



City of Richmond

Report to Committee

To: Public Works and Transportation Committee

Date: January 5, 2012

From: John Irving, P.Eng. MPA
Director, Engineering

File: 10-6050-01/2011-Vol
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Re: **Advance Capital Budget Approval**
2012 Lulu West Waterworks Area (Williams Road)

Staff Recommendation

That 2012 Capital Project Submission 4719 (Lulu West Waterworks Area) as detailed in Attachment 1 be approved for expenditure and commencement of work.

John Irving, P.Eng. MPA
Director, Engineering
(604-276-4140)

Att.1

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ROUTED TO:	CONCURRENCE		CONCURRENCE OF GENERAL MANAGER
Budgets	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		
Water Services	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		
REVIEWED BY TAG	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	REVIEWED BY CAO
			YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>

Staff Report

Origin

Subsection 165(1) of The Community Charter requires the City to adopt a Five Year Financial Plan (“5YFP”) Bylaw (which includes operating, utility and capital expenditures) before May 15th of each year. The bylaw is required to identify all expenditures for the current year (i.e. 2012) and provide estimates for the remainder of the five-year program. The 2012 5YFP Bylaw provides the City with the authority to proceed with spending to the limits outlined in the bylaw.

The 2012 Capital Budget (the “budget”) is one of the key inputs in preparing the 5YFP (2012 – 2016) and is also one of the City’s most important tools in achieving the goals of the Long Term Financial Management Strategy (LTFMS), while providing for the current and future infrastructure needs of the community. Under the City’s LTFMS, the City is committed to financial planning that maintains and enhances existing levels of service to the community, while limiting the impact on property taxes.

As part of the budget process, the Assessor Team evaluated the capital submissions from all City departments and utilized a ranking system within the Capital Planning Model to determine which submissions would be recommended for inclusion in the budget.

The capital submission for the 2012 Lulu West Waterworks Area has been recommended by the Assessor Team.

The purpose of this report is to obtain Council approval to commence construction of this project in a timely manner.

Analysis

Watermain Replacement Capital Submissions

The waterworks capital program is developed based on a number of criteria including:

- the City’s long range infrastructure replacement strategy,
- watermain break history,
- 2041 Official Community Plan (OCP) Water Modelling Study, and
- the proposed road paving program.

The main goals of the program are to replace ageing infrastructure prior to failure and to improve fire protection by locally increasing the system supply capacity.

For the 2012 budget, capital submissions totalling \$7,406,757 were entered into the Capital Planning Model for watermain replacement in various locations (see Table 1).

Table 1 – 2012 Watermain Replacement Capital Submissions

Capital Submission	Amount
4715 – Lulu East Waterworks Area	\$ 1,635,867
4716 – Sea Island Waterworks Area	\$ 670,832
4718 – Lulu North Waterworks Area	\$ 3,476,810
4719 – <i>Lulu West Waterworks Area</i>	\$ 1,623,247
Total	\$ 7,406,757
Capital Funding from Water Utility Reserve (Approved as the basis for establishing the 2012 utility rates)	\$ 7,550,000
Remaining funding	\$143,243

The 2012 Lulu West Waterworks Area project and the three other water capital projects listed above are all fully funded from the Water Utility Reserve. This funding level was approved at the Special Council Meeting of Dec. 12, 2011 as the basis for establishing the 2012 utility rates.

Project Delivery

In order to deliver the 2012 Capital Program in a timely manner, design work on selected 2012 projects was completed in 2011 under the 2011 Infrastructure Advanced Design program. One of the projects that has been designed is the 2012 Lulu West Waterworks Area (Capital Submission 4719). This project consists of the replacement of approximately 1640 metres of watermain along Williams Road between No. 3 Road and No. 4 Road, as described in Attachment 1 (Capital Project Submission 4719).

This portion of watermain was included in the program due to its age and considerable recent break history compared to other watermains in the Capital Program. If the watermains are not replaced, potential future watermain breaks could lead to road failure, reduced water quality, extended disruption of service and inconvenience to customers, possible contamination and increased emergency repair costs. In addition there is a potential for increased GVWD costs as the City's portion is based on water consumption (including leaks and breakages).

Due to the urgency of this project and to take advantage of the competitive bidding environment and subsequent low tender pricing, it was publicly tendered in 2011 with award subject to budget approval. The lowest bid received was \$1,104,550 plus taxes. Additional costs will be incurred for service tie-ins by the City, inspection and contract administration.

