



Infrastructure Services Staff Report

Report Number: IS15-2024
Report Title: Tender Award for Cured-In-Place-Pipe (CIPP) Sewer Lateral Lining
Author: Ian Vaughan, Engineering Project Supervisor
Meeting Type: Council Meeting
Meeting Date: October 22, 2024
eDocs or File ID: T04
Consent Item: No
Final Version: Yes
Reviewed By: Jared Puppe, Director of Infrastructure Services
Final Review: Senior Management Team

Recommendation:

That the Council of the Township of Woolwich, considering Report IS15-2024 respecting Tender Award for Cured-In-Place-Pipe (CIPP) Sewer Lateral Lining:

1. Award Contract 2024-12 Cured-In-Place-Pipe Sewer Lateral Lining Program to Liqui-Force Services (Ontario) Incorporated at a cost of \$ 570,313.92 after H.S.T. rebate; and,
2. Retain GEI Consultants Incorporated for the contract administration, inspection, and post construction services at a total cost of \$ 38,611.41 after H.S.T. rebate.

Background:

The Township of Woolwich (Township) has been investigating and reducing Inflow and Infiltration in their sewer systems since 1995.

Inflow and Infiltration (“I&I”) is ‘clean’ water that enters the sanitary sewer system. Inflow is generally rainwater which comes from downspouts, sump pumps and weeping tiles that are directly connected to the sanitary sewer system. Infiltration is groundwater that enters the sanitary sewer system through cracked or broken pipes, leaking joints, etc. This ‘clean’ water from I&I is conveyed through the sanitary sewer system and is processed at the sewage treatment plant. I&I uses up capacity, reduces the life of sewer systems and adds to the cost of treatment.

Cured-In-Place-Pipe (CIPP) lining products allow existing sewer pipes to remain in place while permitting municipalities to renovate and revitalize the existing sewer networks to extend valuable asset life (50 years). CIPP is a jointless, seamless, pipe-within-a-pipe product used to rehabilitate sanitary sewers, storm sewers, cellar drains, laterals, forcemains and culverts. CIPP installations have been used for over 40 years in North America. The Township of Woolwich began using the technology in 2016 and has completed over 8,200m of mainline sewer relining.

The supply and installation of CIPP addresses a variety of concerns including:

- **Infiltration** – CIPP helps with the reduction of water entering the sewer system through cracks, holes and joint failures in the existing infrastructure which can overload existing treatment facilities, especially during times of wet weather (spring/fall). CIPP significantly reduces infiltration.
- **Roots/Organic Debris** – Over time roots will find sewer systems an attractive source of water and nutrients and can create blockages, leading to surcharges in the system. CIPP is designed to keep roots out of Township infrastructure, while keeping Township flows inside the sewer.
- **Structural Integrity of Existing Pipe** – Because of the structural integrity component of CIPP liners, CIPP can be used to restore the structural integrity to damaged sewers while providing a new “lease on life” for the Township’s aged infrastructure. In addition, CIPP can also be used to replace damaged pipes entirely and act as a standalone sewer, should the existing sewer disintegrate entirely. CIPP liners, can also be lined again, should a failure occur.
- **Flow capacity and characteristics** – CIPP installation slightly decreases the overall sewer capacity by decreasing the overall inside diameter of the pipe; however, CIPP provides the least cross-sectional reduction of all methods used to rehabilitate pipe. CIPP does improve upon the existing flow characteristics as it provides a smooth jointless interior that reduces abrasion resistance.
- **Affordability** – CIPP is typically less expensive than conventional “dig and replace” methods of sewer repair due to the elimination of restoration costs (i.e. no open trenching, no need to cut roadways/boulevards, and no outside service restorations (bell, rogers, hydro, etc.). In addition to the lower restoration costs, there is also less disturbance to property owners and less traffic congestion and detouring.
- **Installation** – Each section of pipe is unique, and care is required to prepare the pipe so that it can be inspected and measured using closed-circuit television (CCTV). A benefit to using CIPP is that it can be installed in any season of the year. CIPP affords a cost-effective, technically sound and flexible solution for our pipe rehabilitation.

