

**PORT OF SEATTLE**  
**MEMORANDUM**

**COMMISSION AGENDA**

**Item No.** 5c  
**Date of Meeting** March 9, 2010

**DATE:** February 17, 2010

**TO:** Tay Yoshitani, Chief Executive Officer

**FROM:** Mike McLaughlin, Senior Manager, Cruise and Industrial Properties  
Rod Jackson, Capital Construction Project Manager, Seaport

**SUBJECT:** Terminal 91 Waterline Replacement  
CIP #800298

**Amount of this request:** \$700,000    **Source of Funds:** General Operating Funds.

**Total Project Cost:** Approving this amount possibly commits a total of \$4,700,000 this year or in future years.

**ACTION REQUESTED:**

Request authorization for the Chief Executive Officer to direct staff to proceed with permitting, project management, in-house design and preparation of construction documents for the future replacement of water main distribution systems at Terminal 91. Pre-construction projects costs are estimated not to exceed \$700,000. Preliminary estimates of total project cost are currently projected to be \$4,700,000.

**SYNOPSIS:**

Portions of the underground waterlines at Terminal 91 (T-91) in the vicinity of the Magnolia Bridge and upland area were installed over 60 years ago (1945 Navy era). These old deteriorated systems are unreliable and have exceeded their design/service life.

Last year there was a significant water main break at the terminal near the Magnolia Bridge that necessitated several days of repair performed by Port crews. This failure interrupted water service to several customers and required traffic detours through the terminals main intersection.

These steel pipelines distribute the domestic water throughout the terminal and supply the fire protection systems—critical to terminal/tenant operations and safety. Replacement of these aged pipelines will prevent continued failures which create costly repairs and interruptions of operations for both the Port and our customers. Multiple water main

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failures during the past few years have resulted in repair costs of over \$150,000 plus the additional costs and negative impacts absorbed by our tenants when waterlines break. If nothing is done, additional water main failures are to be expected, resulting in higher frequency of emergency repairs and related significant impacts to the various terminal operations.

### **PROJECT DESCRIPTION/SCOPE OF WORK:**

#### ***Project Statement:***

This project will replace the deteriorated waterlines, valves and hydrants at T-91 by December 2011.

#### ***Project Objectives:***

- Minimize disruptions to terminal operations during construction.
- Minimize future maintenance & repair work.
- Upgrade water system to provide additional capacity and connection points for future development.
- Project will be on budget and at minimum cost.
- Project will be delivered on-time to meet schedule milestones.
- Project will be environmentally sound and will utilize sustainable environmental elements.

#### ***Scope of Work:***

The overall project scope will demolish and replace deteriorated waterlines, valves, and hydrants; prepare base materials; provide future new utility stub connections and additional capacity; and place new asphalt or concrete pavement. Scope of this initial request includes the design, permitting and preparation of contract documents to support the future construction.

### **PROJECT SCHEDULE:**

	<b><u>Start</u></b>	<b><u>Finish</u></b>
Pre -Design	January 2010	March 2010
Design	March 2010	September 2010
Permits	September 2010	October 2010
Construction	November 2010	December 2011

Due to busy terminal operations and seasonal peaks in traffic volumes, the future construction work is expected to be completed in phases to minimize impact on terminal operations. The goal is to complete all construction work prior to the 2011 cruise season;

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however, some portions of the work may need to be completed immediately following the 2011 cruise season with final construction done by end of 2011.

Requests for project funding approval will be done in two steps:

Step-1: This request \$700,000. Approval of funding to complete all project pre-construction activities including; design; engineering; cost estimates; permitting; project management; preparation of construction documents and soliciting, procuring and executing service agreements (if required).

Step-2: Future funding approval for construction costs. Staff will return to the Commission with final scope of work; project schedule and cost estimates requesting authorization to proceed with construction. Preliminary cost estimate for the total project including construction is \$4,700,000.

### **STRATEGIC OBJECTIVES:**

This project supports the Port strategy to “Ensure Airport and Seaport Vitality” through renewing and replacing vital Seaport Infrastructure to the Port of Seattle Waterfront operations.

Best management practices will be deployed in the selection of materials, work practices and ongoing total cost of ownership.

### **BUSINESS PLAN OBJECTIVES:**

This project is aligned with the business plan objectives to maintain safe working facilities and assets that provide customers with compelling value. This is a renewal and replacement project to rebuild the major waterlines at T-91 which support all of the current businesses at the terminal.

