



To: General Purposes Committee

Date: November 29, 2007

From: Robert Gonzalez, P.Eng.
Director, Engineering

File: 10-6400-01/2007-Vol 01

Re: Emergency Replacement of Blundell Road Forcemain

Staff Recommendation

1. That funding of \$425,000 from the Sanitary Sewer Reserve Fund be approved as the funding source for the "Emergency Replacement of Blundell Road Forcemain" capital project.
2. That the 2008 Capital Budget via the Five Year Financial Plan (2008 – 2012) be amended for the new capital submission "Emergency Replacement of Blundell Road Forcemain" with a total project budget of \$425,000.

Robert Gonzalez, P.Eng.
Director, Engineering
(4150)

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ROUTED TO:		CONCURRENCE		CONCURRENCE OF GENERAL MANAGER	
Budgets		Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>
Sewerage & Drainage.....		Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>
REVIEWED BY TAG		YES	<input checked="" type="checkbox"/>	NO	<input type="checkbox"/>
			<i>AK</i> <i>GJ</i>		
REVIEWED BY CAO		YES	<input checked="" type="checkbox"/>	NO	<input type="checkbox"/>
			<i>ACTIVE</i>		<i>SD</i>

Staff Report

Origin

On October 19, 2007, a disruption to the City's sanitary sewer system was experienced due to a break in an older fibreglass 450 mm diameter Blundell West Trunk Sewer pressurized forcemain approximately 200 metres east of No. 1 Road. City Operations staff responded to this break on an emergency basis and completed a repair thereby avoiding a public health risk associated with exposure to untreated sewage.

Recently it became evident that the pressurized sewer forcemain has started to leak again as the fibreglass repairs are unable to completely seal the leak. As a result it remains necessary to secure funding to complete permanent replacement of a section of the Blundell West Trunk Sewer forcemain.

The purpose of this report is to request Council authority to add a new capital project to the 2008 Capital Program.

Analysis

The City has an extensive wastewater collection system consisting of approximately 460 km of gravity sewer mains, 163 sanitary pump stations and 97 km of forcemains. The fundamental purpose of this system is to collect and convey sanitary sewage to Metro Vancouver's Lulu Island Wastewater Treatment Plant. The Blundell West Trunk Sewer is located on Blundell Road between No. 1 Road and Gilbert Road and specifically provides sanitary service to the northwest region of the City.

On October 19, 2007, City crews responded to a reported sinkhole at approximately 4151 Blundell Road. Crews found the cause of the sinkhole to be a break in the Blundell West Trunk Sewer forcemain and immediately commenced repairs. The 450 mm diameter Blundell West Trunk Sewer forcemain was constructed in 1971 using fibreglass pipe and upon determining the cause of the leak, the sewer forcemain was found to be nearing the end of its useful service life. This sewer forcemain was repaired over a period of weeks given the complications with repairing a pressurized fibreglass sewer forcemain.

The City's cost to complete the emergency repair was \$56,000. There was also considerable impact to traffic on Blundell Road in addition to an elevated public health impact potential to passer-by's and the residents in the immediate vicinity of the work related to exposure to raw sewage.

Given the emergency repair, it is standard practice for Public Works to conduct follow up inspections. Through these follow up inspections, it became evident that the sewer forcemain was again leaking in the same area. Staff investigated several options with industry suppliers, given that the new fibreglass sewer lines and associated repair parts are no longer being produced. The recommendation from suppliers as well as City staff was to replace the section of sewer that has deteriorated.

Staff recommend replacement of the sewer forcemain from No. 1 Road to approximately 225 metres to the east. The cost to complete replacement of this section of sanitary forcemain is estimated to be \$425,000. This work will also include installation of new valves in order to allow this section of sewer main to be isolated in future if required.

Options for Consideration

1. Amend the 2008 Capital Budget (Recommended) – Under this option, a new project entitled “Emergency Replacement of Blundell Road Forcemain” would be added to the 2008 capital program, and would be funded through the Sanitary Sewer Reserve Fund.
2. Replace Project in 2008 Capital Program – There is the opportunity to defer work from the approved 2008 capital program and add an “Emergency Replacement of Blundell Road Forcemain” project. Should Council select this option, staff recommend that the “City Centre Sanitary Sewer Assessment and Rehabilitation” project be reduced from \$2,090,000 to \$1,665,000 and the scope of work be reduced accordingly. Staff do not recommend this option as the intent of the “City Centre Sanitary Sewer Assessment and Rehabilitation” project is also to assess and replace deteriorated sewer pipes.

Should Council approve this project, staff will commence design and construction of the Blundell West Trunk Sewer replacement section immediately thereafter.

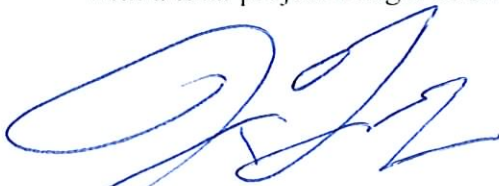
Financial Impact

The financial impact to the City is the addition of a \$425,000 capital project to the 2008 capital program to be funded from the Sanitary Sewer Reserve Fund.

Conclusion

The Blundell West Trunk Sewer provides sanitary service to a large area of the City including Terra Nova. City crews responded to a break in this main and completed emergency repairs. It remains necessary to address a subsequent sewer leak with a recommended sewer replacement at an estimated cost of \$425,000 in order to provide reliable sanitary sewer service and to minimize potential impacts to public health.

Staff recommend that the 2008 Capital Budget via the Five Year Financial Plan (2008 – 2012) be amended for the new capital submission “Emergency Replacement of Blundell Road Forcemain” with a total project budget of \$425,000.



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