
For Immediate Release

Exploring New Territories in Efforts to Expand Infrastructure Life New Strategy to Address Water Distribution Systems in Cambridge

Cambridge, Ontario. November 09, 2011... Things have changed a lot since the 1950s and 60s when Cambridge first laid pipe for water distribution systems. Today, there are numerous approaches to the rehabilitation of things like watermains and the City of Cambridge is utilizing innovative technology that expands the life of the infrastructure while limiting the disruption to the community.

The 'Thin-walled Cast Iron Watermain Rehabilitation Project' began as a Pilot program on October 11th tackling Guelph Avenue which is expected to be completed in early December. The practice of using Thin-walled cast iron for pipes was introduced some five decades ago and thought to be more durable and corrosion resistant than the traditional cast-iron watermains. However, through intensive inspections and historical data, staff determined that these pipes needed attention.

"We are implementing pilot projects while we develop the longer-term strategy to address the infrastructure needs of the water distribution system. We are focusing on rehabilitation through trenchless methods, replacement where necessary, and overall corrosion protection of our watermains," says George Elliott, Commissioner of Transportation and Public Works. Elliott notes the development of the strategic plan is expected to be completed in summer 2012.



Through the award-winning asset management system, the City identified a backlog of approximately \$54 million worth of watermain repairs needed throughout Cambridge. This knowledge-based system allowed staff greater abilities to set priorities and address them in the most cost-effective manner.

The Thin-walled Cast Iron Watermain Rehabilitation Project is another area for the City to step outside the box and introduce new innovation.

For example, the rehabilitation of the 12-inch watermain on Guelph Avenue includes lining the watermain using a cured-in-place-pipe (CIPP) liner as well as installing new hydrants and valves. (Councillor Donna Reid is pictured above with City crews and contractors as the CIPP is prepared for installation.) As Guelph Avenue recently underwent an asphalt replacement program, the process also uses trenchless technology which means that crews don't have to rip up the road to access and repair underground infrastructure.

"The CIPP liner is essentially a double fire hose that is infused with a binder resin that is pulled through the watermain, inflated and cured into place using hot water," says Kealy Dedman, Director of Engineering. She notes the City has undertaken this method on smaller, six-inch pipes before, however this is a first for the larger-diameter watermains. "There is a significant advantage to this method of watermain rehabilitation as we are essentially getting a new pipe formed inside the existing one, preventing water leakage and saving money. Conservation is an important part of the mix and we are working pro-actively to address this kind of potential leakage."



(Pictured here, crews begin installation of the liners into the watermains following infusion of the binder resin)

The Thin-walled Cast Iron Watermain Rehabilitation project for the City of Cambridge will be undertaken over the next three years at a cost of approximately \$7 million. The inspection program results have

accelerated the need for renewal and funding was secured through borrowing or what's known as debenturing.

"Part of the funding investment will help Cambridge continue to explore best practices of rehabilitating pipe not only through the use of semi-structural and structural liners, but also through improvements to more traditional construction practices. "This is a critical piece of infrastructure for the City and our approach can add nearly a half a century to the life of the watermains," notes Elliott.

Cambridge is bringing some of the most informed partners to the table to continue to enhance the outcomes, including contracting AMEC Environment

and Infrastructure to develop the overall strategic plan to address the needs of the thin-walled cast iron watermains and working with Fer-Pal Infrastructure for the installations. The research doesn't stop there as other approaches like spray-in-place liners which are considered faster to install on pipes and highly efficient will be explored as part of the process.

"Thirty percent of the costs for watermain replacement or rehabilitation are attributed to the use of a temporary watermain bypass to ensure continuous supply of potable water for residents and businesses, and maintaining adequate flow for emergency operations such as fire. The pilot projects are looking at ways of eliminating this temporary work to enable more expenditure on the actual repairs for more benefit." says Elliott.

Exploring the frontiers of the 'return to service' subject in turning around rehabilitation projects during replacement or repairs is of vital interest to the City and municipalities across the world. It's a new territory in the North American market and one that the City is actively pursuing.

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The City of Cambridge is one of the fastest growing areas in the country. It is strategically located astride highway 401 in southwestern Ontario, part of Canada's Technology Triangle. In 2010, the population reached over 130,000 people. With a multicultural mix and a strong foundation of support services, Cambridge has a diverse economic base with leading industries in advanced manufacturing, automotive, high technology, pharmaceutical, business and financial services and hospitality/retail. The Corporation of the City of Cambridge is an employer with a progressive work environment that offers the opportunity to provide service to the community through creativity and innovation, and with opportunities for career growth and advancement.

You meet the nicest people in Cambridge. It's a place that understands all about coming together. There is so much more to Cambridge than the beautiful lands created at the convergence of two rivers or its logistically perfect location in the heart of Ontario's economic corridor. Cambridge is the coming together of people from diverse, close-knit and proud communities. The people of Cambridge 'do the right thing' by respecting history, family values, a sound work ethic, the arts, environment and advancement. A young city, Cambridge is a master of balancing the excitement and promise of the new with the historical significance and stability of the old. A place where coming together is just the start. Uniting together is what sets Cambridge apart. Undiscovered-Cambridge families and entrepreneurs get more for less, and sacrifice nothing.

The Corporation of the City of Cambridge is an employer with a work environment that offers the opportunity to provide service to the community through creativity and innovation, and with potential for career growth and advancement. For more information on the area or the corporation visit www.cambridge.ca. The City of Cambridge press room is located at

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