



PORT COLBORNE

Subject: 2025 Watermain Replacement Program Update

To: Council

From: Public Works Department

Report Number: 2025-34

Meeting Date: February 11, 2025

Recommendation:

That Public Works Department Report 2025-34 be received; and

That Council approve merging the existing 2025 and 2026 Watermain Design & Construction Capital project budgets being capital project 24C-WT-R05 (\$275,000), 24C-WT-R06 (\$465,000), and 25C-WT-BK1 (\$1,155,000); and

That Council approve the rehabilitation of the Clarence Street watermain between King Street and West Street.

Purpose:

The purpose of this report is to recommend changes to the 2025 and 2026 Watermain Design and Construction Program that was presented as part of the Infrastructure Needs Study in April 2024 and the 2025 Capital Budget deliberations.

Background:

In April 2024, Council approved Report 2024-51 – Infrastructure Needs Study. This report and study provided a replacement plan for core infrastructure, including the water system.

The watermain replacement program developed through the study identified a short- and long-term replacement plan prioritized based on age, pipe material, and available watermain break data.

Funding approval resulting from the reports included \$740,000 to implement the detail design work for the 2025 and 2026 programs and \$1,155,000 for the 2025 construction program which included the following locations:

2025 Replacement Program

- North Crescent – 245m
- South Crescent – 235m
- Ash Street – 95m
- Jefferson Street – 165m

2026 Replacement Program

- Schofield Avenue – 640m
- Hampton Avenue – 600m

The 2026 watermain construction budget has not been approved but will be presented in the 2026 budget deliberations.

Discussion:

As construction prices continue to rise in the public sector, staff have reviewed alternative infrastructure replacement methods. Cured in Place Pipe (CIPP) lining has been used extensively with high success and at lower costs compared to full pipe replacement. This method involves cleaning the host pipe, inserting and curing a liner into the existing pipe, and then opening access holes for the connected services.

Staff are in the process of retaining a company to complete the design and lining work for the 2025 and 2026 Watermain Replacement Program and have received preliminary pricing. The preliminary pricing falls below the approved budget due to the minimal design costs that lining entails versus full replacement. The cost estimates for full pipe replacement (open-cut construction) versus CIPP lining for the approved 2025 and 2026 watermain programs are compared below.

Project	Approved Capital Budget	Full Pipe Replacement Cost	Cured in Place Pipe Cost
2025 Design (24C-WT-R05)	275,000	\$310,000	\$150,000
2025 Construction (25C-WT-BK1)	1,155,000	\$2,100,000	\$1,100,000
2025 Construction (Clarence Street - King St to West St Addition)	NA	\$350,000	\$200,000
2026 Design Project (24C-WT-R06)	465,000	\$520,000	\$125,000
Total	1,895,000	\$3,280,000	\$1,575,000
Projected Savings		-\$1,385,000	\$320,000

Full pipe replacement costs were estimated based on recent watermain construction projects in Port Colborne. These costs are higher than typical open cut pricing due to Port Colborne's high-water table and excess soils. These aspects make construction in Port Colborne significantly more challenging than areas that do not have to pump ground water throughout a project, or transport and dispose of excess soils to a waste management facility. For these reasons staff have determined that CIPP lining which minimizes both pumping groundwater, and the removal of excess soils should be utilized when possible.

During the Clarence Street Storm Sewer Replacement project, staff completed test pits on existing water services to determine the material they were made of since the road was already being excavated. Staff found multiple galvanized and lead services present. These services have since been approved for replacement through the project as a change order to the original work scope. Lining the associated watermain will ensure that construction activities do not need to mobilize to this location in the foreseeable future to complete watermain repairs.

Since the projected costs of watermain lining are within the approved budget, there is an opportunity to add the Clarence Street watermain into the 2025 lining program at no additional cost to the approved budget. With the area already under construction, a contractor will mobilize to site after the storm sewer project is completed, but before final restoration of the asphalt takes place.

Financial Implications:

No additional costs are associated with approving the lining of the Clarence Street watermain between King Street and West Street. The 2025 and 2026 Watermain Design and Geotechnical accounts, and the 2025 Watermain Construction capital project account will be merged for staff to utilize in implementing the lining program.

Strategic Plan Alignment:

The initiative contained within this report supports the following pillars of the strategic plan:

- Environment and Climate Change
 - Welcoming, Livable, Healthy Community
 - Economic Prosperity
 - Sustainable and Resilient Infrastructure
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Conclusion:

The proposed update to the City's 2025 Watermain Replacement Program, which includes the addition of 95 meters of CIPP lining on Clarence Street, provides a cost-effective solution to advancing the City's Strategic Goal to sustainably renew and improve its infrastructure.

Respectfully submitted,

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Report Approval:

All reports reviewed and approved by the Department Director and also the City Treasurer when relevant. Final review and approval by the Chief Administrative Officer.