

## Commitments to Future Work

The Transportation Master Plan is being completed at a conceptual level of design. There will be a future design phase to develop the preferred design at each bridge location. The following provides a summary of the commitments required during the design and construction phases. These commitments form part of the EA Approval and must be implemented by the City.

### Natural Environment Commitments

Issue	Approval Agency/ Interested Party	Future Commitment
Aquatic System Impacts, including Fish and Fish Habitat	Toronto and Region Conservation Authority (TRCA)  Fisheries and Oceans Canada (DFO)	<ul style="list-style-type: none"><li>• In-water work should be avoided or minimized, to the extent possible.</li><li>• Review potential impacts to fish and fish habitat during the design phase for each bridge to confirm impacts and permitting/approvals required.</li><li>• During design, the project team to confirm if a DFO request for review is required, and shall submit the required application to the Fish and Fish Habitat Protection Program regional office.</li></ul>
Invasive Species Management	Toronto and Region Conservation Authority (TRCA)	<ul style="list-style-type: none"><li>• Based on the scope of work and impacts, an Invasive Species Management Plan will be developed for implementation during construction, due to the sensitivities of the surrounding lands.</li><li>• Consideration for implementing Clean Equipment Protocols during construction will be reviewed based on the scope of work during construction.</li></ul>
Ecosystem Restoration/Compensation from Unavoidable Impacts	Toronto and Region Conservation Authority (TRCA)	<ul style="list-style-type: none"><li>• In areas where impacts to the natural heritage system are unavoidable, mitigation or compensation may be required. Requirements related to ecosystem restoration or compensation will be determined during the future design phases.</li></ul>

Issue	Approval Agency/ Interested Party	Future Commitment
Water Resources	Toronto and Region Conservation Authority (TRCA)	<ul style="list-style-type: none"><li>• A geotechnical or hydrogeological investigation to confirm dewatering and discharge requirements, and to identify appropriate mitigation measures with respect to potential impacts to natural features and functions may be required.</li><li>• Any alteration or interference to a watercourse (e.g., straightening, diverting, realigning, altering baseflow) has the potential to impact fish communities, but may also affect the Regulatory Flood Plain, erosion or other natural channel processes. TRCA may require an environmental study or site confirmation of watercourse locations.</li><li>• A meander belt delineation study or fluvial geomorphology analysis to confirm that any development does not conflict with natural channel processes may be required.</li><li>• A flood study or hydraulic update to confirm that there will be no impacts to the storage or conveyance of flood waters may be required.</li><li>• TRCA requires all development, infrastructure and site alteration meet the criteria in the TRCA 2012 Stormwater Management Criteria document for water quantity, water quality, erosion control, discharge water temperature, and water balance for groundwater recharge and natural features. Green Infrastructure techniques, including Low Impact Development (LID) measures should be used to address issues related to stormwater management, as well as maximize ecosystem services and mitigate the impacts of urbanization and climate change.</li><li>• The determination of the long-term stable crest of slope (or toe of slope) through a staking with TRCA staff, as well as a geotechnical assessment may be required.</li><li>• A fluvial geomorphology study is required for all five bridges; to understand the stream erosion observed for the Sewell's and Maxwell bridge and to confirm the potential bridge span and understand potential stream erosion for the Milne Bailey, Stott's and Hillside bridge. It is noted that two fluvial geomorphology assessments are required, one for Sewell's, Milne and Stott's bridges as they are located on the same watercourse (Lower Rouge River); and a second fluvial geomorphology study for the Hillside and Maxwell bridges as they are also located on the same watercourse (Little Rouge River).</li></ul>

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Regulated Wetlands	TRCA	<ul style="list-style-type: none"><li>Regulated wetlands have been identified in certain study areas for the proposed bridge upgrades.</li><li>During the detailed design phase the boundaries of the regulated wetland must be delineated through a site staking to ensure that the proposed works do not impact or interfere with the wetland.</li><li>Contact with the TRCA must be maintained to arrange the staking initiatives as required.</li></ul>
Terrestrial System	Toronto and Region Conservation Authority (TRCA)	<ul style="list-style-type: none"><li>Future design for each bridge location should seek to minimize impacts beyond the existing right-of-way. Where unavoidable, the TRCA watershed plan and terrestrial natural heritage strategy shall be consulted to develop a strategy to prevent negative impacts to the terrestrial system</li></ul>

Cultural Heritage Commitments

Issue	Approval Agency/ Interested Party	Future Commitment
Bridge Specific HIAs	City of Toronto	<ul style="list-style-type: none"><li>Bridge specific Heritage Impact Assessments (HIAs) will be prepared by a qualified heritage consultant with recent and relevant experience with heritage bridges according to the <i>City of Toronto's Terms of Reference for Heritage Impact Assessments</i> (City of Toronto, 2019) as early as possible in preliminary or detailed design. These HIAs should be submitted for review and comment to the Ministry of Citizenship and Multiculturalism and Heritage Planning at the City of Toronto. The HIAs will include an updated Ontario Regulation 9/06 evaluation for each structure designated before 2005</li></ul>
Archaeological Review	TRCA	<ul style="list-style-type: none"><li>An archaeological review by TRCA's archaeological staff must precede any disturbance to TRCA property.</li></ul>

