# PORT OF SEATTLE MEMORANDUM

COMMISSION AGENDA	Item No.	6a
	Date of Meeting	April 28, 2009

**DATE:** April 1, 2009

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

**FROM:** Richard Ottele, General Manager, Aviation Facilities and Infrastructure

Robert F. Riley, Director, Aviation Capital Improvement Program

**SUBJECT:** Fire Piping Upgrades at the Main Terminal of Seattle-Tacoma International

Airport.

### **ACTION REQUESTED**

Request Port Commission authorization for the Chief Executive Officer to advertise for construction bids, award the contract and construct the Fire Piping Upgrades Main Terminal Project at Seattle-Tacoma International Airport (Airport), for an additional amount of \$1,288,500 and a total project cost of \$1,450,000.

## **SYNOPSIS**

This memorandum requests authorization for construction and the approval to advertise for construction bids for the Fire Piping Upgrades, Main Terminal Project. This project will replace certain vulnerable portions of the Main Terminal fire main piping system to restore system reliability and provide full monitoring compatibility with the central fire alarm system. The Commission previously authorized \$161,500 to complete design on September 23, 2008. This authorization for construction will increase the project authorization by \$1,288,500 for an estimated total project cost of \$1,450,000.

### **BACKGROUND**

The existing fire sprinkler system main supply piping and valves were installed in the late 1960's as part of the Main Terminal construction. Several Main Terminal fire piping mains have experienced pipe and joint failures over the past few years necessitating emergency repairs. The subject fire piping has reached the end of its useful life and requires the proposed upgrades to maximize system reliability. The grade of the current pipes does not meet current standards and seismic bracing needs to be upgraded. In addition, the system has limited alarm-reporting capabilities, adversely affecting the Port's ability to monitor system readiness.

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The Commission authorized \$161,500 on September 23, 2008 to complete design of the fire main piping and valves as well as enhancement of the fire alarm monitoring and reporting system. The total estimated project cost at that time was \$1,500,000. The project design is now complete. The Commission is being requested to approve the advertisement for construction bids and to authorize funding for construction at a new estimated total project amount of \$1,450,000.

### PROJECT DESCRIPTION/SCOPE OF WORK

### Project Statement:

Replace certain vulnerable portions of the Main Terminal fire main piping system to restore system reliability and provide full monitoring compatibility with the central fire alarm system.

#### **Project Objectives:**

Enhance the reliability of the fire protection system for the Main Terminal.

### Scope of Work:

Replace approximately 600 feet of fire main piping in the Main Terminal utility corridors with new, thicker grade piping including installation of piping supports and bracing that meets current seismic codes. The project will also replace the check valves and certain fire alarm valves prior to each fire main branch serving the various zones in the Main Terminal. Further, new flow switches will be installed and connected to the central fire alarm system to provide activation signals for the Main Terminal fire sprinkler system. The scope of work for the replacement of the gate valves isolating the domestic water main from the fire main piping will be transferred to a future project to better facilitate shutdown impacts to the Main Terminal.

This requested action authorizes construction and the approval to advertise for construction bids.

### STRATEGIC OBJECTIVES

This project supports the Port strategy to "Ensure Airport and Seaport Vitality" through enhancing safety by ensuring the fire piping system will perform reliability.

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# **FINANCIAL IMPLICATIONS**

**Budget/Authorization Summary** 

Original Budget	\$1,500,000
Pending Budget Transfer	\$(50,000)
Revised Budget	\$1,450,000
Previous Authorizations this CIP	\$161,500
Current request for authorization	\$1,288,500
Total Authorizations, including this request	\$1,450,000
Remaining budget to be authorized	\$0

**Project Cost Breakdown** 

Construction costs	\$999,000
Sales tax	\$89,000
Internal engineering services	\$89,000
Aviation PMG and other soft costs	\$273,000
Total	\$1,450,000

# **Source of Funds**

This project is included in the 2009-2013 capital budget and plan of finance as a committed project under CIP C800239. Funding will be provided by the Airport Development Fund.

**Financial Analysis Summary** 

CIP Category	Renewal and Replacement		
<b>Project Type</b>	Terminal Infrastructure		
Risk adjusted Discount rate	N/A		
Key risk factors	Unanticipated increased construction costs due to		
	market conditions		
Project cost for analysis	\$1,450,000		
<b>Business Unit (BU)</b>	Aviation Facilities and Infrastructure		
Effect on business performance	NOI after depreciation will increase as 80% of capital		
	costs will be recovered through terminal rents.		
IRR/NPV	N/A		
CPE Impact	CPE will increase by \$0.01 in 2010; however, no		
	change compared to business plan forecast in which this		
	project was included.		

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### **ECONOMIC IMPACTS**

This project will eliminate the need for emergency repairs of the approximately 40 year old Main Terminal fire main piping system and improve fire protection in the Main Terminal.

### ENVIRONMENTAL SUSTAINABILITY/COMMUNITY BENEFITS

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.

### TRIPLE BOTTOM LINE SUMMARY

This project will improve the reliability of the Main Terminal fire piping system, have no impact on the environment, and enhance safety for the community and traveling public at the Airport.

## **PROJECT SCHEDULE**

•	Bid Advertisement	April 2009
•	Contract Award	July 2009
•	Construction Start	September 2009
•	Construction Complete	April 2010

### PREVIOUS COMMISSION ACTION

The Commission authorized \$161,500 on September 23, 2008 (Item 9a) to replace certain vulnerable portions of the Main Terminal fire main piping system to restore system reliability and provide full monitoring compatibility with the central fire alarm system for a total estimated project cost of \$1,500,000.