

COMMITTEE OF THE WHOLE - JUNE 14, 2011

REVISED PROTOCOL TRENCHLESS REPAIR OF CRACKED SEWER SERVICE CONNECTION TEE FITTING

Recommendation

The Commissioner of Engineering and Public Works recommends:

THAT the cracked sewer service connection tee fitting repair protocol be amended to authorize staff to regularly adjust the value of the required monetary payment with consideration for the performance and advancements in trenchless repair technology.

Contribution to Sustainability

The recommendation of this report has been developed with consideration for the impact on the natural and built environments, and its potential social and financial implications.

Economic Impact

The adoption of this report will authorize staff to establish the appropriate value of the funds that are collected from private sector developers with regard to the repair of cracked sewer service connection tee fittings. These funds will be deposited in the City's Sewer Reserve and used to maintain and/or replace the sewer fittings if required in the future, likely as part of a future road renewal project.

Communications Plan

The approved recommendations stemming from this report will be communicated to the private sector developers, engineering consultants and contractors through correspondence and the normal design, inspection and acceptance process.

Purpose

This report recommends the adoption of a revised protocol with respect to the financial contribution associated with the trenchless repair of cracked PVC sewer service connection tee fittings in new developments.

Background - Analysis and Options

Over the last several years, camera inspections have revealed cracks along the joint in a small number of PVC sewer lateral tee fittings. To date, there are about 300 known cracked sewer fittings in new developments City-wide. It is unclear at this point what caused these fittings to develop cracks.

Council, at its meeting on March 9, 2010, approved a protocol for the repair of these cracked sewer service connection fittings. According to this protocol, where a cracked fitting is identified within a newly completed road that is finished with the top asphalt, the fitting is to be repaired using trenchless technology such as a fiberglass tee liner. This repair method has been in use for about seven years now with good success. Most contractors provide a minimum five year warranty on a tee liner repair. Given the City's limited experience with the product, it was anticipated that at some point over the life span of the sewer, the cracked fitting may need to be either relined or dug up and replaced. Accordingly, the protocol also included a requirement for a monetary payment from the private sector developers for each cracked sewer service connection tee fitting that was repaired by using a fiberglass tee liner to facilitate the inspection, maintenance and ultimate replacement of the fitting. The value of the payment was based on the present day

cost of replacing the tee fitting which ranged between \$5,000 and \$10,000 per fitting depending on the depth of the sewer.

Since adoption of this protocol, the Ontario Provincial Standards, Product Management Committee has reviewed the T-Liner product that is provided by DM Robichaud and has accepted it for use in Ontario applications as of March 22, 2011. It is noted that this product is also being accepted in other municipalities as an approved method for long term rehabilitation of sewer laterals.

In addition, the development community has expressed concerns that the value of the monetary payment is too high given the good performance results that are being realized from the use of fiberglass tee liners. At present, the reported failure rate of the liners is relatively low. As the City gains greater experience with this trenchless repair method, staff will be in a better position to assess the longevity and performance of the product. Accordingly, staff is recommending that the value of the monetary payment required under the cracked sewer service connection tee fitting protocol be reviewed regularly by staff with consideration for the experience, longevity, performance and reliability of the trenchless repair technology being used such as a fiberglass tee liner.

Relationship to Vaughan Vision 2020/Strategic Plan

This report is consistent with the priorities previously set by Council, in particular:

- Lead & promote environmental sustainability
- Maintain assets & infrastructure
- Ensure financial sustainability
- Plan and manage growth and economic vitality.

This report is consistent with the priorities previously set by Council and the necessary resources have been allocated and approved.

Regional Implications

This report has no implications on the Region of York.

Conclusion

The City's current practice requires a developer to dig up and replace cracked service connection fittings on an unfinished roadway and will continue to do so. When a cracked tee is identified after the top asphalt has been placed on a road, alternative trenchless methods of repairing the cracked fitting must be used in order to avoid excavating the new road surface. Excavation of new road surfaces can lead to long term maintenance costs and premature road surface failures. The City also requires the developer to provide the City with a monetary payment for each cracked sewer service connection tee fitting that has been repaired by using a fiberglass tee liner. These funds will offset any cost the City may incur in the event the liner or fitting needs to be replaced in the future. The technology and methodology of trenchless repair work is continually evolving and advancing. Accordingly, it is recommended that the value of the monetary payment required under the City's cracked sewer service connection tee fitting protocol be reviewed regularly by staff with consideration for the experience, longevity, performance and reliability of the trenchless repair method being used such as a fiberglass tee liner.

Attachments

None

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Respectfully submitted,

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