



THE CORPORATION OF THE CITY OF COURTENAY

STAFF REPORT

To: Council
From: Chief Administrative Officer
Subject: Anderton Dike Wall – Short Term Repair Funding request

File No.: 5225-04-20

Date: June 20, 2016

PURPOSE:

The purpose of this report is for Council to consider allocating funds in support of the short term repair of the City's dike wall adjacent to the properties at 426 and 440 Anderton Avenue.

CAO RECOMMENDATIONS:

That based on the June 20, 2016 staff report entitled "Anderton Dike Wall – Short Term Repair Funding Request" Council adopt Option 1: Council Approves the expenditure of \$365,000 utilizing the following funding sources in descending order or priority: 1) 2015 unallocated surplus; 2) Gas Tax Fund; and 3) the Asset Management Renewal Reserve for the design and construction of the repair to the Anderton Sheet Pile Dike Wall, and

That Council approve the design-build process and select general contractor bidding process as described in the report, and

That Council approve the procurement of the rock materials directly from Spider Lake Rock and Gravel as a sole source rock supplier to this project.

Respectfully submitted,

David Allen, BES, CLGEM, SCLGM
Chief Administrative Officer

BACKGROUND:

Following the December 2014 flood event, inspections of the City's dike wall infrastructure identified some issues with the sheet pile retaining wall adjacent to the properties at 426 and 440 Anderton Avenue that required further investigation (see photo attached). The City engaged engineering consultants, McElhanney Consulting Services Ltd. (McElhanney), to conduct geotechnical and structural assessments of both the retaining wall and the adjacent private buildings. These assessments have revealed deterioration in the condition of the retaining wall requiring immediate remedial action and a permanent repair.

McElhanney's Technical Memorandum "*City of Courtenay, Anderton Retaining Wall and Building Structures Preliminary Action Plan*" dated March 31, 2016 (Action Plan) recommended that the City:

- Prepare a preliminary design of possible temporary measures for retaining wall reinforcements, and
- Carry out detailed design and implementation of short term improvements to the wall structure

DISCUSSION:

The City has engaged McElhanney to analyse and develop a short term mitigation measure to support the sheet pile wall section while permanent solutions are being evaluated for detailed engineering design. This proposed interim solution includes the construction of a rock buttress structure approximately 3 meters high against the existing sheet pile wall and 5 metres wide into the river channel at the toe of the wall. It will extend approximately 90 metres along the river channel. The engineering work is being undertaken on an urgent basis as the typical window of opportunity for construction in the river is quickly approaching (i.e. late July/early August).

The City typically conducts projects based on the standard design-bid-build strategy to meet purchasing policy objective of best value for money. Given the fast approaching construction window and construction expertise required to access this river site, staff recommend undertaking a simplified design-build process for this project. The difference being that the design is specifically informed by the expertise of the general contractor engaged by the project team. The project design is better informed by the issues and opportunities identified by the contractor early in the design process and can be optimized accordingly. In this instance, time is of the essence to obtain ministry approvals for construction and initiate the physical work in the river quickly. The project would benefit from the knowledge of the contractor early on in the design and timelines would be reduced by eliminating the tendering process.

Engineering staff propose to work with the City's Manager of Purchasing and McElhanney to engage a general contractor based on a selective bidding process. McElhanney has recommended parameters by which to obtain qualifying bids based on labour and equipment costs from two local contractors' experienced in this type of work. The general contractor selection would be based on experience and unit prices. Staff is seeking Council's approval to collaborate on this project in a design-build manner.

The next challenge is the procurement of a sufficient supply of large diameter rock from which to build this structure. McElhanney has identified (on behalf of the City) a supplier south of town with readily available quantities of rock that can support our project. Staff recommends sole sourcing the purchase of the rock materials directly from Spider Lake Rock and Gravel based on the readily available stock and competitive pricing.

The project design is ongoing and construction cost estimates are not yet fully refined. In collaboration with the engineers at McElhanney, staff has determined a reasonable estimate for the project based on the work conducted on the Lewis Park retaining wall in 2015 (62 meters) with an escalation for the significant amount of blasted rock material required for this project. Staff recommends establishing a budget for this work of \$365,000 including construction, engineering and 30% contingency.

