
2014 CAPITAL BUDGET BRIEFING NOTE

Permanent Restoration of Basement Flooding Protection Projects

Issue:

The Budget Committee at its meeting of November 6, 2013 requested the General Manager, Toronto Water to submit a briefing note describing how road restoration is estimated in Basement Flooding Relief projects and how long it takes to complete road restoration after each forecasted Basement Flooding Relief Project.

Background:

The Basement Flooding Protection Program involves the construction of storm drainage and sewer improvement works designed to reduce occurrences of basement flooding. Due to the size and scope of these works, the construction may have a significant impact on the right-of-way.

Historically, the contracts for basement flooding protection projects would include only temporary restoration of the road surface. This process is described in the Municipal Consent Requirements (MCR), which requires that all trenches in the roadway be restored on a temporary basis to allow for one freeze/thaw cycle before permanent restoration is undertaken by the Transportation Services Division, under a separate contract, within an 18 month period.

In 2011, a working group including staff from the Toronto Water, Transportation Services and Engineering and Construction Services divisions was formed to review the cost implications, coordination issues, and technical criteria/standards for proceeding directly to permanent restoration for Toronto Water capital replacement and rehabilitation projects.

Following from this working group, the Engineering and Construction Services Division recently completed several pilot projects to assess the opportunities and benefits associated with completing permanent restoration under the basement flooding and other Toronto Water capital works contracts.

A staff report titled "Managing Construction Disruption", adopted by City Council at its meeting on April 3 and 4, 2013, describes the potential benefits of including permanent restoration in the Toronto Water capital works contracts as follows:

- Lower overall costs: A recent pilot project under the Basement Flooding program demonstrated cost savings of up to 5.5% by including permanent restoration in the basement flooding contract, and

- Minimizing overall construction disruption through the coordination of construction activities under a single contract and eliminating the need to have a second contractor mobilize into the area under a separate contract to complete permanent restoration, and
- Elimination of potential conflicts with Toronto Water contract warranty periods

Due to the observed benefits of including permanent restoration in the basement flooding contracts, the Toronto Water, Transportation Services and Engineering and Construction Services Divisions have agreed that all basement flooding contracts starting in 2013 or later will include permanent restoration.

Schedule of Permanent Restoration Activities:

Basement flooding projects typically have work identified along multiple streets in a single area that is bundled into one contract. These projects have a significant impact to the road, resulting in the need for extensive restoration. Accordingly, through the capital coordination process managed by the Major Capital Infrastructure Coordination section, underground capital work from other stakeholders that could impact the road is sequenced in advance of the basement flooding work so that permanent road restoration can be undertaken immediately after all the basement flooding work within a contract has been completed. If the permanent restoration works cannot be completed prior to December of a given year, then the restoration works will be completed the following spring.

Extent and Scope of Permanent Restoration Activities:

Permanent restoration undertaken for basement flooding projects will include restoration of any sections of road, sidewalk, sod and curb which have been damaged by the basement flooding construction, planting of trees, as well as the restoration of any pre-existing utility cuts, or maintenance items within the limits of the basement flooding contract area.

The extent and limits of the permanent restoration, including maintenance items and restoration of pre-existing utility cuts, is initially determined following an on-site review with Transportation Services prior to construction, then confirmed after the installation of the underground infrastructure and prior to initiating the permanent restoration.

If the Transportation Services Division has any planned capital work like road reconstruction or resurfacing planned on the same streets as the basement flooding protection projects, the Engineering and Construction Services Division will review all opportunities to coordinate the works and complete the works under a single contract (if possible).

Key Points:

- The historical approach to cut repairs poses several key challenges including increased disruption to residents and businesses, potential voiding of construction warranties for Toronto Water projects, and increased costs.
- The MCR document, which describes restoration procedures in the right-of-way, is available online at <http://www.toronto.ca/engineering/mcr/>
- All Toronto Water Capital projects starting in 2013 or later will include permanent restoration

- The permanent restoration will be completed immediately following the construction of all basement flooding underground works, weather permitting, under the same contract
- Permanent restoration will include repairs to any portions of road, curbs, sod and sidewalks which were damaged by the basement flooding construction as well as planting trees
- In cases where Toronto Water works damage more than half of the road, the permanent restoration will include a curb-to-curb resurfacing of the road
- The permanent restoration will include the restoration of any pre-existing utility and maintenance items. This will minimize disruptions to residents and businesses by eliminating the need for a future Transportation Services contractor to mobilize into the same area.

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