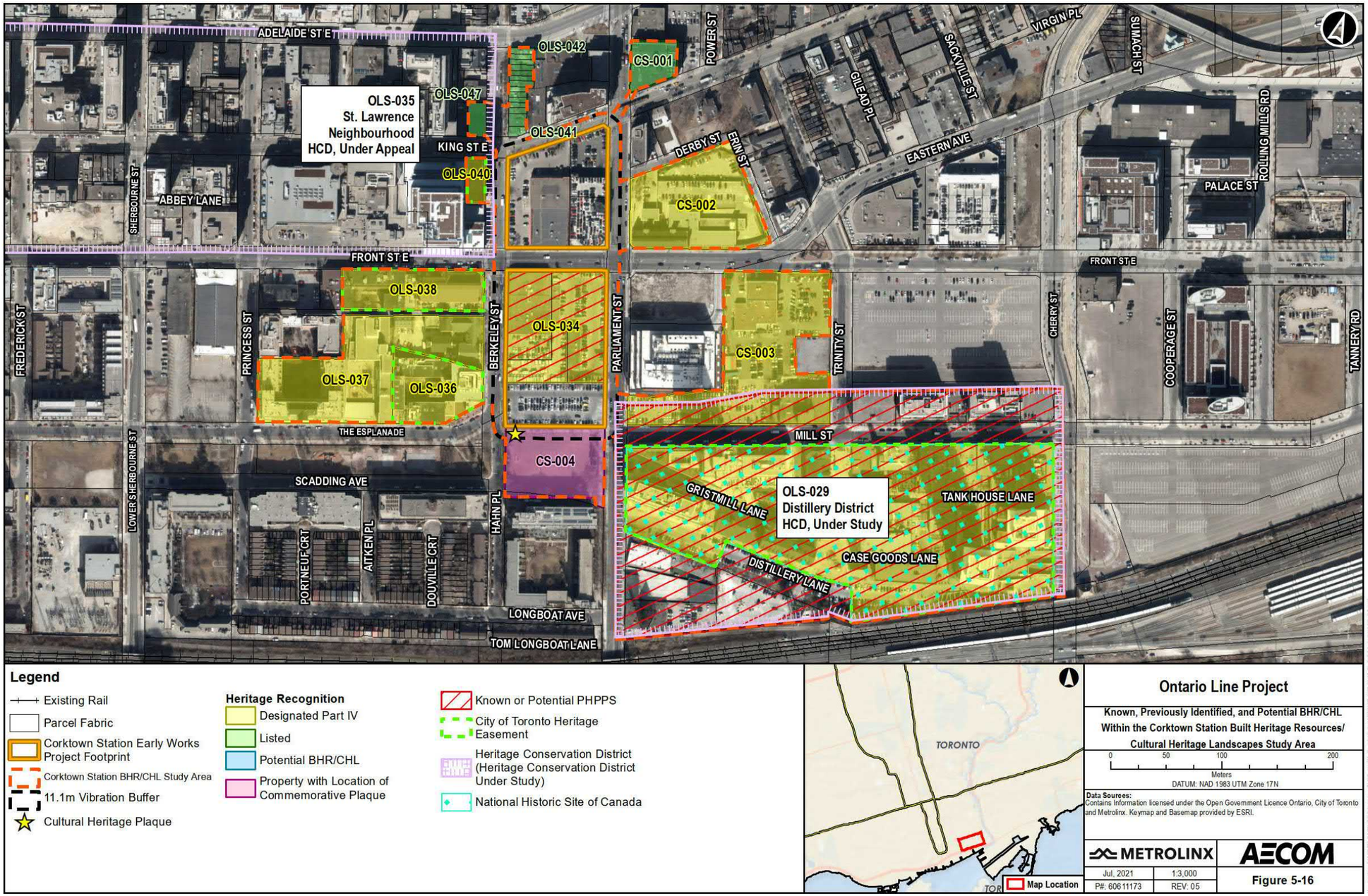
Cultural Heritage Report Reference #[29]	Type of Property	Location/Address	Heritage Recognition	Description of Known or Potential Cultural Heritage Value or Interest and Heritage Attributes	Photographs/Digital Image
OLS-047	■ Commercial/ ■ Residential	■ 56 Berkeley Street, 298, 300 King Street East	■ Listed on Municipal Heritage Register (June 20, 1973) ■ Designated Part V of the *Ontario Heritage Act*, St. Lawrence Neighbourhood Heritage Conservation District, under appeal (by-law 1328-2015)	■ Charles Coxwell Small House-56 Berkeley Street, 298 and 300 King Street East **Design or Physical Value:** ■ Three-storey brick structure with ground floor storefront on King Street ■ West elevation has been clad in stucco **Historical or Associative Value:** ■ Built in 1845 ■ One of the oldest surviving structures in the original 10-block 'Town of York' ■ Related to Charles Coxwell Small, wealthy farmer and public official in Upper Canada **Contextual Value:** ■ Located at the northwest corner of Berkeley Street and King Street East ■ Contributing property within the St. Lawrence Neighbourhood Heritage Conservation District **Potential to Meet Ontario Regulation 10/06**: No **Potential Heritage Attributes:** ■ Scale, form and massing the three storey structure, Juliet balconies with iron railings, store front with large windows with wood bracket in cornice, dichromatic brick including quoin, course between second and third storey, decorative brickwork beneath cornice, stone sills	 Photograph taken by AECOM in 2021

Cultural Heritage Report Reference #[29]	Type of Property	Location/Address	Heritage Recognition	Description of Known or Potential Cultural Heritage Value or Interest and Heritage Attributes	Photographs/Digital Image
CS-001	■ Commercial	■ 91-93 Parliament Street, 330-334 King Street East	■ Listed on Municipal Heritage Register (June 25 & 28, 1984)	■ Aluminum Crown and Stopper Company- 91-93 Parliament Street, 330-334 King Street East ■ Heritage Toronto Plaque Location **Design or Physical Value:** ■ Five-storey red brick commercial building with Edwardian detailing. Six-bay façade along Parliament Street with seven-bay faced on King Street East. Angled corner entrance with stone detailing and pediment. Top row of windows has voussoir arched openings with keystone details, decorative cornice. **Historical or Associative Value:** ■ Constructed for the Aluminum Crown and Stopper Company in 1911-12 ■ Designed by Frederick H. Herbert **Contextual Value:** ■ Prominent location at the northeast corner of the King Street East and Parliament Street **Potential to Meet Ontario Regulation 10/06**: No **Heritage Attributes:** ■ Scale and form of five-storey structure. Angled corner entrance with stone details and cornice. Six and seven bay facades with paired windows and brick pilasters. Top row of windows with voussoir arched openings and keystone details. Decorative stone cornice.	 Photograph taken by AECOM in 2021  Photograph taken by AECOM in 2021

Cultural Heritage Report Reference #[29]	Type of Property	Location/Address	Heritage Recognition	Description of Known or Potential Cultural Heritage Value or Interest and Heritage Attributes	Photographs/Digital Image
CS-002	■ Civic/Former Industrial	■ 51-63 Parliament Street, 296 Front Street East	■ Designated Part IV of the *Ontario Heritage Act* (By-law 9-78) ■ Heritage Toronto Plaque Location	■ Toronto Police Services 51 Division (formerly Consumer's Gas Company Water Gas Purification House)- 51-63 Parliament Street, 296 Front Street **Design or Physical Value:** ■ Three-storey red brick clad industrial with stone detailing. Gabled clerestory roof. West (Parliament Street) façade with three arched bays and pedimented detail at roofline. South façade with ten arched bays separated by brick pilasters. Paired windows in each bay; upper storey windows have voussoir arched openings, with small round windows above. **Historical or Associative Value:** ■ Constructed circa 1899 as a purification house for the Consumers Gas Company ■ Designed by the architectural firm of Bond & Smith, with additions by Frank H. Herbert in 1902 and 1904 ■ Renovated into Toronto Police Services 51 Division offices in 2004 **Contextual Value:** ■ Prominent location on the northeast corner of the Parliament Street and Front Street East intersection ■ Contributes to the former industrial character of the neighborhood; one of several buildings formerly associated with the Consumers Gas Company **Potential to Meet Ontario Regulation 10/06**: No **Heritage Attributes:** ■ Scale and massing of building, red brick cladding and stone details, paired windows with voussoir arched window openings, arched bays with brick pilasters, pedimented detailing on west façade, clerestory roof	 Photograph taken by AECOM in 2021  Photograph taken by AECOM in 2021

Cultural Heritage Report Reference #[29]	Type of Property	Location/Address	Heritage Recognition	Description of Known or Potential Cultural Heritage Value or Interest and Heritage Attributes	Photographs/Digital Image
CS-003	■ Industrial ■ A portion of the property within the proposed boundary of the Distillery District Heritage Conservation District, under study (OLS-029)	■ 18 Trinity Street	■ Designated Part IV of the *Ontario Heritage Act* (By-law 1997-0301) ■ A portion of the property within the proposed boundary of the Distillery District Heritage Conservation District, under study (OLS-029)	■ General Distilling Company Building- 18 Trinity Street **Design or Physical Value:** ■ Three-storey red brick clad structure, flanked by two-storey wings; exhibits classical brick detailing. Principal faced of the centre block is divided into three bays separated by brick pilasters. Windows have flat-headed openings. Upper portion of façade terminates in a projecting cornice. Side (east and west) walls have extended parapets. East wall extends ten bays along Trinity street, separated by brick pilasters. **Historical or Associative Value:** ■ Constructed in 1902 for the General Distilling Company, a subsidiary of Gooderham and Worts which produced industrial alcohol ■ Designed by architect David Roberts Jr., whose practice designed many buildings for Gooderham and Worts, and the Gooderham family ■ Used as a paper recycling plant beginning in the 1940s, currently vacant ■ Associated with the Distillery District **Contextual Value:** ■ Although not part of the National Historic Site, this property has historical associations with the adjacent Gooderham and Worts distillery property ■ Building at 18 Trinity Street, a portion of this property, is within the proposed boundary of the Distillery District Heritage Conservation District, under study **Potential to Meet Ontario Regulation 10/06**: **Yes (within OLS-029)** **Heritage Attributes:** ■ Three-storey centre block with two-storey wings, classical detailing, red brick façade, location at the northwest corner of the Mill Street and Trinity Street intersection	 Photograph taken by AECOM in 2021
CS-004	■ Cultural Heritage Commemorative Plaque	■ Parliament Square Park	■ Ontario Heritage Trust Plaque	■ Ontario Heritage Trust Plaque- Ontario's First Parliament Buildings 1798 **Design or Physical Value:** ■ Provincial Heritage Plaque- blue and gold **Historical or Associative Value:** ■ Ontario Heritage Trust Plaque marking the location of the first parliament buildings in Ontario ■ Plaque Text reads as follows: ONTARIO FIRST PARLIAMENT BUILDINGS 1798 In 1793 it was decided to move the capital of Upper Canada from Niagara to York (now Toronto). Two single-storey brick parliament buildings were constructed near this site. Opened in June 1798, the buildings were used for court proceedings and religious services in addition to parliamentary sessions. During their occupation of York, April 27 to May 2, 1813, American troops set fire to the parliament buildings. By 1820 they had been repaired and a connecting centre block added. Four years later, fire from an overheated chimney flue reduced them to ruins. The site was abandoned and in 1832 new parliament buildings were completed on Front Street, west of Simcoe Street. **Contextual Value:** ■ Context-specific plaque located on the site of Ontario's First Parliament buildings	 Photograph taken by AECOM 2021

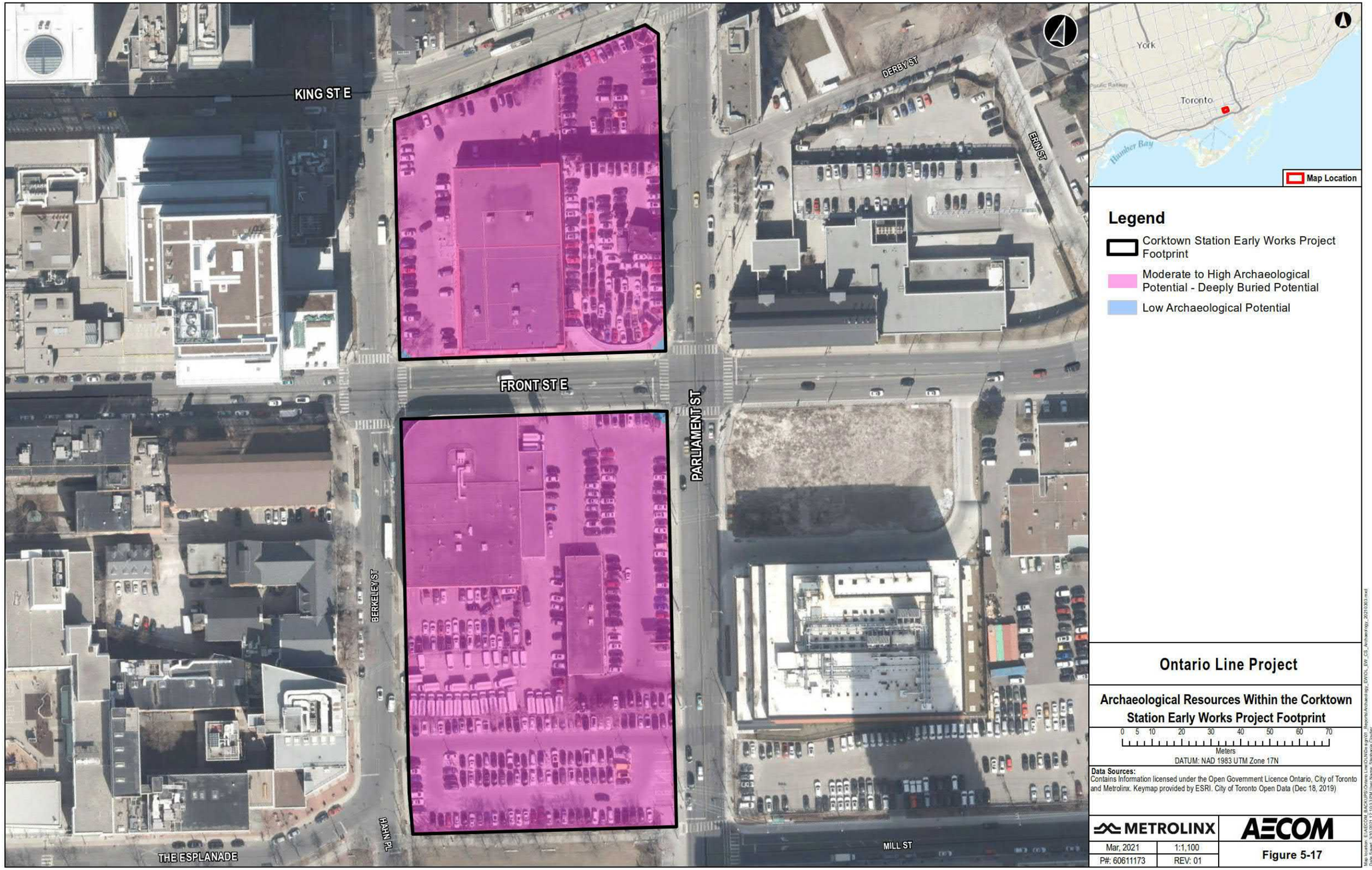
Figure 5-16: Known, Previously Identified, and Potential Built Heritage Resources/Cultural Heritage Landscapes Within the Corktown Station Built Heritage Resources and Cultural Heritage Landscapes Study Area



5.8 Archaeological Resources

The Corktown Station Early Works Project Footprint includes two registered archaeological sites, the First Parliament Site (AjGu-41), which includes the properties at 265 Front Street East, 271 Front Street East, and 25 Berkeley Street in Toronto, and the Lime Kiln Works Site (AjGu-61 and AjGu-64). A number of archaeological assessments within the Project Footprint have been completed by AECOM (AECOM, 2020c), Archeoworks (2009), and Archaeological Services Inc. (ASI, 2001, 2003, 2012a, 2012b). The First Parliament Site is a registered archaeological site (AjGu-41) which includes the First and Second Parliament Buildings, the Home District Gaol, and the Consumers' Gas company buildings, and the Lime Kiln Works Site (AjGu-61 and AjGu-64) is part of the site of the Lawrence Foundry. The majority of the Corktown Station Early Works Project Footprint retains moderate to high archaeological potential (i.e., deeply buried potential), such as potential for discovering pre-contact Indigenous materials and/or materials related to the early development and expansion of the City of Toronto, as shown in **Figure 5-17**. It should be noted that the areas marked as low archaeological potential in **Figure 5-17** are part of the previously disturbed public right-of-way. A number of previous archaeological assessments have been completed within the Corktown Station Study Area including on the Parliament Site (AjGu-41) by ASI (2001) and on the Lime Kiln/Toronto Lime Kiln site (AjGu-61 & AjGu-64) by Archeoworks Inc (2009). Further archaeological assessment is required within the Corktown Station Study Area prior to any ground disturbing activities. Some archaeological features may remain intact beneath paved surfaces. Consultation with the Ministry of Heritage, Sport, Tourism and Culture Industries will be required.

Figure 5-17: Archaeological Resources Within the Corktown Station Early Works Project Footprint



5.9 Traffic and Transportation

5.9.1 Transportation Network

5.9.1.1 Roads and Intersection Operations

5.9.1.1.1 Road Network

An overview of the roads located within the Corktown Station Traffic and Transportation Study Area is described below. All the described roads are under the jurisdiction of the City of Toronto and are classified according to the City of Toronto's Road Classification System Update (City of Toronto, 2018). As part of the City of Toronto's Vision Zero strategy, the City has been implementing speed reductions for several streets within the City (City of Toronto, 2020c). Posted speed reductions that have already been implemented on the roads located within the Corktown Station Traffic and Transportation Study Area, if any, are reflected in the description below. It should be noted that the section of the Gardiner Expressway between Cherry Street and Sherbourne Street was not considered part of the road network as it is not anticipated to be directly impacted by the Corktown Station early works within the Corktown Station Early Works Project Footprint or be part of the route for heavy construction vehicles.

Lake Shore Boulevard East is a major east-west arterial road with a six-lane cross-section and a posted speed of 60 kilometres per hour.

King Street East is a major east-west arterial road with a four-lane cross-section and a posted speed of 40 kilometres per hour.

Eastern Avenue is a minor east-west arterial road with a four lane-cross-section and a posted speed of 50 kilometres per hour.

Adelaide Street is a major arterial road which runs one-way in the eastbound direction with a three-lane cross-section and a posted speed of 40 kilometres per hour.

Front Street is a minor east-west arterial road with a four-lane cross-section. The section of Front Street between Parliament Street and Cherry Street has a posted speed of 30 kilometres per hour and the remaining section within the Corktown Station Early Works Study Area has a posted speed of 40 kilometres per hour.

Parliament Street is a minor north-south arterial road with a four-lane cross-section. Within the Corktown Station Early Works Study Area, Parliament Street does not have a posted speed and hence a statutory speed limit of 50 kilometres per hour is assumed.

Sherbourne Street is a minor north-south arterial road with a two-lane cross-section and a posted speed of 40 kilometres per hour.

Cherry Street is a north-south collector road with a two-lane cross-section and a posted speed of 40 kilometres per hour.

The Esplanade is an east-west collector road with a four-lane cross-section and a posted speed of 40 kilometres per hour.

Berkeley Street, Princess Street and **Trinity Street** are north-south local roads with two-lane cross-sections and posted speeds of 30 kilometres per hour.

Ontario Street is a local road which runs one-way in the southbound direction with a two-lane cross-section and a posted speed of 30 kilometres per hour.

Mill Street is an east-west local road with a two-lane cross-section and a posted speed of 30 kilometres per hour.

5.9.1.1.2 Intersection Operations

The analysis findings on traffic operations at the Corktown Station Traffic and Transportation Study Area intersections in the 2020 Existing Traffic Conditions are summarized in **Table 5-14**. The critical movements are highlighted in grey in **Table 5-14** and are defined as those operating either with a volume to capacity ratio in excess of 0.84 or at level of service[31] 'E' or worse. The detailed Highway Capacity Manual (Transportation Research Board, 2000) reports from Synchro pertaining to the existing conditions analysis are presented in in the **Appendix A5**.

As shown in **Table 5-14,** all the Corktown Station Traffic and Transportation Study Area intersections operate at acceptable level of service 'D' or better and within capacity in both the AM and PM peak hours except for the unsignalized intersection of King Street and Princess Street which operates at overall level of service 'F' in both peak hours. In

31 The level of service designation for all modes of travel range from level of service 'A' to level of service 'F' based on the relative attractiveness (e.g., the amount of average delay for automobile and transit users, the level of comfort, safety, and convenience experienced by pedestrians and cyclists) of the traffic and transportation elements within the Corktown Station Traffic and Transportation Study Area. A level of service target was set for each mode of travel to ensure that the respective mode users experience a minimum desirable level of service which is consistent with both the surrounding land use designation and the road classification. The levels of service targets set for motorized vehicles (i.e., automobiles and transit) and active transportation users are level of service 'D' and level of service 'C', respectively. This indicates that for motorized vehicles, level of service 'A' through 'D' typically indicate acceptable operations, while level of service 'E' or 'F' indicate critical operations. For active transportation users, level of service 'A' through 'C' indicate acceptable operations, while level of service 'D' through 'F' indicate critical operations.

addition, all individual movements at the studied intersections operate at acceptable levels except for the following movements:

- The shared southbound through and right-turn movements at the intersection of Lower Sherbourne and Lake Shore Boulevard East which approach capacity in the PM peak hour with volume to capacity ratio of 0.97 and where motorists experience a long average delay of approximately 87 seconds;
- The shared northbound left, through, and right-turn movements at the unsignalized intersection of King Street and Princess Street which operate at level of service ‘F’ during both peak hours; and,
- The shared southbound left, through, and right-turn movements at the unsignalized intersection of King Street and Princess Street which operate at level of service ‘F’ during the AM peak hour.

