



DATE: July 12, 2017
TO: Mayor Bridge and Members of Council
FROM: Mark Robertson, Public Works Sewer Foreman
SUBJECT: Clifford Ultra Rib Pipe Sanitary Mains Strategy Review

STRATEGIC PLAN:

5.7 Adopt and maintain fair and transparent procurement policies and by-laws to ensure the Town receives competitive pricing on tenders and proposals, and that local business has equal opportunity to submit bids.

BACKGROUND

January 5 2016, Council considered a report about “Ultra Rib Pipe” used in the Clifford sanitary sewer system installed in early 1990’s. At the Council meeting we learned “Ultra-Rib is no longer a recommended installation in urban areas. When connecting to “Ultra-Rib” installers must core into the wall which reduces the pipe’s strength causing it to lose conformity and potential collapse. The design life of the pipe becomes is reduced below 50 years especially where there are multiple connections to a deep sewer.

Council added over \$50,000 to the Ann Street reconstruction in 2016 to remove and replace the “Ultra-Rib”, and asked for a strategy to deal with this material in the long term. That policy was approved November 1, 2016 as attached to this report. Also in 2016 eleven T liners were installed on Brown Street South to repair a compromised main where “inserta Tee’s” were used to core through the wall of the existing “Ultra rib”. The process installing “T” liners add strength to the existing sanitary main at the PDC location which will prevent future pipe failure.

Clifford Ann Street work in 2017 will see more “Ultra rib” replaced in Block C and D. When Phase 2 of the Schwindt development proceeds on William Street staff will look to replace that “Ultra rib” between the arena and John Street. During reconstruction of Elora Street in 2018 it is proposed to leave the Ultra rib in place since the number of new connections will be limited. In Phase 3 from James to West Heritage where new sanitary sewer is installed the design calls for the PVC standard suitable for new installations and future connections.

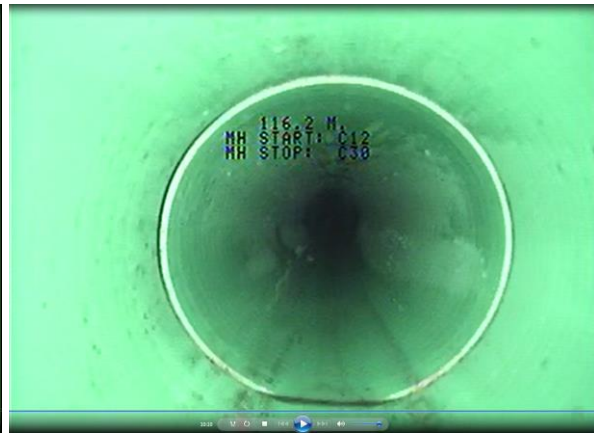
In April and early May this year Foster Sewer Services completed an in-depth inspection and analysis of the Clifford sanitary sewer network. This regular maintenance helps keep the system operating properly. The work consisted of flushing the sewers with a high pressure water jetting nozzle to clean the inside of pipes and remove accumulated debris. A camera is driven down the sewer on a remote control creeper inspecting the clean sewer for issues.

Compaction causing the pipe to appear oval is shown below in figure 1. Staff was pleased to see most of the Clifford sanitary system appears to be in very good condition as seen in figure 2. The system shows very little significant infiltration (only 3 locations) which was confirmed when flows remained reasonable even during heavy rain June 23.

Figure 1



Figure 2



COMMENTS

The 2017 budget includes \$150,000 for Clifford Sewer lining program. Given the results of the video work, upwards of \$130,000 of could be available for other work related to the Clifford sewer system. Approximately \$30,000 is needed to fund Clifford lagoon SCADA implementation to the benefit of the entire system. This would complete the Clifford SCADA project this year. Staff will bring forward any added projects that could be funded out of the \$100,000 remaining before year end. It is advisable to put some money in reserve for the work on William Street for the Schwindt development.

Now that there is base line inspection data for the entire system, the areas showing signs of stress should be monitored annually to identify whether the Ultra-Rib pipe is getting worse or if the pipe was simply not installed properly. The attached policy for ultra-rib pipe is amended to include a requirement that the Town monitor problem areas identified and determine solutions as part of the annual capital budget. The policy no longer requires annual funding to actively re-line “ultra-rib” pipe, but continues to require its replacement particularly where multiple connections will be needed.

FINANCIAL IMPLICATIONS

Funds should be allocated for sewer CCTV monitoring and lining as part of future budgets. 2017 Budget re-allocation of \$30,000.00 from Clifford sewer lining to Clifford SCADA is recommended.

RECOMMENDATION

That Council receives the report from the Public Works Wastewater foreman Clifford Ultra Rib Pipe Sanitary Sewer Mains Strategy and approves the updated policy attached to the report and \$30,000 be reallocated from Clifford sewer lining to Clifford SCADA System.

Mark Robertson, Wastewater Foreman

Bill White C.A.O.Clerk