

**TO:** CHAIR AND MEMBERS FINANCIAL MANAGEMENT COMMITTEE **DATE:** 2018 February 08

**FROM:** DIRECTOR ENGINEERING **FILE:** 32000-05

**SUBJECT:** 2018 FEBRUARY ENGINEERING CAPITAL INFRASTRUCTURE BYLAW FUNDING REQUEST - INFRASTRUCTURE

**PURPOSE:** To request funding to finance the 2018 Engineering capital infrastructure projects as outlined in this report.

---

**RECOMMENDATIONS:**

1. **THAT** the Financial Management Committee recommend Council authorize the City Solicitor to bring forward a Capital Reserve Fund Bylaw in the amount of \$2,704,000, the use of Sanitary Sewer Reserves in the amount of \$2,311,000 and the use of Water Works Reserves in the amount of \$5,522,900 to finance Engineering capital infrastructure projects as outlined in this report.

**REPORT****INTRODUCTION**

In order to proceed with the award of contracts for design, administration and construction, funding approval is requested for the projects listed below.

**1.0 INFRASTRUCTURE****POLICY SECTION**

The following infrastructure projects are aligned with the City of Burnaby's Corporate Strategic Plan, typically by supporting the following goals and sub-goals of the Plan.

- A Connected Community – these projects have a geographic connection in ensuring that people can move easily through all areas of Burnaby, using any form of transportation.
- A Dynamic Community – Build and maintain infrastructure that meeting the needs of our growing community.
- A Thriving Organization – Protect the integrity and security of City Services and Assets.

**1.1 *Watermain Replacement & Road Rehab******estimated \$5,162,600***

These projects include replacement of existing aged watermains and rehabilitation of associated roadways in the South Slopes, Clinton-Glenwood and Willingdon Heights neighbourhood areas. It is anticipated that these projects will include design, tender and construction of both watermains and roadworks, and IT ducts where required.

To: Chair and Members Financial Management Committee  
 From: Director Engineering  
 Re: 2018 FEBRUARY ENGINEERING CAPITAL INFRASTRUCTURE BYLAW FUNDING  
 REQUEST  
 2018 February 08.....Page 2

Area 1 - South Slopes – Keith Street, MacPherson Avenue and Buller Avenue, Eleanor Street and Marine Drive.

Area 2 - Clinton-Glenwood Area - including Beresford Street, Prenter Street, Irmin Street, Kenneth Avenue and Daisy Avenue.

Area 3 - Willingdon Heights - including Carleton Avenue, Madison Avenue, Kitchener Street, William Street, Eton Street, Brentlawn Drive and Ingleton Avenue.

Planned expenditures are as follows:

<b>Project Mask</b>	<b>2018</b>
EJA.3008 Water	3,921,600
EMC.3008	785,000
AEC.3008	456,000
<b>Total</b>	<b>\$5,162,600</b>

## **1.2 Beta Pump Station Upgrade EKA.3057 estimated \$1,169,500**

Upgrades to the existing Beta Pump Station facility are required to accommodate anticipated increases in peak sanitary flows resulting from growth and re-development within the (southern) Brentwood Town Centre area. Construction began in 2017 with Council approved funding of \$3,200,500 and will be completed in 2018.

## **1.3 Combined Sewer Separation Program (Gilmore) estimated \$1,307,100**

This sewer separation project is part of the City's ongoing infrastructure renewal program involving separation of combined sewer as required under the Integrated Liquid Waste Management Plan (ILWMP). Sewer separation minimizes volumes of combined sewer over-flow to the environment and the amount of wastewater that needs to be treated resulting in better allocation of resources, lower energy use and reduced environmental impact.

This project includes separation of combined sewers, including general arrangement and sizing of sanitary and storm sewers, replacement of aged watermains and road rehabilitation in the following four areas:

Area 1 - Lanes north of Trinity Street & Yale Street from Ingleton Avenue to Gilmore Avenue.

Area 2 - Lanes north of Oxford Street & Cambridge St, from Esmond Avenue to Gilmore Avenue.

Area 3 - Lanes north of Union Street, Georgia Street & Francis Street; from MacDonald to Carleton Avenue.

Area 4 - 17<sup>th</sup> Avenue from Canada Way to 6<sup>th</sup> Street.

