

LETTER REPORT

DATE: January 25, 2018

To: Larry Plourde, Administrator

CC: Mike Lott, Utilities Supervisor

SUBJECT: GOLD RIVER BRIDGE WATERLINE REPLACEMENT PROJECT

History

The Village of Gold River has received considerable information about this project including:

- a. An assessment email with recommendations from the village's Consulting Engineer on the condition of the wastewater force main mounted on the Gold River bridge.
- b. Recommendations were of a maintenance nature with remedial work being done by Public Works staff based on regular monitoring of the wastewater force main.
- c. An assessment email with recommendations from the village's Consulting Engineer on the condition of the water distribution line mounted on the Gold River bridge.
- d. Recommendations based on the condition of the water distribution line mounted to the Gold River bridge were of a much more urgent nature with the village's Consulting Engineer stating that "**replacement of the watermain is extremely urgent**".
- e. A proposal Koers and Associates for Consulting Engineering Services for Highway 28 Gold River Bridge Watermain Replacement Design that would bring the process to the stage where the village could call for Tenders or Request for Proposals on the project.
- f. An estimate of costs for the proposal for Consulting Engineering Services being \$44,000.00 to \$50,000.00 plus GST.
- g. An cost estimate of up to \$500,000.00 for the waterline replacement. This estimate was inclusive of construction costs, engineering fees (detailed design, tender, construction management and record drawings) and a contingency allowance.
- h. A Letter Report from Grant Loyer dated December 08, 2017 summarizing the issues with the sewer force main and the water main attached to the Gold River Bridge with a recommendation to allocate up to \$50,000.00 plus GST to initiate the proposed process to the tender stage of the watermain replacement project and a second recommendation that up to \$500,000.00 be allocated in the 2018 budget year for replacement of the watermain.
- i. The Village received all of this information in November/December 2017.

On December 28, 2017 I sent out the following email:

"I have costed out materials for a temporary waterline replacement to provide service if the existing waterline fails before a replacement project is in place. The approximate cost for materials to lay a 6-inch (150 mm) C900 Blue Brute waterline with fittings along the outside edge of the bridge for joining into the existing underground waterline to provide temporary service is \$16,000.00 plus taxes and the majority of those materials could be used in other

areas of the municipality as other waterlines have to be replaced. Labour would be extra for the installation.

I believe that the various options that we discussed including a stand alone suspended system, a separate bridge supporting system for new waterline, installing it on different areas of the existing bridge, etc. could be accomplished from the proposal submitted by Koers and Associates. Other options away from the current location such as a different crossing point or different servicing concepts would require a new proposal from an engineering consultant.”

This email was in response to the following:

- a. A question on what contingency would staff propose for action if the waterline failed before a decision could be made on replacing the waterline. The email suggested purchasing materials with an estimated cost of \$16,000.00 plus taxes for materials to install a temporary 150 mm (6 inch) bypass line across the existing bridge structure. The delivery time for those materials to Gold River is estimated at 5 days. This estimate does not include labour requirements and time to install the line. Considerable work is required to excavate the waterline on either side of the bridge, cut the line, install required valving and fittings on the line, and bring those works to the surface to allow for hooking up the bypass if and when it is required. This system would be used if the waterline failed and/or when the waterline replacement project went forward.
- b. There was no investigation to see if an adjacent municipality had any kind of a system that the Village could borrow to create a bypass if it was required. In my opinion, counting on borrowing materials from an adjacent municipality is not a viable option as it is not known if the materials exist and their condition, if they would be compatible with Village requirements or if they would be available if or when the Village needed those materials. Disinfection of used or older materials is also difficult. It would be more practical to bring the materials into stock for emergency use or for when the bypass might be required for possible replacement of the bridge waterline and then plan to use the piping in future waterline replacement projects around the Village.
- c. The second paragraph of the email also touched on what could be covered in the engineering proposal that the Village had received and what would require a new proposal from our Consulting Engineer.

Since forwarding that email, there have been further conversations and questions asked about possible alternatives to supply water to the area on the other side of the bridge, flow requirements for supplying drinking water and fire protection purposes, storage requirements, potability requirements, the scope of the project and the possibility of applying for grant funding to cover a portion of the project costs. The estimated cost to conduct a desktop study to answer these questions is estimated to be \$10,000.00 to \$15,000.00 depending on the study terms of reference. This is in addition to previous funding estimates.

Conclusions:

Based on the information previously provided and the information in this letter report, direction is required from Council on how to proceed.

Recommendations:

- 1. If there is a desire to gather further information on alternatives for the supply of potable water to the Industrial Park Area, the Lodge and the Clayworks Café, I recommend that Council authorize funding of up to \$15,000.00 to conduct a desktop study to gather that data. There is value in moving down this path if there is consideration to apply for infrastructure grant funding when the next round is announced. Many issues could be resolved by including such items as looping in the Industrial Park area (proposed in a previous study), addressing fire hydrants locations, completing PRV adjustments, public education and water conservation and metering suspected high use areas could be included in water distribution project submission.**
- 2. I recommend that Council authorize an immediate expenditure of up to \$16,000.00 to acquire materials to construct a bypass for the Gold River Bridge waterline and direct staff to create an implementation plan.**
- 3. I recommend that Council include \$50,000.00 plus GST in the 2018 financial plan to support the Proposal for Consulting Engineering Services for Hwy 28 Gold River Bridge Watermain Replacement Design.**
- 4. I recommend that Council include up to \$500,000 plus GST in the 2018 or 2019 financial plan to cover the cost of replacing the Gold River Bridge Watermain.**

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