



**City of Kingston
Report to Council
Report Number 15-268**

To: Mayor and Members of Council
From: Jim Keech, President and CEO, Utilities Kingston
Resource Staff: Mark Van Buren, Director of Engineering
Date of Meeting: September 15, 2015
Subject: Third Crossing – Action Plan Update

Executive Summary:

This report serves as an update to the information report provided to Council in February 2013 that outlined the steps in an action plan that would move the Third Crossing project to be “shovel-ready”. This report recaps the four-phase action plan that was presented in 2013 and provides an update on completed, current, and future activities, including time and capital budget requirements, in order to position the Third Crossing to be ready for construction. The four-phase action plan includes:

- (1) updates to the Kingston Transportation Master Plan (KTMP) and Development Charges (DC) By-Law,
- (2) preliminary design and cost estimates,
- (3) preparation of a financial plan, and
- (4) detailed design and cost estimates.

Recommendation:

That Council approve a total budget of \$2,950,000 to complete the preliminary design and financial plan for the Third Crossing of the Cataraqui River with funding to be provided in the amount of \$749,575 from the Development Charges Reserve Fund and \$2,200,425 from the Municipal Capital Reserve Fund; and

That staff provides a report to Council upon completion of the preliminary design and financial plan that summarizes the work completed on these two phases of the Third Crossing Action Plan, and provides the budget requirements to complete the final phase of the Third Crossing Action Plan.

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Authorizing Signatures:

ORIGINAL SIGNED BY PRESIDENT & CEO, UTILITIES KINGSTON

Jim Keech, President & CEO, Utilities Kingston

ORIGINAL SIGNED BY CHIEF ADMINISTRATIVE OFFICER

Gerard Hunt, Chief Administrative Officer

Consultation with the following Members of the Corporate Management Team:

Cynthia Beach, Corporate & Strategic Initiatives

Lanie Hurdle, Community Services

Not required

Denis Leger, Transportation, Facilities & Emergency Services

Not required

Desiree Kennedy, Chief Financial Officer & City Treasurer

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Options/Discussion:

Investment in infrastructure has been established as one of Kingston City Council's strategic priorities. During the current term (2015-2018), Council has identified the Third Crossing of the Cataraqui River (Third Crossing) as a key infrastructure project and has established a target of having the project "shovel-ready" to position the project for grant funding opportunities at both the Provincial and Federal government levels that will enable the future commencement of construction. The following report provides a background on the Third Crossing project, current status of the environmental assessment, and an update to the action plan developed in 2013 to position the project to be ready for construction.

Background

A number of different studies dating back to the 1960s have identified the need for an additional transportation link across the Cataraqui River. An environmental assessment was commenced in January 2009 and culminated in the Third Crossing Environment Study Report (ESR) that was received and approved by Kingston City Council in May 2012. The ESR reconfirmed the needs justification for an additional crossing of the Cataraqui River in order to relieve existing and future traffic congestion and delay on the Lasalle Causeway during peak travel periods, improve access to areas of the City on both sides of the Cataraqui River, enhance routes for the delivery of emergency services in the City, and provide alternatives for transit and active modes of transportation. Following Council approval of the ESR and the preferred route for a new bridge crossing that would link John Counter Boulevard in the west to Gore Road in the east, the Notice of Completion for the ESR was filed with the Ontario Ministry of Environment and Climate Change (MOECC) to allow for a mandatory public and agency review period. Four Part II Orders, commonly referred to as "bump-up requests", were received by the MOECC which triggered a Provincial process that attempted to resolve concern(s) of the parties requesting the bump-ups, or provide sufficient information for the MOECC to provide a final ruling on the EA. On June 20, 2013, the MOECC provided notification to the City that the Municipal Class ESR for the Third Crossing had been officially accepted by the Province.