Table 5-14: Traffic Operations at the Corktown Station Traffic and Transportation Study Area Intersections under Existing Conditions (2020) during the AM and PM Peak Hours

Synchro ID: Intersection	Movement	AM Peak Hour Volume to capacity Ratio	AM Peak Hour Delay (sec)	AM Peak Hour Level of service	AM Peak Hour 95th Percentile Queue (metres)	PM Peak Hour Volume to capacity Ratio	PM Peak Hour Delay (sec)	PM Peak Hour Level of service	PM Peak Hour 95th Percentile Queue (metres)
90: Adelaide Street and Sherbourne Street (Signalized)	EBLTR	0.39	10.8	B	41.9	0.52	12.1	B	60.9
90: Adelaide Street and Sherbourne Street (Signalized)	NBTR	0.64	32.3	C	75.7	0.65	32.0	C	81.5
90: Adelaide Street and Sherbourne Street (Signalized)	SBL	0.32	27.4	C	19.3	0.57	38.0	D	#34.9
90: Adelaide Street and Sherbourne Street (Signalized)	SBT	0.37	25.3	C	47.4	0.51	27.9	C	67.8
90: Adelaide Street and Sherbourne Street (Signalized)	**Overall**	**0.48**	**17.6**	**B**	**-**	**0.56**	**18.8**	**B**	**-**
115: Adelaide Street and Berkeley Street (Signalized)	EBLTR	0.32	5.8	A	33.1	0.45	6.7	A	54.7
115: Adelaide Street and Berkeley Street (Signalized)	NBTR	0.23	30.7	C	22.0	0.25	30.8	C	23.8
115: Adelaide Street and Berkeley Street (Signalized)	SBLT	0.31	31.5	C	26.5	0.33	31.7	C	26.3
115: Adelaide Street and Berkeley Street (Signalized)	**Overall**	**0.32**	**9.7**	**A**	**-**	**0.42**	**9.5**	**A**	**-**
129: Adelaide Street and Parliament Street (Signalized)	EBL	0.10	4.0	A	3.9	0.09	3.4	A	3.3
129: Adelaide Street and Parliament Street (Signalized)	EBTR	0.44	7.2	A	11.3	0.74	11.4	B	121.3
129: Adelaide Street and Parliament Street (Signalized)	NBTR	0.31	24.5	C	31.4	0.42	25.7	C	44.8
129: Adelaide Street and Parliament Street (Signalized)	SBLT	0.36	25.1	C	34.8	0.38	25.3	C	37.1
129: Adelaide Street and Parliament Street (Signalized)	**Overall**	**0.41**	**14.1**	**B**	**-**	**0.63**	**15.9**	**B**	**-**
140: Berkeley Street and King Street East (Signalized)	EBTR	0.14	5.6	A	9.8	0.25	6.2	A	23.1
140: Berkeley Street and King Street East (Signalized)	WBTR	0.25	6.2	A	22.0	0.14	5.7	A	13.8
140: Berkeley Street and King Street East (Signalized)	NBLTR	0.26	25.7	C	17.5	0.36	26.5	C	28.5
140: Berkeley Street and King Street East (Signalized)	SBLTR	0.32	26.1	C	24.4	0.22	25.3	C	20.0
140: Berkeley Street and King Street East (Signalized)	**Overall**	**0.27**	**10.2**	**B**	**-**	**0.28**	**10.4**	**B**	**-**
141: King Street East and Parliament Street (Signalized)	EBTR	0.15	10.8	B	8.1	0.44	12.9	B	44.8
141: King Street East and Parliament Street (Signalized)	WBTR	0.32	15.9	B	29.6	0.23	15.1	B	21.7
141: King Street East and Parliament Street (Signalized)	NBLTR	0.33	15.0	B	28.5	0.42	16.0	B	39.1
141: King Street East and Parliament Street (Signalized)	SBLTR	0.30	14.6	B	28.7	0.41	15.8	B	40.2
141: King Street East and Parliament Street (Signalized)	**Overall**	**0.32**	**14.6**	**B**	**-**	**0.43**	**14.9**	**B**	**-**
150: King Street East and Sherbourne Street (Signalized)	EBTR	0.06	13.1	B	6.4	0.07	13.2	B	7.5
150: King Street East and Sherbourne Street (Signalized)	WBTR	0.19	15.5	B	22.0	0.20	12.8	B	20.2
150: King Street East and Sherbourne Street (Signalized)	NBTR	0.39	16.9	B	44.3	0.39	16.8	B	46.9
150: King Street East and Sherbourne Street (Signalized)	SBTR	0.33	16.1	B	37.4	0.46	17.9	B	55.8
150: King Street East and Sherbourne Street (Signalized)	**Overall**	**0.29**	**15.9**	**B**	**-**	**0.33**	**15.9**	**B**	**-**
161: Berkeley Street and Front Street (Signalized)	EBTR	0.18	8.2	A	16.3	0.50	11.1	B	57.2
161: Berkeley Street and Front Street (Signalized)	WBTR	0.55	26.2	C	111.8	0.39	14.3	B	59.2
161: Berkeley Street and Front Street (Signalized)	NBL	0.07	24.1	C	6.9	0.13	24.6	C	10.4
161: Berkeley Street and Front Street (Signalized)	NBTR	0.16	24.8	C	18.6	0.48	28.1	C	47.1
161: Berkeley Street and Front Street (Signalized)	SBLTR	0.40	27.2	C	36.8	0.64	33.0	C	#52.2
161: Berkeley Street and Front Street (Signalized)	**Overall**	**0.51**	**23.0**	**C**	**-**	**0.54**	**16.5**	**B**	**-**

Synchro ID: Intersection	Movement	AM Peak Hour Volume to capacity Ratio	AM Peak Hour Delay (sec)	AM Peak Hour Level of service	AM Peak Hour 95th Percentile Queue (metres)	PM Peak Hour Volume to capacity Ratio	PM Peak Hour Delay (sec)	PM Peak Hour Level of service	PM Peak Hour 95th Percentile Queue (metres)
163: King Street East and Princess Street (Unsignalized)	EBTR	0.09	0.0	A	0.0	0.19	0.0	A	0.0
163: King Street East and Princess Street (Unsignalized)	WBTR	0.14	0.0	A	0.0	0.13	0.0	A	0.0
163: King Street East and Princess Street (Unsignalized)	NBLTR	0.72	148.9	F	23.9	0.54	70.4	F	19.2
163: King Street East and Princess Street (Unsignalized)	SBLTR	0.55	81.6	F	19.2	0.22	25.2	D	6.3
163: King Street East and Princess Street (Unsignalized)	**Overall**	**0.72**	**148.9**	**F**	**-**	**0.54**	**70.4**	**F**	**-**
164: Parliament Street and Front Street (Signalized)	EBL	0.14	13.4	B	8.5	0.16	13.3	B	11.9
164: Parliament Street and Front Street (Signalized)	EBTR	0.18	12.6	B	21.6	0.49	15.9	B	61.1
164: Parliament Street and Front Street (Signalized)	WBL	0.35	15.6	B	31.4	0.59	26.8	C	#38.7
164: Parliament Street and Front Street (Signalized)	WBTR	0.51	16.3	B	66.4	0.34	14.1	B	40.4
164: Parliament Street and Front Street (Signalized)	NBLTR	0.50	22.8	C	43.1	0.62	25.4	C	56.0
164: Parliament Street and Front Street (Signalized)	SBLTR	0.37	20.7	C	32.8	0.39	21.0	C	35.2
164: Parliament Street and Front Street (Signalized)	**Overall**	**0.51**	**17.8**	**B**	**-**	**0.60**	**19.0**	**B**	**-**
166: Cherry Street and Front Street (Signalized)	EBL	0.02	21.3	C	3.1	0.05	17.9	B	6.2
166: Cherry Street and Front Street (Signalized)	EBT	0.13	22.1	C	14.6	0.34	20.2	C	41.2
166: Cherry Street and Front Street (Signalized)	EBR	0.02	21.3	C	0.0	0.06	18.0	B	4.2
166: Cherry Street and Front Street (Signalized)	WBL	0.11	22.0	C	9.3	0.20	19.1	B	16.2
166: Cherry Street and Front Street (Signalized)	WBTR	0.30	23.4	C	29.0	0.17	18.8	B	21.3
166: Cherry Street and Front Street (Signalized)	NBLT	0.19	4.4	A	3.1	0.21	14.6	B	38.5
166: Cherry Street and Front Street (Signalized)	NBR	0.31	33.2	C	6.0	0.50	39.6	D	20.7
166: Cherry Street and Front Street (Signalized)	SBTR	0.28	9.2	A	37.0	0.44	13.8	B	53.5
166: Cherry Street and Front Street (Signalized)	**Overall**	**0.30**	**13.8**	**B**	**-**	**0.42**	**17.8**	**B**	**-**
170: Lower Sherbourne Street and The Esplanade (Signalized)	EBLTR	0.30	20.7	C	24.9	0.50	25.2	C	37.2
170: Lower Sherbourne Street and The Esplanade (Signalized)	WBLTR	0.36	21.6	C	29.3	0.47	24.2	C	35.4
170: Lower Sherbourne Street and The Esplanade (Signalized)	NBL	0.09	7.1	A	7.1	0.11	7.4	A	7.1
170: Lower Sherbourne Street and The Esplanade (Signalized)	NBTR	0.33	8.9	A	29.6	0.29	8.5	A	29.0
170: Lower Sherbourne Street and The Esplanade (Signalized)	SBL	0.03	6.7	A	2.7	0.03	5.9	A	m2.6
170: Lower Sherbourne Street and The Esplanade (Signalized)	SBTR	0.26	8.2	A	23.2	0.42	10.4	B	57.7
170: Lower Sherbourne Street and The Esplanade (Signalized)	**Overall**	**0.34**	**12.5**	**B**	**-**	**0.45**	**14.5**	**B**	**-**
172: Parliament Street and Mill Street (Signalized)	WBL	0.17	18.1	B	18.1	0.17	18.2	B	19.2
172: Parliament Street and Mill Street (Signalized)	WBR	0.08	17.4	B	9.5	0.09	17.6	B	9.8
172: Parliament Street and Mill Street (Signalized)	NBTR	0.36	11.9	B	30.7	0.45	12.8	B	37.5
172: Parliament Street and Mill Street (Signalized)	SBLT	0.30	11.5	B	24.3	0.47	13.1	B	39.3
172: Parliament Street and Mill Street (Signalized)	**Overall**	**0.27**	**12.7**	**B**	**-**	**0.33**	**13.7**	**B**	**-**

Synchro ID: Intersection	Movement	AM Peak Hour Volume to capacity Ratio	AM Peak Hour Delay (sec)	AM Peak Hour Level of service	AM Peak Hour 95th Percentile Queue (metres)	PM Peak Hour Volume to capacity Ratio	PM Peak Hour Delay (sec)	PM Peak Hour Level of service	PM Peak Hour 95th Percentile Queue (metres)
173: Cherry Street and Mill Street (Signalized)	EBL	0.09	17.6	B	9.8	0.13	17.9	B	12.7
173: Cherry Street and Mill Street (Signalized)	EBTR	0.14	17.9	B	16.3	0.32	19.3	B	35.0
173: Cherry Street and Mill Street (Signalized)	WBL	0.66	26.2	C	58.4	0.55	22.7	C	43.7
173: Cherry Street and Mill Street (Signalized)	WBTR	0.18	18.2	B	20.0	0.11	17.7	B	14.9
173: Cherry Street and Mill Street (Signalized)	NBL	0.11	14.9	B	11.3	0.10	14.8	B	8.2
173: Cherry Street and Mill Street (Signalized)	NBT	0.21	15.6	B	28.5	0.21	15.6	B	30.9
173: Cherry Street and Mill Street (Signalized)	SBL	0.25	37.6	D	m6.3	0.20	48.5	D	m3.2
173: Cherry Street and Mill Street (Signalized)	SBTR	0.34	20.9	C	56.2	0.57	11.1	B	45.9
173: Cherry Street and Mill Street (Signalized)	**Overall**	**0.50**	**20.8**	**C**	**-**	**0.59**	**16.0**	**B**	**-**
192: Lower Sherbourne Street and Lake Shore Boulevard East (Signalized)	EBLTR	0.45	37.1	D	51.5	0.48	34.8	C	63.8
192: Lower Sherbourne Street and Lake Shore Boulevard East (Signalized)	WBLTR	0.60	33.9	C	80.0	0.55	35.7	D	69.9
192: Lower Sherbourne Street and Lake Shore Boulevard East (Signalized)	NBL	0.00	36.9	D	1.7	0.03	38.1	D	2.8
192: Lower Sherbourne Street and Lake Shore Boulevard East (Signalized)	NBTR	-	-	-	-	0.01	36.9	D	3.2
192: Lower Sherbourne Street and Lake Shore Boulevard East (Signalized)	SBL	0.14	39.1	D	15.4	0.25	41.2	D	25.9
192: Lower Sherbourne Street and Lake Shore Boulevard East (Signalized)	SBTR	0.50	46.8	D	56.0	0.97	86.6	F	#145.7
192: Lower Sherbourne Street and Lake Shore Boulevard East (Signalized)	**Overall**	**0.52**	**36.2**	**D**	**-**	**0.65**	**44.7**	**D**	**-**
302: Adelaide Street and Ontario Street (Unsignalized)	EBTR	0.19	0.0	A	0.0	0.30	0.0	A	0.0
302: Adelaide Street and Ontario Street (Unsignalized)	SBL	0.15	12.6	B	4.1	0.22	16.3	C	6.3
302: Adelaide Street and Ontario Street (Unsignalized)	**Overall**	**0.19**	**12.6**	**B**	**-**	**0.30**	**16.3**	**C**	**-**
306: King Street East and Ontario Street (Unsignalized)	EBT	0.07	0.0	A	0.0	0.15	0.0	A	0.0
306: King Street East and Ontario Street (Unsignalized)	WBT	0.12	0.0	A	0.0	0.11	0.0	A	0.0
306: King Street East and Ontario Street (Unsignalized)	SBLR	0.13	26.5	D	3.5	0.22	30.0	D	6.2
306: King Street East and Ontario Street (Unsignalized)	**Overall**	**0.13**	**26.5**	**D**	**-**	**0.22**	**30.0**	**D**	**-**

Notes: #: 95th percentile cycle volume exceeds capacity, queue may be longer
m: Volume for the 95th percentile queue is metered by an upstream signal
The critical movements are highlighted in grey and are defined as those operating either with a volume to capacity ratio in excess of 0.84 or at level of service ‘E’ or ‘F’

5.9.1.2 Pedestrian Network and Operations

5.9.1.2.1 Pedestrian Network

Within the Corktown Station Traffic and Transportation Study Area, pedestrians are accommodated through sidewalks that are generally present on either side of the roads. Immediately south of the Corktown Station Early Works Project Footprint, there is a recreational trail which provides an active transportation connection between The Esplanade and Parliament Street and Mill Street. Active transportation users can also be accommodated through the Lower Don Trail and the Martin Goodman Trail, located north and south of the Lake Shore Boulevard, respectively. In addition, painted crosswalks are provided across all legs of the signalized intersections located within the Corktown Station Traffic and Transportation Study Area. Pedestrian push buttons are provided at the majority of the legs of the signalized intersections within the Corktown Station Traffic and Transportation Study Area.

Figure 5-18 illustrates the location and type of pedestrian facilities provided within the Corktown Station Traffic and Transportation Study Area.

5.9.1.2.2 Pedestrian Operations

The findings of the Pedestrian Level of Service analysis at the signalized intersections and road segments within the Corktown Station Traffic and Transportation Study Area in the 2020 Existing Traffic Conditions are summarized in **Table 5-15** and **Table 5-16**, respectively, and illustrated in **Figure 5-19**. The intersections and road segments with Pedestrian Level of Service ‘D’ or worse are identified as those not meeting the Pedestrian Level of Service target and thus, operating at “critical” levels. These critical road elements are highlighted in grey in **Table 5-15** and **Table 5-16**. The detailed Pedestrian Level of Service analysis results at the individual intersection approach level under the 2020 Existing Traffic Conditions are presented in the Traffic and Transportation Early Works Report **Appendix A5**.

As shown in **Table 5-15**, pedestrians experience critical Pedestrian Level of Service ‘D’ or worse at all the Corktown Station Traffic and Transportation Study Area intersections except at the intersection of King Street and Sherbourne Street and the intersection of Parliament Street and Mill Street where pedestrians experience acceptable Pedestrian Level of Service ‘C’. This is mainly attributed to the long average delays/waiting times that pedestrians experience before they receive Walk Time and start crossing the arterial roads within the Corktown Station Traffic and Transportation Study Area such as Adelaide Street, Sherbourne Street, King Street East, Front Street, and Lake Shore Boulevard. In addition, as they start crossing at the signalized intersections, they experience significant “exposure to traffic” due to the generally wide crossing distances (i.e., number of lanes to be crossed, the potential conflicts with left-turning and right-turning vehicular traffic, and the absence of right-turn-on-red restrictions or pedestrian signal leading intervals at the majority of the intersections).

As shown in **Table 5-16**, the pedestrian facilities along The Esplanade, Mill Street, Lake Shore Boulevard, Sherbourne Street, and Cherry Street operate at acceptable Pedestrian Level of Service 'C' or better. This is mainly attributed to the wide sidewalks along the noted roads and the presence of a multi-use pathway along Lake Shore Boulevard. The remaining road segments have narrow sidewalk widths and thus operate at critical Pedestrian Level of Service 'E'.

Table 5-15: Pedestrian Level of Service at the Corktown Station Traffic and Transportation Study Area Intersections under Existing Conditions (2020)

Signalized Intersections	Pedestrian Level of Service
Adelaide Street and Sherbourne Street	D
Adelaide Street and Berkeley Street	D
Adelaide Street and Parliament Street	E
King Street East and Sherbourne Street	**C**
King Street East and Berkeley Street	D
King Street East and Parliament Street	D
Front Street and Berkeley Street	D
Front Street and Parliament Street	E
Front Street and Cherry Street	F
The Esplanade and Lower Sherbourne Street	E
Mill Street and Parliament Street	C
Mill Street and Cherry Street	F
Lake Shore Boulevard East and Lower Sherbourne Street	F

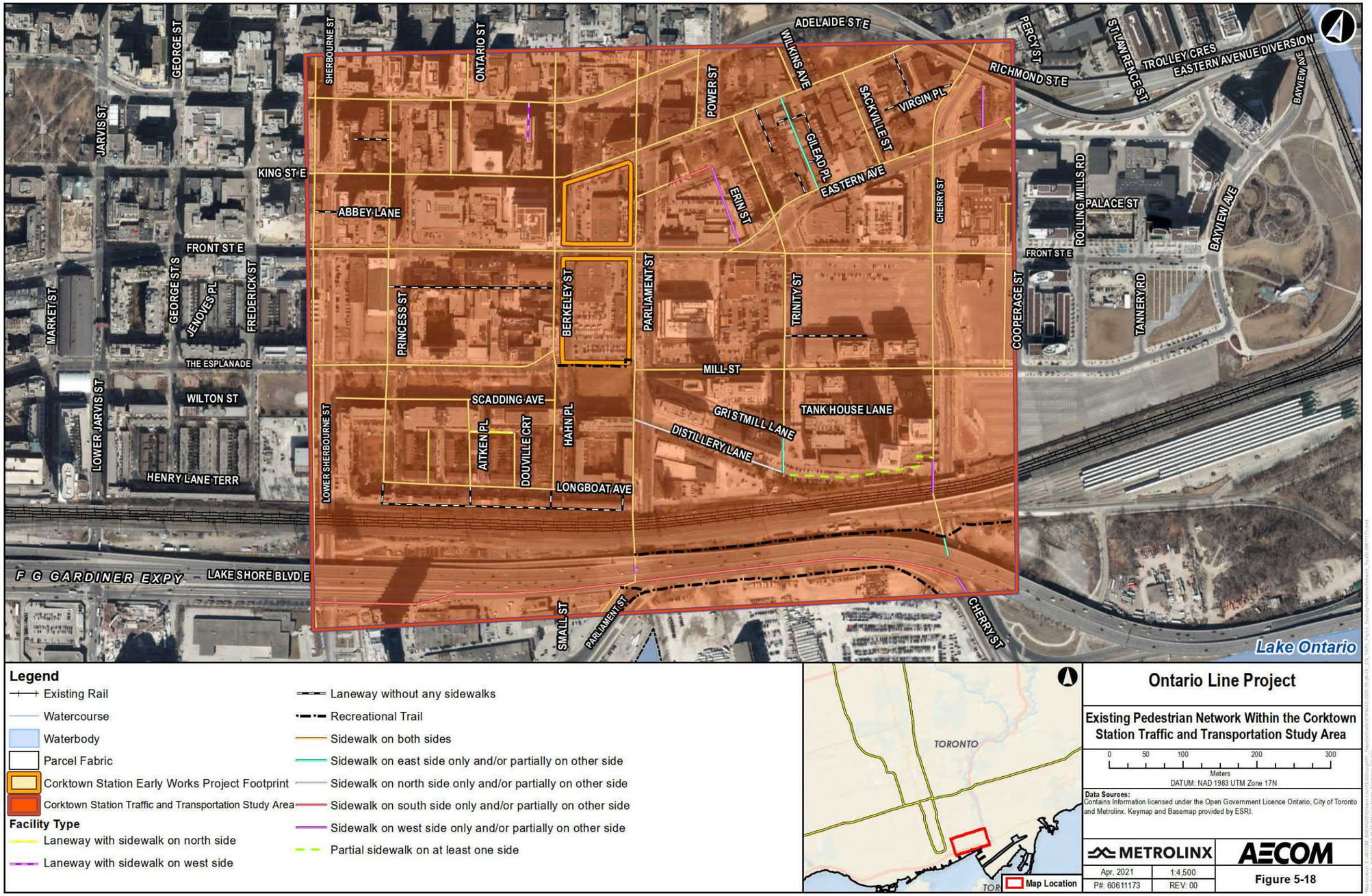
Note: The intersections that operate below the Pedestrian Level of Service target 'C' are highlighted in grey.

Table 5-16: Pedestrian Level of Service at the Corktown Station Traffic and Transportation Study Area Road Segments under Existing Conditions (2020)

Road Segment	Pedestrian Level of Service
Adelaide Street between Sherbourne Street and Parliament Street	E
King Street East between Sherbourne Street and Sumach Street	E
Front Street between Sherbourne Street and Parliament Street	E
Front Street between Parliament Street and Cherry Street	D
The Esplanade between Sherbourne Street and Berkeley Street	C
Mill Street between Parliament Street and Cherry Street	A
Lake Shore Boulevard between Sherbourne Street and Cherry Street	A
Sherbourne Street between Lake Shore Boulevard and Adelaide Street	C
Berkeley Street between The Esplanade and Adelaide Street	C
Parliament Street between Lake Shore Boulevard and Adelaide Street	E
Cherry Street between Lake Shore Boulevard and Adelaide Street	A

Note: The road segments that operate below the Pedestrian Level of Service target 'C' are highlighted in grey.

Figure 5-18: Existing Pedestrian Network Within the Corktown Station Traffic and Transportation Study Area



Legend

- Existing Rail
- Watercourse
- Waterbody
- Parcel Fabric
- Corktown Station Early Works Project Footprint
- Corktown Station Traffic and Transportation Study Area

Facility Type

- Laneway with sidewalk on north side
- Laneway with sidewalk on west side
- Laneway without any sidewalks
- Recreational Trail
- Sidewalk on both sides
- Sidewalk on east side only and/or partially on other side
- Sidewalk on north side only and/or partially on other side
- Sidewalk on south side only and/or partially on other side
- Sidewalk on west side only and/or partially on other side
- Partial sidewalk on at least one side

Ontario Line Project

Existing Pedestrian Network Within the Corktown Station Traffic and Transportation Study Area

0 50 100 200 300
Meters
DATUM: NAD 1983 UTM Zone 17N

Data Sources:
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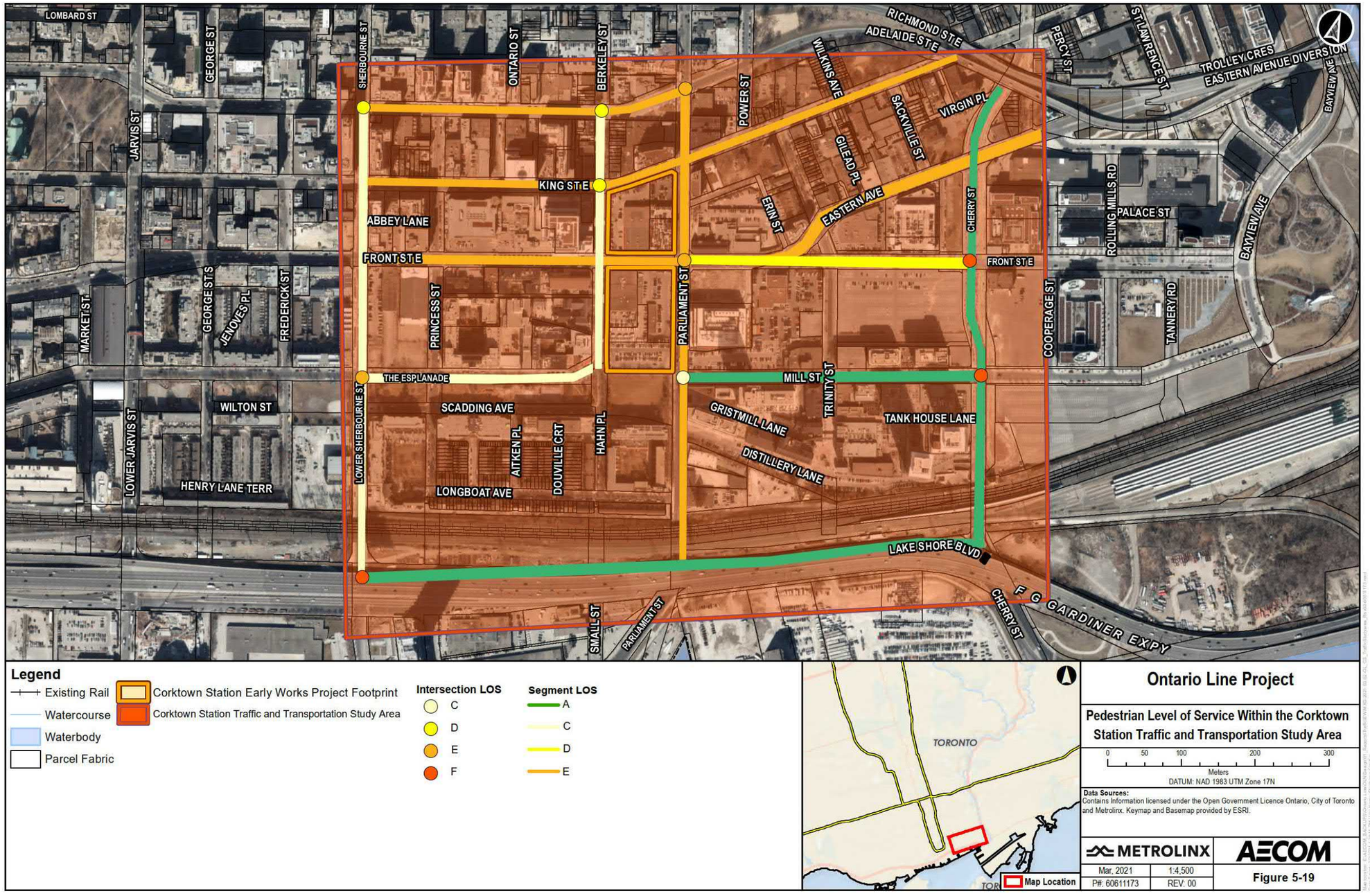
Figure 5-18

Figure 5-19: Pedestrian Level of Service Within the Corktown Station Traffic and Transportation Study Area



5.9.1.3 Cycling Network and Operations

5.9.1.3.1 Cycling Network

Cyclists are accommodated within the Corktown Station Traffic and Transportation Study Area through cycle tracks and on-street bike lanes. The cycle tracks along the south side of Adelaide Street provide cyclists with one-way movement in the eastbound direction. Cyclists travelling in the northbound and southbound direction are accommodated through the directional cycle tracks along either side of Sherbourne Street and the on-street bike lanes along either side of Cherry Street.

Figure 5-20 illustrates the location and type of cycling facilities provided within the Corktown Station Traffic and Transportation Study Area.

5.9.1.3.2 Cycling Operations

The findings of the Bicycle Level of Service analysis at the Corktown Station Traffic and Transportation Study Area signalized intersections and road segments under 2020 Existing Traffic Conditions are summarized in **Table 5-17** and **Table 5-18**, respectively, and illustrated in **Figure 5-21**. The intersections and road segments with Bicycle Level of Service 'D' or worse are identified as those not meeting the Bicycle Level of Service target and thus, operating at "critical" levels. These critical road elements are highlighted in grey in **Table 5-17** and **Table 5-18**. The detailed Bicycle Level of Service analysis results for the Existing Conditions (2020) are presented in **Appendix A5**.

As shown in **Table 5-17**, the majority of the Corktown Station Traffic and Transportation Study Area signalized intersections operate at acceptable Bicycle Level of Service 'C' or better overall. However, cyclists experience critical Bicycle Level of Service 'D' at the following signalized Corktown Station Traffic and Transportation Study Area intersections:

- Front Street and Parliament Street;
- Mill Street and Cherry Street; and,
- Lake Shore Boulevard East and Lower Sherbourne Street.