A total of 2.3km of combined sewer main will be separated (replaced).

To: Chair and Members Financial Management Committee  
 From: Director Engineering  
 Re: 2018 FEBRUARY ENGINEERING CAPITAL INFRASTRUCTURE BYLAW FUNDING  
 REQUEST  
 2018 February 08.....Page 3

To optimize the combined sewer separation program, this project also includes replacement of aged watermains alongside the affected sewers, where applicable. A total of 2.2km of watermain replacement is anticipated.

Planned expenditures are as follows:

<b>Project Mask</b>	<b>2018</b>
EKA.3014 Sewer	700,000
EMC.3014	285,300
EJA.3014 Water	283,500
AEC.3014	38,300
<b>Total</b>	<b>\$1,307,100</b>

**1.4 Stoney Creek/ Storm Service Replacements ELD.0012 estimated \$350,000**

Resolve contract disputes on Stoney Creek project as a result of an incident in 2015. Engineering has engaged in the MMCD contract dispute resolution process for this project to settle claims due to unforeseen conditions during construction.

**1.5 Metro Vancouver Douglas Road Main Project #2 Coordination Project estimated \$730,000**

This project consists of utility upgrades and road rehabilitation in conjunction with a Metro Vancouver capital works program associated with their Douglas Road Main (DRM2) replacement project. There are two areas that are anticipated in this project.

M1: Still Creek Area - Beginning at Delta Avenue at Lougheed Highway, project runs south along Royal Oak Avenue alignment, under the Trans Canada Highway to and along Kincaid Street.

M4: Burnaby Heights area - Beginning at McGill Street at Ingleton Avenue heading east through to Rosser Avenue. South on Rosser Avenue to Albert Street and then east to Alpha Avenue.

Planned expenditures are as follows:

<b>Project Mask</b>	<b>2018</b>	<b>2019</b>	<b>Total</b>
EMC.3137	215,000	215,000	430,000
EKA.3137 Sewer	150,000	150,000	300,000
<b>Total</b>	<b>\$365,000</b>	<b>\$365,000</b>	<b>\$730,000</b>

**1.6 Kingsgate Pump Station EJA.3003 estimated \$317,800**

Investigate, design and make repairs or upgrades to existing water pump station components. Planned expenditures are anticipated to be in 2018.

To: Chair and Members Financial Management Committee  
 From: Director Engineering  
 Re: 2018 FEBRUARY ENGINEERING CAPITAL INFRASTRUCTURE BYLAW FUNDING  
 REQUEST  
 2018 February 08.....Page 4

**1.7 North Burnaby Watermains and Road Rehab** **estimated \$550,000**

This is a watermain replacement and roads rehabilitation package involves replacement of existing watermain and services, complete with pavement rehabilitation on local/collector streets in various locations of north Burnaby. This project will be designed by an engineering consultant(s) and constructed through a tendered contract. Planned expenditures are as follows:

<b>Project Mask</b>	<b>2018</b>	<b>2019</b>	<b>Total</b>
EJA.3147 Water	275,000	275,000	550,000
<b>Total</b>	<b>\$275,000</b>	<b>\$275,000</b>	<b>\$550,000</b>

**1.8 Metro Vancouver Central Park Main Project #2 Coordination Project** **estimated \$550,000**

This project consists of utility upgrades and road rehabilitation designated for coordination with Metro Vancouver capital works program associated with their Central Park Main (CPM2) replacement project.

There are two areas that are anticipated in this project.

Area 1:

<b>Street</b>	<b>From</b>	<b>To</b>	<b>Scope of Work &amp; Details</b>
Salisbury Avenue	Elwell Street	Edmonds Street	Watermain replacement
18 <sup>th</sup> Street	Edmonds Street	10 <sup>th</sup> Avenue	Watermain, new & upsized

Area 2:

<b>Street</b>	<b>From</b>	<b>To</b>	<b>Scope of Work &amp; Details</b>
Willingdon/Hurst/Dow Avenues	Willingdon Avenue	Imperial Street	Watermain replacement
Maywood Street	Patterson Avenue	Willingdon Avenue	Watermain replacement
Imperial Street	Sussex Avenue	Royal Oak Avenue	Watermain replacement
Maywood Street	Willingdon Avenue	Sussex/Dow Avenues	Future 300mm DI (optional)
Imperial Street	Randolph Avenue	Brantford Avenue	Watermain replacement
Imperial and Elwell Streets	Sperling Avenue	Hall Avenue	Watermain replacements

