

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

**COMMISSION AGENDA**

**Item No.** 5b

**ACTION ITEM**

**Date of Meeting** March 5, 2013

**DATE:** February 22, 2013

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

**FROM:** Rees Robinson, Senior Marine Maintenance Project Manager  
Dwight Rives, Director, Port Construction Services

**SUBJECT:** Funding Increase for the Terminal 91 Sewer Lift Station #4 Replacement  
(Project #104358, CIP #C800186)

**Amount of This Request:** \$110,000

**Source of Funds:** General Fund

**Est. State and Local Taxes:** N/A

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

**Est. Total Project Cost:** \$425,000

**ACTION REQUESTED:**

Request Commission authorization for the Chief Executive Officer to increase the Terminal 91 (T-91) Sewer Lift Station #4 Replacement project budget by \$110,000 for a total project budget authorization of \$425,000.

**SYNOPSIS:**

The T-91 Sewer Lift Station #4 is the final sewage collection point for all buildings on Pier 90 and the T-91 Short Fill before discharging into the City of Seattle sanitary sewer system. It is well past its service life and suffered a major equipment failure in 2007.

The initial project budget for the Sewer Lift Station Replacement for \$250,000 was included in the 2012 approved capital budget and was authorized through the small project authorization process. The initial budget was based on cost estimates determined during preliminary design. Subsequently, project scope increased, Port Engineering completed design, and construction cost estimates were refined, whereupon Port staff requested Commission authorization of an additional \$65,000 to complete the project in August 2012.

Unforeseen underground conditions have resulted in construction costs beyond those estimated at the time of Commission authorization. The majority of the increased costs resulted from a deep excavation that was required in order to place the lift station wet well. The depth of

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excavation was substantially below ground water level, and in combination with sandy soil conditions, the effort resulted in significant erosion of surrounding area. Consequently, the volume of soil, approximately 600 tons, removed from the excavation was considerably larger than what was originally anticipated. The excavated spoils are unsuitable for re-use and additional costs will be incurred for proper disposal. Additional costs were also incurred for furnishing and placing of new backfill materials. The unexpected construction costs have depleted the project construction budget. Port staff is requesting an additional \$110,000 to complete construction of the T-91 Sewer Lift Station #4 Replacement project. Additional funds for the project are available due to under-spending in other Seaport small project CIPs.

### **BACKGROUND:**

T-91 Sewer Lift Station #4 serves all the buildings on Pier 90 and the shortfill at the landward end of the pier. Lift stations are used to pump sewage from a lower to a higher elevation. 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 T-91. The project scope replaces the existing lift station and resolves system deficiencies.

Construction of the sewer lift station replacement and system improvements began in October 2012. Pending Commission authorization, project construction is expected to be complete in April 2013.

### **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 as it is the final sewage collection point from the buildings on Pier 90 and the T-91 shortfill prior to discharge to the City sewer main. It is essential that it be reliable.

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

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

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### **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. Construction began in October 2012. Equipment and materials have been procured with delivery expected by March 15, 2013. Construction is estimated to be complete by April 15, 2013.

### **FINANCIAL IMPLICATIONS:**

<b><i>Budget/Authorization Summary:</i></b>	<b>Total Project</b>
Original Budget – Small Project Authorization	\$250,000
Previous Authorizations	\$ 65,000
Current Request For Authorization	\$110,000
Total Authorizations, Including This Request	\$425,000
Remaining Budget To Be Authorized	\$0
Total Estimated Project Cost	\$425,000

<b><i>Project Cost Breakdown:</i></b>	<b>This Request</b>	<b>Total Project</b>
Construction: Soil Handling, Hauling, Disposal	\$110,000	\$320,000
Construction Management	\$0	\$10,000
Design	\$0	\$59,000
Project Management	\$0	\$30,000
State & Local Taxes (estimated)	\$0	\$6,000
Total	\$110,000	\$425,000

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

This project was included in the 2012 approved capital budget as a Small Capital Project under CIP #C800186, in the amount of \$250,000. An additional \$65,000 in funding was approved by Commission in August 2012 for a total project budget of \$315,000. The additional \$110,000 that is now requested to fully fund this project is available due to cancellation of, or timing delays in, other Seaport capital projects.

This project will be funded from the General Fund.

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### ***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 construction is underway.</li><li>• Project schedule could be delayed due to material availability, weather, and the need to minimize disruptions to terminal operations and existing tenants/customers.</li></ul>
<b>Project cost for analysis</b>	\$425,000
<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 \$21,250/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

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

Alternative 1: Stop work on the project. Do not complete installation of the new lift station. The existing 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 \$110,000 for a total project authorization of \$425,000 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:**

August 7, 2012 – The Commission authorized \$65,000 for a total project authorization of \$315,000.