This is mainly attributed to lack of designated cycling facilities on some of the individual approaches to the noted intersections (e.g., bicycle left-turn box, pocket bike lanes, cross-rides, etc.) which requires a left-turning cyclist in mixed traffic to either dismount their bicycle and walk across two perpendicular intersection legs as a pedestrian or weave through and cross general-purpose traffic lanes(s) before making a left turn.

As shown in **Table 5-18**, cyclists accommodated through the cycling facilities along Adelaide Street, Lake Shore Boulevard, Sherbourne Street and Cherry Street and

through the signed bike routes along The Esplanade and Mill Street experience excellent Bicycle Level of Service 'A' or 'B'. Along King Street East, Front Street, and Parliament Street, cyclists travel with a total of four to five mixed traffic lanes and hence experience critical Bicycle Level of Service 'D' along all the studied road segments of the noted roads.

Table 5-17: Bicycle Level of Service at the Corktown Station Traffic and Transportation Study Area Intersections under Existing Conditions (2020)

Signalized Intersections	Bicycle Level of Service
Adelaide Street and Sherbourne Street	B
Adelaide Street and Berkeley Street	B
Adelaide Street and Parliament Street	B
King Street East and Sherbourne Street	B
King Street East and Berkeley Street	B
King Street East and Parliament Street	B
Front Street and Berkeley Street	B
Front Street and Parliament Street	D
Front Street and Cherry Street	B
The Esplanade and Lower Sherbourne Street	B
Mill Street and Parliament Street	B
Mill Street and Cherry Street	D
Lake Shore Boulevard East and Lower Sherbourne Street	D

Note: The intersections that operate below the Bicycle Level of Service target 'C' are highlighted in grey.

Table 5-18: Bicycle Level of Service at the Corktown Station Traffic and Transportation Study Area Road Segments under Existing Conditions (2020)

Road Segment	Bicycle Level of Service
Adelaide Street between Sherbourne Street and Parliament Street	A
King Street East between Sherbourne Street and Sumach Street	D
Front Street between Sherbourne Street and Cherry Street	D
The Esplanade between Sherbourne Street and Berkeley Street	B
Mill Street between Parliament Street and Cherry Street	B
Lake Shore Boulevard between Sherbourne Street and Cherry Street	A
Sherbourne Street between Lake Shore Boulevard and Adelaide Street	A
Berkeley Street between The Esplanade and Adelaide Street	B
Parliament Street between Lake Shore Boulevard and Adelaide Street	D
Cherry Street between Lake Shore Boulevard and Adelaide Street	A

Figure 5-20: Existing Cycling Network Within the Corktown Station Traffic and Transportation Study Area

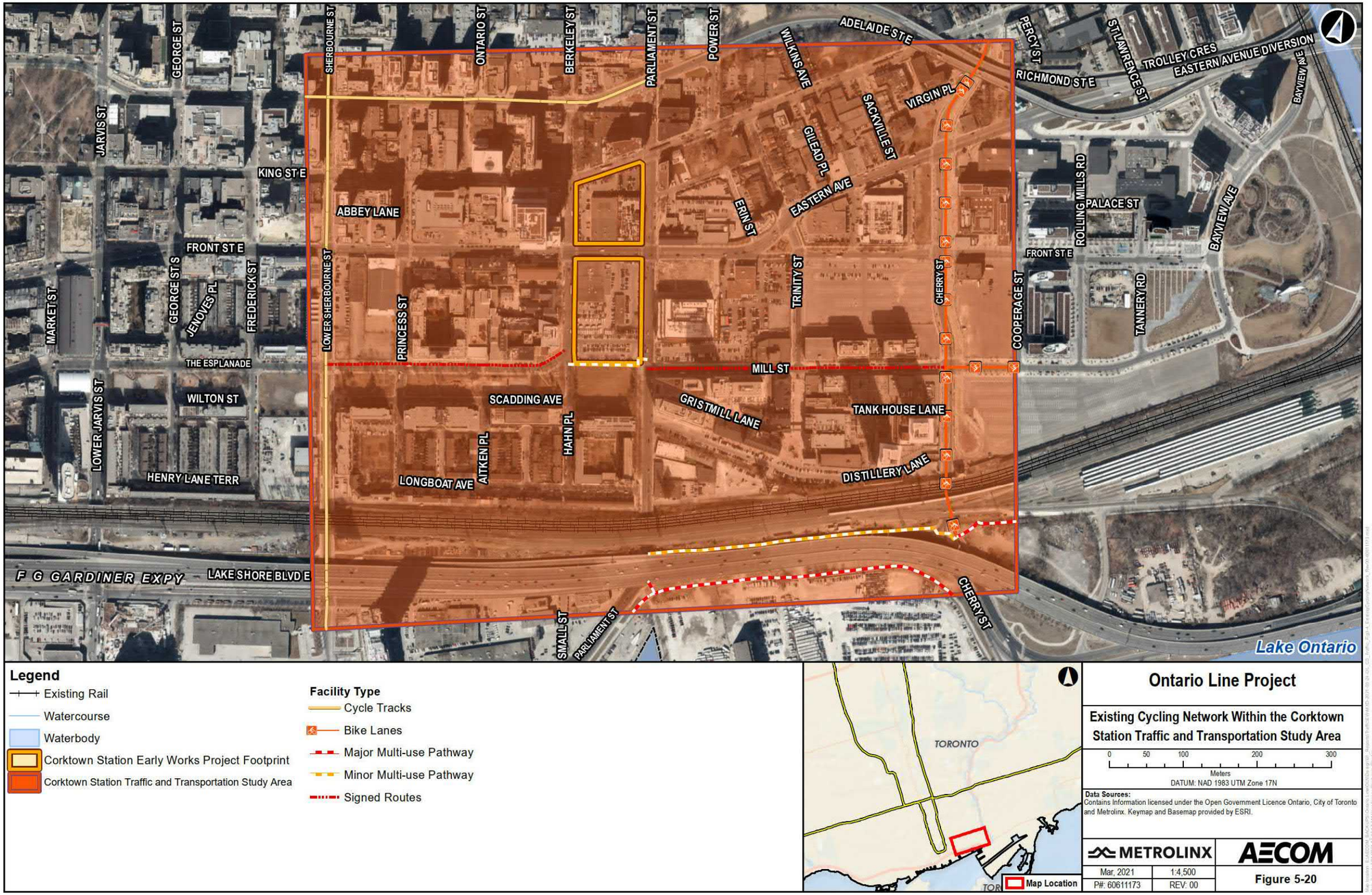
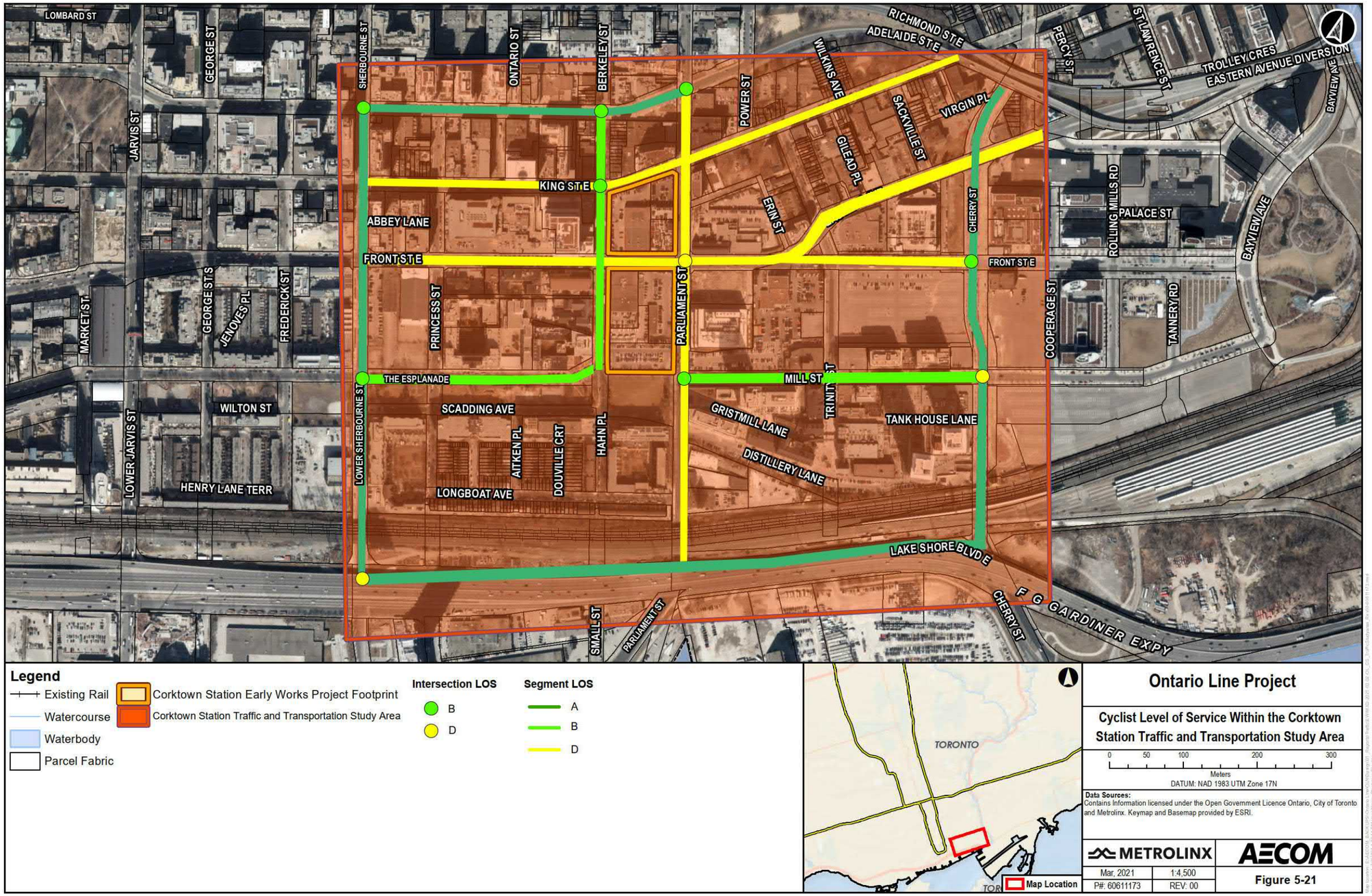


Figure 5-21: Cycling Level of Service Within the Corktown Station Traffic and Transportation Study Area



5.9.1.4 Transit Network and Operations

5.9.1.4.1 Transit Network

The existing transit routes that operate within the Corktown Station Traffic and Transportation Study Area are summarized in **Table 5-19** and illustrated in **Figure 5-22**. All transit routes described in **Table 5-19** are operated by the Toronto Transit Commission.

The service headways provided in **Table 5-19** represent the hours of peak transit service within the AM peak period (6:00 AM to 9:00 AM) and PM peak period (4:00 AM to 7:00 PM). Off-peak transit services are generally less frequent than AM and PM peak period services; therefore, only AM and PM peak period service headways are provided in **Table 5-19** to represent the maximum transit service that could be impacted by construction to form the transit impact assessment

Table 5-19: Existing Transit Routes within the Corktown Station Traffic and Transportation Study Area

Route Number – Name and Description	Service Headway during Peak Periods
#65 – Parliament bus route operates between Castle Frank Station on the Bloor-Danforth Subway and the area of The Esplanade and Princess Street, generally in a north-south direction. A single service is operated: the **65 (Castle Frank Station-Esplanade)** branch which operates at all times, seven days a week. The bus service operates mainly along Parliament Street. The closest northbound stops to the Corktown Station Early Works Project Footprint are located nearside at the intersection of Front Street and Berkeley Street and the intersection of Parliament Street and King Street East. The closest southbound stops to the Corktown Station Early Works Project Footprint are located nearside at the intersection of Parliament Street and Front Street and the intersection of Front Street and Berkeley Street.	13-minute in the AM peak hours 11-minute in the PM peak hour
#72 – Pape bus route operates between Pape Station on Line 2 Bloor-Danforth and Commissioners Street, and between Pape Station and Union Station on Line 1, generally in a north-south direction. Three services are operated: The **72A (Pape Station-Eastern)** branch which operates at all times except the morning and afternoon peak periods from Monday to Friday. The **72B (Pape Station -Union Station via Queens Quay)** branch which operates all day, every day. The **72C (Pape Station -Commissioners)** branch which operates during the morning and afternoon peak periods from Monday to Friday. Service between Pape Station and Eastern Avenue is part of the 10 Minute Network and operates at 10-minute or better headways, all day, every day. Within the Corktown Station Traffic and Transportation Study Area, the bus service has designated northbound and southbound stops at the intersection of Lake Shore Boulevard and Parliament Street and the intersection of Lake Shore Boulevard and Cherry Street.	6-minute in the AM peak hour 7-minute in the PM peak hour

Route Number – Name and Description	Service Headway during Peak Periods
#75 – Sherbourne bus route operates between the area of Queens Quay East and Lower Jarvis Street, Sherbourne Station on the Bloor-Danforth Subway, and the area of South Drive and Glen Road, generally in a north-south direction. One single service is operated: the **75 (Queens Quay-South Drive)** branch which operates at all times, seven days a week. At certain times of the week these buses alternate trips with the 82 Rosedale bus route. These trips are identified as the 75A (Queens Quay-South Drive & Summerhill) branch on schedules only. There is no change to the service or routing on the 75 Sherbourne route. The bus service mainly operates along Sherbourne Street. The closest northbound and southbound stops to the Corktown Station Early Work Project Footprint are located nearside at the intersection of Sherbourne Street and Front Street and the intersection of Sherbourne Street and King Street East.	5-minute in the AM peak hour 8-minute in the PM peak hour
#121 – Fort York-Esplanade bus route operates between Exhibition Place, the Fort York neighbourhood and the Distillery neighbourhood, and, in the summer, between Ontario Place, the Fork York neighbourhood and Clarke Beach Park (Cherry Beach), generally in an east-west direction. All buses serve Union Station on Line 1, and the Fort York, City Place, Esplanade, and Distillery neighbourhoods. Two services are operated: the **121A (Exhibition (Princes' Gates)-Distillery via Union Station)** branch operates all day, every day outside the summer months. **The 121D (Ontario Place-Cherry Beach via Union Station and Distillery)** seasonal branch operates from mid-May to mid-October. The bus service mainly operates along Cherry Street, Front Street, and The Esplanade. The closest eastbound stops to the Corktown Station Early Work Project Footprint are located nearside at the intersection of Front Street and Berkeley Street and the intersection of Front Street and Parliament Street. The closest westbound stops to the Corktown Station Early Work Project Footprint are located nearside at the intersection of Parliament Street and Mill Street and far-side at the intersection of Front Street and Berkeley Street. at The Esplanade intersections with Lower Jarvis Street, and Lower Sherbourne Street.	13-minute in the AM peak hour 18-minute in the PM peak hour
#142 – Downtown/Avenue Road Express bus route operates between the intersection of Berkeley Street and King Street and Bombay loop located northeast of the Highway 401 and Avenue Road interchange, generally in a north-south direction. The bus service operates mainly along Avenue Road, University Avenue, and King Street. The closest northbound and southbound stops to the Corktown Station Early Work Project Footprint are located at the intersection of King Street East and Berkeley Street.	30-minute in both the AM and PM peak hours
#143 – Downtown/Beach Express bus route operates between the intersection of Charlotte Street and King Street and the Neville Park Loop, generally in an east-west direction. The bus service mainly operates along King Street, Eastern Avenue, and Queen Street East. The closest eastbound and westbound stops to the Corktown Station Early Work Project Footprint are located at the intersection of King Street East and Parliament Street.	15-minute in the AM peak hour 25-minute in the PM peak hour

Route Number – Name and Description	Service Headway during Peak Periods
#144 – Downtown/Don Valley Express bus route operates between the intersection of Charlotte Street and King Street and the intersection of Victoria Park Avenue and Parkwoods Village Drive and Concorde Place, generally in a north-south direction. Two services are operated: the **144A (Underhill-Downtown Express)** and the **144B (Wynford-Downtown Express)**. The bus service mainly operates along King Street, Adelaide Street East, Don Valley Parkway, and Don Mills. The closest northbound and southbound stops to the Corktown Station Early Work Project Footprint are located at the intersection of King Street East and Parliament Street.	7-minute in the AM peak hour 20-minute in the PM peak hour
#145 – Downtown/Humber Bay Express bus route operates between the intersection of Berkeley Street and King Street and the intersection of Lake Shore Boulevard and Royal York Road or the intersection of Lake Shore Boulevard and Kipling Avenue, generally in an east-west direction. Two services are operated: the **145A (Royal York-Downtown Express)** and the **145B (Kipling-Downtown Express)**. The bus service mainly operates along Lake Shore Boulevard, Bathurst Street, and King Street. The closest eastbound and westbound stops to the Corktown Station Early Work Project Footprint are located at King Street East and Berkeley Street.	20-minute in both the AM and PM peak hours
#304 – King Blue Night streetcar route operates between Dundas West Station and Broadview Station on Line 2 Bloor-Danforth via King Street, generally in an east-west direction. One single service is operated: the **304 (Dundas West Station-Broadview Station)** branch which operates during the overnight period, seven days a week. The streetcar route operates mainly along King Street. The closest eastbound and westbound stops to the Corktown Station Early Work Project Footprint are located at nearside at the intersection of King Street East and Parliament Street.	15-minute in both the AM and PM peak hours
#365 – Parliament Blue Night bus route operates between Castle Frank Station on Line 2 Bloor-Danforth and The Esplanade, generally in a north-south direction. One single service is operated: the **365 (Castle Frank Station-Esplanade)** branch which operates during the overnight period, seven days a week. The bus service operates mainly along Parliament Street. The closest northbound stops to the Corktown Station Early Works Project Footprint are located nearside at the intersection of Front Street and Berkeley Street and the intersection of Parliament Street and King Street East. The closest southbound stops to the Corktown Station Early Works Project Footprint are located nearside at the intersection of Parliament Street and Front Street and the intersection of Front Street and Berkeley Street.	30-minute
#503 – Kingston Road streetcar route operates between the area of Kingston Road and Victoria Park Avenue, and the area of King Street West and York Street, generally in an east-west direction. It serves the King Station on Line 1 Yonge-University, and it also passes within one block of the Union and St. Andrew Stations on Line 1. One single service is operated: the **503 (Victoria Park-York)**, which operates	9-minute in the AM peak hour 10-minute in the PM peak hour

Route Number – Name and Description	Service Headway during Peak Periods
during the peak periods, from Monday to Friday only. The streetcar route operates mainly along Kingston Road, Queen Street East, and King Street East. The closest eastbound and westbound stops to the Corktown Station Early Work Project Footprint are located at the intersection of King Street East and Parliament Street.	
#504 – King streetcar route operates between Dundas Station and Broadview Station on Line 2 Bloor-Danforth, generally in an east-west direction. It also serves the St. Andrew and King Station on Line 1 Yonge-University. Two services are operated: the **504A (Dundas West Station-Distillery)** and the **504B (Broadview Station-Dufferin Gate)**, both branches operating at all times, seven days a week. The route is part of the 10-Minute Network and operates at 10-minute or better headways, all day, every day. The streetcar route operates mainly along King Street. The closest eastbound and westbound stops to the Corktown Station Early Work Project Footprint are located at nearside at the intersection of King Street East and Parliament Street.	3-minute in both the AM and PM peak hours

5.9.1.4.2 Transit Operations

The findings of the Transit Level of Service analysis at the Corktown Station Traffic and Transportation Study Area signalized intersections, and road segments under Existing Conditions (2020) are summarized in **Table 5-20** and **Table 5-21**, respectively, and illustrated in **Figure 5-23**. The intersections and road segments with Transit Level of Service ‘E’ or worse are identified as those not meeting the Transit Level of Service target and thus, operating at “critical” levels. These critical road elements are highlighted in grey in **Table 5-20** and **Table 5-21**. The detailed Transit Level of Service analysis results are presented in **Appendix A5**.

As shown in **Table 5-20**, all the signalized intersections within the Corktown Station Traffic and Transportation Study Area operate at acceptable Transit Level of Service ‘D’ or ‘C’, except for the intersection of Adelaide Street and Sherbourne Street, the intersection of Front Street and Berkeley Street, and the intersection of Lake Shore Boulevard and Lower Sherbourne Street which operate at critical Transit Level of Service ‘E’ or ‘F’. This is mainly attributed to the long average delays that buses along route #65 – Parliament, #75 – Sherbourne, and #145 – Downtown/Humber Bay Express experience when going through the noted intersections in both the southbound and northbound directions.

As shown in **Table 5-21**, all transit vehicles travelling along the road segments within the Corktown Station Traffic and Transportation Study Area experience an acceptable Transit Level of Service ‘D’ or better, meeting the minimum desirable Transit Level of Service for the studied sections. Transit vehicles travelling along the dedicated streetcar facility along Cherry Street experience excellent Transit Level of Service ‘A’.

Table 5-20: Transit Level of Service at the Corktown Station Traffic and Transportation Study Area Intersections under Existing Conditions (2020)

Signalized Intersections	Transit Level of Service
Adelaide Street and Sherbourne Street	E
Adelaide Street and Berkeley Street	-
Adelaide Street and Parliament Street	D
King Street East and Sherbourne Street	C
King Street East and Berkeley Street	D
King Street East and Parliament Street	C
Front Street and Berkeley Street	E
Front Street and Parliament Street	D
Front Street and Cherry Street	D
The Esplanade and Lower Sherbourne Street	D
Mill Street and Parliament Street	C
Mill Street and Cherry Street	C
Lake Shore Boulevard East and Lower Sherbourne Street	F

Note: The intersections that operate below the Transit Level of Service target 'D' are highlighted in grey.

Table 5-21: Transit Level of Service at the Corktown Station Traffic and Transportation Study Area Road Segments under Existing Conditions (2020)

Road Segment	Transit Level of Service
Adelaide Street between Sherbourne Street and Parliament Street	D
King Street East between Sherbourne Street and Sumach Street	D
Front Street between Sherbourne Street and Cherry Street	D
The Esplanade between Sherbourne Street and Berkeley Street	D
Mill Street between Parliament Street and Cherry Street	D
Lake Shore Boulevard between Sherbourne Street and Cherry Street	D
Berkeley Street between The Esplanade and Adelaide Street	D
Sherbourne Street between Lake Shore Boulevard and Adelaide Street	D
Parliament Street between Lake Shore Boulevard and Adelaide Street	D
Cherry Street between Lake Shore Boulevard and Adelaide Street	A

Figure 5-22: Existing Transit Network Within the Corktown Station Traffic and Transportation Study Area

