

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

**COMMISSION AGENDA**

**Item No.** 5e

**ACTION ITEM**

**Date of Meeting** September 11, 2012

**DATE:** August 31, 2012

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

**FROM:** Rees Robinson, Senior Marine Maintenance Project Manager

**SUBJECT:** Request for Funding Increase for the P69 Cooling Tower Replacement  
(Project #104505, CIP C800359)

**Amount of This Request:** \$75,000

**Source of Funds:** Tax Levy

**Est. State and Local Taxes:** \$24,500

**Est. Jobs Created:** 8

**Est. Total Project Cost:** \$415,000

**ACTION REQUESTED:**

Request Commission authorization for an additional project budget authorization of \$75,000 for the Pier 69 (P69) Cooling Tower Replacement project. The additional budget authorization of \$75,000 will increase the total authorized project cost to \$415,000.

**SYNOPSIS:**

The cooling tower at P69 is essential to the operation of the building's HVAC (heating, ventilating and air conditioning) system. It is used year-round in building operations to maintain acceptable indoor air quality and a comfortable temperature at P69 during warm/hot weather and to cool the Port's ICT equipment, which must operate in a cool environment at all times to prevent overheating and equipment failure. P69's existing cooling tower was installed in 1992 during the original renovation of the building and is at the end of its normal service life. It is located on the roof of P69 in a corrosive marine environment, which potentially reduces its expected service life.

Replacement of the cooling tower has been identified as a small capital project since 2007 with a project cost under \$300,000, and work began in 2011. On November 8, 2011, the Commission authorized \$65,000 for a total project budget of \$340,000 to complete the project. At that time, staff intended to utilize an existing on-call small works contract and to replace the cooling tower prior to spring 2012. Subsequently, staff decided to delay construction so that the cooling tower replacement would occur over the four-day Thanksgiving weekend to limit impacts to P69 facility operations and to competitively procure a project-specific small works contract. It is estimated the replacement will take four days to complete.

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The decision to use a project-specific contract resulted in unanticipated project costs, such as additional engineering, project management and procurement costs associated with preparing documents, and executing and administering the contract, and was made because of concerns that the open order contractor had under-estimated the project. The total, previously unanticipated, costs associated with procuring and administering the contract are approximately \$20,000.

The lowest responsive bid of \$224,400 was more than 10 percent over the engineer's estimate of \$172,000. This small works contract will be authorized by the Chief Executive Officer in accordance with Section 4.3 of Resolution No. 3605, as amended. This project was approved in the 2012 Real Estate budget in the amount of \$275,000. The total estimated project cost is \$415,000, including this request for \$75,000. Funding is available due to timing delays in other Real Estate Division Small Capital projects.

### **BACKGROUND:**

The existing P69 cooling tower was installed during the building renovation in 1992. The cooling tower is at the end of a typical service life of 20 years and is located on the roof of P69, placing it in a corrosive marine environment. This location potentially reduces its expected life. Replacement of the P69 Cooling Tower has been identified as a future small capital project since 2007. Replacing the cooling tower was included as a planned project in the Real Estate 2010 Small Project CIP C800305. Since work did not begin on the project until 2011, the project moved to the Real Estate 2011 Small Project CIP and is included in the Real Estate 2012 budget.

Performance of the cooling tower is essential to building operations. The cooling tower serves all of the chillers that provide cooling to the P69 building and maintains acceptable indoor air quality. Its operation is essential to reduce the heat generated by Port's electronic equipment, which is subject to failure if not properly cooled.

On April 21, 2012, the Port bid the P69 Cooling Tower Replacement Project. The Engineer's Estimate was \$172,000. On April 21, 2012, the Port of Seattle received four bids ranging from \$224,400 to \$274,443 as shown in the table below. Bids were greater than 10 percent over the engineer's estimate.

<b><u>Contractor</u></b>	<b><u>Bid</u></b>	<b><u>% over Engineer's Estimate</u></b>
J.P Frances	\$224,400	30%
Holmberg Co.	\$251,250	46%
MacDonald-Miller	\$257,752	50%
Design Air	\$274,443	60%

Staff analyzed the engineer's estimate of \$172,000 and found the following items were not priced appropriately for the estimate. Port staff believes the lowest responsive and responsible bid represents a fair and reasonable price.

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- The high cost of labor for off-hour and holiday work required to complete the work over Thanksgiving weekend was not adequately accounted for in the engineer's estimate. Although some upfront work can be done during regular hours, the work of removing the existing cooling tower and installing the new cooling tower, and bringing in online, must be done during non-Port business hours because of the disruption that would occur during working hours. The amount of work requires a long holiday weekend to complete.
- It is likely the contractor will use a crane barge for the cooling tower replacement. The cost of crane barge was not represented in the engineer's estimate.

### **PROJECT JUSTIFICATION:**

The P69 cooling tower is at the end of its service life. If it is not replaced, the Port runs the risk of not being able to cool the building. The inability to cool the building would result in unacceptable indoor air quality and damage to the data center and electrical service equipment.

### **PROJECT SCHEDULE:**

Replacement of the cooling tower is expected to occur over Thanksgiving weekend 2012.

### **FINANCIAL IMPLICATIONS:**

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

Original Budget – Small Project Authorization	\$275,000
Previous Authorizations	\$65,000
Current request for authorization	\$75,000
Total Authorizations, including this request	\$415,000
Remaining budget to be authorized	\$0
Total Estimated Project Cost	\$415,000

#### ***Project Cost Breakdown:***

	This Request	Total Project
Construction (including in-house labor)	\$36,000	\$236,200
Taxes	\$6,200	\$24,500
Construction Contingency	\$11,800	\$33,800
Project Management & Other Soft Costs	\$21,000	\$55,500
Design and Permitting	\$0	\$65,000
Total	\$75,000	\$415,000

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

This project was included in the 2012 Approved Annual Budget under the Real Estate 2011 Small Project CIP C800359 in the amount of \$275,000. An additional \$65,000 funding was approved by Commission in November 2011 for a total project budget of \$340,000. The additional \$75,000 that is now requested to fully fund this project is available due to timing delays in other Real Estate Division Small Capital projects.

This project will be funded by the Tax Levy.

### ***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>	Project schedule could be delayed due to lead-time requirements for procurement. Due to the need to minimize tenant disruptions, procurement delays could result in deferring the project installation schedule until the Christmas holiday weekend.
<b>Project cost for analysis</b>	\$415,000
<b>Business Unit (BU)</b>	Facilities Management
<b>Effect on business performance</b>	This project will not generate any incremental revenue. Total depreciation expense from this project is estimated at \$20,750 per year based on a twenty-year asset life. The allocation of actual project costs to specific assets will be finalized near the end of the project, estimated to be the end of the fourth quarter in 2012. Net Operating Income after Depreciation for this facility will decrease by the associated incremental depreciation from project.
<b>IRR/NPV</b>	N/A

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

Alternative 1: Do not replace the cooling tower. The cooling tower will eventually break down causing unacceptable indoor air quality, as well as damage to data center and electrical service equipment. This is not the recommended alternative.

Alternative 2: Continue with the planned P69 Cooling Tower Replacement Project. Authorization of an additional \$75,000 for a total project authorization of \$415,000 will allow replacement of the cooling tower before the cooling tower breaks down permanently and before the next warm weather season. **This is the recommended alternative.**

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

- None.

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

- November 8, 2011 - The Commission authorized \$65,000 for a total project authorization of \$340,000.