Third Crossing Action Plan

In response to a motion from Council, staff provided an information report to Council in February 2013 with a plan to move the Third Crossing project to a "shovel-ready" status. The action plan was developed around four distinct phases including (i) updates to the Kingston Transportation Master Plan and Development Charges Bylaw, (ii) preliminary design, (iii) financial plan, and (iv) final design. An update to the action plan is provided as follows:

Action Plan - Phase 1 (Plan Updates)

1) Kingston Transportation Master Plan (KTMP) Update:

At present, the KTMP 2015 final report is currently being revised by staff to address additional questions and comments received as part of the Environment, Infrastructure, and Transportation Policies (EITP) Committee meeting and the adjoining public meeting for the KTMP held on April

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14, 2015. Although provisions were made for up to a 4-lane cross-section in the Third Crossing ESR, the decision of travel lane capacity was deferred until updated growth, population, and traffic studies were completed. Since the Third Crossing was approved in 2012, the population and employment growth study was completed in 2013 and those findings were subsequently incorporated into travel demand projections for trips crossing the Cataraqui River. The Third Crossing ESR report had identified the annual average daily traffic (AADT) on the Causeway as approximately 23,000 vehicles per day in 2010. Staff has continued to monitor traffic volumes at this location between 2012 and 2015. The AADT measured during this period has ranged from 24,026 to 27,376 vehicles per day.

Although the 2015 KTMP reconfirms the need for the Third Crossing is justified, it is important to note that the population of the City of Kingston is predicted to peak in the early 2030s and then start to decline. The forecast for declining population growth, coupled with expected improvements to other modes of transportation, including walking and cycling and transit, changes in transportation technologies, promotion of transportation demand management strategies, changes in population demographics, and magnitude of infrastructure project capital costs, are all factors that influence the travel lane capacity decision. Staff has considered these factors and study conclusions and recommends that a preliminary design and financial plan be advanced for a 2-lane bridge deck configuration for the Third Crossing.

2) Development Charges (DC) By-Law Update:

An update to the development charges bylaw was completed on September 9, 2014 with the passage of a new DC By-Law No. 2014-135. The Third Crossing project, which has been previously been included in the DC background study, continues to be an important component of the total roads needs attributable to future development. The municipality continues to collect development charges in relation to the Third Crossing by way of the inclusion of this project in the list of eligible costs. Development charges are one of the sources of funding for design and construction of the Third Crossing in addition to capital reserve funds and possible grants and/or user fees. Due to the significant capital costs associated with the Third Crossing, provincial and federal government grant funding has been identified as a major component of the anticipated funding for the overall project.

Action Plan – Phase 2 (Preliminary Design and Cost Estimates)

At this point in time, staff is recommending that Council proceed with Phase 2 of the Third Crossing Action Plan. This effort would build upon the conceptual design information provided in the Third Crossing ESR and involves staff developing terms of reference to procure professional engineering services for the preparation of preliminary designs and construction cost estimates for the Third Crossing project. Staff estimates that Phase 2 work would require 15 months (plus 3 months to complete procurement of engineering consultant) for completion with a capital budget requirement of \$2.6 million. The scope of work includes:

- Completion of preliminary 2-lane bridge design and drawings;

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- completion of various detailed field investigations (e.g. additional geotechnical assessments);
- shore land road and intersection improvement design;
- confirmation of property acquisition requirements for road and bridge infrastructure including construction staging areas;
- confirmation of various environmental permits required;
- update opinion of probable cost (Class B construction cost estimates);
- preparation of preliminary Cultural/Natural Environment Protection Plan and Risk Management Plan; and
- undertake stakeholder consultations (including public, Parks Canada, and First Nations).

Staff would also begin preliminary negotiations between the City of Kingston and Parks Canada to develop a Third Crossing construction, operation, maintenance, and land access agreement.