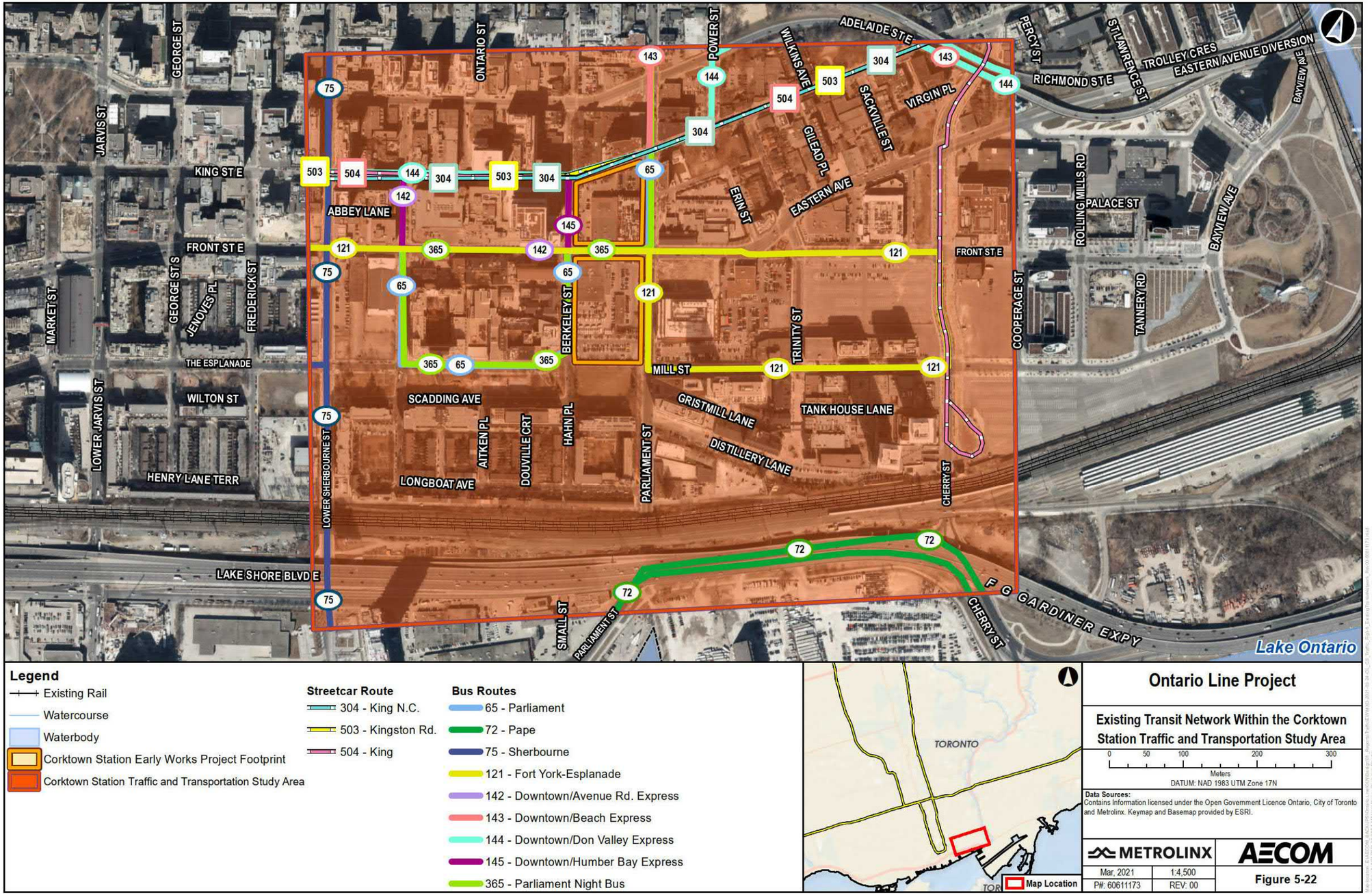
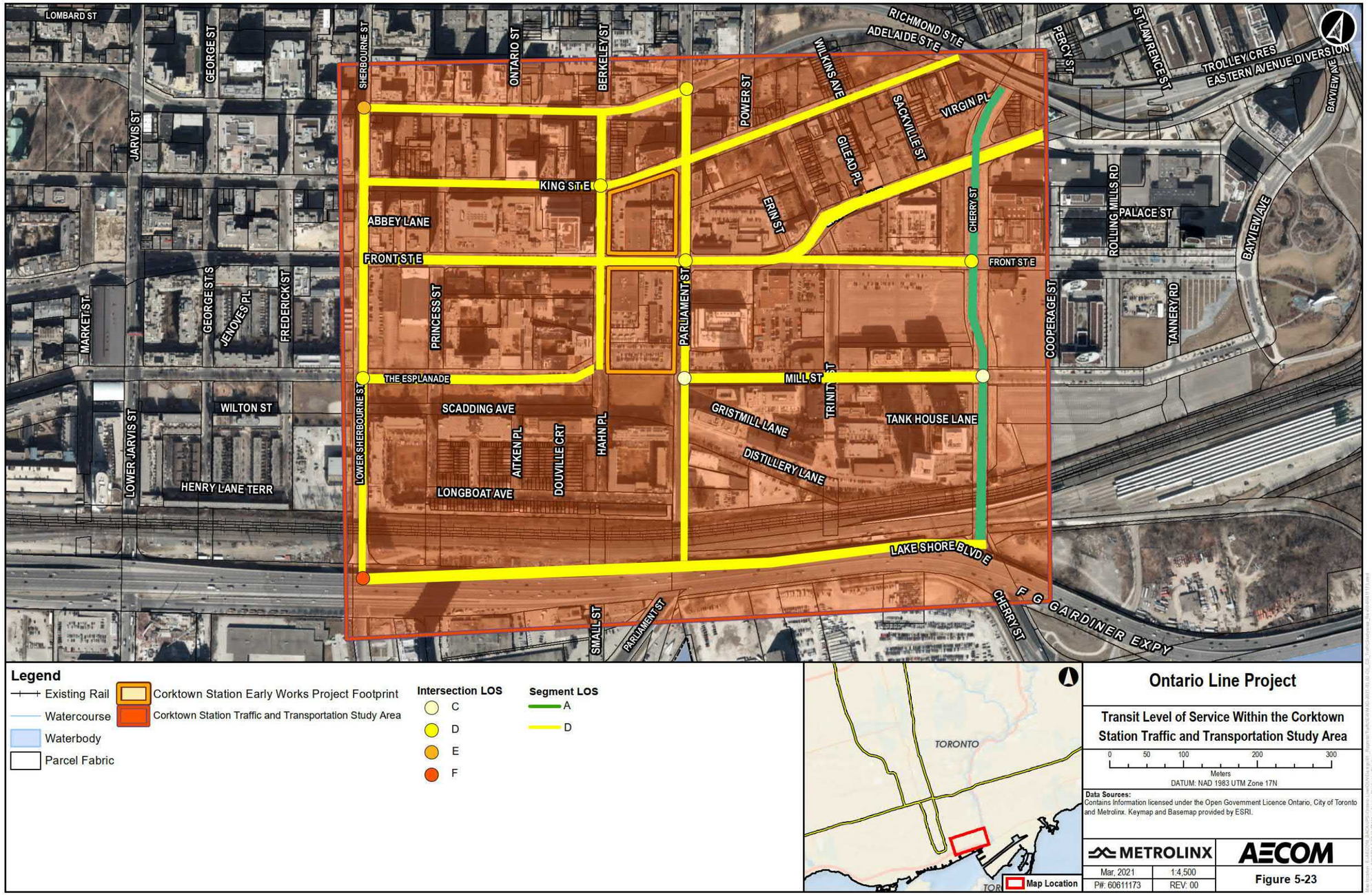


Figure 5-23: Transit Level of Service Within the Corktown Station Traffic and Transportation Study Area



5.10 Utilities

5.10.1 Private Utilities

Table 5-22 lists the privately-owned utility providers with infrastructure within the Corktown Station Early Works Project Footprint. A refined list will be confirmed as project planning progresses.

Table 5-22: Private Utilities Within the Corktown Station Early Works Project Footprint

Utility Provider	Utility Category
Rogers Communications Partnership	Telecommunications
Telus Communications Company	Telecommunications
Enbridge	Energy transportation/pipeline

5.10.2 Public Utilities and Municipal Servicing

Table 5-23 lists the public utility providers with infrastructure within the Corktown Station Early Works Project Footprint.

Table 5-23: Public Utilities Within the Corktown Station Early Works Project Footprint

Utility Provider	Utility Category
City of Toronto / Toronto Water	Water and wastewater treatment

6 Potential Impacts, Mitigation Measures and Monitoring Activities

In accordance with Sections 8(2)6, 8(2)7 and 8(2)8 of Ontario Regulation 341/20: Ontario Line Project, this section describes the potential impacts, mitigation measures, and monitoring activities to verify the effectiveness of mitigation measures associated with the Corktown Station early works.

6.1 Natural Environment

Table 6-1 outlines mitigation measures and monitoring activities to address the potential natural environment impacts that may result from the Corktown Station early works.

Table 6-1: Potential Impacts, Mitigation Measures and Monitoring Activities – Natural Environment

Environmental Component	Potential Impact	Mitigation Measure(s)	Monitoring Activities
Designated Natural Areas	▪ No potential impacts as there are no Designated Natural Areas within 120 metres of the Corktown Station Early Works Project Footprint	▪ None Required	▪ None Required
Policy Area – City of Toronto Natural Heritage System and Ravine and Natural Feature Protection By-law Area	▪ No potential impacts as there are no City of Toronto policy areas within the Corktown Station Early Works Project Footprint	▪ None Required	▪ None Required
Policy Area – Toronto and Region Conservation Authority Regulated Areas	▪ No potential impacts as there are no Toronto and Region Conservation Authority regulated areas within the Corktown Station Early Works Project Footprint	▪ None Required	▪ None Required
Vegetation Communities	▪ City and private tree removal	▪ An Arborist Report by an International Society of Arboriculture Certified Arborist will be prepared, if required, in accordance with the Ontario Forestry Act R.S.O. 1990, and other regulations and best management practices as applicable. ▪ The Arborist Report will include, but not be limited to the individual identification of all trees within the Corktown Station early works construction areas including those that require removal or preservation, or trees that may be injured. Trees to be identified may include those on Metrolinx property, trees on public and private lands, and boundary trees. City of Toronto by-laws dictate the minimum area buffers to be inventoried and Diameter at Breast Height which requires inventory. ▪ Prior to the undertaking of tree removals, a Tree Removal Strategy/Tree Preservation Plan will be developed to document tree protection and mitigation measures that follow the City of Toronto Tree Protection Policy and Specifications for Construction Near Trees Guidelines (2016b) and adherence with best practices, standards and regulations on safety, environmental and wildlife protections. ▪ Compensation for tree removals will be undertaken in accordance with provisions outlined in the Metrolinx Vegetation Guideline (2020). ▪ Pruning of branches will be conducted through the implementation of proper arboricultural techniques. ▪ Tree Protection Zone fencing will be established to protect and prevent tree injuries. Tree Protection Zones will be clearly staked prior to construction using barriers in accordance with local by-law requirements.	▪ Regular inspection in areas of vegetation removal will be undertaken as required during construction to ensure that fencing is intact, only specified trees are removed and no damage is caused to the remaining trees and adjacent vegetation communities. ▪ On-site inspection will be undertaken to confirm the implementation of the mitigation measures and identify corrective actions if required. Corrective actions may include additional site maintenance and alteration of activities to minimize impacts. ▪ If required, the approach to compensation monitoring will be developed in accordance with Metrolinx's Vegetation Guideline (2020).
Vegetation Communities	▪ Soil contamination as a result of spills (e.g., grease and/or fuel) from equipment use ▪ Introduction or spread of invasive species	▪ A Spill Prevention and Contingency Plan will be developed and adhered to. Spills will be immediately contained and cleaned up in accordance with provincial regulatory requirements and the contingency plan. ▪ Refuelling shall be done within refuelling stations lined with appropriate material to prevent seepage and fuel discharge. ▪ All machinery, construction equipment and vehicles arriving on site should be in clean condition (e.g., free of fluid leaks, soils containing seeds of plant material from invasive species) and be inspected and washed in accordance with the Clean Equipment Protocol for Industry (Halloran et al., 2013) prior to arriving and leaving the construction site in order to prevent the spread of invasive species to other locations.	▪ On-site inspection will be undertaken to confirm the implementation of the mitigation measures and identify corrective actions if required. Corrective actions may include additional site maintenance and alteration of activities to minimize impacts. ▪ Ensure precautions are being taken to minimize the spread of invasive species by implementing the Clean Equipment Protocol for Industry (Halloran et al., 2013) on equipment and machinery prior to moving sites.

Environmental Component	Potential Impact	Mitigation Measure(s)	Monitoring Activities
Wildlife and Wildlife Habitat – General	▪ Disturbance, displacement or mortality of wildlife	▪ Prior to construction, investigation of the Corktown Station early works construction areas for wildlife and wildlife habitat that may have established following the completion of previous surveys will be undertaken, as appropriate. ▪ If wildlife is encountered, measures will be implemented to avoid destruction, injury, or interference with the species, and/or its habitat. For example, construction activities will cease or be reduced, and wildlife will be encouraged to move off-site and away from the construction area on its own.	▪ Regular on-site inspection by on-site environmental workers or construction staff should occur within the construction area to ensure that no wildlife is trapped within the construction area. ▪ On-site inspection will be undertaken to confirm the implementation of the mitigation measures and identify corrective actions if required. Corrective actions may include additional site maintenance and alteration of activities to minimize impacts.
Significant Wildlife Habitat: Common Nighthawk	▪ Removal of candidate nesting habitat for Common Nighthawk	▪ Refer below to mitigation measures described for Migratory Breeding Birds and Nests. ▪ Demolition of buildings should be scheduled outside of the breeding bird season of April 1 to August 31. If this is not possible and buildings must be demolished during this period, the following will be completed: ▪ The roofs will be checked for presence of gravel. If gravel is not present, then the building is unlikely to provide suitable nesting habitat for Common Nighthawk. If gravel is present, a search for eggs and nesting activity for Common Nighthawk on the roof will be conducted. If nests or nesting activity of Common Nighthawk are confirmed, the building cannot be demolished until it is confirmed by a Qualified Biologist that young have fully fledged and left the nest.	▪ Refer below for monitoring requirements described for Migratory Breeding Birds and Nests.
Migratory Breeding Birds and Nests	▪ Disturbance or destruction of migratory bird nests	▪ All works must comply with the Migratory Birds Convention Act, including timing windows for the nesting period (April 1 to August 31 in Ontario). ▪ If activities are proposed to occur during the general nesting period, a breeding bird and nest survey will be undertaken prior to required activities. Nest searches by an experienced searcher are required and will be completed by a qualified Biologist no more than 48 hours prior to vegetation removal. ▪ If a nest of a migratory bird is found outside of this nesting period (including a ground nest) it still receives protection.	▪ Regular monitoring (field observations, on-site inspections) will be undertaken to confirm that activities do not encroach into nesting areas or disturb active nesting sites.
Species at Risk – General	▪ Habitat loss, disturbance and/or mortality to Species at Risk	▪ All requirements of the Endangered Species Act will be met. Species-specific mitigation measures will be developed in accordance with any registration and/or permitting requirements under the Endangered Species Act, recommended surveys undertaken prior to construction, and consultation with Ministry of Environment, Conservation and Parks.	▪ On-site inspection will be undertaken to confirm the implementation of the mitigation measures and identify corrective actions if required. Corrective actions may include additional site maintenance and alteration of activities to minimize impacts. ▪ Species-specific monitoring activities will be developed in accordance with any registration and/or permitting requirements under the Endangered Species Act.
Wetlands and Waterbodies	▪ No potential impacts as there are no wetlands or waterbodies present	▪ None Required	▪ None Required
Fish and Fish Habitat	▪ No potential impacts as there is no fish or fish habitat present	▪ None Required	▪ None Required

Notes: Regulations, standards and guidance documents referenced herein are current as of the time of writing and may be amended from time to time.
If clarification is required regarding regulatory requirements, the appropriate regulatory agencies will be consulted.

6.2 Soil and Groundwater

Table 6-2 outlines mitigation measures and monitoring activities to address the potential soil and groundwater impacts that may result from the Corktown Station early works.

Table 6-2: Potential Impacts, Mitigation Measures and Monitoring Activities – Soil and Groundwater

Environmental Component	Potential Impacts	Mitigation Measure(s)	Monitoring Activities
Soil Stability and Quality	▪ Construction activities may cause displacement of the soils. Without mitigation, this may result in ground movement and settlement (e.g., during excavation/grading, demolition and removal or buildings, and/or dewatering activities). ▪ Though no significant dewatering is anticipated to be required, dewatering activities can cause soil subsidence/settlement and impacts on surface/subsurface structures within the Zone of Influence. ▪ Heaving of an excavation base may occur caused by groundwater pressures below the depth of excavation. This risk is typically low for shallow excavations. ▪ Construction activities (e.g., excavation) could expose contaminated materials and/or result in the spreading of contaminated materials.	▪ Complete detailed soil investigations, as project planning progresses. ▪ Excavation support systems will be employed, as required. ▪ Use excavation/grading/dewatering equipment designed to reduce the potential for ground loss and the associated potential for settlement of the ground surface. ▪ If dewatering is required to support the Early Works activities, and structures are identified within the anticipated dewatering Zone of Influence, potential subsidence/settlement impacts to existing structures can be mitigated with measures such as completion of pre-construction inspections of structures within the dewatering/construction Zone of Influence and implementation of a detailed settlement monitoring program complete with settlement triggers that result in changes to the dewatering/construction program if surpassed. ▪ If anticipated to occur, the potential heave of an excavation base is mitigated through a groundwater depressurization program completed in advance of excavation that sufficiently lowers the potentiometric head in the confined groundwater system and stabilizes the soils being excavated. ▪ Develop and implement remedial action plans, risk assessment and risk mitigation plans for encountering contamination, as necessary. ▪ Develop a Soil and Excavated Materials Management Plan for the handling, management and disposal of all excavated material (i.e., soil, rock and waste) that is generated or encountered during the work. ▪ Requirements of Ontario Regulation 406/19: On-Site and Excess Soil Management, will be met. ▪ If it is anticipated that contaminated soils will be encountered, the need for an Odour Management Plan and air quality monitoring will be confirmed as project planning and the implementation strategy progress and plans will be developed accordingly. ▪ Known or suspected contaminants will be considered in environmental planning, including soil, water, and air quality monitoring, equipment, personnel management and selection of appropriate worker personal protective equipment.	▪ If required, develop and conduct a settlement monitoring program to identify any construction effects, identify adverse trends and identify the need for additional mitigation measures. ▪ Soil and groundwater sampling and monitoring plans shall be implemented as required prior to, during, and post construction. Track soil in registry as required by Ontario Regulation 406/19.
Groundwater Quantity	▪ Though no significant dewatering is anticipated to be required, construction dewatering may include impacts to private groundwater supply wells caused by a reduction in local groundwater levels ▪ The volume of dewatering effluent can affect the discharge location and associated mitigation	▪ No existing supply wells were identified in the reviewed background information. If dewatering is anticipated to be required, the absence of active supply wells within the anticipated dewatering Zone of Influence should be confirmed. If present, potential impacts to private groundwater supply well(s) can be mitigated with measures such as avoidance of dewatering requirements, minimizing dewatering, and/or utilizing groundwater cut-off techniques to physically exclude groundwater from flowing into excavations advanced for construction. ▪ If dewatering is required for the Early Works construction, determination of water taking quantities, quality, and resultant dewatering Zone of Influence will be completed as project planning progresses, for example through completion of a site-specific Hydrogeological Investigation, Construction Dewatering Assessment and Groundwater Management Plan. ▪ Prior to the outset of construction, the preparation of a Construction Dewatering Assessment and Groundwater Management Plan should be completed if required. ▪ If required, the Construction Dewatering Assessment will be completed to: – Provide an estimate of groundwater and/or surface water taking rates and quantities; – Estimate a Zone of Influence for each dewatering area; – Characterize groundwater and/or surface water quality; – Recommend appropriate dewatering methodologies; – Provide an assessment of potential impacts related to the dewatering; and – Advise on associated permitting requirements. ▪ If required, the Groundwater Management Plan will be completed to: – Evaluate potential groundwater discharge options (i.e., sanitary and/or storm sewer, natural environment, off-site disposal, etc.);	▪ Regular site inspections and monitoring activities such as effluent discharge location(s), will be completed by qualified members of the construction team to ensure that mitigation measures are fulfilled and that all regulatory requirements are met.

Environmental Component	Potential Impacts	Mitigation Measure(s)	Monitoring Activities
		– Identify effluent treatment requirements; – Outline monitoring, mitigation, and contingency program (if required); – Determine the potential need for regulatory approvals; and – Identify notification and reporting requirements. ■ Approvals for the discharge of dewatering effluent, such as Municipal Discharge Permits and/or Ministry of the Environment, Conservation and Parks Environmental Compliance Approval, may be required based on the anticipated dewatering volumes, groundwater quality, and relative location of dewatering activities with respect to potential receiving infrastructure (i.e., sanitary and/or storm sewer). ■ Identification of site-specific mitigation measures inclusive of monitoring programs relating to private supply wells, and geotechnical heave/settlement within the anticipated dewatering Zone of Influence will be determined as project planning progresses.	
Groundwater Quality	■ Previous land use may have resulted in local contamination of groundwater which may be encountered during construction excavation and/or dewatering activities. ■ General construction activities such as vehicle and machinery operation have the potential to affect groundwater quality through minor contaminant releases. ■ Spills consisting of materials that constitute a contaminant may affect the surrounding groundwater quality and potential water quality in nearby supply wells (if present). ■ Improperly managed construction dewatering activities can result in accidental releases of contaminated groundwater to the environment and/or result in the migration of existing impacted groundwater. ■ The following materials may impact groundwater quality within the highly vulnerable aquifer: – Application of road salt; and – Storage/use of organic solvents and/or dense non-aqueous phase liquids.	■ The existing groundwater conditions within each potential construction dewatering area will be characterized prior to construction activities, during the development of the Groundwater Management Plan if required. ■ Pre-construction (baseline) groundwater quality testing should be performed at all construction dewatering locations before the outset of any discharge activities and compared to appropriate regulatory guidelines (i.e., storm and sanitary by-laws for discharge to municipal sewers). Appropriate water quality management (i.e., filtration systems and/or water treatment systems) will be required to be designed and implemented in the event that exceedances of regulatory guidelines or limits are detected in the influent groundwater quality. Discharge of dewatering effluent will be governed by the discharge approval(s) obtained for the Project, which could include one or a combination of Municipal Discharge Permits, and/or Ministry of the Environment, Conservation and Parks Environmental Compliance Approval. ■ If dewatering is required, conduct regular groundwater quality testing of discharge water as required. ■ On-site treatment of dewatering effluent, if required, such that parameters in excess of the established discharge criteria are removed/reduced and discharge can proceed. ■ Measures such as avoidance of dewatering requirements, minimizing dewatering, and/or utilizing groundwater cut-off techniques to physically exclude groundwater from flowing into excavations advanced for construction could be considered, when on-site treatment is not technically and/or financially feasible. The removal of water to an off-site disposal facility could also be considered. ■ A Spill Prevention and Response Plan, outlining the steps required to prevent and contain any contaminant releases and/or to avoid impacts to groundwater/surface water, is required to be developed prior to initiation of construction activities. This Spill Prevention and Response Plan should include a requirement for a spill kit to be maintained on-site at all times during construction. ■ Ensuring that machinery is maintained and free of leaks to reduce the possibility of fluid release and storing any potential contaminants (e.g., oils, fuels, and chemicals) in designated areas using appropriate secondary containment, where necessary. ■ Education of workers regarding appropriate chemical use, handling, storage and transportation procedures, including spill response and reporting requirements. ■ Conduct a review of Source Protection Plan policies and implement the following measures: – A Salt Management Plan that incorporates best management practices where the storage and application of road salt is required; – Best management practices if the handling and storage of dense non-aqueous phase liquids is required; and – Best management practices if the storage of an organic solvent is required.	■ Monitoring activities such as groundwater and dewatering effluent sample collection and measurement of groundwater parameters (e.g., pH) in the field will be completed as required by qualified members of the construction team. ■ Regular inspections of equipment for fuel/fluid leaks, dewatering equipment and containment tanks for leakage, and installed erosion and sediment control measures.

6.3 Hydrology and Surface Water

Table 6-3 outlines mitigation measures and monitoring activities to address the potential hydrology and surface water impacts that may result from the Corktown Station early works.

The Corktown Station Early Works Project Footprint is located outside of the Don River Floodplain and, therefore, no floodplain related impacts are anticipated.

Table 6-3: Potential Impacts, Mitigation Measures and Monitoring Activities – Hydrology and Surface Water

Environmental Component	Potential Impacts	Mitigation Measure(s)	Monitoring Activities
Surface Water/Stormwater and Drainage	▪ Change in stormwater quality and quantity, including: – Erosion of exposed soil and increased sediment loading which may impact receiving waterbodies and/or municipal stormwater drainage system; and – Increased surface water/stormwater runoff.	▪ The overall stormwater quality and quantity control strategy will be developed in accordance with all relevant municipal, provincial, and federal requirements, as amended. Stormwater management design will consider guidance provided by the MOECC Stormwater Management Planning and Design Manual (2003) and Ministry of Transportation Drainage Management Manual (2008), and the Toronto and Region Conservation Authority Stormwater Management Criteria (2012), as required. ▪ The following stormwater management best management practices will be considered and implemented, as required: – Minimize clearing and amount of exposed soil; – Install key sediment controls before grading/land alterations begin; – Sequence construction activities so that the soil is not exposed for long periods of time; – Protect storm drain inlets to filter out debris; and – Stabilize all exposed soil areas as soon as land alterations have been completed. ▪ Prior to construction, a Stormwater Management Plan that will outline stormwater discharge management associated with construction activities, and an Erosion and Sediment Control plan will be developed. ▪ If required, a Municipal Discharge Permit (City of Toronto Private Water Discharge Permit/Agreement) will be obtained to manage excess surface water/stormwater.	▪ Monitoring activities will be implemented as outlined in the Stormwater Management Plan and/or Erosion and Sediment Control Plan and may include regular inspections and reporting on the performance of implemented erosion and sediment control measures, best management practices, and other monitoring activities, as required. ▪ All monitoring procedures should stay in place throughout Corktown Station early works construction.

6.4 Air Quality

Table 6-4 outlines mitigation measures and monitoring activities to address the potential air quality impacts that may result from the Corktown Station early works.

The following federal and provincial guidelines for construction mitigation were utilized in the development of mitigation measures:

- Environment Canada's Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities (Cheminfo Services Inc., 2005);
- Ministry of the Environment, Conservation and Parks' Management Approaches for Industrial Fugitive Dust Sources Technical Bulletin (Ministry of the Environment, Conservation and Parks, 2017);
- Ontario Hot Mix Producers Association's Environmental Practices Guide: Ontario Hot Mix Asphalt Plants, Fifth Edition (Ontario Hot Mix Producers Association, 2015); and
- Operations Manual for Air Quality Monitoring in Ontario (Ministry of the Environment, 2018).

