



# Staff Report

## Operations

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**Report To:** Committee of the Whole  
**Meeting Date:** April 6, 2021  
**Report Number:** CSPOS.21.027  
**Title:** Request for Budget Increase for Water Pressure Zone 4C Distribution Improvement Project  
**Prepared by:** Mike Humphries, Engineering Design Technologist

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### A. Recommendations

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THAT Council receive Staff Report CSOPS.21.027, entitled "Request for Budget Increase for Water Pressure Zone 4C Distribution Improvement Project";

AND THAT Council approve increasing the budget by 71.59% from \$1,236,200 by \$885,000 to a total budget of \$2,121,200;

AND THAT Council increase the funding from the Water Asset Replacement Reserve Fund by \$885,000.

### B. Overview

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The purpose of this report is to provide an update on the construction tender results and request additional budget for the construction of the "Water Pressure Zone 4C Distribution Improvement Project".

### C. Background

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A large portion of the watermain in the Tyrolean Village Area is deficient and at the end of its useful life. High water pressures in the area have contributed to 6 watermain breaks since 2012. The Pressure Zone 4C Project's final design was initiated in 2019 to help improve pressures and flows in the area and avoid future watermain breaks until the watermain could be replaced. The original project included the removal of the existing Pressure Reducing Valve (PRV) on Craigmere Crescent at County Road 19 and the addition of two new PRV's, one located on Birch View Trail between Arlberg Crescent and Brooker Boulevard and the other located on Tyrolean Lane east of Craigmere Crescent. The project also included the extension of the existing watermain on Craigmere Crescent to loop the existing water main to Settler's Way (approximately 80m) and the installation of approximately 70m of new water main on Birch View Trail from Arlberg Crescent to Brooker Boulevard.



WT Infrastructure has been retained by the Town to complete Final Design and Contract Administration through to the end of construction. Due to a Provincial Order related to COVID 19, WT Infrastructure was unable to complete the daylighting of existing infrastructure and legal surveying work. As a result, the final design was delayed, and the project was tendered for construction in July of 2020. The bids came in substantially over budget and the construction was postponed. The engineer's pre-tender estimate was very close (within 1.6%) to the approved construction budget and the lowest bidder was 47% over the engineer's pre-tender estimate. It was thought that pricing came in high due to the lack of bidders and late timing of the tender release. The Tender was cancelled with the intent of retendering in early 2021.

The replacement of the watermain in the Tyrolean Village area was originally contemplated in the 5-10 year Capital Plan and was moved ahead by Council in 2019. In 2020, Council approved the Tyrolean Village Water Replacement and Wastewater Servicing Project which has some overlapping areas with the Pressure Zone 4C Project. After cancelling the tender for the Pressure Zone 4c project in July 2020 Staff re-scoped the project to include overlapping areas of watermain replacement and it was subsequently approved by Council in October 2020. A map showing the limits of newly scoped project is included as Attachment #1.

The design was completed and a Public Information Centre (PIC) was held on January 28, 2021. The comments/concerns raised at the meeting were generally related to tree protection/damage, driveway access, water disruptions and communication to short term rentals.

The initial preliminary construction estimate from the engineer prior to the PIC was \$980,000 which is in line with the Town's estimate and construction budget of \$1,041,100. Just prior to the PIC, the 90% design was completed, and the engineers estimate was revised and increased to \$1.2 million. This increase was noted and discussed at the Committee of the Whole meeting on January 12, 2021 and was updated and included in the final PIC presentation.

Once the PIC was completed the design was finalized, and staff released the re-scoped construction Tender on February 10, 2021. The engineers cost estimate was refined prior to tendering and resulted in an overall increase of over 30% to an estimated \$1,381,760 including \$50,000 contingency. This increase was largely related to extending the project limits at the Tyrolean Lane/Craigmore Crescent intersection to optimize the connection to the existing watermain on Craigmore Crescent south of the intersection and the extending of the limits at Tyrolean Lane/Arlberg Crescent intersection to coordinate with the future Tyrolean Lane watermain to the east of the intersection on Tyrolean Lane. Full single lane road reconstruction was also required due to the location of the existing road alignment. The existing watermain was not installed with tracer wire and there are no "Record" drawings available for this area of Town. The exact location of the watermain was not known until it was daylighted (exposed with vacuum truck and surveyed) during the final design. Due to the location of the existing watermain and the proximity of the proposed watermain (Town standard location) the requirement for a temporary watermain was also added to avoid breaking the existing brittle watermain during construction and to ensure safe water was provided to residents during construction.