Action Plan – Phase 3 (Financial Plan)

The development of a financial plan for the Third Crossing will be a critical component of the action plan to move the project to “shovel-ready” status. This phase of the action plan would occur in parallel with Phase 2 in order to draw upon information being generated as the Phase 2 opinion of probable costs for construction and land acquisition requirements progress. Staff would develop terms of reference to procure professional services to determine all available sources of project funding (e.g. tax, development charges, grants, user fees), undertake public consultation, and evaluate and recommend a preferred financial plan. The selected financial consultants will be required to liaise closely with the engineering consulting team and communication experts, strategists or specialized experts to assist with pursuing funding options that will be contracted by the City on an as-needed basis to prepare a financial plan that aims to maximize project funding from both the Provincial and Federal governments.

A key consideration that will also need to be addressed at this stage is the evaluation and selection of a project delivery model. The project team will consider four different project delivery models that were identified in the Environmental Study Report for the Third Crossing. It is important to note that an analysis of alternate project delivery models (e.g. Public-Private Partnerships) will be a requirement for possible grant funding opportunities.

Staff anticipates this financial plan work would be completed within the same timeframe required to complete Phase 2 and requires a capital budget of \$350,000 to complete.

The work associated with both Phases 2 and 3 of the Action Plan would conclude with a report to Council that would recommend a preferred financial plan for the construction, operation, and maintenance of the Third Crossing project. The report would also provide a staff

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recommendation on the preferred project delivery model to be utilized and thereby provide an updated budget required to complete the final project design and land acquisition requirements. The report to Council would also enable Council to have a decision-point prior to proceeding with the final phase of the Action Plan as described below.

Action Plan – Phase 4 (Final Design and Cost Estimates)

The final phase of the Action Plan would entail the preparation of final elements of the project immediately prior to the planned commencement of construction. Under a traditional Design-Bid-Build project delivery model, staff would develop terms of reference to procure professional engineering services to prepare/finalize:

- final design drawings and specifications for construction;
- contract documents;
- detailed construction phasing and scheduling;
- all permits and approvals required for construction;
- the Cultural/Natural Environment Protection Plan and Risk Management Plan;
- construction cost estimates (Class A cost estimate);
- land lease and construction Agreements with Parks Canada;
- land acquisitions required for the project; and
- stakeholder consultations.

The aforementioned activities would be required if the decision to proceed with a traditional Design-Bid-Build project delivery model was selected prior to Phase 4. If an alternative project delivery model (e.g. Design-Build or P3) was the preferred means of implementation for the Third Crossing, the preparation of detailed design drawings, specifications, and contract documents would be completed at a level appropriate for the form of project delivery selected. The alternative forms of project delivery would typically require the definition of performance specifications for the Third Crossing as opposed to the preparation of detailed engineering drawings and specifications. Under this alternative project delivery model scenario, staff would develop appropriate terms of reference to procure professional services that have expertise and experience in alternative delivery models for large municipal infrastructure projects.

Staff anticipates that the work for this phase of the Action Plan, following a traditional Design-Bid-Build project delivery model, would require 18 months (plus 3 months to complete procurement of engineering consultant) to complete with a budget estimate of \$4.5 million. Under an alternative delivery model, staff estimates (for planning purposes only) that the work could be completed within 15 months (plus 3 months to complete procurement of engineering

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consultant) with a rough cost estimate of \$1.4 million (calculated as approximately 30% of the cost for traditional delivery model). Capital budget would also be required for land acquisitions that would be formally defined as part of the review and appraisal of property requirements in Phase 2. The Third Crossing ESR has identified 6 properties located on the west shore of the Cataragui River that may need to be acquired for construction purposes. These lands represent approximately 0.9 hectares and include partial and full buyouts. If prior to final review, appraisal and establishment of the capital budget for land acquisition, there are opportunities to acquire any of the identified properties, either by land owners approaching the City or listing properties for sale, staff will pursue these opportunities through separate reports to Council.

The work associated with Phase 4 of the Action Plan would conclude with an information report to Council that would provide a final project design summary, an update on stakeholder consultations, and final project construction cost estimates. At this juncture, the Third Crossing project would be deemed "shovel-ready".