Table 6-4: Potential Impacts, Mitigation Measures and Monitoring Activities – Air Quality

Environmental Component	Potential Impacts	Mitigation Measure(s)	Monitoring Activities
Construction Air Quality	■ Potential air quality impacts could include effects from diesel combustion and particulate emissions. Odour and visible dust may also cause public annoyance. ■ Exhaust emissions from construction vehicles may contribute to increased levels of nitrogen oxides, and volatiles such as benzene and benzo(a)pyrene, which given their existing background concentrations can contribute to existing levels of provincial criteria exceedance. ■ Certain construction activities are likely to emit particulates in higher quantities, which include site preparation and earth works activities, demolition activities, unpaved surfaces with heavy equipment travel, and uncovered soil storage piles. ■ Disruption of contaminated soils may release contaminants.	■ On-site construction vehicle activity shall be managed to control emissions of odourous contaminants and diesel exhaust, including benzene and benzo(a)pyrene emissions from exhaust. An Air Quality Management Plan will be developed to ensure consistent attention to mitigation of dust and particulates, including silica, from the construction site. The following mitigation measures should be considered in the Air Quality Management Plan: – All equipment complies with Canadian engine emissions standards. – All equipment visually inspected prior to use and properly maintained. – Implement a no idling policy on site (unless necessary for equipment operation). – Use of electricity from the grid over diesel generators wherever possible. – Retrofitting of combustion engines with specific exhaust emission control measures such as particulate traps. – If applicable, follow guidelines on hot mix asphalt outlined in the Ontario Hot Mix Producers Association's Environmental Practices Guide: Ontario Hot Mix Asphalt Plants, Fifth Edition (Ontario Hot Mix Producers Association, 2015). ■ Applicable mitigation measures from Environment Canada's Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities (Cheminfo Services Inc., 2005), the Ministry of Environment, Conservation and Parks' Technical Bulletin Management Approaches for Industrial Fugitive Dust Sources, shall be followed. The following mitigation measures should be considered in the Air Quality Management Plan: – Complete earthwork grading within 10 days of ceased active construction. – Temporary seeding or mulching of bare soil and storage piles, if possible. – Compression or clodding of soil surfaces and storage piles to reduce erosion. – Confine storage pile activity to downwind side of piles. – Reduction of activities during high wind conditions. – Full or partial enclosure of demolition activities. – Wind screens or barriers where possible or necessary. – Scheduling certain construction activities (i.e., site preparation and earth works activities, demolition activities, unpaved surfaces with heavy equipment travel, and uncovered soil storage piles)to periods of time when exposure to dust is expected to be limited (e.g., avoid scheduling activities during dry, windy weather conditions). – Landscaping materials ordered close to time of use to reduce on-site storage. – Application of soil stabilizers or dust control polymers where feasible. – Daily removal of accumulated mud, dirt and debris deposits on-site, and regular truck washing – Paved and unpaved roadway cleaning, watering or application of a non-chloride dust suppressant. – Minimize drop height of materials on-site. – Covering surface area of hauled bulk material. – Methods and equipment for clean-up of accidental spill of dusty materials. – Limit travel speeds on-site to a maximum of 16-24 kilometres per hour. ■ If disruption of contaminated soils is anticipated at any time, ensure that contaminants are not released. ■ Develop a communications protocol which includes timely resolution of complaints.	■ The following monitoring activities should be considered in the development of the Air Quality Management Plan: – Baseline conditions should be established prior to construction for longer than one week to capture representative concentrations under varying meteorological conditions. – On-site meteorological monitoring in conjunction with real-time particulate monitoring representative of receptor impacts. – Place monitors both upwind and downwind of construction activities, where possible. – Application of threshold "Action Level" triggers for implementation of specific and increasing intensity mitigation activities linked to specific construction activities. – Reporting detailed results of ongoing monitoring and mitigation activities. – Monitoring at locations where there are persistent complaints, as required. ■ In addition, relevant construction monitoring activities from the following recommended guidelines will be implemented during construction: – Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities (Cheminfo Services Inc., 2005); and, – Operations Manual for Air Quality Monitoring in Ontario (Ministry of the Environment, Conservation and Parks, 2018).

6.5 Noise and Vibration

Table 6-5 outlines mitigation measures and monitoring activities to address the potential noise and vibration impacts that may result from the Corktown Station early works.

Table 6-5: Potential Impacts, Mitigation Measures and Monitoring Activities – Noise and Vibration

Environmental Component	Potential Impact	Mitigation Measure(s)	Monitoring Activities
Construction Noise	■ Environmental noise may cause annoyance and disturb sleep and other activities. ■ The severity of the noise effects resulting from construction projects varies, depending on: – Scale, location and complexity of the Project – Construction methods, processes and equipment deployed – Total duration of construction near sensitive noise receivers – Construction activity periods (days, hours, time period) – Number and proximity of noise-sensitive sites to construction area(s)	■ Construction noise impact mitigation measures to be considered include but are not limited to the following: – Siting construction staging and laydown areas to avoid/reduce adverse impacts to sensitive receptors where possible. – Use construction equipment compliant with noise level specifications in the Ministry of the Environment, Conservation and Parks guidelines NPC-115 and NPC-118. – Keep equipment in good working order and operate with effective muffling devices. – Enclosures for equipment such as generators and compressors. – Additional equipment silencers/mufflers. – Use of upgraded construction hoarding (considering requirements from CSA Z107.9 for noise barriers) between construction equipment and noise sensitive receivers. – Use of localized movable noise barriers/screens for specific equipment and operations. – Minimize simultaneous operation of equipment where possible. – Implement a no idling policy on site (unless necessary for equipment operation). – Restrict construction hours where possible: – Perform construction during daytime hours where possible. If night time construction is necessary, the activities with the highest noise levels should be conducted during day time periods where possible. – If construction will occur outside of normal daytime hours, inform local residents before construction of type of construction and expected duration outside of daytime hours. – Consider operational duration limits for construction. – Limit the number of heavy trucks on site to the minimum required. – Stage construction vehicles away from noise sensitive locations if possible. – Establish and apply project-specific construction noise criteria. – Coordinate with the Canadian Opera Company (at the Joey and Toby Tanenbaum Opera Centre at 227 Front Street East) and Canadian Stage (located on 26 Berkeley Street) to avoid disturbance during performances. – Develop a communications protocol which includes timely resolution of complaints. – A plan that addresses noise and vibration management will be developed as project planning progresses. – Additional mitigation measures not listed above may be considered.	■ Noise levels will be monitored where the impact assessment indicates that noise limits may approach or exceed noise criteria, to identify if any additional mitigation is required and verify mitigation measure(s) effectiveness. ■ Monitoring at locations where there are persistent complaints, as required.
Construction Vibration	■ Exposure to vibration may result in public annoyance and complaints. Vibration may also cause damage to buildings and other structures.	■ Construction vibration impact mitigation measures to be considered include but are not limited to the following to meet applicable vibration criteria: – Siting construction staging and laydown areas to avoid/reduce adverse impacts to sensitive receptors where possible. – Utilize equipment with low vibration emissions where possible. – Restrict construction hours: • Perform construction during daytime hours where possible. If night time construction is necessary, the activities with the highest vibration levels should be conducted during daytime periods where possible. – Confirm results, restrictions and monitoring requirements of vibration assessment based upon refined site staging, equipment, construction areas, updated information regarding sensitive structures/operations that may require more stringent vibration limits than the limits in City of Toronto By-law 514-2008 prior to the commencement of construction, and update as necessary. – Use alternative means of construction within 5.8 metres of structures so that the City of Toronto's prohibited vibration level limits are not exceeded. – Use alternative means of construction within 11.1 metres of structures so that the vibration level limits for buildings susceptible to vibration damage are not exceeded where applicable. – Review other applicable vibration limits that may apply, such as the City of Toronto Specification GN117SS. – Conduct monitoring and pre-construction inspections in accordance with City of Toronto By-law 514-2008. Monitoring and preconstruction requirements can be determined by calculation of Zone of Influence of construction equipment.	■ Monitoring will be undertaken at locations within the Zone of Influence to ensure compliance with the City of Toronto By-law 514-2008 and to identify the need for additional mitigation if required. ■ Monitoring will be undertaken to ensure compliance with other applicable vibration level limits identified, as required. ■ Monitoring will be undertaken to verify mitigation measure(s) effectiveness. ■ Pre-construction building inspection of potentially impacted buildings adjacent to the early works construction site are to be undertaken in accordance with City of Toronto By-law 514-2008. Continuous vibration monitoring along the construction site property lines closest to these structures will be initiated as warranted.

Environmental Component	Potential Impact	Mitigation Measure(s)	Monitoring Activities
		– Provide smooth surfaces for trucks to travel and route heavily loaded trucks away from vibration sensitive sites where possible. – Operate construction equipment on lower vibration settings where available. – Maximize distance between equipment and sensitive receivers where possible. – Establish and apply project-specific construction vibration criteria limits. – Do not operate equipment where the City of Toronto By-law 514-2008 prohibited limits are predicted to be exceeded. Alternative construction methods and/or equipment with lower vibration emissions or power settings can be used if they do not exceed the City of Toronto's prohibited vibration limits. – Develop communications protocol which includes timely resolution of complaints. – Additional mitigation measures not listed above may be considered.	▪ Monitoring at locations where there are persistent complaints, as required.

6.6 Socio-Economic and Land Use Characteristics

Table 6-6 outlines mitigation measures and monitoring activities to address the potential socio-economic and land use impacts that may result from the Corktown Station early works.

Table 6-6: Potential Impacts, Mitigation Measures and Monitoring Activities – Socio-Economic and Land Use Characteristics

Environmental Component	Potential Impacts	Mitigation Measure(s)	Monitoring Activities
Property	▪ Property acquisition – permanent and temporary	▪ Specific property requirements associated with the early works activities will be minimized to the extent possible.	▪ None identified.
All Land Uses and Adjacent Lands	▪ Nuisance effects from construction activities	▪ Mitigation measures related to potential nuisance effects are outlined in the Air Quality and Noise and Vibration potential impacts, mitigation measures, and monitoring activities. ▪ An Erosion and Sediment Control Plan will be developed in accordance with the Greater Golden Horseshoe Area Conservation Authorities' Erosion and Sediment Control Guideline for Urban Construction (December 2006), as amended from time to time, that addresses sediment release to adjacent properties and roadways.	▪ When applicable, monitoring related to potential nuisance effects are outlined in the Air Quality and Noise and Vibration potential impacts, mitigation measures, and monitoring activities. ▪ Erosion and sediment control monitoring to be conducted (e.g., on-site inspection of erosion and sediment control measures).
All Land Uses and Adjacent Lands	▪ Land use and access disruption	▪ Provide well connected, clearly delineated, and appropriately signed walkways and cycling route options, with clearly marked detours where required. ▪ Provide temporary walkways with a pedestrian clearway of 2.1 metres, where possible. Temporary walkways required during construction will also meet Accessibility for Ontarians with Disabilities Act requirements for universal accessibility. ▪ Provide temporary lighting, as required, and wayfinding signs and cues for navigation around the construction site. ▪ Regular (existing) access to businesses during working hours will be maintained, where feasible. Where regular access cannot be maintained, alternative access and signage will be provided. ▪ Continue to engage with the City of Toronto and local school board(s) to confirm mitigation measures and to continue coordinating as planning of the bi-directional bike lane along Esplanade and Mill Street progresses.	▪ Regular monitoring (e.g., on-site inspection) of temporary access paths, walkways, cycling routes and fencing to ensure effectiveness.
Visual Characteristics	▪ Visual effects from construction activities/areas	▪ Consult with the City of Toronto as project planning progresses. ▪ Consideration will be given to providing temporary screens / hoarding along the borders of the early works site.	▪ Regular monitoring (e.g., on-site inspection) of construction visual effects mitigation measures to ensure effectiveness.
Light Pollution	▪ Light trespass, glare and light pollution effects	▪ Comply with all local applicable municipal by-laws and practices for lighting in areas near or adjacent to roadways regarding outdoor lighting for construction activities, and incorporate industry best practices provided in ANSI/IES RP-8-18 – Recommended Practice for Design and Maintenance of Roadway and Parking Facility Lighting. Obtrusive light with respect to adjoining residents, communities, and/or businesses will be limited. ▪ Perform the work in such a way that any adverse effects of construction lighting are controlled or mitigated to avoid unnecessary and obtrusive light with respect to adjoining residents, communities and/or businesses.	▪ Regular monitoring (e.g., on-site inspection) of light pollution mitigation measures to ensure effectiveness.
Public Realm	▪ Potential temporary relocation or removal of streetscaping materials, furniture, and landscaping in the public realm	▪ Minimize impacts which may result in the temporary relocation or removal of streetscaping materials, furniture, and landscaping in the public realm to the extent possible. Wherever possible, lands impacted by construction will be restored to the current City of Toronto standard following construction completion.	▪ There are no monitoring activities associated with the public realm.

6.7 Built Heritage Resources and Cultural Heritage Landscapes

Table 6-7 outlines mitigation measures and monitoring activities to address the potential impacts to built heritage resources and cultural heritage landscapes that may result from the Corktown Station early works.

Table 6-7: Potential Impacts, Mitigation Measures and Monitoring Activities – Built Heritage Resources and Cultural Heritage Landscapes

Ontario Line Cultural Heritage Report Reference #	Location / Address and Property Name	Heritage Recognition	Known or Potential Provincial Heritage Property of Provincial Significance	Type and Description of Potential Impact	Mitigation Measures	Monitoring Activities
OLS-029	▪ Gooderham & Worts Distillery National Historic Site (and Distillery District Heritage Conservation District, Under Study)	▪ Designated Part IV of the Ontario Heritage Act *(*By-law 154-76- designation for the complex*)* ▪ National Historic Site ▪ Heritage Conservation District, Under Study (Heritage Conservation District Study is complete, Plan not available online) ▪ Listed on the Canadian Register ▪ City of Toronto Heritage Easement Agreements CA397773, CA397771, CA397781, CA397779, CA397777, CA397775, CA397783, AT228498.	**Yes**	**1. No direct adverse impacts from Corktown Station early works** (Impact Type 1 – no anticipated impact, from Appendix H: Preliminary Potential Project-Specific Impacts and Proposed Mitigation Measures – Ontario Line South Study Area, in the Ontario Line Cultural Heritage Report (AECOM, 2020a)) No direct physical impacts are anticipated. The boundary of the National Historic Site, including the buildings in the northwest corner of the National Historic Site, and the proposed Heritage Conservation District boundary of OLS-029 are adjacent to the Corktown Station Early Works Project Footprint, separated by Parliament Street, and therefore, will not experience direct impacts from early works.	▪ No mitigation measures required. Continue to avoid OLS-029, the National Historic Site and Heritage Conservation District, under study.	▪ Corktown Station early works will have no direct impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.
OLS-029	▪ Gooderham & Worts Distillery National Historic Site (and Distillery District Heritage Conservation District, Under Study)	▪ Designated Part IV of the Ontario Heritage Act *(*By-law 154-76- designation for the complex*)* ▪ National Historic Site ▪ Heritage Conservation District, Under Study (Heritage Conservation District Study is complete, Plan not available online) ▪ Listed on the Canadian Register ▪ City of Toronto Heritage Easement Agreements CA397773, CA397771, CA397781, CA397779, CA397777, CA397775, CA397783, AT228498.	**Yes**	**2. No indirect adverse impacts from Corktown Station early works** (Impact Type 1 – no anticipated impact, from Appendix H: Preliminary Potential Project-Specific Impacts and Proposed Mitigation Measures – Ontario Line South Study Area, in the Ontario Line Cultural Heritage Report (AECOM, 2020a)) No indirect impacts due to vibration are anticipated. Contributing buildings within OLS-029 are approximately 120 metres southeast of the Corktown Station Early Works Project Footprint, beyond the 11.1 metres vibration buffer. In addition, the modern residential buildings adjacent to the Corktown Station Early Works Project Footprint within the National Historic Site are approximately 32 metres beyond the Corktown Station Early Works Project Footprint, beyond the 11.1 metres vibration buffer.	▪ No mitigation measures required. Maintain a sufficient buffer distance of at least 11.1 metres between the early works and any buildings within the National Historic Site.	▪ Corktown Station early works will have no indirect impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.
OLS-034	▪ 265 and 271 Front Street East and 25 Berkeley Street	▪ Designated Part IV of the Ontario Heritage Act (By-law 091-1997)	**Yes**	**1. Direct adverse impact from Corktown Station early works** (Impact Type 2C from Appendix H: Preliminary Potential Project-Specific Impacts and Proposed Mitigation Measures – Ontario Line South Study Area, in the Ontario Line Cultural Heritage Report (AECOM, 2020a) – Removal/Demolition of a building or structure on the property and/or any ground disturbance that has the potential to remove or demolish deeply buried archaeological remains.)	▪ Mitigation measures documented in Appendix H of the Ontario Line South Study Area, in the Ontario Line Cultural Heritage Report (AECOM, 2020a) have been refined based on the early works impact assessment. The following mitigation measures should be implemented regarding any physical impact to the properties: ▪ Consult with City of Toronto's Heritage Planning as planning progresses regarding any physical impact to the properties in order to determine and obtain any approval or permits required.	▪ Corktown Station early works will have no impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works. ▪ Refer to Ontario Line Final Corktown Station Early Works Report for further archaeological monitoring recommendations, if required.

Ontario Line Cultural Heritage Report Reference #	Location / Address and Property Name	Heritage Recognition	Known or Potential Provincial Heritage Property of Provincial Significance	Type and Description of Potential Impact	Mitigation Measures	Monitoring Activities
				The Corktown Station Early Works Project Footprint which includes OLS-034 has been identified as the launch site for the tunnel excavation equipment to complete tunnels and underground station spaces for the downtown and Don Yard segments and construction of the Corktown Station. This site will provide essential logistics support required for the Project's tunneling (see Section 1.3.3 for details). To prepare this site, demolition of existing buildings, removal of other structures and asphalt, decommissioning of utilities, and soil removal and/or remediation where required will need to be completed. Site preparation is a part of early works. These activities will enable the completion of the environmental due diligence investigations, including archaeological assessments. Completion of these early works on an expedited basis is essential to allow for the timely delivery of the overall Project. Direct physical impacts anticipated. OLS-034, consists of three properties and is entirely within the Corktown Station Early Works Project Footprint (Figure 2-1 of **Appendix A4**). Prior to reaching Impact Type 2C from the range of potential impacts in Appendix H: Ontario Line Cultural Heritage Report (AECOM, 2020a), the mitigation options presented in Appendix H, Impact Type 2A and 2B, were considered and eliminated. Demolition and removal of two buildings on the properties, including their foundations, as well as asphalt and soil removal where required, was determined to be the only option. Therefore, early works will have an direct adverse impact on OLS-034.	▪ Consult with Ontario Heritage Trust as current owner of part of OLS-034 as part of the planning process and if required, obtain approval/consent ▪ Metrolinx was granted Minister of Heritage, Sport, Tourism and Culture Industries' Consent on March 18, 2021, with conditions for the: – Demolition and removal of the non-heritage buildings located at 265 Front Street East; and, – Removal of the heritage attributes (i.e. archaeological excavation of the archaeological site [AjGu-41]) located on 265 Front Street East, 271 Front Street East and 25 Berkeley Street. ▪ Metrolinx is committed to fulfilling the conditions outlined in the Minister's Consent, including completion of archaeological requirements.	
OLS-035	▪ St. Lawrence Neighbourhood Heritage Conservation District	▪ Designated Part V of the Ontario Heritage Act (by-law 1328-2015) ▪ St. Lawrence Neighbourhood Heritage Conservation District, under appeal	**No**	1. **No direct adverse impacts from Corktown Station early works** (Impact Type 1 – no anticipated impact, from Appendix H: Preliminary Potential Project-Specific Impacts and Proposed Mitigation Measures – Ontario Line South Study Area, in the Ontario Line Cultural Heritage Report (AECOM, 2020a)) No direct physical impacts are anticipated. The boundary of the Heritage Conservation District is adjacent to the Corktown Station Early Works Project Footprint (Figure 2-1 of **Appendix A4**), separated by Berkeley Street, and therefore, will not experience direct impacts from early works.	▪ No mitigation measures required. Continue to avoid OLS-035, the heritage conservation district.	▪ Corktown Station early works will have no direct impacts to contributing properties within the Heritage Conservation District that require monitoring prior, during or post-construction of early works.

Ontario Line Cultural Heritage Report Reference #	Location / Address and Property Name	Heritage Recognition	Known or Potential Provincial Heritage Property of Provincial Significance	Type and Description of Potential Impact	Mitigation Measures	Monitoring Activities
OLS-035	▪ St. Lawrence Neighbourhood Heritage Conservation District.	▪ Designated Part V of the Ontario Heritage Act (by-law 1328-2015) ▪ St. Lawrence Neighbourhood Heritage Conservation District, under appeal	**No**	**2. No indirect adverse impacts from early works** (Impact Type 1 – no anticipated impact, from Appendix H: Preliminary Potential Project-Specific Impacts and Proposed Mitigation Measures – Ontario Line South Study Area, in the Ontario Line Cultural Heritage Report (AECOM, 2020a)) No indirect impacts due to vibration are anticipated. There are no contributing buildings within the Heritage Conservation District that are located within the 11.1 metres vibration buffer.	▪ No mitigation measures required. Maintain a sufficient buffer distance of at least 11.1 metres between the early works and the contributing buildings within the Heritage Conservation District.	▪ Corktown Station early works will have no indirect impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.
OLS-036	▪ 2 Berkeley Street, and 248, 250, 252, 254, 256, 258, 260, 262, and 264 The Esplanade	▪ Designated Part IV of the Ontario Heritage Act (By-law 665-80) ▪ City of Toronto Heritage Easement Agreement, CT4950	**No**	**1. No direct adverse impacts from Corktown Station early works** (Impact Type 1 – no anticipated impact, from Appendix H: Preliminary Potential Project-Specific Impacts and Proposed Mitigation Measures – Ontario Line South Study Area, in the Ontario Line Cultural Heritage Report (AECOM, 2020a)) No direct physical impacts are anticipated. OLS-036, the property, is separated from the Corktown Station Early Works Project Footprint by Berkeley Street.	▪ No mitigation measures required. Continue to avoid OLS-036.	▪ Corktown Station early works will have no direct impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.
OLS-036	2 Berkeley Street, and 248, 250, 252, 254, 256, 258, 260, 262, and 264 The Esplanade	▪ Designated Part IV of the Ontario Heritage Act (By-law 665-80) ▪ City of Toronto Heritage Easement Agreement, CT4950	**No**	**2. No indirect adverse impacts from Corktown Station early works** (Impact Type 1 – no anticipated impact, from Appendix H: Preliminary Potential Project-Specific Impacts and Proposed Mitigation Measures – Ontario Line South Study Area, in the Ontario Line Cultural Heritage Report (AECOM, 2020a)) No indirect impacts due to vibration are anticipated. The nearest building within OLS-036 is approximately 17.2 metres west of the Corktown Station Early Works Project Footprint, beyond the 11.1 metres vibration buffer.	No mitigation measures required. Maintain a sufficient buffer distance of at least 11.1 metres between the early works and the building.	▪ Corktown Station early works will have no indirect impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.
OLS-037	26 Berkeley Street	▪ Designated Part IV of the Ontario Heritage Act (By-law 122-76 and 638-80)	**No**	**1. No direct adverse impacts from Corktown Station early works** (Impact Type 1 – no anticipated impact, from Appendix H: Preliminary Potential Project-Specific Impacts and Proposed Mitigation Measures – Ontario Line South Study Area, in the Ontario Line Cultural Heritage Report (AECOM, 2020a)) No direct physical impacts are anticipated. OLS-037, the property, is separated from the Corktown Station Early Works Project Footprint by Berkeley Street.	No mitigation measures required. Continue to avoid OLS-037.	▪ Corktown Station early works will have no direct impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.

Ontario Line Cultural Heritage Report Reference #	Location / Address and Property Name	Heritage Recognition	Known or Potential Provincial Heritage Property of Provincial Significance	Type and Description of Potential Impact	Mitigation Measures	Monitoring Activities
OLS-037	26 Berkeley Street	▪ Designated Part IV of the Ontario Heritage Act (By-law 122-76 and 638-80)	**No**	**2. No indirect adverse impacts from Corktown Station early works** (Impact Type 1 – no anticipated impact, from Appendix H: Preliminary Potential Project-Specific Impacts and Proposed Mitigation Measures – Ontario Line South Study Area, in the Ontario Line Cultural Heritage Report (AECOM, 2020a)) No indirect impacts due to vibration are anticipated. The building within OLS-037 is approximately 20.1 metres west of the Corktown Station Early Works Project Footprint, beyond the 11.1 metres vibration buffer.	No mitigation measures required. Maintain a sufficient buffer distance of at least 11.1 metres between the early works and the building.	▪ Corktown Station early works will have no indirect impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.
OLS-038	227 Front Street East (formerly 223 and 251 Front St. E.)	▪ Designated Part IV of the Ontario Heritage Act (By-law 592-85, 123-76, 639-80) ▪ City of Toronto Heritage Easement Agreement CT850259 (February 19, 1987)	**No**	**1. No direct adverse impacts from Corktown Station early works** (Impact Type 1 – no anticipated impact, from Appendix H: Preliminary Potential Project-Specific Impacts and Proposed Mitigation Measures – Ontario Line South Study Area, in the Ontario Line Cultural Heritage Report (AECOM, 2020a)) No direct physical impacts are anticipated. OLS-038, the property, is separated from the Corktown Station Early Works Project Footprint by Berkeley Street.	No mitigation measures required. Continue to avoid OLS-038.	▪ Corktown Station early works will have no direct impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.
OLS-038	227 Front Street East (formerly 223 and 251 Front St. E.)	▪ Designated Part IV of the Ontario Heritage Act (By-law 592-85, 123-76, 639-80) ▪ City of Toronto Heritage Easement Agreement CT850259 (February 19, 1987)	**No**	**2. No indirect adverse impacts from Corktown Station early works** (Impact Type 1 – no anticipated impact, from Appendix H: Preliminary Potential Project-Specific Impacts and Proposed Mitigation Measures – Ontario Line South Study Area, in the Ontario Line Cultural Heritage Report (AECOM, 2020a)) No indirect impacts due to vibration are anticipated. The nearest building within OLS-038 is approximately 24.1 metres west of the Corktown Station Early Works Project Footprint, beyond the 11.1 metres vibration buffer.	No mitigation measures required. Maintain a sufficient buffer distance of at least 11.1 metres between the early works and the building.	▪ Corktown Station early works will have no indirect impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.
OLS-040	54 Berkeley Street, 359, 361 King Street East	▪ Designated Part IV of the Ontario Heritage Act (By-law 682-84) ▪ City of Toronto Heritage Easement Agreement, Reg. CT697089, (December 20, 1984) ▪ Designated Part V of the Ontario Heritage Act, St. Lawrence Neighbourhood Heritage Conservation District, under appeal (by-law 1328-2015)	**No**	**1. No direct adverse impacts from Corktown Station early works** (Impact Type 1 – no anticipated impact, from Appendix H: Preliminary Potential Project-Specific Impacts and Proposed Mitigation Measures – Ontario Line South Study Area, in the Ontario Line Cultural Heritage Report (AECOM, 2020a)) No direct physical impacts are anticipated. OLS-040, the property, is separated from the Corktown Station Early Works Project Footprint by Berkeley Street.	No mitigation measures required. Continue to avoid OLS-040.	▪ Corktown Station early works will have no direct impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.