FINANCIAL IMPLICATIONS:

Staff recommend utilizing the following funding sources in descending order or priority: 1) the 2015 unallocated surplus; 2) Gas Tax; and 3) the Asset Management Renewal Reserve.

ADMINISTRATIVE IMPLICATIONS:

Staff continues to devote resources to overseeing and managing this unplanned construction project. To-date more than 100 hours of staff time has been consumed addressing this issue.

ASSET MANAGEMENT IMPLICATIONS:

Asset management practices strive to be one step ahead of the asset’s lifecycle failure. The Anderton Dike Wall has experienced an unanticipated “in-service failure”. Therefore, asset renewal was not planned for in the current year’s budget, yet it is imminently required.

STRATEGIC PRIORITIES REFERENCE:

None

OFFICIAL COMMUNITY PLAN REFERENCE:

None

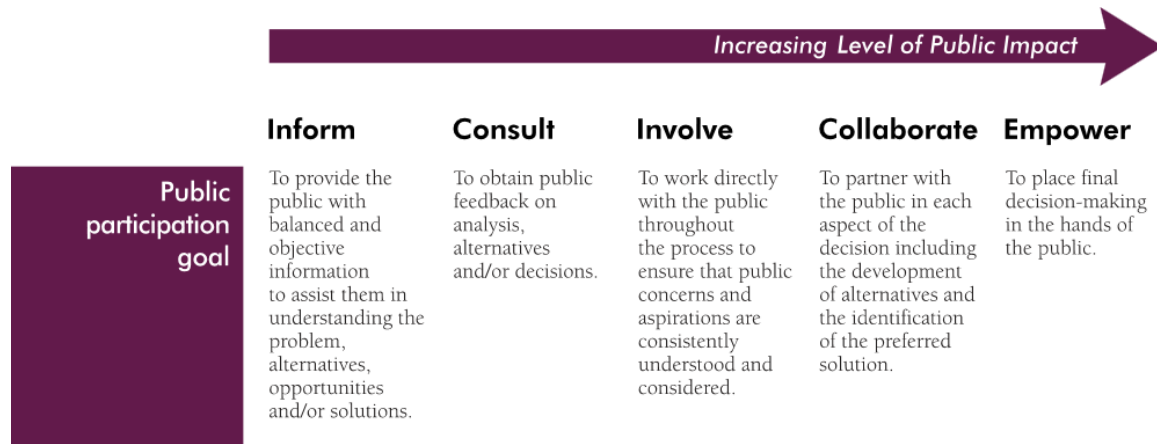
REGIONAL GROWTH STRATEGY REFERENCE:

None

CITIZEN/PUBLIC ENGAGEMENT:

Following recommendations from external agencies with appropriate expertise, staff has informed the owners and tenants of the buildings of the condition of the Anderton wall through an information meeting, providing copies of all studies and reports commissioned on the evaluation of the soils and structures and has committed to providing newsletter updates as information emerges. Staff has undertaken an informed level of engagement based on the IAP2 Spectrum of Public Participation:

http://c.ymcdn.com/sites/www.iap2.org/resource/resmgr/imported/IAP2%20Spectrum_vertical.pdf



OPTIONS:

Option 1 That based on the June 20, 2016 staff report entitled “Anderton Dike Wall – Short Term Repair Funding Request” Council adopt Option 1: Council Approves the expenditure of \$365,000 utilizing the following funding sources in descending order or priority: 1) 2015 unallocated surplus; 2) Gas Tax Fund; and 3) the Asset Management Renewal Reserve for the design and construction of the repair to the Anderton Sheet Pile Dike Wall, and

That Council approve the design-build process as described in the report, and

That Council approve the procurement of the rock materials from Spider Lake Rock and Gravel as a sole source rock supplier to this project. (Recommended)

Option 2 That Council direct staff to review the existing approved 2016 General Fund Budget and recommend a re-allocation strategy to use funds from existing projects in support of the Anderton Wall short term repair. (Not Recommended)

That Council approve the design-build process as described in the report for the project, and

That Council approve the procurement of the rock materials from Spider Lake Rock and Gravel as a sole source rock supplier to this project.

Prepared by:



Lesley Hatch, P.Eng.

Director of Engineering Services



