

Date: March 26, 2021

Re: Results of Sanitary Sewer Study

A study on the state of Village of Bible Hill's sanitary sewerage system has now concluded, with final reporting from professional engineering firm R.V. Anderson Associates Limited (RVA) indicating overall, the Village infrastructure is in good condition – with some deficiencies.

RVA was selected in June 2020 to undertake a comprehensive assessment of the system and report on short and long-term capital needs to ensure it is maintained in a good state of repair. The firm used industry standard and Provincially established methods to inspect the infrastructure and analyze the resulting data, including new and recent CCTV inspections of 45% of sewer, visual inspections of 93% of manholes and all three pumping stations, and theoretical age-based estimates of the remainder. Built into the final recommendations, the firm considered risk associated with the various system components, in terms of the probability and consequence of failure.

Highlights of the final reporting include the following:

Current state of the Infrastructure:

- The Village owns 43.3km of gravity sewer and forcemains, 516 manholes, and three pumping stations
- Total replacement value of these assets is \$35.8MM (\$30.2, \$5.1, and \$0.5MM respectively)
- 80% or 34.2km of sewer is between very good and fair condition, and 21% or 9.1km is in poor or worse condition; 99% or 510 manholes are between very good and fair condition, and 1% or 6 manholes are in poor or worse condition; and, of three pumping stations, the largest and most critical is in good condition, one is in fair condition, and the smallest is in poor condition

(Note that for sewers assessed to be in poor or worse condition, more than 85% of those condition assessments are based on theoretical aged-based estimates rather than inspections, and therefore require further attention to confirm or update status)

- Overall, sewers exhibit a moderate degree of risk (86% very low to moderate, 14% high or very high); manholes exhibit a low degree of risk (93% very low or low, 7% high or very high); and pumping stations exhibit a high degree of risk

Capital needs:

- Approximately 5.9km of sewers and two pumping stations exhibit a high degree of risk and should be a priority for renewal
- Recommends the Village consider a condition assessment program to determine material and conditions of original system service laterals that may pose a risk to serviced properties and system functionality
- Recommends approximately \$399K of investment is required over the next ten years and notes a potential investment requirement of approximately \$16.2MM over the following ten to thirty years – primarily driven by sewers and manholes installed pre-1970

Continuous improvement:

- Recommends the Village consider building upon significant progress made in improving its ability to manage and make decisions on infrastructure by developing an Asset Management Policy securing the Commission's commitment to planning and making evidence-based decisions, establishing an asset management steering committee, and further developing asset management information
- Recommends the Village request access to GIS records managed by the Municipality, and work collaboratively with the Municipality on the regular assessment program
- Recommends the Village identify sources of funding to satisfy its investment needs to highlight potential funding gaps and additional measures to be taken to ensure the system can continue to meet its service requirements

On close of the study, the Village Commission is satisfied with the evidence now in hand. Said Commission Chair Kevin Kennedy – “Knowing the present status of the sewer system, where we need to focus attention, and what we can anticipate in the long-term is key knowledge we sought to find. Our maintenance partnership with Colchester continues to be a significant contributor to the system being in a good state of repair. The Village Commission will focus on ensuring the short-term deficiencies identified are addressed, and that long-term needs and further development of our asset management practices are considered.”

Village of Bible Hill first constructed a sewer system, which (then) covered the majority of properties throughout the Village, in 1957. Since those early days, development in the Village continued and the system expanded upon. With growing sewer assets in other areas of Colchester, it was in the early 1970s that sewer staff, service equipment, and maintenance responsibilities were transferred from the Village to Municipality of the County of Colchester, with maintenance costs funded annually by the Village – an arrangement that continues today.

Earlier this month, the Village was granted up to \$50K by Federation of Canadian Municipalities in partnership with the Government of Canada to support the study.

The final report can be found on the Village's website at biblehill.ca.