Summary

The timeline and costs associated with the action plan is summarized in Table A below. Staff estimates an overall duration of approximately 39 months to complete Phases 2, 3 and 4 of the Action Plan. Utilizing a traditional model of project delivery, the total cost to prepare the Third Crossing Project to a construction-ready stage would be approximately \$7.45 million (excluding land acquisition requirements) with a timeline of approximately 3 years. The approximate costs utilizing an alternative form of project delivery are estimated at \$4.35 million (excluding land acquisition requirements) with a similar timeline.

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Table A – Third Crossing Action Plan

Phase	Description	Length of Time required for completion	Cost Estimate
1	KTMP Update DC Bylaw Update	<ul style="list-style-type: none"> KTMP – EITP (October) DC Bylaw - complete 	N/A
2	Preliminary Design and Cost Estimate	<ul style="list-style-type: none"> 15 months (plus 3 months consultant procurement) 	\$2.6M
3	Financial Plan	<ul style="list-style-type: none"> Commence in parallel with Phase 2 Report to Council at completion 	\$350K
Report to Council		<ul style="list-style-type: none"> Summary of Phase 2 and 3 work Recommendation for financial plan and project delivery model 	
4	Final Design and Cost Estimate	<ul style="list-style-type: none"> Traditional: 18 months (plus 3 months consultant procurement) Alternative: 15 months (plus 3 months consultant procurement) 	~\$4.5M ~\$1.4M
Report to Council		<ul style="list-style-type: none"> Summary of Phase 4 work 	

Communication Strategy

Due to the high profile nature of the Third Crossing project and the unique aspects of designing and constructing a 1.2 km bridge crossing of the Cataraqui River, staff will also develop a communications and community outreach plan that will be aimed at further engaging the community with a goal to create a final design for the Third Crossing that exemplifies Kingston's motto "where history and innovation thrive". To this end, a communications and community outreach plan will be prepared that shares information on how a future Third Crossing can (a) help to celebrate the history and unique heritage along this portion of the Cataraqui River and (b) be a showcase for inclusion of innovative technologies to build 'smart' infrastructure for the 21st century.

Existing Policy/By-Law:

Kingston Transportation Master Plan (draft 2015)
 Development Charges By-Law No. 2014-135
 City of Kingston Population, Housing and Employment Projection Study (2013)

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Notice Provisions:

Not applicable.

Accessibility Considerations:

The conceptual design for the Third Crossing bridge and associated road works includes the provision of accessible sidewalks/pathway, street benches, para-ramps, pedestrian countdown devices, and audible pedestrian traffic devices in conformance with the requirements of the provincial Accessibility for Ontarians with Disabilities Act (AODA). This report is available in alternate formats by request directed to the City Clerk.

Financial Considerations:

Financial considerations are embedded within the Options/Discussion section of the report and summarized in Table A above. Depending on the final cost estimates for the project and the approach to financing (including grants), the magnitude of the expenditure will need to be carefully integrated with overall capital and financing capacity for the City. Current financial plans reflect the need for grant funding to enable construction. It has been the past experience of City staff that grant-funding opportunities are typically setup with relatively short time periods for submission of projects for grant funding consideration and generally geared towards projects that are ready to proceed to construction.

This project has been included in the City's long-term capital plans and funding models with the assumption that grant funding will be required to fund 50% of the total project cost. It is recommended that the grant component of the preliminary design and planning costs be funded from the Municipal Capital Reserve Fund until such time as final cost estimates and funding strategies are confirmed and potential grant funding obtained.

Contacts:

Mark Van Buren, Director of Engineering 613-546-4291 ext. 3218

Dan Franco, Supervising Engineer 613-546-4291 ext. 3226

Other City of Kingston Staff Consulted:

Desiree Kennedy, Director of Financial Services & City Treasurer

Exhibits Attached:

Not applicable.