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### **YONGE STREET EMERGENCY SEWER REPAIR**

**The Transportation and Works Committee recommends the adoption of the recommendation contained in the following report, August 24, 2007, from the General Manager, Roads:**

#### **1. RECOMMENDATION**

It is recommended that:

1. Funding in the amount of \$1,091,000 for the emergency storm sewer repair on Yonge Street in the Town of Aurora be acknowledged and be funded within the 2007 Roads Capital Program.

#### **2. PURPOSE**

The purpose of this report is to inform Council of the emergency sewer repair that is required on Yonge Street, in the Town of Aurora (*see Attachment 1*), and to seek funding approval.

#### **3. BACKGROUND**

On July 11, 2006, Regional Road Maintenance staff discovered a depression on Yonge Street just north of Industrial Parkway, in the Town of Aurora.

A further investigation by staff, consisting of a CCTV (Closed Circuit Television) inspection of the storm sewers, revealed that the existing storm sewer was in very poor condition with areas of severe cracking and collapsing of the concrete storm pipe. It was also evident from the CCTV investigation that there were signs of ground water infiltration along the entire length of the sewer. After assessing the condition of the storm sewer, it was determined that the northbound lane of Yonge Street, just north of Industrial Parkway would have to be closed due to the possible failure of the storm sewer and road collapse. It was also necessary to engage a soils consultant to review the ground conditions and recommend a repair strategy. The consultant retained was Inspec-Sol Inc.

Inspec-Sol Inc. advised that further CCTV inspections of all the storm sewers in the immediate area (including the Town of Aurora section to the north) should be undertaken, as well as a dewatering specialist company be retained to determine ground water flow rates that would be required for dewatering of the site during the repair of the storm sewer.

Atlas Dewatering was engaged and conducted ground water flow rates in the area of the failed storm sewer. It was determined that a Level 1 permit to remove water was required from the Ministry of Environment. This permit process usually takes approximately 12 weeks. This timeframe would delay the construction into the winter months.

In recognition that the lane could not remain closed for an extended period of time, steel road plates were placed over the storm sewer, to bridge the traffic loads allowing the lane to be reopened. The plates were installed on October 12, 2006 and all lanes were reopened.

Due to the timing of the completion of the detailed assessment of the area, this work was unable to be included in the projected 2007 Capital Program. Also, the full extent of damage and scope of repair work was not fully determined until the spring of 2007.

A contract has been prepared, tendered and awarded for the replacement of the complete storm sewers and pavement rehabilitation on Yonge Street from Industrial Parkway to approximately 400 metres north.

This work was tendered without Council approval because the estimated value was within the amount allowed to be awarded by the Chief Administrative Officer.

The location of the road and storm sewer failure is very close to the CN bridge over Yonge Street. In order to ensure that the bridge would not be affected by any of the proposed repair work, the Region hired UMA Consulting to inspect and monitor the CN bridge and rails prior to, during and upon completion of the construction.

The cooperative efforts between CN rail authorities and the Town of Aurora have been engaged to help complete this project.

#### **4. ANALYSIS AND OPTIONS**

The contractor has started to work on this repair which is expected to be completed by November 2007.

This part of Yonge Street passes under the CN structure carrying the CN rail over the road. From the investigation that was completed, it was determined that it would be necessary to dewater the area before any excavation could take place to replace the storm sewer. A permit to take water has been obtained, and the construction has commenced.

##### **4.1 CN Rail**

The section of storm sewer that failed is in a part of Yonge Street that goes under the CN rail. CN officials were notified of the failure. CN officials immediately went to the site to make sure that the integrity of the CN structure was not compromised. CN also set up

their own monitoring system to detect any movement in the rails as the dewatering takes place.

#### **4.2 Town of Aurora**

The jurisdiction of Yonge Street changes from the Region to the Town of Aurora immediately north of the CN bridge, Aurora owns and maintains Yonge Street from the CN bridge to approximately 500 metres south of St. John's Sideroad. The storm sewer system on Yonge Street flows north from Industrial Parkway, past the CN bridge into the Town's storm sewer and outlets to the north west. The section of storm sewer immediately north of the CN bridge is under the jurisdiction of the Town of Aurora. Region staff has been in discussion with the Town staff on this matter. Only a small section of the Town owned sewer needs to be replaced which is included in this contract.

### **5. FINANCIAL IMPLICATIONS**

In the development of the 2007 budget, this project was not anticipated and funding was not included in the capital budget. Major unforeseen repairs of this magnitude are not expected nor are they budgeted for in the normal preparation of the annual budget. The contract awarded price for the work is \$841,000. The cost for the consultant, design, monitoring, inspection and dewatering is \$250,000. Based on the 2007 mid-year forecast, sufficient funds are available in the 2007 Roads Capital Program to cover this emergency expenditure. The appropriate required corresponding adjustments to the carry-overs for the under spent 2007 roads projects will be included in the draft 2008 Roads Capital Budget.

### **6. LOCAL MUNICIPAL IMPACT**

During the construction period, there will be lane reductions resulting in potential increased traffic congestion. This traffic congestion will impact Aurora residents using this section of road. A traffic management plan is in place to help minimize the impacts of the construction on the travelling public, the highlights of which are listed below.

- Yonge Street shall be kept open to through traffic at all times.
- As VIVA service is operational on Yonge Street, the contractor will not be permitted any lane restrictions between 6:00 a.m. and 7:00 p.m.
- Outside of these hours, and with the approval of the General Manager, Roads, limited short duration lane restrictions may be permitted for the delivery and removal of material/equipment.

- The limited short duration lane restrictions will not be permitted to exceed a 10 minute time duration within a one hour period.
- Two southbound lanes of traffic and one northbound lane of traffic will be maintained between the hours of 6:00 a.m. and 10:00 a.m.
- Two northbound lanes of traffic and one southbound lane of traffic shall be maintained between the hours of 3:00 p.m. and 7:00 p.m.
- All other times, a minimum one lane of traffic shall be maintained in each direction.
- With the prior approval of the General Manager, Roads, one lane of three available traffic lanes will be permitted to be restricted when controlled by flag persons between the hours of 10:00 a.m. and 3:00 p.m. only for the purpose of relocating traffic staging and the delivery and removal of materials and equipment.
- Access shall be maintained at all times to all businesses and residences presently having access to the road.

## **7. CONCLUSION**

An emergency sewer repair on Yonge Street, north of Industrial Parkway is required due to the potential of a sewer and/or road failure. Steps have been taken to correct the problem which should be completed by the end of November 2007. Emergency repairs such as this are not accounted for in the normal budget process. The contract price for the tendered work is \$841,000. In addition, funds are required to cover the cost of design, inspection, monitoring and dewatering to be \$250,000, for a total cost of \$1,091,000. It is therefore recommended that funds for this emergency work be provided from within the 2007 Roads Capital Program.

For more information on this report, contact Brian Harrison, Director, Operations, Roads Branch at extension 5205 in the Transportation and Works Department.

The Senior Management Group has reviewed this report.

*(The attachment referred to in this clause was included in the agenda for the September 5, 2007 Committee meeting.)*