



Item
Meeting..... 2017 Jul 10

COUNCIL REPORT

TO: CITY MANAGER **DATE:** 2017 June 23

FROM: DIRECTOR ENGINEERING **FILE:** 32000-05

SUBJECT: 2017 ENGINEERING CAPITAL INFRASTRUCTURE FUNDING
REQUEST - BETA PUMP STATION

PURPOSE: To request the approval of additional Sanitary Sewer Capital funding for a multi-year Engineering capital infrastructure improvement project.

RECOMMENDATION:

- 1. **THAT** Council authorize staff to draw from the Sanitary Sewer Capital Fund the amount of \$1,465,420 (inclusive of GST of \$65,420.56) to finance the Beta Pump Station project, as outlined in this report.

REPORT

The 2017 – 2021 Financial Plan provided expenditure authority up to \$4,096,300 for the reconstruction of Beta Pump station in 2017 and 2018. Council has previously approved funding in December 2015 and April 2017. In order to proceed with the award of a construction contract, additional funding is requested for this project

Beta Sanitary Pump Station

The scope of this project includes the replacement of Beta Pump Station including the construction of a new building to house a generator, Motor Control Centre (MCC), odour control equipment and washroom, an adjacent sewage pumping system including concrete influent chamber, wet well and valve chamber, all mechanical and electrical systems for the building and pumping system, landscaping, raingarden, piping and site works at the south end of Beta Avenue. The existing pump station needs replacement to support additional growth in the area resulting from the Concord and Thind developments.

Developer funding has been collected and will continue to be collected to cover the growth related portion of this pump station which is approximately 90% of the cost. (2017 contribution increased from \$325 to \$580 per residential unit.)

The project was tendered and the lowest bid for construction came in at \$4,892,525. Design and contract administration are expected to total \$516,000. The project will also incur \$70,000 in incremental overhead charges (internal labour, plus other incidentals) over the life of the project bringing the total estimated project cost to \$5,478,525.

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The 2017 – 2021 Financial Plan provided \$4,096,300 for this project. This leaves projected funding shortfall of \$1,400,000 for the project before GST.

There were a number of factors that lead to the higher than expected tender amount:

- 1) There were a number of design elements that were not anticipated last September during budgeting. As design work progressed, there were a number of items which added to the cost, including:
 - a. The size of the building increased due to odor control and provisions for future electrical equipment since this station is designed to be upgraded in phases;
 - b. The wet well was changed to a concrete chamber as opposed to Fibreglass Reinforced Pipe and is now bigger than initially assumed;
 - c. Pumps were chosen based on a hydraulic analysis completed by Opus as a separate assignment for the City. The initial estimate assumed 20hp pumps at \$75k but the final design called for 60hp pumps which came in at \$274k.;
 - d. Diameters of the twinned forcemains, casing under the railways and gravity inlet pipe all increased as a result of this hydraulic analysis of the Still Creek catchment;
 - e. The number of driven steel piles required for the building and wet well significantly increased as these sizes were not fully determined at the time of the initial estimate. The City had also done additional geotech and structural modeling and additional piles are required as a result of the roof structure;
 - f. A flow meter and a chamber to house the flowmeter was added to the design;
 - g. The MCC and genset came in higher than estimated (higher than the second bidder); and,
 - h. Crossing of CN rail came in much higher than estimated, probably due to the unknowns we could encounter.
- 2) The construction industry is busy so prices are typically higher.
- 3) The design time was longer than expected due to significant coordination with Operations, two developers and their engineers.

The contract award is elsewhere on the agenda pending approval of this report. Sufficient Capital Reserves are available to fund the capital projects outlined in this report.

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1.0 RECOMMENDATION

It is recommended that Council authorize the staff to draw from the Sanitary Sewer Capital Fund in the amount of \$1,465,420.56 (inclusive of GST of \$65,420.56), to finance the capital project outlined in this report.



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DIRECTOR ENGINEERING

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Copied to: Director Finance
City Solicitor
Asst. Director Engineering – Projects
Project Manager (L. Vidic)