Water and Young Street Inflow and Infiltration Project

Through the Water Street and Young Street Inflow and Infiltration Remediation Project, the objective is to remediate the inflow and infiltration within the wastewater system along Water Street and Young Street in St. Jacobs. Through Report IS12-2021 Water Street and Young Street Inflow and Infiltration Remediation Project, GM BluePlan Engineering Limited (now GEI Consulting) was retained for the engineering and design services. Through IS20-2023, Tender Award for Cured-In-Place-Pipe (CIPP) Sewer Lining, the mainline sewer lining within Water Street and Young Street was completed. The mainline sewer lining was required to be completed prior to the lateral lining to create a monolithic seal of the mainline and lateral connection point. The CIPP Lateral Lining Location Maps are attached to this report as Appendix A.

The work required under this contract consists of full-length trenchless rehabilitation of existing sewer laterals, from mainline to house/building using a CIPP tube with ambient or light cured resin. The purpose of this contract is to eliminate extraneous flow and repair structural and operational defects in the Water Street and Young Street sanitary sewer collection systems.

Staff have prioritized the locations of sewer laterals identified as having inflow and infiltration issues requiring repair/replacement based on CCTV review and areas of known concern (existing flow monitoring information provides areas where inflow and infiltration has historically occurred). Focusing on these areas can help reduce inflow and infiltration and help to reduce overall flows received by the Region's Wastewater Facilities.

It is noted that, while Staff provided the contractor with the most up to date sewer lateral videos, drawings and background information available at the time of tender, final quantities of lateral lengths to be lined will not be determined until the contractor mobilizes and completes CCTV inspections of their own.

GEI Consulting has reviewed the laterals and lateral connection, condition assessment documentation, media footage, provided an in-depth evaluation of operational defects, vertical deflections and other issues of the wastewater laterals for Water and Young Street. Township staff completed an Online Public Consultation Centre (PCC) for the Water and Young Street project in March of 2023.

Comments:

Tender documents were picked up by fifteen firms and two bids were received by tender closing. Liqui-Force Services (Ontario) Incorporated provided the low bid price at a total cost of \$ 570,313.92 after H.S.T. rebate. The Record of Tender Summary is attached to this report as Appendix B.

The tenders were reviewed by GEI Consultants Incorporated and Township Staff. It has been determined that the low bid submitted by Liqui-Force Services (Ontario) Incorporated is correct with no major abnormalities.

Township staff are familiar with Liqui-Force Services (Ontario) Incorporated and have successfully completed similar project in the past. Liqui-Force Services (Ontario) Incorporated meet all requirements of the contract documents; therefore, staff recommend that Liqui-Force Services (Ontario) Incorporated be awarded the contract for the CIPP sewer lateral lining project. The Award Recommendation Letter is attached to this report as Appendix C.

A construction contingency in the amount of \$50,000.00 and provisional items in the amount of \$67,080.19 is included in the tender received by Liqui-Force Services (Ontario) Incorporated. Contingencies are included in each tender submission to address any unforeseen construction issues and to enable the negotiation of any tender items should changes to the scope of work occur. Provisional items are included in the contract and will be utilized if required.

Interdepartmental Impacts:

None.

Financial Impacts:

Budget **\$1,350,000.00**

Tender for Water and Young Street (Lateral)

Liqui-Force Services (Ontario) Incorporated	\$ 560,450.00
H.S.T	\$ 72,858.50
Subtotal (including H.S.T)	\$ 633,308.50
Less H.S.T Rebate	\$ 62,994.58
Total with H.S.T. rebate	\$ 570,313.92

Other Known Costs for Water and Young

GM BluePlan: Inspection, Contract Administration and Post Construction Services (as-recorded drawings, deficiency reviews)	\$ 38,611.41
Remaining carryover cost from Tender 2023-15 for Water Street and Young Street (Mainline Sewer) completed in 2024.	\$ 560,000.00
Woolwich Staff	\$ 15,000.00
Total	\$ 613,611.41

Grand Total	\$ 1,183,925.33
Remaining Budget	\$ 166,074.67

Funding for the Water Street and Young Street Cured-In-Place-Pipe (CIPP) Sewer Lateral Lining Program was identified in the 2024 Capital Budget being funded from the Wastewater Reserve Fund. This project was previously approved to be funded from the Wastewater Reserve Fund, and finance have confirmed this project was included in the deficit projections shared with Council in September. However, as the wastewater reserve fund is currently in a deficit position, a financial strategy will need to be developed in conjunction with the rate review study, to bring the reserve to a positive balance.