Ontario Line Cultural Heritage Report Reference #	Location / Address and Property Name	Heritage Recognition	Known or Potential Provincial Heritage Property of Provincial Significance	Type and Description of Potential Impact	Mitigation Measures	Monitoring Activities
OLS-040	54 Berkeley Street, 359, 361 King Street East	▪ Designated Part IV of the Ontario Heritage Act (By-law 682-84) ▪ City of Toronto Heritage Easement Agreement, Reg. CT697089, (December 20, 1984) ▪ Designated Part V of the Ontario Heritage Act, St. Lawrence Neighbourhood Heritage Conservation District, under appeal (by-law 1328-2015)	**No**	**2. No indirect adverse impacts from Corktown Station early works** (Impact Type 1 – no anticipated impact, from Appendix H: Preliminary Potential Project-Specific Impacts and Proposed Mitigation Measures – Ontario Line South Study Area, in the Ontario Line Cultural Heritage Report (AECOM, 2020a)) No indirect impacts due to vibration are anticipated. The building within OLS-040 is approximately 23.4 metres west of the Corktown Station Early Works Project Footprint, beyond the 11.1 metres vibration buffer.	No mitigation measures required. Maintain a sufficient buffer distance of at least 11.1 metres between the early works and the building.	▪ Corktown Station early works will have no indirect impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.
OLS-041	302-306 King Street East	▪ Listed on Municipal Heritage Register (June 20, 1973)	**No**	**1. No direct adverse impacts from Corktown Station early works** (Impact Type 1 – no anticipated impact, from Appendix H: Preliminary Potential Project-Specific Impacts and Proposed Mitigation Measures – Ontario Line South Study Area, in the Ontario Line Cultural Heritage Report (AECOM, 2020a)) No direct physical impacts are anticipated. OLS-041, the property, is separated from the Corktown Station Early Works Project Footprint by Berkeley Street and King Street East.	No mitigation measures required. Continue to avoid OLS-041.	▪ Corktown Station early works will have no direct impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.
OLS-041	302-306 King Street East	▪ Listed on Municipal Heritage Register (June 20, 1973)	**No**	**2. No indirect adverse impacts from Corktown Station early works** (Impact Type 1 – no anticipated impact, from Appendix H: Preliminary Potential Project-Specific Impacts and Proposed Mitigation Measures – Ontario Line South Study Area, in the Ontario Line Cultural Heritage Report (AECOM, 2020a)) No indirect impacts due to vibration are anticipated. The buildings within OLS-041 is approximately 16.9 metres north of the Corktown Station Early Works Project Footprint, beyond the 11.1 metres vibration buffer.	No mitigation measures required. Maintain a sufficient buffer distance of at least 11.1 metres between the early works and the building.	▪ Corktown Station early works will have no indirect impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.
OLS-042	53-79 Berkeley Street, 535 Adelaide Street East	▪ Listed on Municipal Heritage Register (June 20, 1973)	**No**	**1. No direct adverse impacts from Corktown Station early works** (Impact Type 1 – no anticipated impact, from Appendix H: Preliminary Potential Project-Specific Impacts and Proposed Mitigation Measures – Ontario Line South Study Area, in the Ontario Line Cultural Heritage Report (AECOM, 2020a)) No direct physical impacts are anticipated. OLS-042, the property, is separated from the Corktown Station Early Works Project Footprint by King Street East.	No mitigation measures required. Continue to avoid OLS-042.	▪ Corktown Station early works will have no direct impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.

Ontario Line Cultural Heritage Report Reference #	Location / Address and Property Name	Heritage Recognition	Known or Potential Provincial Heritage Property of Provincial Significance	Type and Description of Potential Impact	Mitigation Measures	Monitoring Activities
OLS-042	53-79 Berkeley Street, 535 Adelaide Street East	▪ Listed on Municipal Heritage Register (June 20, 1973)	**No**	**2. No indirect adverse impacts from Corktown Station early works** (Impact Type 1 – no anticipated impact, from Appendix H: Preliminary Potential Project-Specific Impacts and Proposed Mitigation Measures – Ontario Line South Study Area, in the Ontario Line Cultural Heritage Report (AECOM, 2020a)) No indirect impacts due to vibration are anticipated. The building within OLS-042 is approximately 26.5 metres north of the Corktown Station Early Works Project Footprint, beyond the 11.1 metres vibration buffer.	No mitigation measures required. Maintain a sufficient buffer distance of at least 11.1 metres between the early works and the building.	▪ Corktown Station early works will have no indirect impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.
OLS-047	56 Berkeley Street, 298, 300 King Street East	▪ Listed on Municipal Heritage Register (June 20, 1973) ▪ Designated Part V of the Ontario Heritage Act, St. Lawrence Neighbourhood Heritage Conservation District, under appeal (by-law 1328-2015)	**No**	**1. No direct adverse impacts from Corktown Station early works** (Impact Type 1 – no anticipated impact, from Appendix H: Preliminary Potential Project-Specific Impacts and Proposed Mitigation Measures – Ontario Line South Study Area, in the Ontario Line Cultural Heritage Report (AECOM, 2020a)) No direct physical impacts are anticipated. OLS-047, the property, is separated from the Corktown Station Early Works Project Footprint by Berkeley Street.	No mitigation measures required. Continue to avoid OLS-047.	▪ Corktown Station early works will have no direct impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.
OLS-047	56 Berkeley Street, 298, 300 King Street East	▪ Listed on Municipal Heritage Register (June 20, 1973) ▪ Designated Part V of the Ontario Heritage Act, St. Lawrence Neighbourhood Heritage Conservation District, under appeal, (by-law 1328-2015)	**No**	**2. No indirect adverse impacts from Corktown Station early works** (Impact Type 1 – no anticipated impact, from Appendix H: Preliminary Potential Project-Specific Impacts and Proposed Mitigation Measures – Ontario Line South Study Area, in the Ontario Line Cultural Heritage Report (AECOM, 2020a)) No indirect impacts due to vibration are anticipated. The nearest building within OLS-047 is approximately 31.2 metres northwest of the Corktown Station Early Works Project Footprint, beyond the 11.1 metres vibration buffer.	No mitigation measures required. Maintain a sufficient buffer distance of at least 11.1 metres between the early works and the building.	▪ Corktown Station early works will have no indirect impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.
CS-001	91-93 Parliament Street, 330-334 King Street East	▪ Listed on Municipal Heritage Register (June 25 & 28, 1984)	**No**	**1. No direct adverse impacts from early works** No direct physical impacts are anticipated. CS-001, the property, is separated from the Corktown Station Early Works Project Footprint by King Street East.	No mitigation measures required. Continue to avoid CS-001.	▪ Corktown Station early works will have no indirect impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.
CS-001	91-93 Parliament Street, 330-334 King Street East	▪ Listed on Municipal Heritage Register (June 25 & 28, 1984)	**No**	**2. No indirect adverse impacts from early works** No indirect impacts due to vibration are anticipated. The building at CS-001 is approximately 40.2 metes northeast of the Corktown Station Early Works Project Footprint, beyond the 11.1 metres vibration buffer.	No mitigation measures required. Maintain a sufficient buffer distance of at least 11.1 metres between the early works and the building.	▪ Corktown Station early works will have no indirect impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.

Ontario Line Cultural Heritage Report Reference #	Location / Address and Property Name	Heritage Recognition	Known or Potential Provincial Heritage Property of Provincial Significance	Type and Description of Potential Impact	Mitigation Measures	Monitoring Activities
CS-002	51-63 Parliament Street, 296 Front Street East	▪ Designated Part IV of the Ontario Heritage Act (By-law 9-78)	**No**	1. **No direct adverse impacts from early works** No direct physical impacts are anticipated. CS-002, the property, is separated from the Corktown Station Early Works Project Footprint by Parliament Street.	No mitigation measures required. Continue to avoid CS-002.	▪ Corktown Station early works will have no indirect impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.
CS-002	51-63 Parliament Street, 296 Front Street East	▪ Designated Part IV of the Ontario Heritage Act (By-law 9-78)	**No**	2. **No indirect adverse impacts from early works** No indirect impacts due to vibration are anticipated. The building at CS-002 is approximately 26.6 metres east of the Corktown Station Early Works Project Footprint, beyond the 11.1 meters vibration buffer.	No mitigation measures required. Maintain a sufficient buffer distance of at least 11.1 metres	▪ Corktown Station early works will have no indirect impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.
CS-003	18 Trinity Street	▪ Designated Part IV of the Ontario Heritage Act (By-law 1997-0301)	**Yes (within OLS-029)**	1. **No direct adverse impacts from early works** No direct physical impacts are anticipated. CS-003, the property, and the proposed Distillery District Heritage Conservation District boundary, is separated from the Corktown Station Early Works Project Footprint by Parliament Street.	No mitigation measures required. Continue to avoid CS-003.	▪ Corktown Station early works will have no indirect impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.
CS-003	18 Trinity Street	▪ Designated Part IV of the Ontario Heritage Act (By-law 1997-0301)	**Yes (within OLS-029)**	2. **No indirect adverse impacts from early works** No indirect impacts due to vibration are anticipated. The building within CS-003 is approximately 159.3 metres east of the Corktown Station Early Works Project Footprint, beyond the 11.1 meters vibration buffer.	No mitigation measures required. Maintain a sufficient buffer distance of at least 11.1 metres between the early works and the building.	▪ Corktown Station early works will have no indirect impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.
CS-004	Parliament Square Park	▪ Ontario Heritage Trust Plaque	**No**	1. **No direct adverse impacts from Corktown Station early works** No direct physical impacts are anticipated. This commemorative plaque is located south of Corktown Station Early Works Project Footprint.	No mitigation measures required. Continue to avoid CS-004.	▪ Corktown Station early works will have no indirect impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.
CS-004	Parliament Square Park	▪ Ontario Heritage Trust Plaque	**No**	2. **No indirect adverse impact from Corktown Station early works** Impacts due to vibration on CS-004 are not applicable. This resource is a commemorative plaque and does not contain buildings or structures that would be subject to vibration impacts.	No mitigation measures required.	▪ Corktown Station early works will have no indirect impacts to built heritage resources and cultural heritage landscapes that require monitoring prior, during or post-construction of early works.

6.8 Archaeological Resources

Early works are anticipated to result in a combination of surface/above and below grade impacts. Required archaeological investigations and completion of early works activities such as building foundation removal or activities that have the potential for vibration effects will be coordinated and completed such that buried archaeological resources are appropriately considered.

All archaeology completed on the First Parliament site at 265 Front Street East, 271 Front Street East, and 25 Berkeley Street will be in accordance with the following conditions of the Ministry of Heritage, Sport, Tourism and Culture Industries' Minister's Consent:

a) All archaeological assessments are undertaken in accordance with the Ontario Heritage Act, the 2011 Standards and Guidelines for Consultant Archaeologists, and in accordance with the recommendations of previously completed archaeological assessment reports.

b) Prior to commencing any archaeological fieldwork, the licensed consultant archaeologist will submit a detailed strategy for review and approval by the Ministry of Heritage, Sport, Tourism and Culture Industries Archaeology Program Unit. Additionally, where new conditions or situations are encountered that are not covered by an approved strategy, a revised strategy will be submitted to the Ministry of Heritage, Sport, Tourism and Culture Industries Archaeology Program Unit for approval prior to proceeding with fieldwork.

c) Any construction excavation must be preceded by archaeological fieldwork according to a strategy approved by the Ministry of Heritage, Sport, Tourism and Culture Industries Archaeology Program Unit or must be accompanied by an excavation and monitoring strategy.

d) Excavation by a licensed consultant archaeologist or under the direction of a licensed consultant archaeologist will proceed to a point that is to the satisfaction of the Ministry of Heritage, Sport, Tourism and Culture Industries Archaeology Program Unit. In the event that the Project will not require total excavation of the site, an avoidance and protection strategy must be implemented for the remainder of the archaeological site to the satisfaction of the ministry.

Archaeological assessments on other areas within the Corktown Station Early Works Footprint (i.e. on the north side of Front Street East) will be undertaken in accordance

with the Ontario Heritage Act, the 2011 Standards and Guidelines for Consultant Archaeologists, and in accordance with the recommendations of previously completed archaeological assessment reports and in advance of ground disturbance activities[32] as planning progresses.

Additionally, Metrolinx and the Ontario Heritage Trust will develop an Interpretation and Commemoration Plan for the First Parliament Site, in consultation with the City of Toronto Heritage Planning, and as appropriate, with Indigenous Nations and other parties.

Table 6-8 outlines mitigation measures and monitoring activities to address potential impacts to archaeological resources that may result from Corktown Station early works.

32. Ground disturbing activities can be defined as any and all activities that will or have the potential to impact/disturb the area below the surface. Example of activities include, but are not limited to, heavy machine movement/weight, clearing, grading, excavating, trenching, drilling, and transporting and filling of land.

Table 6-8: Potential Impacts, Mitigation Measures and Monitoring Activities – Archaeological Resources

Environmental Component	Potential Impact	Mitigation Measure(s)	Monitoring Activities
Archaeological Potential	▪ Potential for the disturbance of registered archaeological sites and/or archaeological resources previously identified.	▪ Areas identified as retaining archaeological potential in the Corktown Station Early Works Project Footprint, as per the Ontario Line South Stage 1 Archaeological Assessment Report (AECOM, 2020c), are shown in **Figure 5-17.** Work plans shall be developed for the next stages of archaeological work on the First Parliament and Lime Kiln Works Sites and will be made available for review by the City of Toronto Heritage Planning, in addition to ongoing consultation with the City of Toronto, Indigenous Nations and other parties. – The majority of the Corktown Station Early Works Project Footprint retains moderate to high archaeological potential where deeply buried archaeological potential remains, such as for discovering pre-contact Indigenous materials and/or materials related to the early development and expansion of the City of Toronto, including the First and Second Parliament Buildings, the Home District Gaol, the Consumers' Gas company buildings, and other registered archaeological sites. – The Ministry of Heritage, Sport, Tourism and Culture Industries' Archaeology Program Unit will be consulted prior to any ground disturbing activities within areas identified as having archaeological potential. ▪ All archaeology on the First Parliament site on 265 Front Street East, 271 Front Street East and 25 Berkeley Street will be in accordance with the following conditions of the Minister of Heritage, Sport, Tourism and Culture Industries' Consent: – All archaeological assessments are undertaken in accordance with the Ontario Heritage Act, the 2011 Standards and Guidelines for Consultant Archaeologists, and in accordance with the recommendations of previously completed archaeological assessment reports. – Prior to commencing any archaeological fieldwork, the licensed consultant archaeologist will submit a detailed strategy for review and approval by the Ministry of Heritage, Sport, Tourism and Culture Industries' Archaeology Program Unit. Additionally, where new conditions or situations are encountered that are not covered by an approved strategy, a revised strategy will be submitted to the Ministry of Heritage, Sport, Tourism and Culture Industries' Archaeology Program Unit for approval prior to proceeding with fieldwork. – Any construction excavation must be preceded by archaeological fieldwork according to a strategy approved by the Ministry of Heritage, Sport, Tourism and Culture Industries' Archaeology Program Unit or must be accompanied by an excavation and monitoring strategy. – Excavation by a licensed consultant archaeologist or under the direction of a licensed consultant archaeologist will proceed to a point that is to the satisfaction of the Ministry of Heritage, Sport, Tourism and Culture Industries' Archaeology Program Unit. In the event that the Project will not require total excavation of the site, an avoidance and protection strategy must be implemented for the remainder of the archaeological site to the satisfaction of the ministry. Archaeological assessments on other areas within the Corktown Station Early Works Footprint will be undertaken in accordance with the Ontario Heritage Act, the 2011 Standards and Guidelines for Consultant Archaeologists, and in accordance with the recommendations of the previously completed archaeological assessment reports and in advance of ground disturbance activities. ▪ The Mississaugas of the Credit First Nation, and other Indigenous Nations will be invited to participate in archaeological fieldwork. All future archaeological assessment findings and reports will be shared with the Mississaugas of the Credit First Nation and other Indigenous Nations that were engaged during the Stage 1 archaeological assessment. ▪ Metrolinx and the Ontario Heritage Trust will develop an Interpretation and Commemoration Plan for the First Parliament Site, in consultation with the City of Toronto Heritage Planning, and as appropriate, with Indigenous communities and other parties.	▪ None identified at this time. ▪ Metrolinx will adhere to all recommendations in any subsequent archaeological assessments, including monitoring activities, as required.
Archaeological Resources	▪ Potential recovery of unexpected archaeological resources during construction.	▪ Should previously unknown or unassessed deeply buried archaeological resources be uncovered during construction activities, they may be a new archaeological site and therefore subject to Section 48(1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed archaeologist to carry out archaeological field work, in compliance with Section 48(1) of the Ontario Heritage Act. Any person discovering human remains must immediately cease work and notify the police or coroner and the Registrar of Cemeteries, Ministry of Government Services, in accordance with the Funeral, Burial, and Cremation Services Act. In addition, consultation with relevant Indigenous Nations will be initiated in the event that archaeological resources or human remains are discovered.	▪ None identified at this time. ▪ Metrolinx will adhere to all recommendations in any subsequent archaeological assessments, including monitoring activities, as required.

6.9 Traffic and Transportation

Table 6-9 outlines mitigation measures and monitoring activities to address potential traffic and transportation impacts that may result from the Corktown Station early works.

Table 6-9: Potential Impacts, Mitigation Measures and Monitoring Activities – Traffic and Transportation

Environmental Component	Potential Impacts	Mitigation Measure(s)	Monitoring Activities
Transportation Network – Roads	▪ Heavy construction vehicle traffic may impact traffic operations resulting in increased vehicular delays and queue lengths, especially at intersections where construction traffic is required to make left-turning movements. ▪ Potential overlapping construction timelines with other planned projects (e.g., local developments) nearby may result in impacts to the transportation network and its road users. ▪ Closure of the Green P municipal parking lots located within the Corktown Station Early Works Project Footprint.	▪ A quantitative traffic impact assessment will be completed, if required, as project planning progresses to consider vehicular traffic impacts as a result of the Corktown Station early works ▪ Develop and implement a Transit and Traffic Management Plan(s), which could include temporary changes to intersection lane configurations, traffic signal timing optimization, modifications to existing signal timing plans, etc. The Transit and Traffic Management Plan(s) will also address specific emergency services requirements in consultation with the City of Toronto. ▪ Traffic signal timing optimization may be assessed/implemented to increase capacity of affected intersections and to aid in the movement of traffic. Traffic signal timing adjustments would require coordination between Metrolinx and City of Toronto, and will be undertaken if required, to determine appropriate changes to traffic signal timings. ▪ Consider scheduling construction activities during off-peak periods and weekends to minimize disruptions to road users during the critical peak periods. ▪ Co-ordinate with the City of Toronto regarding other ongoing construction projects when scheduling the early works activities to maintain the mobility of all road users (i.e., avoid closure of parallel corridors). ▪ Consult with the City of Toronto and the Toronto Parking Authority with regards to the Green P municipal parking lot closure.	▪ The effectiveness of the Transit and Traffic Management Plan(s) will be monitored throughout the construction period and adjustments will be made based on actual field observations, as needed.
Transportation Network – Active Transportation	▪ Traffic congestion along Front Street and other adjacent roads, as a result of the increase in heavy vehicle traffic, could increase pedestrians' and cyclists' exposure to traffic. ▪ Potential realignment/closure of sidewalks along Front Street, Berkeley Street, King Street, and Parliament Street may increase walking distances and compromise pedestrians' convenience.	▪ Co-ordinate with the City of Toronto to minimize the interference with pedestrians and cyclists. This may include fencing, hoarding (minimum 2 metres high, solid and secured), shared-lane markings, signals, wayfinding signs, and lighting as required to provide pedestrians and cyclists with safe, accessible, and continuous routes. ▪ Include safety precautions for nearby schools (e.g., having school crossing guards at nearby intersections) in the Transit and Traffic Management Plan(s) in consultation with the City of Toronto, and local school board(s). ▪ Implement flagging where construction vehicles are present to ensure construction vehicle operators are aware of pedestrian and vehicular traffic within the construction area. ▪ If required, ensure any modifications to pedestrian crossings distances at signalized intersections are reflected in revised pedestrian clearance timings. ▪ Any temporary pedestrian crossing facilities including temporary or relocated Toronto Transit Commission transit stops will be designed to meet Toronto Transit Commission accessibility standards. ▪ Mitigation measures will be considered (e.g., maintain a minimum sidewalk width) in order to maintain pre-construction pedestrian levels of service. ▪ Consult with the City of Toronto to minimize potential impacts during special events (e.g. Distillery District) should closures or long-term impacts be required.	▪ The effectiveness of the Transit and Traffic Management Plan(s) will be monitored throughout the construction period and adjustments will be made based on actual field observations, as needed.
Transit Network	▪ Impacts to surface transit routes (i.e., bus and streetcar) within the Corktown Station Traffic and Transportation Study Area are not anticipated.	▪ No mitigation measures are recommended.	▪ Transit services will be monitored through actual field observations throughout the construction period and mitigation measures will be considered, as needed.

6.10 Utilities

Table 6-10 outlines mitigation measures and monitoring activities to address potential utilities impacts that may result from the Corktown Station early works.

Table 6-10: Potential Impacts, Mitigation Measures and Monitoring Activities – Utilities

Environmental Component	Potential Impacts	Mitigation Measure(s)	Monitoring Activities
Private Utilities	▪ Utilities decommissioning, modification and/or relocation. ▪ It is anticipated that there will be temporary impacts to existing utilities during the early works, with potential relocations and associated disruptions to be determined. Temporary traffic detours may be needed during utility relocations. ▪ Potential impacts to utilities are under review and will be confirmed as project planning progresses.	▪ In-depth utility investigations, if required, will be undertaken as project planning progresses to confirm impacts. Any potential conflicts and association relocation requirements or mitigation measures will be identified in consultation with utility providers. ▪ Utilities such as sewers, water, electrical, communications and gas located within Corktown Station Early Works Project Footprint may be relocated to facilitate the completion of the early works. ▪ As project planning progresses, the potential impacts to utilities, relocations and mitigation measures will be further refined and confirmed through a subsurface utility engineering investigation. ▪ Appropriate mitigation measures including next steps related to consultation with utility companies and stakeholders, and phasing plans will be determined once the impacts are confirmed. ▪ Metrolinx will also consult with private utility companies for unexpected utility conflicts that may arise during project planning and/or implementation.	▪ None identified.
Public Utilities and Municipal Servicing	▪ Utilities decommissioning, modification and/or relocation. ▪ It is anticipated that there will be temporary impacts to existing utilities during the early works, with potential relocations to be determined. Temporary traffic detours may be needed during utility relocations. ▪ Potential impacts to utilities are under review and will be confirmed as project planning progresses.	▪ In-depth utility-related investigations such as subsurface utility engineering investigations, if required, will be completed as project planning progresses. Metrolinx will consult with the City of Toronto and Toronto Water during the development of these studies to ensure concerns are addressed. ▪ Metrolinx will also consult with the City of Toronto, Toronto Hydro and Toronto Water, as required, as project planning progresses regarding potential impacts to municipal infrastructure and servicing and ensure that applicable City standards, guidelines, and criteria are met.	▪ None identified.

7 Permits and Approvals

The following sections provide a description of the federal, provincial, conservation authority and/or municipal permits that may be required for the Corktown Station early works. Permit and approval requirements will be confirmed as early works project planning progresses.

7.1 Federal

No federal permits are anticipated to be required for the Corktown Station early works.

7.2 Provincial

7.2.1 Ontario Water Resources Act, 1990

As prescribed under Ontario Regulation 63/16, water taking for construction site dewatering in excess of 50,000 L/day and under 400,000 L/day is subject to registration through the Environmental Activity and Sector Registry. In accordance with Section 34 of the Ontario Water Resources Act, a Category 3 Permit to Take Water from Ministry of the Environment, Conservation and Parks must be obtained for the taking of more than 400,000 L/day of groundwater for the purposes of construction dewatering from any given source. Approvals for the discharge of pumped water may also be required, and could be a combination of Municipal Discharge Permits (City of Toronto Private Water Discharge Permit/Agreement) and/or Ministry of the Environment, Conservation and Parks Environmental Compliance Approvals in accordance with Section 53 of the Ontario Water Resources Act. Any discharge of water would be subject to the terms and conditions of required permits and approvals based on the expected site conditions. Permitting requirements shall be confirmed as project planning progresses, when specific details such as construction timing and methods are known.

7.2.2 Environmental Protection Act, 1990

Environmental Compliance Approval(s) may be required from the Ministry of the Environment, Conservation and Parks for equipment held by contractors, owners and operators of that equipment in advance of construction, as required.

7.2.3 Endangered Species Act, 2007

Metrolinx will comply with the conditions of the Permit CR-D-002-19 issued on August 7, 2020 under Section 17(1) in accordance with clause 17(2)(d) of the Endangered Species Act, 2007; however, Species at Risk are not anticipated to be affected by the Corktown Station early works.

7.2.4 Ontario Heritage Act, 1990

As a prescribed public body, Metrolinx has obligations under the Standards and Guidelines for Conservation of Provincial Heritage Properties (prepared under Section 25.2 of the Ontario Heritage Act) to identify, protect, maintain and use provincial heritage properties in a manner that conserves the cultural heritage value or interest of the property. For known or potential Provincial Heritage Properties of Provincial Significance, the Standards and Guidelines require that consent of the Minister of Heritage, Sport, Tourism and Culture Industries be obtained “before removing or demolishing buildings or structures on the property, or before transferring the property from provincial control” (prepared under Section 25.2 of the Ontario Heritage Act).

