

Authority to Enter Into a Project Delivery Agreement with Waterfront Toronto for the Design of Lake Shore Boulevard East, Don River to Logan

Date: May 27, 2020

To: Infrastructure and Environment Committee

From: Deputy City Manager, Infrastructure and Development Services

Wards: Wards 10 and 14

SUMMARY

This report seeks City Council authority for staff to enter into a Project Delivery Agreement with Waterfront Toronto for the purpose of designing future infrastructure that is overlapping between the Port Lands Flood Protection project and Gardiner Strategic Rehabilitation Plan. Specifically, Waterfront Toronto would undertake detailed design work, and prepare a Class B cost estimate and traffic impact assessment for a new Lake Shore Boulevard Bridge over the Don River, as well as a reconstructed Lake Shore Boulevard East, from approximately Don Roadway to Logan Avenue.

The Port Lands Flood Protection project will provide permanent flood protection for approximately 290 hectares or 715 acres of land through the creation of a new, naturalized mouth of the Don River and other significant flood protection measures (e.g., river valley, wetlands, natural habitat, sediment management facility and other structures). In addition, the project will deliver the essential municipal services (e.g., roads, bridges, sewers, water supply, etc.) that must be undertaken concurrently with the flood protection works for technical and logistical reasons.

In order to accommodate the widening of the Don River mouth for permanent flood protection, the existing Lake Shore Boulevard Bridge over the Don River needs to be lengthened from two bays to four, and raised to accommodate flow discharges during flooding events. To implement the Gardiner East EA and Gardiner Strategic Rehabilitation Plan, the Bridge must also be widened in order to accommodate required cycling and public realm elements. Furthermore, the existing bridge deck and girders are close to the end of their useful service lives and need to be replaced and/or extensively refurbished.

City staff, in consultation with Waterfront Toronto have concluded that the most efficient and practical approach to construction is to build a new bridge in a single project that combines the overlapping scope of the two initiatives. Additionally, City and Waterfront Toronto staff have concluded that the project should also address the related

streetscape, public realm and cycling infrastructure that has been conceptualized in the Lake Shore Boulevard East Public Realm Vision, Phasing and Implementation Plan.

Although the project could be constructed by either the City or Waterfront Toronto, City and Waterfront Toronto staff are of the preliminary view that construction should be led by Waterfront Toronto. This view will however be subject to additional analysis that will be done as part of the design, cost estimate and traffic impact assessment work described in this report.

The implementation of a single/integrated project would help both projects achieve cost efficiencies by utilizing one construction crew and reduce "throw away" costs. Throw away costs would include multiple construction mobilizations and demobilizations, the temporary underpinning of Gardiner support structures and the reconstruction and widening of the newly lengthened bridge spans in order to accommodate Gardiner East EA road widths and public realm aspects. Costs associated with the increased safety risks under the scenario of implementing the projects separately would also be significantly reduced. A comprehensive list of reasons for constructing a new Lake Shore Boulevard East bridge in a single project that combines the overlapping and related scope of the two initiatives is provided in the Comments section of this report.

The proposed Project Delivery Agreement recommended in this report would allow Waterfront Toronto to undertake the development of a detailed design, including a Class B cost estimate, implementation phasing plan and traffic impact assessment. A second Project Delivery Agreement would be required for construction, should additional analysis lead to the conclusion that the project would be best implemented by Waterfront Toronto.

Funds for the implementation of the final design would be identified in a future Transportation Capital Budget submission. In addition, if applicable, staff would seek additional authority for a Project Delivery Agreement with Waterfront Toronto for the construction phase of the project.

RECOMMENDATIONS

The Deputy City Manager - Infrastructure and Development Services recommends that:

a) City Council authorize the City to enter into a Project Delivery Agreement with Waterfront Toronto (the Toronto Waterfront Revitalization Corporation) for the completion of the design, cost estimate and traffic impact assessment for Lake Shore Boulevard East including a new bridge over the Don River on terms and conditions satisfactory to the Deputy City Manager - Infrastructure and Development Services and in a form satisfactory to the City Solicitor.

b) City Council authorize the Deputy City Manager - Infrastructure and Development Services to execute this Project Delivery Agreement on behalf of the City.

FINANCIAL IMPACT

The estimated value of the work that would be above and beyond the work that is being undertaken for Port Lands Flood Protection -- work that is attributable to the Strategic Rehabilitation Plan for the F.G. Gardiner Expressway and the reconstruction of Lake Shore Boulevard East -- is up to \$16 million. Waterfront Toronto would generate a Class B cost estimate for the construction phase of the project.

Funds to complete the work described in this report are available in the approved 2020-2029 Capital Budget and Plan for Transportation Services (CTP122-08). Funding required for implementation of the design will be included for consideration as part of future Capital Budget submissions for Transportation Services.