Additionally, in January 2021, the Ministry of Environment, Conservation & Parks, enacted the new On-Site & Excess Soil Management regulation (O. Reg. 406/19) under the *Environmental Protection Act* to ensure that excavated soils are treated as a resource and are beneficially re-used wherever possible. This regulation will result in increased construction costs related to tracking and management of excess soil and increased consulting costs related to additional soil sampling and testing requirements. It is anticipated that the additional sampling and testing costs could be as much as \$20,000.

## **D. Analysis**

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The Construction Tender closed on March 4, 2021. There were two compliant bidders both of which exceeded the approved budget and the engineers pre-tender estimate. The Bid Analysis Report by WT Infrastructure is included as attachment #2. Arnott Construction Ltd was the lowest bidder with a bid of \$1,848,950.00 and Arenes Construction Ltd followed with a bid of \$1,855,750.60. These were the same two bidders from the original tender release in July 2020. The lowest bid exceeds the approved budget by over 75% and the engineers pre-tender estimate by 34%.

Staff and WT Infrastructure have reached out informally to suppliers and contractors to try and get a better understanding of the higher pricing we are experiencing. From these discussions it appears that prices for aggregates have increased by 10-15%, materials such as pipe and fittings have increased by as much as 30% and that some contractors are reporting close to a 30% increase in labour costs.

Staff have investigated opportunities to reduce the construction cost with WT infrastructure and the lowest bidder. The conclusion was that it would not be possible to reduce costs unless the scope of the project was reduced.

Based on these discussions and WT Infrastructure's recommendation from the Tender Analysis (included as Attachment #2) staff recommend Council consider increasing the project budget by \$885,000 including construction and additional fees related to O. Reg. 406/19.

## **E. Strategic Priorities**

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### **1. Communication and Engagement**

We will enhance communications and engagement between Town Staff, Town residents and stakeholders

### **2. Organizational Excellence**

We will continually seek out ways to improve the internal organization of Town Staff and the management of Town assets.

### **3. Community**



We will protect and enhance the community feel and the character of the Town, while ensuring the responsible use of resources and restoration of nature.

#### 4. Quality of Life

We will foster a high quality of life for full-time and part-time residents of all ages and stages, while welcoming visitors.

### F. Environmental Impacts

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The construction activities will produce greenhouse gases.

The replacement of the deficient watermain will reduce the probability of future watermain breaks.

### G. Financial Impacts

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The chart below outlines the variances between the budget and the tender:

Item	Budget	Actual	Variance \$	Variance %
Miscellaneous	\$0	\$2,352	(\$2,352)	N/A
Engineering	\$195,100	\$231,295	(\$36,195)	19%
Construction	\$1,041,100	\$1,883,000	(\$841,900)	81%
Total	\$1,236,200	\$2,116,647	(\$880,447)	71%
Funding Sources				
Water Asset Replacement Reserve Fund	\$1,225,200	\$2,105,647	(\$880,447)	71%
Developer Contribution (paid through a development agreement)	\$11,000	\$11,000	\$0	
Total	\$1,236,200	\$2,116,647	(\$880,447)	71%

Staff are recommending that Council increase the budget and that the Town award the tender and complete the project on the basis of this project being considered a priority project that provides overall community and local area benefit.



## **H. In Consultation With**

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Shawn Carey, Director of Operations

Allison Kershaw, Manager of Water and Wastewater

Sam Dinsmore, Deputy Treasurer/Manager of Budgets & Accounting

Serena Wilgress, Manager of Purchasing and Risk Management

## **I. Public Engagement**

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A Public Information Centre was conducted for this project on January 28, 2021 to engage the residents and finalize the design. However, the topic of this Staff Report has not been subject to a Public Meeting and/or a Public Information Centre as neither a Public Meeting nor a Public Information Centre are required.

Comments regarding this report should be submitted to Mike Humphries,  
[engineeringdesigntechnologist@thebluemountains.ca](mailto:engineeringdesigntechnologist@thebluemountains.ca).

## **J. Attached**

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1. Attachment 1: Project Mapping
2. Attachment 2: 2021-01-T-OPS Tender Analysis by WT Infrastructure Inc.

Respectfully submitted,

Mike Humphries, C.E.T.  
Engineering Design Technologist

Shawn Carey  
Director of Operations

For more information, please contact:  
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**Report Approval Details**

Document Title:	Request for Budget Increase for Water Pressure Zone 4c Distribution Improvement Project.docx
Attachments:	- Att 1 Project Map.pdf - Att 2 Tender Analysis.pdf
Final Approval Date:	Mar 26, 2021

This report and all of its attachments were approved and signed as outlined below:

**Shawn Carey - Mar 25, 2021 - 11:29 AM**

**Shawn Everitt - Mar 26, 2021 - 8:52 AM**