The Water Street and Young Street project was originally identified in 2012 to begin engineering for a reconstruction project due the inflow and infiltration as well as the Series 160 (thin walled) PVC watermain. As the Series 160 PVC watermain has been adequate to date, through IS20-2023, Tender Award for Cured-In-Place-Pipe (CIPP) Sewer Lining, the mainline sewer lining within Water Street and Young Street was completed.

Community Strategic Plan Impacts:

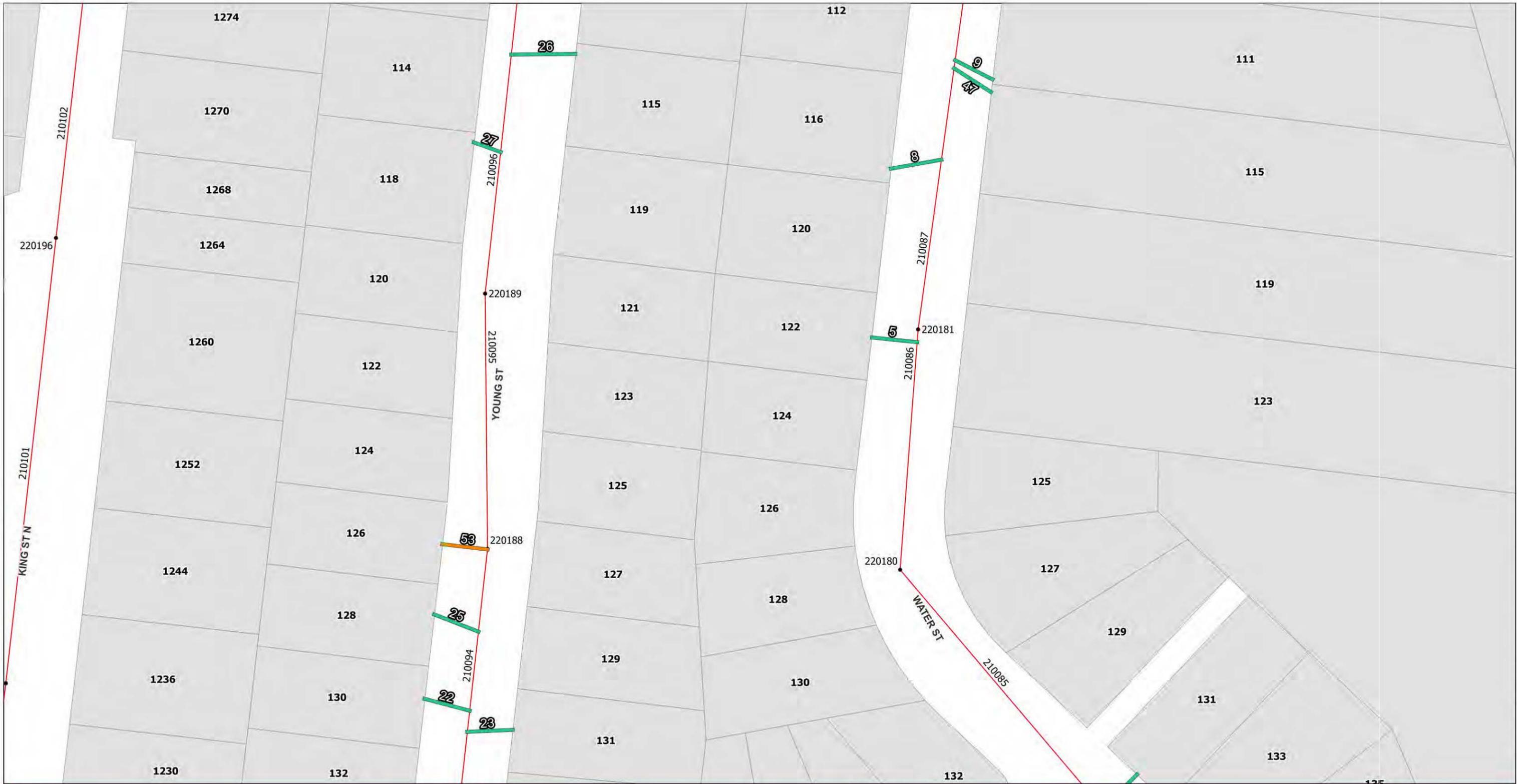
The Cured-In-Place-Pipe (CIPP) Sewer Lateral Lining Program supports the Township of Woolwich's strategic direction to "*Manage and maintain all municipal infrastructures with an emphasis on continuous improvement and greater efficiencies*", with a goal to "*Optimize the Use of Municipal Infrastructure*".