Metrolinx has sought consent of the Minister of Heritage, Sport, Tourism, and Culture Industries for the First Parliament Site (OLS-034), and consent has been granted by the Minister of Heritage, Sport, Tourism, and Culture Industries. Metrolinx is committed to fulfilling all conditions outlined through the Minister of Heritage, Sport, Tourism, and Culture Industries’ Consent for the First Parliament Site (OLS-034). Conditions from the Minister of Heritage, Sport, Tourism, and Culture Industries’ Consent for the First Parliament Site (OLS-034) can be referenced in **Table 6-7**.

7.3 Conservation Authority

Authorization under Ontario Regulation 166/06: Toronto and Region Conservation Authority Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses is not required for the Corktown Station early works.

7.4 Municipal

A range of municipal permits and approvals (e.g., Permit to Injure or Remove Trees) may be required for the Project, particularly pertaining to municipally owned lands and infrastructure. Metrolinx will obtain all required permits and approvals.

Metrolinx as a Crown Agency of the Province of Ontario is exempt from certain municipal processes and requirements. In these instances, Metrolinx will engage with

the City of Toronto to incorporate municipal requirements as a best practice, where practical, and may obtain associated permits and approvals.

Metrolinx shall continue to communicate and engage with the City of Toronto project planning progresses to address municipal concerns.

Water, sanitary, and storm servicing will be reviewed as project planning progresses. Metrolinx will consult with the City of Toronto as project planning progresses to address impacts to municipal water, sanitary, and storm sewer systems.

Consultation between Metrolinx and the City of Toronto Heritage Planning is ongoing regarding physical impacts to 265 and 271 Front Street East and 25 Berkeley Street (OLS-034, First Parliament Site - AjGu-41, the Lime Kiln Works Site (AjGu-61 and AjGu-64), and the St. Lawrence Neighbourhood Heritage Conservation District, as a result of Corktown Station early works. Metrolinx will co-ordinate with the City of Toronto and Toronto Parking Authority for transportation related permits and approvals (e.g., street occupation permit) as project planning progresses, as required.

8 Consultation Process

8.1 Overview of the Consultation Process

In accordance with Section 11 of Ontario Regulation 341/20: Ontario Line Project, this section summarizes the Corktown Station early works consultation activities carried out with members of the public, technical stakeholders, community stakeholders and groups, elected officials, Indigenous Nations, and other interested parties, including a summary of feedback and comments received. The overall Project record of consultation and summary of correspondence with the public, community stakeholders and groups, government review agencies and other technical stakeholders, elected officials and Indigenous Nations between November 2019 and October 17, 2020 is provided in Section 7 and Appendix C of the Ontario Line Final Environmental Conditions Report.

On May 12, 2021, the Notice of Publication of the Draft Corktown Station Early Works Report was issued to commence the public review period, effective until June 11, 2021. The Notice was published on the engagement webpage of the Project website (www.metrolinx.com/ontarioline) and distributed to all individuals on the Project Distribution List, approximately 15,090[33] properties (i.e., apartments, houses and businesses) within and surrounding the Corktown Station Study Area, 4,166 property owners within 30 metres of the Corktown Station Early Works Project Footprint, community stakeholders and groups within the Corktown Station Study Area, government review agencies and other technical stakeholders, elected officials, and Indigenous Nations.

The Notice was advertised in three major newspapers (Toronto Star, Le Metropolitan, Toronto L'Express) in English and French.

On July 15, 2021, the Notice of Publication of the Final Corktown Station Early Works Report was issued. The Notice was published in the same major newspapers that the Notice of Publication of the Draft Corktown Station Early Works Report was advertised in. The Notice was also distributed to all individuals and property owners, community stakeholders and groups, government review agencies and other technical stakeholders, elected officials and Indigenous Nations that received the Notice of Publication of the Draft Corktown Station Early Works Report. The Final Corktown

[33] The property list has been updated since publishing the Draft Corktown Station Early Works Report from 14,715 to 15,090 to accommodate the most recent Canada Post mail routes, which are updated on a monthly basis.

Station Early Works Report (this Report) includes updates based on feedback received during the review period of the Draft Corktown Station Early Works Report and is summarized in **Section 8.2.2**.

Consultation records related specifically to Corktown Station early works are documented in **Appendix B3** of this Report. **Appendix B3** has been updated as part of this Final Corktown Station Early Works Report to include all correspondence with the public, community stakeholders and groups, government review agencies and other technical stakeholders, elected officials and Indigenous Nations.

8.1.1 Approach to Consultation

The overall approach to consultation for the Ontario Line Project is outlined in Section 7.1.1 of the Ontario Line Final Environmental Conditions Report (AECOM, 2020a)[34], with further details provided in Appendices C1 to C6 of that report.

To share information and collect feedback related to Corktown Station early works, Metrolinx has undertaken the following communication and engagement activities prior to the publication of the Draft Corktown Station Early Works Report and during the 30-day public review period:

- Early works specific updates on the Engagement webpage (Project website) (www.metrolinx.com/ontarioline) including:
  - Downtown segment neighbourhood updates (Corktown Station is located within the Downtown segment) – published on September 17, 2020 and updated on April 23, 2021, May 12, 2021 and June 17, 2021.
  - Downtown segment virtual presentation and live question and answer session hosted on April 26, 2021 (https://www.metrolinxengage.com/en/OLliveApril26).
  - Downtown segment virtual presentation and live question and answer session hosted on June 17, 2021 (https://www.metrolinxengage.com/en/OLLiveJune17).
  - Early works webpage (https://www.metrolinxengage.com/en/content/early-works) and environment webpage (https://www.metrolinxengage.com/en/content/ontario-line-environment) updates that includes information related to

34. The Ontario Line Final Environmental Conditions Report (AECOM, 2020) was posted on the Engagement webpage (Project website) on November 30, 2020 in accordance with Ontario Regulation 341/20: Ontario Line Project.

environmental reporting and timelines, early works timelines, scope overview and location and provides an option to learn more about each early works location – published on September 17, 2020 and updated on April 23, 2021, May 12, 2021, June 11, 2021, July 5, 2021 and July 15, 2021 to provide an overview of the Corktown Station early works.

- Mailings/notifications;
- Emails via the Project email address (ontarioline@metrolinx.com);
- E-newsletters to the Project Distribution List (see **Section 8.1.3** for more details);
- Newspaper advertisements;
- Elected officials briefings;
- Outreach to technical stakeholders and Indigenous Nations; and
- Online consultation via the Engagement webpage (Project website).

Further details regarding the consultation process are included in the subsections below and in **Appendices B1 to B3**.

8.1.2 Record of Consultation

Metrolinx maintained a record of consultation related to Corktown Station early works through July 15, 2021. The record of consultation has been divided into three separate appendices:

- **Appendix B1** provides the Project Distribution List used to facilitate notifications to stakeholders and interested parties.
- **Appendix B2** provides a record of all Corktown Station early works consultation materials made available through the Engagement webpage (Project website).
- **Appendix B3** contains the complete record of consultation and correspondence, including newspaper advertisements and notices, and meetings with the public, community stakeholders and groups, government review agencies and other technical stakeholders, elected officials and Indigenous Nations through July 15, 2021.

All comments received from the public have been redacted to protect personal information.

8.1.3 Identification of Interested Parties

At the outset of the Project, an initial Project Distribution List was developed to facilitate notifications to stakeholders and interested parties. Additional email contacts were collected through the Engagement webpage (Project website) (where individuals could submit their email addresses and select “subscribe”), and through in-person and online consultation activities that took place between January 2020 and July 2021. Individuals have the opportunity to subscribe or unsubscribe to the Project Distribution List at any time.

The Project Distribution List is a live document that is continuously updated in response to Project feedback (e.g., requests to be added) and is used to inform stakeholders and the public of Project milestones (e.g., Notice of Publication of the Draft Corktown Station Early Works Report and Notice of Publication of the Final Corktown Station Early Works Report).

The Project Distribution List is available in **Appendix B1** of this Report. To protect personal information, individuals and members of the public are not included on the Project Distribution List.

All parties on the Project Distribution List have been notified of the publication of the Draft Corktown Station Early Works Report, including opportunities to review and provide comments, and have been notified of the Final Corktown Station Early Works Report.

8.2 Public Engagement and Feedback

8.2.1 Public Engagement Opportunities

Through June 11, 2021, early works-specific public engagement efforts included posting early works updates to the Project website and providing various online engagement opportunities for interested persons (as mentioned in **Section 8.1.1** and described in detail in **Section 8.2.1.1** below).

8.2.1.1 Engagement Webpage

On April 23, 2021, information related to Corktown Station early works was published on the Project website (www.metrolinx.com/ontarioline), including updates to the Environmental Assessment process reporting timeline and neighbourhood updates including information related to Corktown Station early works and the First Parliament Site. This information is presented in **Appendix B2** of this Report. Information posted on May 12, 2021 included: the Notice of Publication of Draft Corktown Station Early

Works Report; the Draft Corktown Station Early Works Report and associated appendices; details regarding Corktown Station early works components; updates on the Environmental Assessment process; and key findings, potential effects and proposed mitigation measures for each of the environmental study reports.

Between May 12, 2021 and June 11, 2021, individuals had the opportunity to review the Draft Corktown Station Early Works Report and associated discipline-specific environmental study reports outlining key study findings and provide feedback.

Through June 11, 2021, individuals have been able to provide feedback related to Corktown Station early works using two different formats, 'Contact Us' and 'Ask-A-Question'. 'Contact Us' is a fillable form where participants provide their name, e-mail address, subject and message. The messages submitted using this form are sent to the Ontario Line email address.

'Ask-A-Question' is a public forum where participants provide their name, topic and question in a fillable form. The questions submitted by participants and the responses from Metrolinx are shared publicly on the Metrolinx Engage website. Participants also have the option to vote for their favourite questions or responses.

From May 12, 2021 to June 11, 2021, individuals have also been able to provide feedback related to the Corktown Station early works through the 'Provide Your Feedback' function on the Project webpage. 'Provide Your Feedback' is a fillable anonymous form where participants can provide their feedback on the Draft Corktown Station Early Works Report by answering the following questions:

- What are your thoughts on the results of the Corktown Station early works environmental studies?
- Which Corktown Station early works environmental study is most important to you and why?
- Is there anything else we missed? Please let us know if you have any additional thoughts or concerns about the Draft Corktown Station Early Works Report.

To provide feedback on individual environmental studies, fillable anonymous environmental discipline-specific feedback forms with the following questions were located at the end of each environmental discipline webpage:

- What are your thoughts on the Air Quality study key findings and identified potential impacts and mitigation measures?
- What are your thoughts on the Archaeological Resources study key findings and identified potential impacts and mitigation measures?

- What are your thoughts on the Cultural Heritage Report key findings and identified potential impacts and mitigation measures?
- What are your thoughts on the Hydrology and Surface Water study key findings and identified potential impacts and mitigation measures?
- What are your thoughts on the Natural Environment study key findings and identified potential impacts and mitigation measures?
- What are your thoughts on the Noise and Vibration study key findings and identified potential impacts and mitigation measures?
- What are your thoughts on the Socio-Economic Environment study key findings and identified potential impacts and mitigation measures?
- What are your thoughts on the Soil and Groundwater study key findings and identified potential impacts and mitigation measures?
- What are your thoughts on the Traffic and Transportation study key findings and identified potential impacts and mitigation measures?

All 'Provide Your Feedback', environmental discipline-specific feedback form submissions, 'Contact Us' and 'Ask-A-Question' submissions related to Corktown Station early works received through to June 11, 2021 are available in **Appendix B3**. This appendix includes a summary of public email correspondence and a detailed correspondence record captured through to June 11, 2021.

The following online statistics were collected during the public engagement period for the Draft Corktown Station Early Works Report from May 12, 2021 to June 11, 2021:

- Approximately 975 people visited the early works engagement webpages on the Project website to learn more about early works planned for Corktown Station and share feedback;
- Fourteen questions and comments related to Corktown Station early works were received by email and through the 'Contact Us' and 'Ask-A-Question' features; and
- Twenty feedback form submissions were received in response to the Draft Corktown Station Early Works Report.

8.2.2 Public Feedback

Public feedback received by the Project Team prior to, and during the review period for the Draft Corktown Station Early Works Report between May 12, 2021 and June 11,

2021, is included in **Appendix B3**. All comments received from the public have been redacted to protect personal information.

A detailed summary of public feedback received up to June 11, 2021 is provided below.

8.2.2.1 Summary of Public Feedback – Email, Contact Us and Ask-A-Question

The following section highlights the key findings identified through public feedback gathered prior to the release of the Draft Corktown Station Early Works Report, and during the review period for the Draft Corktown Station Early Works Report (May 12, 2021 to June 11, 2021). Complete correspondence related to this feedback is found in **Appendix B3**.

Input received via email submissions and the 'Contact Us' and 'Ask-A-Question' features of the Project website fell into the following general themes:

- Station locations, designs, and names;
- Environmental impacts – flooding;
- Environmental study results;
- Public engagement process;
- First Parliament site commemoration - engagement process;
- First Parliament site and impacts associated with future development;
- Noise and vibration impacts and mitigation measures;
- Construction timelines and scope; and
- Project support and opposition.

<u>Station Locations, Designs and Names</u>

- Two individuals requested clarification regarding the location of Corktown Station.
- A few individuals questioned potential station locations, including at the King Street East and Parliament Street intersection and the King Street East and Sumach Street intersection.
- One individual stated that Corktown Station seems to be located in the St. Lawrence neighbourhood and asked if Cosburn Station could be named East York Station instead.
- One individual expressed concerns regarding station design and questioned whether station design will be coordinated with surrounding historical buildings.

- One individual inquired about the potential for future Ontario Line stations to be built on Cherry Street or in the Portlands/Distillery District/East Bayfront area. This individual also noted the heritage features of the Cherry Street interlocking tower could be incorporated into future station designs.
- One individual requested to know if the Portland redevelopment and ridership information were considered in the planning rationale for station locations. The individual requested a map showing the pedestrian connectivity for the Corktown and East Harbour areas.

Environmental Impacts – Flooding

- One individual shared concern regarding the flood protection area near 39 Parliament Street and requested to know if the Ontario Line would travel underneath it, and if so, if tunneling the Ontario Line in this area would lead to flooding risks/issues.

Environmental Study Results

- One individual expressed concern that 70 Berkeley Street (Alumae Theatre) was not included in the report, and noted the building has a heritage plaque since 2010.

Public Engagement Process

- One individual requested to know more about the public engagement process associated with Corktown Station and East Harbour Station and questioned if alternatives would be considered.
- One individual requested a copy of the Draft Corktown Station Early Works Report and to be added to the Project Distribution List.

First Parliament Site Commemoration – Engagement Process

- One individual expressed concern regarding the previous consultation efforts/ process with the City, Indigenous Nations, and other parties, specifically regarding Metrolinx's approach to addressing stakeholder concerns. The individual inquired whether the consultation process for Corktown Station early works, specifically related to First Parliament site commemoration would be approached differently than previous consultation efforts. The individual requested to know whether Metrolinx would modify plans if significant archaeological finds were encountered or if significant objections were made by the City, Indigenous Nations or other parties.

First Parliament Site and Impacts Associated with Future Development

- Two individuals expressed concern and requested clarification regarding potential impacts, specifically expropriation, to properties on the First Parliament site. One of these individuals stated that they understand the First Parliament site to be an Historical Cultural Heritage property under the *Ontario Heritage Act*. They requested to know the future plans for the First Parliament site and expressed that it should be protected. They also noted the importance to the city as a whole of preserving historic cultural heritage attributes within the First Parliament site.
- Several individuals expressed opposition toward the planned development on the First Parliament Site and noted the Site should be protected and preserved.
- One individual questioned plans for Transit-Oriented Communities related to Corktown Station, clarification on Minister's Zoning Orders and potential related impacts to the local community.
- In addition to the existing Ontario Heritage Trust commemorative plaque on the First Parliament Site, paying tribute to Ontario's First Parliament Buildings 1798, one individual suggested rebuilding the log cabin on the First Parliament site.

Noise and Vibration Impacts and Mitigation Measures

- Two individuals expressed concerns regarding potential noise and vibration impacts, one referring to the Project in general and the other specifically focused on predicted levels at their condominium building.
- One individual requested clarification on why 90 Trinity Street was not assessed in the report. They also asked why noise impacts were not assessed at Erin Street. Noise prediction figures along Erin Street and an example of predicted noise and vibration effects that are predicted at their property were requested.
- One individual inquired about the depth below grade of the Ontario Line tracks at the Corktown Station location.

Construction Timelines and Scope

- A few individuals inquired about project timelines, planned scope of work, and timelines (duration and hours of operation) for demolition and construction.

Project Support and Opposition

- One individual expressed excitement about the Project and associated neighbourhood enhancements and recognition of the First Parliament site.
- A few individuals expressed opposition to the Ontario Line Project.

All public correspondence related to Corktown Station early works is provided in **Appendix B3**.

8.2.2.2 Summary of Public Feedback – 'Provide Your Feedback' and Draft Corktown Station Early Works Report Environmental Discipline-Specific Forms

The following themes emerged through the online 'Provide Your Feedback' and environmental discipline-specific feedback forms submitted through the Engagement webpage (Project website) from May 12, 2021 to June 11, 2021:

- Construction and demolition scope, schedule and timelines;
- First Parliament site commemoration and engagement;
- Accessibility;
- Environmental study results;
- Communications activities and complaints protocols; and
- Future development and existing policies, plans and projects.

What are your thoughts on the results of the Corktown Station early works environmental studies?

- **Construction and Demolition Scope, Schedule and Timelines**
  - One individual expressed concern about the lack of details about the bridge over the Lower Don River in the report and impacts to businesses during early works.

Which Corktown Station early works environmental study is most important to you and why?

- **First Parliament Site Commemoration and Engagement**
  - One individual expressed concern about connection to the history of the Corktown neighbourhood in the Report, and suggested the Built Heritage Resources and Cultural Heritage Landscapes section include details about the City of Toronto's work on the First Parliament site. The individual also

noted that the south-west corner of the Eastern Avenue and Cherry Street intersection is a long-term care site under development.

- One individual suggested incorporating the history and heritage of the First Parliament site into the station design.

Is there anything we missed? Please let us know if you have any additional thoughts or concerns about the Draft Corktown Station Early Works Report.

- **Construction and Demolition Scope, Schedule and Timelines**
  - One individual requested that a Corktown neighbourhood description be added to the Early Works Report. The individual requested for more details about the early works scope including bridge design and impacts to the Richmond Hill GO corridor. The individual also asked about the rationale behind the locations chosen for Corktown Station early works and timing of the demolition.

What are your thoughts on the Air Quality study key findings and identified potential impacts and mitigation measures?

- **Construction and Demolition Scope, Schedule and Timelines**
  - One individual expressed concern about the several new development projects planned in the vicinity of the Corktown Station early works project footprint and the impacts of having multiple active construction sites in this area. **Communications Activities and Complaints Protocols**
  - One individual inquired about how Metrolinx will communicate to residents about ensuring mitigation measures and monitoring activities are followed, and whether detailed results of the ongoing mitigation and monitoring activities will be provided.

What are your thoughts on the Archaeological Resources study key findings and identified potential impacts and mitigation measures?

- **First Parliament Site Commemoration and Engagement**
  - Two individuals suggested reconstructing the original log cabin on the First Parliament site to honour the history of the site with more than a heritage plaque.
  - One individual inquired about engagement with the community regarding the development of the Heritage Interpretation Plan for the station and First Parliament site.

What are your thoughts on the Cultural Heritage Report key findings and identified potential impacts and mitigation measures?

- **Future Development and Existing Policies, Plans and Projects**
  - One individual inquired about timing for when the Distillery District National Historic Site and Heritage Conservation District Plan will be available online.
- **Environmental Study Results**
  - One individual expressed concern for impacts to 70 Berkeley Street (Alumnae Theatre). The individual noted that the property is a heritage building and was not included in the report. They also noted that the property has a Heritage Toronto plaque, and provided a link to the entry for the property in TO Built.

What are your thoughts on the Noise and Vibration study key findings and identified potential impacts and mitigation measures?

- **Environmental Study Results**
  - One individual inquired about noise and vibration impacts at a condominium building at 90 Trinity Street.
  - One individual suggested considering sound stages, film sets and recording studios in the area.
- **Communications Activities and Complaints Protocol**
  - One individual inquired about the communications and complaints protocol for residents within the vicinity of the construction areas, in terms of noise and vibration. The individual asked what mechanisms are in place to ensure accountability for noise and vibration limit exceedances during nighttime hours. The individual asked what forms of communication will be used to inform residents of the nearest representative noise-sensitive receptors noted in the Draft Corktown Station Early Works Report. The individual also requested to know the locations of the noise and vibration monitoring equipment, if Metrolinx will complete a pre- and post-construction condition assessment and alternate means of construction that may be used

What are your thoughts on the Socio-Economic Environment study key findings and identified potential impacts and mitigation measures?

- **Future Development and Existing Policies, Plans and Projects**
  - One individual noted that the mapping does not reflect future planned neighbourhoods along the waterfront, and suggested the Parks and Public Realm Plan and the Downtown Mobility Strategy be considered for the development on Parliament Street.
  - One individual expressed concern regarding the location of Corktown Station, and suggested Metrolinx follow the Master Plan prepared by the City of Toronto.
- **First Parliament Site Commemoration and Engagement**
  - One individual suggested reconstructing the original log cabin on the First Parliament site to honour the history of the site with more than a heritage plaque.
- **Accessibility**
  - One individual inquired about how Metrolinx will ensure walkways around the site are kept free from obstructions and ensure *Accessibility for Ontarians with Disabilities Act* (AODA) requirements are enforced in areas around the construction site.

What are your thoughts on the Soil and Groundwater study key findings and identified potential impacts and mitigation measures?

- **Communications Activities and Complaints Protocol**
  - One individual requested clarification on how residents can report changes to their properties, submit requests for changes in mitigation measures, and forms of communication that will be used to notify residents of changes to soil and groundwater activities.

What are your thoughts on the Traffic and Transportation study key findings and identified potential impacts and mitigation measures?

- **Communications Activities and Complaints Protocol**
  - One individual asked how residents can report negative transportation experiences, submit requests for changes in mitigation measures, and about the forms of communication that will be used to notify residents of changes in traffic patterns for pedestrians, cyclists, motorists, and transit users.

- **Environmental Study Results**
  - One individual expressed concern about traffic congestion during construction and noted that all planned transportation detours should be coordinated.
  - One individual noted that priority on the roads should be given to public traffic and not construction vehicles, and asked Metrolinx to ensure construction vehicles and construction personnel do not park vehicles in a way that disrupts general public parking.

No public feedback was received regarding the key findings, potential impacts and mitigation measures for the following studies:

- Hydrology and Surface Water; and
- Natural Environment.

All public correspondence related to the Draft Corktown Station Early Works Report is provided in **Appendix B3**.

8.3 Engagement with Community Stakeholders and Groups

Eighty-nine community stakeholders and groups have been engaged in the Ontario Line Project through July 15, 2021 as listed below. Each of these community stakeholders and groups were notified of the publication of the Draft Corktown Station Early Works Report via email on May 12, 2021, and were advised to provide feedback no later than June 11, 2021. They were also all notified of the publication of the Final Corktowk Station Early Works Report (this Report) via email on July 15, 2021.

- Aboriginal Labour Force Development Circle;
- Aboriginal Legal Services;
- Amazing Moss Park;
- Anishnawbe Health Toronto;
- Association for Native Development in the Performing and Visual Arts;
- Beaconsfield Village Residents Association;
- Building Roots;
- Campbell House Museum;
- Canadian Council for Aboriginal Business;
- CF Toronto Eaton Centre;
- Chinatown Business Improvement Area;

- CityPlace Fort York Business Improvement Area;
- CityPlace Residents' Association;
- Community Living Toronto;
- Corktown Residents and Business Association;
- Danforth Business Improvement Area;
- Danforth Residents Association;
- Distillery Historic District;
- Don Mills Residents Inc.;
- Don Valley Community Legal Services;
- Downtown Yonge Business Improvement Area;
- East End Transit Alliance;
- East Waterfront Community Association Toronto;
- Enoch Turner Schoolhouse Foundation;
- Flemingdon Health Centre;
- Fontbonne Ministries;
- Fort York Neighbourhood Association;
- Friends of Corktown Common;
- Friends of Flemingdon Park;
- Friends of Moss Park;
- Friends of Trinity Bellwoods Park;
- Gabriel Dumont Institute;
- Garden District Residents Association;
- Garment District Neighbourhood Association;
- Gooderham and Worts Neighbourhood Association;
- Grange Community Association;
- GreekTown on the Danforth Business Improvement Area;
- Green Communities Canada;
- Lakeshore East Community Advisory Committee;
- Leadership of Downtown Toronto Business Improvement Areas;
- Leaside Green and Leaside Park Terrace Condos;
- Leaside Residents Association;
- Leslieville Business Improvement Area;
- Liberty Village Business Improvement Area;
- Liberty Village Residents Association;

- March of Dimes;
- Miziwe Biik Aboriginal Employment & Training;
- Native Canadian Centre of Toronto;
- Native Men's Residence;
- Native Women's Resource Centre;
- Nishnawbe Homes;
- Ontario Aboriginal HIV/AIDS Strategy;
- Pape Area Concerned Citizens for Transit;
- Pape Avenue Junior Public School Parent Council;
- Pape Village Business Improvement Area;
- Parkdale Residents Association;
- Parkdale Village Business Improvement Area;
- Queen Street West Business Improvement Area;
- Regent Park Neighbourhood Association;
- Respect Local Planning;
- Riverside Business Improvement Area;
- Sisters of St. Joseph Toronto;
- St. Lawrence Market Neighbourhood Business Improvement Area;
- St. Lawrence Neighbourhood Association;
- The 519;
- The Bentway Conservancy;
- The Danny Business Improvement Area;
- The Friends of Fort York and Garrison Common;
- The Neighbourhood Association;
- The Ontario Federation of Indigenous Friendship Centres;
- Thorncliffe Park Community Association;
- Thorncliffe Park Women’s Committee;
- Thorncliffe Soccer Club;
- Toronto Aboriginal Support Services Council;
- Toronto Community Housing;
- Toronto Entertainment District Business Improvement Area;
- Toronto Entertainment District Residents Association;
- Toronto Financial District Business Improvement Area;
- Trinity Bellwoods Business Improvement Area;

- United Way of Greater Toronto;
- Wandering Spirit School;
- Waterfront Business Improvement Area;
- West Don Lands Committee;
- West Queen West Business Improvement Area;
- Wigwamen;
- WoodGreen Community Services;
- Wynford-Concord Residents Association;
- Young Men's Christian Association of Greater Toronto; and,
- 2-Spirited People of the 1st Nations.