Planned expenditures are as follows:

<b>Project Mask</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Total</b>
EJA.3138 Water	175,000	175,000	-	350,000
EKA.3138 Sewer	50,000	-	50,000	100,000
EMC.3138	50,000	50,000	-	100,000
<b>Total</b>	<b>\$275,000</b>	<b>\$225,000</b>	<b>\$50,000</b>	<b>\$550,000</b>

**1.9 Loughed Highway Upgrade** *estimated \$162,900*  
**Boundary Road to Gilmore Avenue**

This project includes a coordinated program of road upgrades and twinned watermain along Loughed Highway, Boundary Road to Gilmore Avenue, and a watermain replacement and related road rehabilitation on Boundary Road, Loughed Highway to Myrtle Street. Planned expenditures are as follows:

<b>Project Mask</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Total</b>
EMC.3038	62,900	-	100,000	162,900
<b>Total</b>	<b>\$62,900</b>	<b>-</b>	<b>\$100,000</b>	<b>\$162,900</b>

**1.10 Rumble Street Upgrade Project – Phase 1, 2 of 3** *estimated \$108,000*

Complete project closeout, resolve deficiencies and complete plantings for Rumble Street phases 1 and 2. Planned expenditures are as follows:

<b>Project Mask</b>	<b>2018</b>
ERA.0049	66,500
EKA.0014 Sewer	41,500
<b>Total</b>	<b>\$108,000</b>

**1.11 Pressure Reducing Valve (PRV) Station Replacement** *estimated \$100,000*

Investigate, design and construct a replacement for the existing Price PRV, as part of the City's ongoing infrastructure renewal program. Manage capital expenditure for City forces based upgrades to other PRV's, as required. Planned expenditures are as follows:

<b>Project Mask</b>	<b>2018</b>	<b>2019</b>	<b>Total</b>
EJA.3149 Water	50,000	50,000	100,000
<b>Total</b>	<b>\$50,000</b>	<b>\$50,000</b>	<b>\$100,000</b>

To: Chair and Members Financial Management Committee  
From: Director Engineering  
Re: 2018 FEBRUARY ENGINEERING CAPITAL INFRASTRUCTURE BYLAW FUNDING  
REQUEST  
2018 February 08.....Page 6

**1.12 Burnaby Lake Rowing Pavilion  
Sewer Line Replacement ENX.3059**

***estimated \$20,000***

This is completion of the construction phase of the Facility Sewer Line replacement project. Portions of the existing Sewer Forcemain servicing the Rowing Pavilion have failed and have been temporarily repaired and require flushing. Replacement of complete sanitary sewer forcemain is necessary to ensure no environmental damage to Burnaby Lake is caused due to aging infrastructure. Burnaby Lake Rowing Pavilion is a multi-use facility replacement of sanitary sewer lines will allow facility to operate at full capacity. Planned expenditures are anticipated to be in 2018.

**1.13 Environmental Monitoring**

***ELA.3135***

***estimated \$10,000***

Fulfill environmental monitoring requirements as stipulated by the BC Ministry of Forests, Lands, and Natural Resource Operations for capital projects that require environmental compensation. Planned expenditures are anticipated to be in 2018.

These expenditures will be included in the 2018 – 2022 Provisional Financial Plan and sufficient Capital Reserve Funds, Water Works Reserves, and Sanitary Sewer Reserves are available to finance the capital projects outlined in this report.

**RECOMMENDATION**

It is recommended that the Financial Management Committee recommend Council authorize the City Solicitor to bring forward a Capital Reserve Fund Bylaw in the amount of \$2,704,000, the use of Sanitary Sewer Reserves in the amount of \$2,311,000 and the use of Water Works Reserves in the amount of \$5,522,900 to finance the Engineering capital infrastructure projects as outlined in this report.



Leon A. Gous, P.Eng., MBA  
DIRECTOR ENGINEERING

FV/ac

Attachments

Copied to: City Manager  
Director Finance  
Deputy Director, Engineering  
Manager, Public Works  
Assistant Director, Infrastructure and Development