Conclusion:

Staff recommends that Tender 2024-12 for the Cured-In-Place-Pipe (CIPP) Sewer Lateral Lining Program be awarded to Liqui-Force Services (Ontario) Incorporated at a total cost of \$570,313.92 after H.S.T. rebate and retain GEI Consultants Incorporated for the contract administration, inspection, and post construction services at a total cost of \$38,611.41 after H.S.T. rebate.

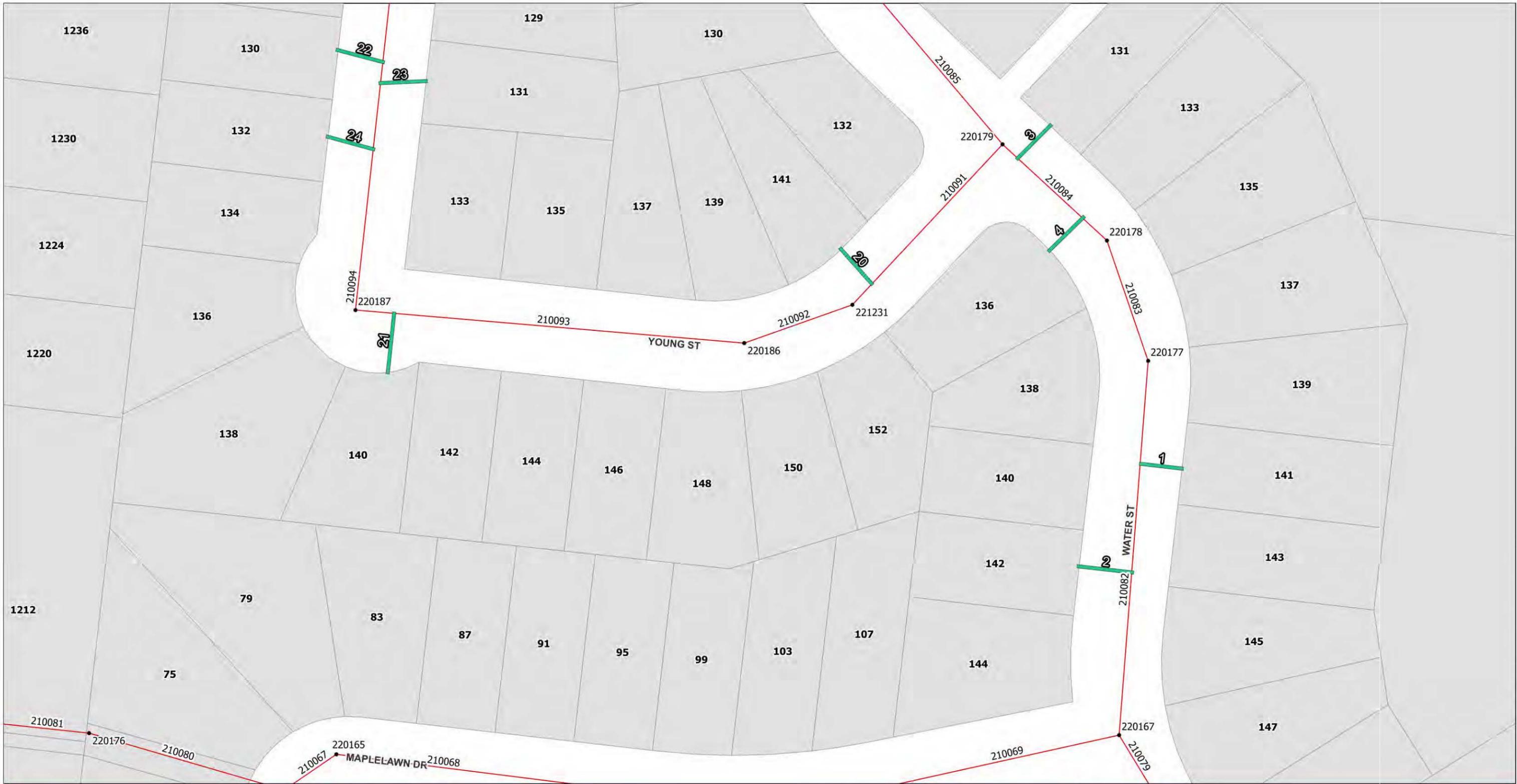
Attachments:

1. Appendix A – CIPP Lateral Lining Location Maps
2. Appendix B – Record of Tender Summary
3. Appendix C – Award Recommendation Letter



Sanitary Infrastructure • Sanitary Manholes — Sanitary Sewers	Lateral Rehabilitation Actions — Connection Liner — FLL CIPP — Provisional FLL CIPP or Connection Liner	Background Information ■ Parcel Boundaries		Sanitary Lateral Rehabilitation Actions
Reference(s) 1. Projection EPSG:26917 				Project Name: Water and Young Street I&I Remediation Client Name: Woolwich, ON, Canada  Last Updated: August 2024 Document ID: 2401773 - 421039

Document Path: E:\www\woolwich\woolwich_on\1773-421039\2023-10-10\Water St and Young St\GIS Data\Waterway Working File.gpr



Sanitary Infrastructure	Lateral Rehabilitation Actions	Background Information
• Sanitary Manholes	— Connection Liner	▭ Parcel Boundaries
— Sanitary Sewers	— FLL CIPP	
	— Provisional FLL CIPP or Connection Liner	

Reference(s)

1. Projection EPSG:26917

Sanitary Lateral Rehabilitation Actions

Project Name: Water and Young Street I&I Remediation	Client Name: Woolwich, ON, Canada
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Last Updated: August 2024
Document ID: 2401773 - 421039

Document Path: E:\working\WOOLWICH-ON-TWP-CIP2401773-421039-02-1-01-Water-St-and-Young-St-Data\GIS-Datas\Working-File.dwg

IS15-2024 - Cured-In-Place-Pipe (CIPP) Sewer Lateral Lining
Appendix B - Record of Tender Summary

Closing Date: Tuesday, September 24, 2024

Submission Summary

Vendor	City/Province	Submission Name	Unofficial Value or Notes
Liqui-Force Services (Ontario) Inc	Kingsville, Ontario	Submission 1	\$633,308.50
Capital Sewer Services Inc.	Vaughan, ON	Submission 1	\$979,602.65

Witness (Print Name) Signature Date

Witness (Print Name) Signature Date

Witness (Print Name) Signature Date

IS15-2024 - Cured-In-Place-Pipe (CIPP) Sewer Lateral Lining
Appendix C - Award Recommendation Letter



1266 SOUTH SERVICE ROAD UNIT C31
HAMILTON, ONTARIO, CANADA
L8E 5R.
905.643.6688

October 3, 2024
Our File: 2401832

Ian Vaughan
Engineering Project Supervisor
24 Church St W, Elmira, ON, N3B 2Z6

Re: Cured in Place Pipe (CIPP) Sewer Lateral Lining (Contract 2024-12)

Dear Mr. Vaughan,

Tenders for 2024 CIPP Lateral Lining (2024-12) were received by the Township of Woolwich (Township) on or before 2:00pm September 24, 2024. A total of 2 bids were received via Bids & Tenders. The tender results are summarized in Table 1, which includes provisional items and HST rebate.

Table 1: Price Submitted

Bidder	Tender Price
Liqui-Force Services (Ontario) Inc (LFS)	\$570,313.92
Capital Sewer Services Inc. (CSS)	\$882,162.53

GEI Consultants Inc (GEI) has reviewed the submissions for general bid compliance and both were deemed compliant.

All the bids were entered electronically into tables on the online bidding platform. GEI checked the submitted Form of Tender pricing for errors and omissions and no arithmetic errors were identified.

We note the following based on our review of the low bid submitted by LFS:

- LFS are considered leaders in the industry for lining laterals from the mainline.
- GEI has successfully completed similar projects with LFS since 2021.
- LFS did not carry any subcontractors.
- LFS provided a reasonable market price to complete lateral lining and the Township should consider completing the provisional full length lateral lining work if budgets allow.

RECOMMENDATION

GEI can confirm that LFS meets all requirements of the contract documents. Provided that the Township has sufficient budget to cover the project costs, we recommend that the Township award LFS the contract including the provisional amount - \$570,313.92 including HST rebate.

We trust you will find the above to be in order and meets the Township's requirements. Please contact the undersigned should you have any questions regarding the above.

Yours truly,
GEI CONSULTANTS
Per:



Ben Peters, B.Eng.
Sr. Project Manager, Trenchless