On September 28, 2020, Metrolinx met with the West Don Lands Committee to provide updates on the Ontario Line Project and downtown segment. Items that were discussed included the procurement model, construction of stations and tunnels, station location and design, impacts to heritage buildings, flood impacts and mitigation, and operations of the Ontario Line.

On November 25, 2020, Metrolinx met with the St. Lawrence Neighbourhood Association to provide an overview of the Ontario Line Project including information on archaeological resources and noise and vibration studies as well as updates for the Downtown project segment (Osgoode Station to Don Yard). Items discussed included safety, station design, potential impacts to traffic and parks, construction noise and vibration mitigation, lessons learned from the Eglinton Crosstown Light Rail Transit project and Corktown Station construction impacts.

On March 8, 2021, Metrolinx met with the Gooderham and Worts Neighbourhood Association to present an overview of the Ontario Line Project with a focus on Moss Park and Corktown Stations. Items discussed included anticipated vibration impacts to residential buildings located in the Distillery District, the proposed pedestrian and cycling crossing over the Lower Don River, coordination with other nearby construction projects to reduce impacts, and collaboration with the City of Toronto for the Parliament Square Park upgrades. The Gooderham and Worts Neighbourhood Association inquired about the long-term use of the First Parliament Site and whether the community led First Parliament Plan will be considered. Metrolinx noted that they were working closely with the City on an integrated plan for the short, medium and long term plans for the site, including a plan for the construction and operation of the Ontario Line in this area. Those plans will build upon the First Parliament Site Master Plan and there will be engagement with communities on how to best capture the history of the site.

On April 13, 2021, Metrolinx met with the West Don Lands Committee and St. Lawrence Market Neighbourhood Association to discuss Corktown Station and the use of the First Parliament Site. Items discussed included land transactions, archaeological assessments, station design, community engagement and Transit Oriented Communities.

Metrolinx will continue to engage with community stakeholders and groups as Corktown Station early works planning progresses.

Correspondence records with community stakeholders and groups related to Corktown Station early works are provided in **Appendix B3** of this Report.

8.4 Engagement with Technical Stakeholders

Technical stakeholders engaged throughout the Project to-date, including federal, provincial and municipal agencies, conservation authorities and other technical stakeholders (e.g., utility companies) are listed below.

- **Federal Agencies**
  - Fisheries and Oceans Canada; and,
  - Transport Canada.
- **Provincial Agencies**
  - Infrastructure Ontario;
  - Ministry of Economic Development, Job Creation and Trade;
  - Ministry of Education, Capital Programs Branch;
  - Ministry of the Environment, Conservation and Parks;
  - Ministry of Heritage, Sport, Tourism and Culture Industries;
  - Ministry of Municipal Affairs and Housing;
  - Ministry of Natural Resources and Forestry;
  - Ministry of the Solicitor General (formerly Ministry of Community Safety and Correctional Services);
  - Ministry of Transportation; and,
  - Ontario Provincial Police.
- **Municipal Agencies**
  - City of Toronto;
  - Toronto Catholic District School Board; and,
  - Toronto District School Board.
- **Conservation Authorities**
  - Toronto and Region Conservation Authority.

- **Other Technical Stakeholders**
  - Canadian National Rail;
  - Exhibition Place;
  - George Brown College;
  - Hydro One Networks Incorporated;
  - La Cité;
  - Law Society of Ontario;
  - Ontario Heritage Trust; and,
  - Ontario College of Art & Design University.

All technical stakeholders were provided with the opportunity to review draft technical reports and a draft of the Draft Corktown Station Early Works Report in March 2021. Technical stakeholders listed above also received a copy of the Notice of Publication of Draft Corktown Station Early Works Report and the Notice of Publication of Final Corktown Station Early Works Report and a link to review the reports via email on May 12, 2021 and July 15, 2021 respectively. Exhibition Place was not provided a copy of the Notice of Publication of Draft Corktown Station Early Works Report due to an internal error.

In summer and fall 2020, Metrolinx met with the Ontario Heritage Trust to introduce the Ontario Line Project, discuss potential property impacts to the First Parliament Site and the exciting opportunity that the Project presented to complete archaeological investigations and unlock the rich history of the site. The teams agreed to work together to identify conservation and preservation opportunities at the site.

Metrolinx will continue to engage with technical stakeholders as Corktown Station early works planning progresses.

Correspondence records with technical stakeholders related to Corktown Station early works are provided in **Appendix B3** of this Report.

8.5 Engagement with Elected Officials

Elected Officials who were informed of the release of the Draft Corktown Station Early Works Report and Final Corktown Station Early Works Report, and invited to respond or be briefed through July 15, 2021 are listed below.

- Councillor Anthony Peruzza;
- Councillor Brad Bradford;
- Councillor Denzil Minnan-Wong;
- Councillor Gary Crawford;
- Councillor Jaye Robinson;

- Councillor Joe Cressy;
- Councillor Kristyn Wong-Tam;
- Councillor Michael Ford;
- Councillor Paula Fletcher;
- Member of Provincial Parliament Chris Glover;
- Member of Provincial Parliament Kathleen Wynne;
- Member of Provincial Parliament Michael Coteau;
- Member of Provincial Parliament Peter Tabuns; and,
- Member of Provincial Parliament Suze Morrison.

Copies of the Notice of Publication of Draft Corktown Station Early Works Report and the Notice of Publication of Final Corktown Station Early Works Report, with a link to review the reports, were provided to Elected Officials via email on May 12, 2021 and July 15, 2021 respectively.

Metrolinx will continue to engage with Elected Officials as Corktown Station early works planning progresses. Correspondence with Elected Officials related directly to Corktown Station early works are provided in **Appendix B3** of this Report.

8.6 Engagement with Indigenous Nations

Indigenous Nations that have been provided information on the Ontario Line Project between February 2020 and July 2021 are listed below.

- Haudenosaunee Confederacy Chiefs Council;
- Huron-Wendat Nation;
- Kawartha Nishnawbe First Nation;
- Métis Nation of Ontario;
- Mississaugas of the Credit First Nation;
- Six Nations of the Grand River;
- Williams Treaties First Nations:
    - Alderville First Nation;
    - Beausoleil First Nation;
    - Chippewas of Georgina Island;
    - Chippewas of Rama First Nation;
    - Curve Lake First Nation;
    - Hiawatha First Nation; and,
    - Mississaugas of Scugog Island First Nation.

In March 2020, Kawartha Nishnawbe First Nation indicated that the Nation holds Treaty and Aboriginal rights within the Project's study area. They noted that they do not have the capacity to participate in reviewing reports and asked whether Metrolinx will be providing assistance. Metrolinx offered to meet to discuss possible opportunities to support the review process but a response from Kawartha Nishnawbe First Nation was not received. Metrolinx continues to welcome a conversation with Kawartha Nishnawbe First Nation in the future.

In September 2020, Six Nations of the Grand River noted it did not have the resources or capacity to review large reports and meet requested deadlines, with the exception of archaeological assessment reports. Metrolinx held a meeting with the Nation on November 25, 2020 to better understand the issues and concerns of the Six Nations of the Grand River and identify opportunities to support meaningful engagement with Six Nations of the Grand River. It was noted during this meeting that the Nation identified that specific treaty information was not included in the archaeological assessments that supports the Ontario Line[35]. The draft meeting minutes from the November 25, 2020 meeting reflecting this concern were submitted to the Six Nations of the Grand River in early January 2021 for further input. Recognizing that the ongoing COVID-19 pandemic may be impacting the operations of the Six Nations of the Grand River office, Metrolinx continues to reach out to the Six Nations of the Grand River for further input from the Nation on how to best address this concern.

On January 19, 2021, Metrolinx invited Indigenous Nations to participate in archaeological monitoring for borehole drilling at First Parliament site that was taking place in January and February 2021 to support environmental assessment and geotechnical studies related to the Ontario Line Project. In response to this invitation, Six Nations of the Grand River, Huron-Wendat Nation, and Haudenosaunee Confederacy Chiefs Council participated in archaeological monitoring. On the days they were unable to attend, they were sent daily reports about the field work that took place. Daily field work reports were also shared with Curve Lake First Nation and Mississaugas of the Credit First Nation, who had requested them in lieu of attendance which was limited due to COVID-19 concerns.

On February 23, 2021, Metrolinx met with the Mississaugas of the Credit First Nation to discuss the Ontario Line and Eglinton Crosstown West Extension projects, with a particular focus on works occurring in the Don and Humber River systems. During the

35. From the perspective of Six Nations of the Grand River, information regarding Treaty 13, Nanfan Treaty, and the Fort Albany Treaty of 1701, which may be relevant to the Ontario Line Study Area, were not included in the Ontario Line Stage 1 Archaeological Assessment Reports as the reports were prepared early on in the Project and prior to engagement with Six Nations of the Grand River. Metrolinx continues to reach out to the Six Nations of the Grand River for further input on how to best address this concern, such as by including relevant treaty information in forthcoming archaeological assessment reports.

meeting, there was discussion about the First Parliament site and Metrolinx indicated that there are opportunities to commemorate Indigenous Peoples at this site. Mississaugas of the Credit First Nation also indicated that they are interested in participating in all archaeological fieldwork for the Ontario Line Project. Metrolinx confirmed that the Nation will be invited to all archaeological fieldwork for the Project.

In March 2021, Metrolinx provided all Indigenous Nations listed above with the opportunity to review draft technical reports and a draft of the Draft Corktown Station Early Works Report, prior to the finalization and publication of this Report.

On April 12, 2021, Metrolinx provided all Indigenous Nations listed above with information about Corktown Station early works and upcoming field visits and investigations at the Corktown Station early works site, which includes two registered archaeological sites, the First Parliament Site and the Lime Kiln Site. Metrolinx also invited the Nations to provide feedback on the commemoration of the First Parliament Site and to participate in upcoming archaeological fieldwork.

On May 12, 2021, Metrolinx provided Indigenous Nations with the Notice of Publication of Draft Corktown Station Early Works Report and a link to the Draft Corktown Station Early Works Report via email.

On May 13, 2021, Metrolinx met with Huron-Wendat Nation to provide an overview of the Ontario Line Project as well as the archaeological work associated with the Ontario Line crossings of the Don River system and to discuss the proposed plans relating to archaeology at the First Parliament site. Metrolinx noted that the Huron-Wendat Nation will be invited to participate in archaeological fieldwork for the Ontario Line Project and to review all archaeological assessments.

On July 15, 2021, Metrolinx provided Indigenous Nations with the Notice of Publication of Final Corktown Station Early Works Report and a link to the Final Corktown Station Early Works Report via email.

No comments related to Corktown Station early works have been received to-date from Indigenous Nations, though, as discussed above, Metrolinx did receive concerns related to capacity to review.

Consultation with Indigenous Nations will continue as Corktown Station early works progress. Correspondence records with Indigenous Nations related to Corktown Station early works are provided in **Appendix B3** of this Report. A copy of the Draft Corktown Station Early Works Report along with the Notice of Publication of Draft Corktown Station Early Works Report was provided to Indigenous Nations on May 12, 2021. A copy of the Final Corktown Station Early Works Report along with the Notice of

Publication of Final Corktown Station Early Works Report was provided to Indigenous Nations on July 15, 2021.

8.7 Issues Resolution Process and Final Early Works Report

The Draft Corktown Station Early Works Report was made available to the public, technical stakeholders, elected officials, Indigenous Nations and other interested persons for review from May 12, 2021 to June 11, 2021. During this time, interested parties had the opportunity to submit written comments to Metrolinx. In accordance with Section 10 of Ontario Regulation 341/20: Ontario Line Project, Metrolinx established an issues resolution process to attempt to resolve any concerns raised by interested persons and Indigenous Nations, in a way that does not cause unreasonable delay to the implementation of Corktown Station early works. The issues resolution process involved review of comments provided during the 30-day review period, development of responses to comments, and engagement of subject matter experts to support the development of responses, as required. Based on comments received, no further studies beyond what Metrolinx has already committed to complete have been identified as required.

In accordance with Section 11(1)(b) of Ontario Regulation 341/20: Ontario Line Project, **Section 8.7.1** of this Report includes:

- A description of the issues resolution process in respect of any concerns raised by Indigenous Nations and interested persons;
- A description of the concerns raised by Indigenous Nations and interested persons in the issues resolution process and of the outcome of the process, including what, if anything, Metrolinx did or will do in respect of the concerns raised; and
- A description of any impacts to the timeline for implementation of the Corktown Station early works.

As the Draft Corktown Station Early Works Report has been updated, Metrolinx has issued a Notice of Publication of the Final Corktown Station Early Works Report and posted the Report to the Project webpage (www.metrolinx.com/ontarioline) within 65 days of the issuance of the Notice of Publication of the Draft Corktown Station Early Works Report.

The Minister of the Environment, Conservation and Parks may issue a notice to Metrolinx imposing conditions related to the early works within 35 days after receipt of

the Notice of Publication of the Final Early Works Report. The Minister may also choose to inform Metrolinx that no notice will be issued.

The Minister may issue a notice only if:

- The Minister is of the opinion that the way in which Metrolinx addressed a concern raised during the issues resolution process would cause unreasonable delay to the implementation of Corktown Station early works, and the conditions in the Minister's notice modify the way in which the concern is addressed in the Final Corktown Station Early Works Report without causing reasonable delay to the implementation of Corktown Station early works; or
- The Minister is of the opinion that the early works may have an adverse impact on the existing Aboriginal or treaty rights of Indigenous peoples within Canada, and the conditions may prevent, mitigate or remedy the adverse impact.

The implementation of Corktown Station early works may proceed if no notice is received within the 35-day period, the Minister informs Metrolinx that no notice will be issued, or if the requirements of the Minister's notice have been satisfied.

8.7.1 Description of Metrolinx Response to Concerns Expressed by Indigenous Nations and Interested Persons

In accordance with Section 11(1)(b) of the Ontario Regulation 341/20: Ontario Line Project, the following section provides a description of what Metrolinx did to respond to concerns expressed by Indigenous Nations and interested persons, including government review agencies and other technical stakeholders.

No comments were received from Indigenous Nations during the review period.

Prior to publication of the Draft Corktown Station Early Works Report, Indigenous Nations, government review agencies and other technical stakeholders were provided with the opportunity to review the report draft. During this time, Metrolinx received comments from government agencies and other technical stakeholders which were addressed throughout the report prior to the Draft Corktown Station Early Works Report publication, and documented in **Appendix B3** of the Draft Corktown Station Early Works Report. No comments were received from Indigenous Nations during this time.

During the 30-day public review period for the Draft Corktown Station Early Works Report (May 12, 2021 to June 11, 2021), Metrolinx received 34 public comments (seven emails, five 'Contact Us', two 'Ask-A-Question' and 20 Provide Your Feedback

submissions) and comments from two community stakeholders and groups and three government review agencies (City of Toronto, Toronto District School Board, and Ministry of the Environment, Conservation and Parks).

A summary of key themes of comments, questions and concerns received during the review period, what Metrolinx has done in response to the feedback received, and any potential timeline implications is provided in **Table 8-1**. In response to feedback and concerns received by interested persons, Metrolinx revised the Draft Corktown Station Early Works Report as outlined in **Table 8-1** and captured in this Final Corktown Station Early Works Report. No comments resulted in responses impacting the timeline for implementation of Corktown Station early works.

Table 8-1: Summary of Key Themes of Feedback Received, Metrolinx Actions in Response to the Feedback, and Implications to the Corktown Station Early Works Timeline

Comment From	Key Themes of Feedback Received	Key Feedback	Metrolinx Actions in Response to Feedback	Corktown Station Early Works Timeline Implications
Public	Station design, locations, accessibility and names	■ Requests for clarification on station locations, names, pedestrian connectivity, coordination of station design with surrounding historical buildings, and incorporation of heritage features into design. ■ Inquiries regarding AODA compliance at the future Corktown Station and during construction.	■ Provided confirmation of Corktown Station early works scope, location, along with anticipated impacts and mitigation measures. ■ Development and provision of comment responses, including sharing of information (**Appendix B3**). ■ Inclusion of concern in the Consultation section of the Corktown Station Early Works Report and **Appendix B3** as part of the consultation record.	■ None
Public	Environmental study results and environmental impacts	■ Concern regarding flood protection areas and flooding/risk issues as a result of the Ontario Line Project, specifically in the area surrounding 39 Parliament Street. ■ Concerns regarding heritage buildings within the vicinity of the future Corktown Station, specifically at 70 Berkeley Street. ■ Concerns regarding increases in traffic congestion surrounding the construction sites and construction vehicle interference with regular traffic. ■ Concerns regarding noise and vibration impacts to surrounding condominium buildings. ■ Requests for clarification on why noise impacts along Erin Street and at 90 Trinity Street was not assessed.	■ Provided clarification that 70 Berkeley Street is outside the Built Heritage Resources and Cultural Heritage Landscapes Study Area, and there is no potential for direct or indirect impacts to heritage attributes of this property. ■ Development and provision of comment responses, including sharing of information (**Appendix B3**). ■ Inclusion of concern in the Consultation section of the Corktown Station Early Works Report and **Appendix B3** as part of the consultation record.	■ None
Public	Construction and demolition scope, schedule and timelines	■ Requests for information and concerns regarding project timelines, planned scope of work, alternatives available for businesses, construction staging, and hours of operation for demolition and construction. ■ Requests for description of impacted neighbourhoods added to the Final Corktown Station Early Works Report, specifically Corktown neighbourhood. ■ Concerns regarding construction sites in close proximity to condominium buildings and other active construction sites.	■ Inclusion of Corktown neighbourhood description to **Section 5.6.1.3.4** of the Final Corktown Station Early Works Report. ■ Development and provision of comment responses, including sharing of information (**Appendix B3**). ■ Inclusion of concern in the Consultation section of the Corktown Station Early Works Report and **Appendix B3** as part of the consultation record.	■ None
Public	Project support and opposition, public engagement/communications process and activities and complaints protocols	■ Comment expressing excitement about the Ontario Line Project and associated neighbourhood enhancements and recognition of the First Parliament site. ■ Comment expressing concern and opposition to the Ontario Line Project. ■ Requests for more information on public engagement process and questions on consideration of alternatives. ■ Requests for details on protocols for complaints, and if requests for changes in mitigation and monitoring activities are possible, specifically regarding noise, traffic and soil and groundwater activities. ■ Requests for copies of upcoming reports and to be added to the Project Distribution List.	■ Sharing of links to the Province of Ontario and City of Toronto's announcement on preliminary Transit Oriented Communities plans, the Ontario Line project and Metrolinx News. ■ Confirmation of ongoing consultation and community engagement events regarding the Ontario Line Project. ■ Sharing of links to the Project webpage for more information and to sign up for the e-newsletter ■ Development and provision of comment responses, including sharing of information (**Appendix B3**). ■ Inclusion of concern in the Consultation section of the Corktown Station Early Works Report and **Appendix B3** as part of the consultation record.	■ None
Public	First Parliament site impacts and site commemoration	■ Questions and concerns regarding engagement process for the First Parliament site, requests for clarification on potential impacts to properties on the First Parliament site. ■ Questions regarding plans for Transit Oriented Communities related to Corktown Station. ■ Suggestions for inclusion of heritage features and connections of the site's history into station design. ■ Opposition toward the planned development on the First Parliament site.	■ Confirmation that impacts to the First Parliament site will be mitigated and that Metrolinx is working with the City of Toronto, community groups, Indigenous Nations and technical stakeholders to commemorate and celebrate the history of the First Parliament site. ■ Confirmation that a Transit Oriented Community is planned at the future Corktown Station. ■ Inclusion of 55 Eastern Avenue in **Table 5-6**, **Table 5-10**, and on **Figure 5-14**. ■ Development and provision of comment responses, including sharing of information (**Appendix B3**).	■ None

Comment From	Key Themes of Feedback Received	Key Feedback	Metrolinx Actions in Response to Feedback	Corktown Station Early Works Timeline Implications
		■ Concern regarding connection to the history of the Corktown neighbourhood and suggestions to include details about the City of Toronto's work on the First Parliament site. ■ Comment noting that the south-west corner of the Eastern Avenue and Cherry Street intersection (55 Eastern Avenue) is a long-term care site under development.	■ Inclusion of concern in the Consultation section of the Corktown Station Early Works Report and **Appendix B3** as part of the consultation record.	
Public	Future development and existing plans/policies/projects	■ Questions about when the Distillery District National Historic Site and Heritage Conservation District Plan will be available online. ■ Concerns regarding Corktown Station location and coordination with future planned neighbourhoods and suggestions to follow City of Toronto's plans such as the Downtown Parks and Public Realm Strategy and the Downtown Mobility Strategy for development of the site.	■ Development and provision of comment responses, including sharing of information (**Appendix B3**). ■ Inclusion of the Downtown Parks and Public Realm Strategy and Downtown Mobility Strategy in **Section 2.2.3.9** and **2.2.3.10** of the Final Corktown Station Early Works Report. ■ Inclusion of concern in the Consultation section of the Corktown Station Early Works Report and **Appendix B3** as part of the consultation record.	■ None
Community Stakeholders and Groups	Heritage Detailed Design Report	■ The Corktown Residents and Business Association noted that the St. Lawrence Heritage Conservation District boundaries in Appendix A4 were incorrect and requested the boundaries be updated.	■ Updates were made to **Section 5.7** and **Section 6.7** of the Ontario Line Final Corktown Station Early Works Report and **Appendix A4** to address the feedback received.	■ None
Community Groups and Stakeholders	Environmental study results and environmental impacts	■ The West Don Lands Committee expressed concern regarding the public engagement activities and noted that major project decisions were made without significant public input and engagement. ■ The West Don Lands Committee requested details on natural environment study results, soil and groundwater management plans, communications and complaints protocols for the public, and construction staging and management; and expressed concerns about traffic disruption. ■ The West Don Lands Committee suggested creating a Construction Liaison Committee composed of nearby residents and businesses to address issues and complaints from the public. ■ The West Don Lands Committee suggested a group of local heritage experts be recruited for engagement regarding heritage and archeological resources.	■ Development and provision of comment responses, including sharing of information (**Appendix B3**). ■ Confirmation that the Ontario Line reports have been drafted in compliance with Ontario Regulation 341/20 and the reports satisfy all the requirements under the regulation. ■ Encouraged further questions be provided to the Ontario Line Community Relations Team through the project forum, email or phone. ■ Confirmation that all requirements of the Endangered Species Act will be met, if any impacts to Species at Risk are found. ■ Confirmation that a Construction Liaison Committee will be established to resolve complaints or concerns. ■ Confirmation that regulatory requirements and mitigation measures will be followed, and additional mitigation measures will be implemented to manage potential impacts. ■ Confirmation that ongoing consultation with the stakeholders, Indigenous Nations, agencies and the public to establish an Interpretation and Commemoration Plan for First Parliament.	■ None
Technical Stakeholders – Provincial and Municipal Agencies	Technical Content – Description of Alternative Considered, Local Environmental Conditions, Impact Assessment, and Permits and Approvals	■ Ministry of the Environment, Conservation and Parks provided comments related to vibration. ■ City of Toronto provided comments related to archaeology, permits, noise and vibration, air quality, cultural heritage, utilities, traffic and transportation, nearby projects, natural environment, tree removal compensation, and socio-economic and land use characteristics. ■ Toronto District School Board provided comments related to student safety, traffic congestion, transit impacts, air quality and noise and vibration concerns, and future engagement with Toronto District School Board on Corktown Station early works.	■ Development and provision of comment responses to the Ministry of the Environment, Conservation and Parks. ■ Updates were made to the following sections of the Ontario Line Final Corktown Station Early Works Report and **Appendix A2** and **A3** to address feedback received from the City of Toronto: - **Table ES-2** - **Section 4.5** - **Section 5.4** - **Section 5.6** - **Section 5.8** - **Section 5.9** - **Section 6.8** ■ Development and provision of comment responses to Toronto District School Board, including sharing of information.	■ None

8.8 Commitment to Future Consultation

Metrolinx is committed to continuing Indigenous, stakeholder and public engagement and consultation beyond the regulatory requirements set out in Section 10 of Ontario Regulation 341/20. Specifically, Metrolinx will:

- Maintain the Project Engagement Webpage (Project Website) (www.metrolinx.com/ontarioline) so interested parties can access updated Project information;
- Maintain the Project Distribution List to help ensure all interested parties receive Project updates; and
- Continue discussions with members of the public, local stakeholders and Indigenous Nations with respect to potential impacts and mitigation throughout Corktown Station early works planning and construction, as appropriate.

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