The award period has been extended to February 15, 2012 to allow for Council approval of this project. If this deadline is not met, the tender may need to be cancelled, and the project will be re-tendered once the 2012 Capital Program is approved. This will lead to significant delays and considerable consequences as described in the previous paragraph, as well as potential increased tender pricing due to inflation.

Financial Impact

Capital Submission 4719 – Lulu West Waterworks has been recommended by the Assessor Team for inclusion in the 2012 budget. The value of this submission is \$1,623,247.50 with an OBI of \$570.36. The funding source for this project is the water utility reserve and this amount is within the annual funding availability limits and was approved at the Special Council Meeting of Dec. 12, 2011 as the basis for establishing the 2012 utility rates. This project does not displace or compete with any other non-water capital projects.

This project will also be included in the 5 Year Financial Plan (2012-2016) Bylaw.

Conclusion

The Williams Road watermain has been identified as being in need of replacement. Breakage of this watermain would result in costly repairs and inconvenience to the public. Advance approval of Capital Submission 4719 (Lulu West Waterworks Area) will mitigate these risks for this area.



Milton Chan, P.Eng.
Senior Project Engineer
(604-276-4377)

Attachment 1

**City of Richmond
Capital Project Submission**

Submission ID: 4719

Date	Wednesday, 22 June 2011	Project Year	2012
Submitted by	Elena Paller	Recommended	Yes

Project Number**Project Name** Lulu West Waterworks Area**Project Location** See Scope**Estimated cost** \$1,623,247.50**Purpose (As it relates to strategic vision)**

This project will:

- replace ageing infrastructure at the end of its service life;
- improve fire protection.

This project is required to minimize operating cost due to watermain breaks.

This project meets strategic City goals:

Serving the Customer – by minimizing customer's disruptions due to watermain breaks and providing long term maintenance of service.

Financial Management –Waterworks infrastructure replacement reduces the potential for unplanned maintenance that is unpredictable and costly and maximizes long-term local government financial health by replacing watermain in accordance with the City's long range infrastructure replacement strategy.

Scope of Work

This project includes 720 meters of 200mm diameter watermain construction and 840 meters of 300mm diameter watermain to replace the existing infrastructure.

The waterworks capital program is developed based on the City's long range infrastructure replacement strategy, watermain break history, 2041 OCP Water Modelling Study and the proposed road paving program.

The program replaces ageing infrastructure prior to failure and improves fire protection.

Please refer to document #3154073 for specific locations, cost estimates and detailed scope of work.

Sustainability

Sustainable Resource Use – The watermain replacement program promotes reduced per capita water consumption through the installation of mandatory water meters. The reduced water consumption will defer the need for future capacity upgrades and, therefore, defer the need for future capital expenditure.

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Inclusive, Safe & Accessible Community – The watermain replacement program is required to maintain reliable delivery of water to the community which is essential for individual and community health and well-being. Waterworks infrastructure provides fire protection for safety of the public and their properties.

Vibrant Community – Waterworks infrastructure supports recreational opportunities for the residents by providing water to the swimming pools, ice rinks, drinking fountains and water parks. Waterworks infrastructure supports beautification of the community by providing water for irrigation of both public and private landscapes.

Leadership in Municipal Practices – Waterworks infrastructure replacement program maximizes long-term local government financial health by replacing watermain in accordance with the City's long range infrastructure replacement strategy.

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Cost breakdown

Roads	\$0.00
Storm Sewer	\$0.00
Waterworks	\$1,623,247.50
Sanitary Sewer	\$0.00
Building Construction	\$0.00
Land Acquisition	\$0.00
Park Development	\$0.00
Vehicle Purchases	\$0.00
Local Improvements/Nics	\$0.00
Computer cost	\$0.00
TOTAL	\$1,623,247.50

Impact of Capital Project on Operating Budget \$570.36

OBi Document Number

Comments**Consequences of not proceeding with the project**

If watermain are not replaced, the potential watermain breaks could lead to road failure, reduced water quality, extended disruption of service and inconvenience to customers, possible source of contamination and increasing emergency repair cost. In addition there is a potential for increased GVWD costs as the City's portion is based on water consumption (including leaks and breakages).

GM Approval Signature

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