

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

**COMMISSION AGENDA**  
**ACTION ITEM**

**Item No.** 5c  
**Date of Meeting** August 7, 2012

**DATE:** July 27, 2012

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

**FROM:** Rees Robinson, Senior Marine Maintenance Project Manager  
Greg Englin, Manager, Maritime Operations

**SUBJECT:** Request for Funding Increase for the T91 Lift Station #4 Replacement  
(Project #104358, CIP #C800186)

**Amount of This Request:** \$65,000

**Source of Funds:** General Fund

**Est. State and Local Taxes:** \$6,000

**Est. Jobs Created:** N/A

**Est. Total Project Cost:** \$315,000

**ACTION REQUESTED:**

Request Commission authorization (1) for the Chief Executive Officer to amend the Terminal 91 (T-91) Lift Station #4 Replacement project budget by \$65,000 for a total project budget authorization of \$315,000; and (2) for use of Port crews to construct the project. Additional funds for the project are available due to under-spending in other Seaport small project CIPs.

**SYNOPSIS:**

T-91 Sewer Lift Station #4 serves all the buildings on Pier 90 (P90) and the shortfill. Lift Stations are used to reduce pipe depths over a length of pipe. They ‘reset’ the pipe depth by pumping sewage from a lower to a higher elevation to accommodate long gravity sewer pipe runs without having to install and maintain pipe at prohibitive depths. The existing lift station was installed in 1981 and was repaired with a temporary fix in 2007, following a major equipment failure.

This project will allow sewer system improvements and complete replacement of Sewer Lift Station #4 at Terminal 91. The project scope replaces the existing lift station and resolves system deficiencies. The project is currently budgeted in the 2009 Seaport Small Project CIP #C800186. The authorized budget for the lift station replacement project is \$250,000. The authorized project budget was based on rough order of magnitude design and construction cost estimates determined during preliminary design. Subsequently, in-house engineering completed

## **COMMISSION AGENDA**

Tay Yoshitani, Chief Executive Officer

July 27, 2012

Page 2 of 5

design, and construction cost estimates were determined. The project cannot be completed within the authorized budget. Port staff are requesting an additional \$65,000 to complete the project.

### **BACKGROUND:**

Sewer Lift Station #4 is located south of the Resident Engineers trailer on Pier 90. It is the final sewage collection and discharge point from the buildings on P90 and the shortfill to the City sewer main. The existing pump and controls are portable, and were installed as a temporary fix in 2007 following a major failure of the original equipment.

Replacement of the lift station was identified as a potential project and included in the 2009 Seaport Small Project CIP. The project was activated, after authorization to begin design, in June, 2010. Since 2010, shifting project priorities have resulted in delays of the lift station replacement project. Operation of the temporary pump allowed staff to defer this item and prioritize a permanent solution to lower on the project list. As an example, the lift station project competed for resources with the T91 Water Main Replacement project and the water main project was given priority. Now, the temporary equipment is near the end of its service life and the project shouldn't be delayed further.

During design, the scope of the project increased to include improvements to the sewer system feeding the lift station in order to eliminate system deficiencies. Deficiencies include:

- A wet well that is too shallow to effectively receive discharge from surrounding buildings
- Improperly sloped sewer pipe causing sewage backups to the manholes serving Building 86

Rather than a simple pump replacement, the scope of design included improving the sewer system feeding the sanitary lift station. The project scope required more design work and field investigation than originally anticipated, as well as an increase in construction budget. Design is now complete and project costs are more than originally estimated.

Port of Seattle Engineering completed design and will provide engineering support services during construction. Marine Maintenance and PCS will partner to construct the project. Procurement of equipment and materials, and scheduling of construction will begin following Commission authorization.

### **PROJECT JUSTIFICATION:**

T-91 Lift Station #4 is well past its service life. It was installed in 1981. The typical service life for a lift station is 15 to 20 years. The portable pump and controls, which were installed as a temporary repair in 2007, periodically break down and require repair. This lift station is critical. It is the final sewage collection point from the buildings on P90 and the T-91 shortfill prior to discharge to the City sewer main. It is essential that it be reliable.

## **COMMISSION AGENDA**

Tay Yoshitani, Chief Executive Officer

July 27, 2012

Page 3 of 5

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

- Install new, reliable sewer lift station
- Install deeper wet well
- Correct sanitary sewer line slopes
- Provide easy to maintain system

## **PROJECT SCOPE OF WORK AND SCHEDULE:**

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

The scope of work is to replace existing sewer lift station #4 with a new lift station and improve the pipe system feeding the lift station. The work includes replacement of a wet well, submersible pumps, pump controller, valve vault, and replacement and regrading of pipe feeding the lift station.

### ***Schedule:***

Design of the lift station is complete. Procurement of equipment and materials will likely require four to six weeks. Construction is estimated to last between four and six weeks and is expected to be complete by the end of October 2012.

## **FINANCIAL IMPLICATIONS:**

<b><i>Budget/Authorization Summary:</i></b>	<b>Total Project</b>
Original Budget	\$250,000
Previous Authorizations ( <i>Small Capital, Division Approved</i> )	\$250,000
Current request for authorization	\$ 65,000
Total Authorizations, including this request	\$315,000
Remaining budget to be authorized	\$0
Total Estimated Project Cost	\$315,000

<b><i>Project Cost Breakdown:</i></b>	<b>This Request</b>	<b>Total Project</b>
Construction	\$38,000	\$210,000
Construction Management	\$ 2,000	\$ 10,000
Design	\$15,000	\$ 59,000
Project Management	\$10,000	\$ 30,000
State & Local Taxes (estimated)	\$0	\$ 6,000
Total	\$65,000	\$315,000

## **COMMISSION AGENDA**

Tay Yoshitani, Chief Executive Officer

July 27, 2012

Page 4 of 5

### ***Budget Status and Source of Funds:***

This project was included in the 2012 approved budget as a Small Capital Project under CIP# C800186, in the amount of \$250,000. The additional \$65,000 in funding needed to complete this project is expected to be available due to timing differences in other planned Small Capital projects.

This project will be funded from the General Fund.

### ***Financial Analysis and 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. This risk is deemed to be relatively low, as the design process for this project is complete and the scope of work necessary is well defined.</li><li>• Project schedule could be delayed due to project complexity, weather, and the need to minimize disruptions to terminal operations and existing tenants/customers.</li></ul>
<b>Project cost for analysis</b>	\$315,000
<b>Business Unit (BU)</b>	Seaport Industrial Properties
<b>Effect on business performance</b>	<p>This asset replacement project will not generate any incremental revenue. However, it will eliminate disruptions due to sewer lift station failures to terminal operations, tenants, and customers.</p> <p>Incremental depreciation expense from this project is estimated at \$16,000/year, based on a 20 year asset life. NOI after Depreciation will decrease by the associated depreciation from this project.</p>
<b>IRR/NPV</b>	N/A

## **COMMISSION AGENDA**

Tay Yoshitani, Chief Executive Officer

July 27, 2012

Page 5 of 5

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

Alternative 1: Stop work on the project. Do not replace the lift station or make system improvements. The lift station will continue to have failures and require repair. Sewage backups will occur. This is not the recommended alternative.

Alternative 2: Continue with the planned T-91 Lift Station #4 Replacement Project. Authorization of an additional \$65,000 for a total project authorization of \$315,000 will allow sewer system improvements and complete replacement of the lift station. **This is the recommended alternative.**

### **OTHER DOCUMENTS ASSOCIATED WITH THIS REQUEST:**

None.

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

None.