### **FINANCIAL ANALYSIS:**

#### **Budget/Authorization Summary**

Original Budget	\$0
Previous Authorizations ( <i>under Preliminary Planning CIP# C001785</i> )	\$55,000
Current request for authorization	\$645,000
Total Authorizations, including this request	\$700,000
Remaining budget to be authorized ( <i>estimated construction cost</i> )	\$4,000,000
Total Estimated Project Cost ( <i>pending final design</i> )	\$4,700,000

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### **Project Cost Breakdown**

Design (In-house engineering)	\$285,000
Construction Management	\$184,000
Project Management	\$112,000
Environmental Support	\$114,000
<b>Subtotal (Phase I request)</b>	<b>\$700,000</b>
Estimated Construction Costs	\$4,000,000
Estimated Total Project Costs	\$4,700,000

### **Source of Funds**

The project was included in the 2010 Plan of Finance under Committed CIP# C800298, T-91 Water Main Replacement N. of Bridge, in the amount of \$4,200,000. The additional \$500,000 required to fund the balance is available due to anticipated timing delays in other 2010 Plan of Finance Committed projects, such as the Terminal 104 Site Improvements.

The project will be funded from the General Fund.

### **Financial Analysis Summary**

<b>CIP Category</b>	Renewal/Enhancement
<b>Project Type</b>	Renewal & Replacement
<b>Risk adjusted Discount rate</b>	N/A
<b>Key risk factors</b>	<ul style="list-style-type: none"><li>• Construction costs may increase if required work is more extensive than currently known. The construction cost estimate will be refined during the design process included in the Step 1 request.</li><li>• Project schedule could be delayed due to project complexity, weather, permitting delays, and the need to minimize disruptions to terminal operations and existing tenants/customers. This risk is partially mitigated with a phased construction approach.</li></ul>
<b>Project cost for analysis</b>	\$4,700,000
<b>Business Unit (BU)</b>	Seaport Industrial Properties

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<b>Effect on business performance</b>	<p>This asset replacement project will not generate any incremental revenue. However it will eliminate disruptions from water main breaks to terminal operations, tenants, and customers.</p> <p>Incremental depreciation expense from this project is estimated at \$94,000/year, based on a 50 year asset life. NOI after Depreciation will decrease by the associated depreciation from this project.</p>																							
	<table border="1"><thead><tr><th><b>NOI (in \$000's)</b></th><th><b>Year 1</b></th><th><b>Year 2</b></th><th><b>Year 3</b></th><th><b>Year 4</b></th><th><b>Year 5</b></th></tr></thead><tbody><tr><td>NOI</td><td>\$0</td><td>\$0</td><td>\$0</td><td>\$0</td><td>\$0</td></tr><tr><td>Depreciation</td><td>(\$94)</td><td>(\$94)</td><td>(\$94)</td><td>(\$94)</td><td>(\$94)</td></tr><tr><td>NOI After Depreciation</td><td>(\$94)</td><td>(\$94)</td><td>(\$94)</td><td>(\$94)</td><td>(\$94)</td></tr></tbody></table>	<b>NOI (in \$000's)</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	NOI	\$0	\$0	\$0	\$0	\$0	Depreciation	(\$94)	(\$94)	(\$94)	(\$94)	(\$94)	NOI After Depreciation	(\$94)	(\$94)	(\$94)	(\$94)
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<b>IRR/NPV</b>	N/A																							

### **SUSTAINABILITY AND LIFE CYCLE COSTS:**

No impact to the environment is anticipated as a result of this project. Upgrades will be constructed with materials that have demonstrated long life and durability. Total cost and life cycle costs will be determined upon final completion of the final design. Sustainability issues will also be considered as part of this design process.

### **ALTERNATIVES CONSIDERED AND THEIR IMPLICATIONS:**

#### **Alternative 1:**

Do nothing. Without replacement, the existing waterlines will continue to deteriorate and the possibility of failure will continue to increase. Local repairs at points of failure through the terminal have been costly and negatively impact the on-going terminal operations when they occur.

#### **Alternative 2:**

Complete full replacement of the failing underground water distribution systems serving the existing facilities at T-91 to maintain water service throughout the facility and provide required fire protection systems. This alternative will restore the waterlines to full beneficial use and will alleviate the possibility of future failures which cause tenant inconvenience when they occur. This upgrade will also provide needed capacity and additional connection points for future development of the terminal. **This is the recommended alternative.**

### **PREVIOUS COMMISSION ACTIONS OR BRIEFINGS:**

None