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial impact information.

DECISION HISTORY

At its meeting of November 8 and 9, 2016 City Council adopted the Port Lands Flood Protection Due Diligence Review, which provided background details on the project's schedule, budget, risks and scope, including roads and services, bridges, flood protection and marine structures, parks, and environmental matters such as soil and groundwater conditions. Options and technologies for environmental remediation and management were also identified and the report proposed a design concept and a community-based risk assessment process to properly evaluate and manage environmental risks. The report also summarized the costs and benefits of the project, and recommended a proposed scope, budget and schedule. A copy of the report and attachments can be found at this link:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2016.EX18.3>

At its meeting of February 12, 2018, City Council authorized staff to enter into a Contribution Agreement with Waterfront Toronto and the Federal and Provincial governments related to the tri-government funding necessary to construct the Port Lands Flood Protection Project. Executed on May 1, 2018, the Agreement contains terms related to eligible expenses, risk management, scope and overall project management. A copy of the report can be found at this link:

<https://www.toronto.ca/legdocs/mmis/2018/ex/bgrd/backgroundfile-111934.pdf>

At its meeting on December 13, 14 and 15, 2016, in consideration of the report on the New Implementation Approach for the F.G. Gardiner Expressway Revised Strategic Rehabilitation Plan, City Council authorized the Executive Director, Engineering and Construction Services, to proceed with the new approach for the implementation of the Revised Strategic Rehabilitation Plan for the F.G. Gardiner Expressway; and directed the General Manager, Transportation Services, to include the revised cash flows associated with the new approach for the implementation of the Revised Strategic Rehabilitation Plan for the F.G. Gardiner Expressway within the Transportation Services 2017-2026 Capital Budget. A copy of the report can be found at this link:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2016.EX20.14>

COMMENTS

Proposed Scope of Work

This project will lead to a detailed design, a Class B cost estimate and a traffic impact assessment for a new Lake Shore Boulevard Bridge over the Don River, as well as a reconstructed Lake Shore Boulevard East, from the Don Roadway to Logan Avenue.

In order to accommodate the widening of the Don River mouth through the Port Lands Flood Protection project, the Lake Shore Boulevard Bridge needs to be raised and lengthened from an existing two bay configuration to four bays. This will allow for the required flood water conveyance. In addition, the project will facilitate the construction of a planned Sediment and Debris Management Area (to the north of Lake Shore Boulevard), which is required so that sediment and debris that flows downstream can be removed in order to maintain flood water conveyance.

Under current approved plans for the flood protection project, significant challenges exist regarding the required lengthening and raising of the Lake Shore Boulevard Bridge over the Don River. At the core of these challenges is the task of dismantling/demolishing and then partially rebuilding the existing Lake Shore Boulevard Bridge with the Gardiner deck/ramp still in place. This undertaking would require the temporary underpinning of the existing Gardiner support piers while the new Lake Shore Boulevard Bridge structure is extended.

In comments provided to Waterfront Toronto on early concept designs, City staff noted that the existing Lake Shore Boulevard Bridge deck and girders are close to the end of their useful service lives and need to be replaced and/or extensively refurbished. However, the close proximity of existing Gardiner support structures significantly restricts the ability to replace the Lake Shore Boulevard Bridge in a cost-effective and efficient manner. This is due to the fact that under existing conditions, the Bridge cannot be widened to accommodate the required roadway pedestrian and cycling infrastructure envisioned in the approved Gardiner East EA until the overhead deck and ramp structure is removed, likely after the estimated completion of the Port Lands Flood Protection project (2024).

Further, the continued existence of the Gardiner structure also means that any construction activities would be occurring within a severely confined space, thereby increasing the risks to the project's overall safety.

Given the challenges associated with rebuilding the existing Lake Shore Boulevard Bridge with the Gardiner deck/ramp still in place, City staff and Waterfront Toronto have been exploring the option of constructing a new Lake Shore Boulevard Bridge in a single project that combines the overlapping and related scope of the Port Lands Flood Protection project and the Gardiner Strategic Plan.

Although the project could be constructed by either the City or Waterfront Toronto, City and Waterfront Toronto staff are of the preliminary view that construction should be led by Waterfront Toronto. This view will, however, be subject to additional analysis that

would be done as part of the design, cost estimate and traffic impact assessment work described in this report.

