



City of Richmond

Report to Committee

To: Public Works and Transportation Committee **Date:** November 22, 2019
From: Eric Sparolin, P.Eng.
Acting Manager, Engineering Design and Construction **File:** 10-6050-01/2019-Vol 01
Re: **Sanitary Sewer Replacement – 6000 Block Buswell Street**

Staff Recommendation

That funding of \$1,500,000 from the Sewer Utility Reserve be approved to complete the sanitary sewer replacement in the 6000 Block of Buswell Street and be included in the Consolidated 5 Year Financial Plan (2020-2024).

Eric Sparolin, P.Eng.
Acting Manager, Engineering Design and Construction
(604-247-4915)

Att. 1

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Finance Department Sewerage & Drainage	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS: 	APPROVED BY CAO

Staff Report

Origin

In October 2019, during maintenance of the sanitary sewers around Buswell Street and Cooney Road, staff discovered a section of failed sanitary sewer in the 6000 Block of Buswell Street (Attachment 1). A section of sanitary sewer is now out of service. A temporary sanitary sewer bypass system has been installed by City forces and remains in place to provide continuous sewer service to the surrounding properties. It is necessary to repair the sanitary sewer and restore the sanitary system to normal operation.

This report supports Council's Strategic Plan 2018-2022 Strategy #1 A Safe and Resilient City:

Enhance and protect the safety and well-being of Richmond.

1.2 Future-proof and maintain city infrastructure to keep the community safe.

Analysis

The City has a 200mm diameter sanitary sewer constructed in 1970 that is located in a statutory right-of-way at the rear of 6380 Buswell Street, and is approximately 3.5m below ground level.

During maintenance operations the sewers are flushed and cleaned to remove any debris in the sewer that may eventually build up and cause a blockage. While performing maintenance on this sewer, staff discovered that sections of this sewer main and manhole have been damaged, resulting in blockages and ground settlement around the manhole.

City forces have installed a temporary sanitary sewer bypass system to maintain sewer service to nearby properties. Although the bypass pumps are in place, there is a high risk of a blockage occurring in the existing sanitary sewer and bypass system. Since this may result in damage to private properties, repair and replacement of the sanitary sewer must start immediately.

The anticipated scope of emergency work includes ground stabilization measures and replacement of approximately 50m of deep sanitary sewer.

A BC Hydro transformer that provides power to adjacent multi-family residential properties is in close proximity to the area of the ground settlement. BC Hydro has been monitoring the transformer and has confirmed that it is currently operational. The City has retained a geotechnical engineer to provide technical support and recommendations to minimise any further settlement and potential impacts to the surrounding area including the BC Hydro transformer and underground ducts. Staff will continue working with BC Hydro to coordinate the sanitary sewer repair and ground stabilization works to avoid disruption of BC Hydro power service.

In accordance with the City's Procurement Policy (Policy 3104), procurement would be excluded from normal purchasing practices as this is considered an unforeseeable urgent situation or emergency. Costs to date to for the bypass system can be accommodated within the

current Financial Plan to address this urgent situation/emergency. Should Council not approve the funding request of \$1,500,000, any incurred emergency works costs that cannot be accommodated within the Financial Plan will be reported to Council and the Financial Plan will be amended to include the expenditure and the funding source.

Financial Impact

The total estimated capital cost is \$1,500,000 for repair and replacement of the failing sanitary sewer in the 6000 Block of Buswell Street.

In order to commence this emergency work in 2019, staff recommend that an existing Council approved sanitary sewer capital project be utilized as a temporary funding source until this additional \$1,500,000 funded by the Sanitary Sewer Reserve Fund is included in the Consolidated 5 Year Financial Plan (2020-2024).

Conclusion

The sanitary sewer system in the statutory right-of-way in the 6000 Block Buswell Street has failed. Repair and replacement of this sewer is required to provide sanitary service to the adjacent residences.



Eric Sparolin, P.Eng.
Acting Manager, Engineering Design and Construction
(604-247-4915)

ES:

Att. 1: Sanitary Sewer Failure Location

Attachment 1 - Sanitary Sewer Failure Location