Technical and Design Commitments

Issue	Approval Agency/ Interested Party	Future Commitment
Geotechnical	Toronto and Region Conservation Authority (TRCA)	<ul style="list-style-type: none"><li>• Based on the proposed scope of work at each bridge, determine if a detailed site characterization should be completed by a comprehensive geotechnical study at the later stage of the design, including a review of slope stability so that the ground condition and geotechnical recommendations are to be developed for the proposed works.</li><li>• Where stabilization is required due to the active erosion in the valleys, this stabilization should be designed by a geotechnical engineer to ensure that a minimum safety factor of 1.5 is met after stabilization.</li><li>• Where the work is in proximity of the steep slope and valleys, the construction methodology and sequencing should be presented at the later stages of design to ensure that the surrounding ground/slope is not adversely impacted during the construction.</li><li>• Where the work requires a construction access into the steep slopes and valleys, the cross-sections and profile should be presented for the access at the later stages of design. The slope stability assessment is required to study the cross-sections (cuts and fills) and to confirm that the slope stability is met. The slope stability analyses should also account for the heavy machinery/equipment loads and vibrations.</li><li>• At the later stage of design, cross-sections should be provided along the alignment in adequate intervals and the critical locations, which show the proposed grade with respect to the existing ground. The cross-sections should be extended enough to show all the features and slopes/banks. The extent of the proposed grading should be also shown on the site plan along the alignment.</li></ul>
Property	Toronto and Region Conservation Authority (TRCA); Ministry of Natural Resources and Forestry (MNRF)	<ul style="list-style-type: none"><li>• If TRCA property land transfer or easement is required for the implementation of the preferred alternative, permission and approval from TRCA and the Minister of Natural Resources and Forestry (MNRF) will be completed. The design will demonstrate that TRCA program and policy objectives are met.</li></ul>

Engagement and Participation of Indigenous Nations and Communities

Issue	Approval Agency/ Interested Party	Future Commitment
Indigenous Nation Involvement	Mississaugas of the Credit First Nation's (MCFN)	<ul style="list-style-type: none"><li>Fieldwork for Archaeological Assessments - An invitation to participate as a Field Liaison Representative (FLR) will be extended to for Stages 2, and Stage 3 and 4 (if required) assessments.</li></ul>
Indigenous Nation Involvement	Curve Lake First Nation	<ul style="list-style-type: none"><li>The City will continue to engage with Curve Lake First Nation during the future project phases. A summary of input provided by Curve Lake First Nation is included in Table 14 of the TMP and should be reviewed as part of the scoping of the future design phases for each bridge</li><li>Fieldwork for Archaeological Assessments - An invitation to participate as a Field Liaison Representative (FLR) will be extended to for Stages 2, and Stage 3 and 4 (if required) assessments.</li><li>Invite biologists from Curve Lake First Nation to participate in future natural environment and heritage assessments.</li></ul>

Commented [SB1]: Did this and other commitments to FNs occur?

Sustainability

Issue	Approval Agency/ Interested Party	Future Commitment
Sustainable Infrastructure	TRCA	<ul style="list-style-type: none"><li>City to consider sustainability best management practices during the procurement, design, and construction phases.</li></ul>

Operations

Issue	Approval Agency/ Interested Party	Future Commitment
Maintaining Evacuation Route	City of Toronto	<ul style="list-style-type: none"><li>Twyn Rivers Drive has been designated for use as an evacuation route in the event of a nuclear emergency at the Pickering Nuclear Generating Station. The intended use is for service vehicles while the public would be routed to Highway 401, and the future designation of this route may be reviewed under a process that is separate from this TMP. The Pickering Nuclear Generating Station began operations in 1966 (with plans to decommission in 2024), and Maxwell’s Bridge has demonstrated that it can be used successfully during that time. The timing of investment can be phased if project cost and emergency route maintenance is a concern.</li></ul>
Winter Maintenance	City of Toronto	<ul style="list-style-type: none"><li>Ensure that environmental considerations, including impacts on the natural environment as they relate to winter maintenance, are used to inform further design considerations of the Rouge Park Bridges.</li></ul>

Stakeholder Commitments

Issue	Approval Agency/ Interested Party	Future Commitment
Key Stakeholder Involvement	Mississaugas of the Credit First Nation's (MCFN)	<ul style="list-style-type: none"><li>Fieldwork for Archaeological Stages 2 through 4 will include participation of a Field Liaison Representative (FLR).</li></ul>
On-going Stakeholder Coordination	Park Canada	<ul style="list-style-type: none"><li>On-going coordination between Parks Canada and internal City of Toronto stakeholders who work on various RNUP projects and initiatives.</li></ul>
Legislation/Regulation Section 28.1 of the Conservation Authorities Act	Toronto and Region Conservation Authority (TRCA)	<ul style="list-style-type: none"><li>While the five bridges are within the boundaries of the RNUP, the city maintains ownership, jurisdiction and management responsibility for public roads and bridges on its right-of-way. Since the bridges and the road right-of-way are owned and operated by the City of Toronto, the city will require permits from TRCA for all works in the ROW. Further coordination with RNUP may be required at the design stage should access/construction be required beyond the limits of the ROW, on RNUP lands.</li></ul>

Program and Policy Commitments

Issue	Approval Agency/ Interested Party	Future Commitment
Programs to engage local communities	Toronto and Region Conservation Authority (TRCA)	<ul style="list-style-type: none"><li>During detailed design, The City will work with TRCA to confirm if a Community and Public Realm Benefits Strategy for this project is warranted.</li></ul>