Reasons for constructing a new Lake Shore Boulevard Bridge in a single project that combines the overlapping and related scope of the two initiatives include:

- 1) Improved safety: It is complex and dangerous to undertake major bridge construction within a confined space under a still operating expressway ramp. Implementing the work as a single project would eliminate the need for expensive and specialized heavy construction equipment;
- 2) Minimized "throw away costs": Implementing the work as a single project would eliminate the need to provide costly and risky underpin supports for the elevated Gardiner, only to demolish them later;
- 3) Economies of scale: Implementing the work as a single project would allow for economies of scale where there is one design team and one constructor, including one mobilization and one demobilization;
- 4) A one-time disruption of traffic: While traffic impacts will be significant for any implementation scenario, implementing the work as a single project would allow for a compressed impact, with use of a coordinated mitigation plan;
- 5) Construction efficiency: Under a combined project scenario, the two new bridge spans would be constructed in a single phase that includes the lengthening and raising the profile of the Bridge to accommodate flood flow discharges, as well as the necessary widening of the Bridge in order to accommodate the public realm requirements set out in the Gardiner East EA. Under a separated project scenario, the required construction would occur in two phases, where the first phase would only lengthen the bridge and the second would widen and raise the profile of the Bridge;
- 6) Improved cycling and pedestrian connections: The configuration of the intersection of Lake Shore Boulevard East and the Don Roadway is substandard for pedestrian, cyclists and vehicles due to the lack of proper turning lanes, Gardiner bent sightline interference and road and rail bridge misalignment. These issues would be corrected if the work is completed in a single project. Under a separated project scenario, the Lower Don Trail bridge crossing the Don River would be removed as part of the PLFP project. The cyclist crossing would then only be reinstated on the widened Lakeshore Boulevard Bridge as part of the Gardiner Strategic Rehabilitation Plan. Under a combined project scenario, the cycling crossing would be reinstated concurrent with the lengthening and widening of the Bridge; and,
- 7) Utility coordination: Both the Port Lands Flood Protection and the Gardiner Strategic Rehabilitation Plan projects require the upgrade of municipal infrastructure in Lake Shore Boulevard, the Don Roadway and Saulter Street; this work would need to be completed on a temporary basis and then reconstructed if the projects are not completed in a single operation.

The implementation of this infrastructure would be coordinated with, and supportive of, other active and ongoing projects in the area such as the redevelopment of the East Harbour lands, the Coxwell stormwater by-pass project, the pending Broadview Extension EA and McCleary Precinct planning study. The Lower Don River area is subject to an intensive effort by the City to coordinate the implementation of the capital projects of the City, Waterfront Toronto, Metrolinx, private landowners and area utilities.

Project Delivery Agreement with Waterfront Toronto

The proposed Project Delivery Agreement recommended in this report would allow Waterfront Toronto to undertake the required detailed design work, including a Class B cost estimate, as well as an implementation phasing plan and traffic impact assessment. Staff would use a standard legal template that has been developed through past Project Delivery Agreements with Waterfront Toronto and other third parties.

A second Project Delivery Agreement would be required for construction, should the additional analysis that will be done through the design process described in this report lead to the conclusion that the project would be best implemented by Waterfront Toronto. Given that the Port Lands Flood Protection project is now well underway in the Port Lands and with full flood protection required by 2024, Waterfront Toronto is currently best positioned to undertake the necessary work. However, in order to fully assess the viability of this, additional design work related to the Lake Shore Boulevard Bridge, as well as the public realm along Lake Shore Boulevard East from the Don River to Logan Avenue is required. Additionally, enhanced traffic impact and mitigation measures are also required in order to ensure any traffic disruption is managed to the greatest extent possible during the project delivery.

The design, cost estimating and traffic assessment work noted above is in addition to Waterfront Toronto's current scope and budget for the delivery of the Port Lands Flood Protection project. As such, the scope is not currently covered by the existing in-force Contribution Agreement signed by the three government partners and Waterfront Toronto in 2018.

Next Steps

Funds for the implementation of the construction phase of this project will be identified in a future Transportation Capital Budget submission. In addition, if applicable, City staff would seek additional authority for a Project Delivery Agreement for the construction phase of the project.

CONTACT

David Stonehouse, Director
Waterfront Secretariat
City Planning
Ph: (416) 392-8113
E-Mail: david.stonehouse@toronto.ca

Jacquelyn Hayward, Director
Project Design and Management
Transportation Services
Ph: (416) 392-5348
jacquelyn.hayward@toronto.ca

Ashley Curtis, Director
Planning and Capital Program
Transportation Services
Ph: (416) 392-0170
E-Mail: ashley.curtis@toronto.ca

Frank Clarizio, Director
Design & Construction
Transportation Infrastructure
Engineering Construction
Services
Ph: (416) 392-8412
E-mail: frank.clarizio@toronto.ca

Michael Smith, Solicitor
City Legal
Ph: (416) 392-7245
E-Mail: Michael.A.Smith@toronto.ca

SIGNATURE

Tracey Cook, MBA
Deputy City Manager
Infrastructure and Development Services
