

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

**COMMISSION AGENDA**

**Item No.** 6c

**Date of Meeting** July 27, 2010

**DATE:** July 12, 2010

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

**FROM:** Michael Ehl, Director, Airport Operations  
Wayne Grotheer, Director, Aviation Project Management Group

**SUBJECT:** Passenger Loading Bridges at Seattle-Tacoma International Airport (CIP # C800105).

**This Request:** \$1,663,000

**Source of Funds:** Airport Development Fund  
& Future Bonds

**Total Project Budget:** \$6,000,000

**Jobs Created:** 16

**Sales Tax Paid:** \$201,000

**ACTION REQUESTED:**

Request Port Commission authorization for the Chief Executive Officer to (1) prepare design documents; execute and amend service agreements; execute and award purchasing contracts; perform contract administration; (2) authorize Port Construction Services (PCS) to self perform work; (3) purchase airline-owned passenger loading bridges and (4) replace aging and inflexible loading bridges at Seattle-Tacoma International Airport (Airport) in support of the Passenger Loading Bridge Project (CIP # C800105).

**SYNOPSIS:**

This request will continue the Airport's program to replace passenger loading bridges that have reached the end of their useful life and potentially purchase airline-owned passenger loading bridges to provide flexibility in airline gate assignments. It will allow installation of standardized loading bridges at up to four (4) various gates, and/or purchase of airline-owned bridges. Loading bridges will be removed and replaced based on maintenance and operational needs. This request of \$1,663,000, when added to prior authorizations, increases the total authorized amount to \$6,000,000.

**BACKGROUND:**

With the execution of the current Signatory Lease and Operating Agreement with the airlines, the Airport has been converting from long-term leased gates and airline-owned passenger loading bridges to preferential and common use gates with Airport-owned passenger loading

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bridges. This conversion provides flexibility in assigning and scheduling airlines onto gates, and can yield greater gate utilization. Of the 74 aircraft gates with passenger loading bridges, the Airport currently owns and maintains 52. Of these, 48 are manufactured by John Bean Technologies Corporation Jetway Systems (JBT). The Airport is standardizing to passenger loading bridges manufactured by JBT, and the necessary competitive waiver will be executed by the delegate of the CEO.

In 2006, a project was initiated to acquire gate-related assets including passenger loading bridges from airlines, and to replace existing aging Airport-owned passenger loading bridges at various gates.

Changes in airline gate assignments may present the opportunity for the Airport to purchase airline-owned passenger loading bridges to eliminate conflict between airline ownership and airline use. In addition, Maintenance has a prioritized list of passenger loading bridges to be replaced. Current and future airline gate assignments, along with the current age and maintenance cost will dictate the priority. Specifically, the South Satellite has a number of bridges to be replaced due to increased demand of international airline operations. These bridges will be evaluated to provide the highest flexibility to accommodate different aircraft types.

Sole source standardization of passenger loading bridges is in the Airport's best interest since maintenance and airline staff will only need to be trained on one system. This will simplify maintenance and parts inventory and promote consistent and safe operations of the bridges. Airlines prefer the JBT manufacturer because all of their staff is currently trained on this system.

The current loading bridge replacement authorizations have been under spent. The cost savings can be attributed to the current market condition, increased bidder participation, pre-purchasing the equipment, using PCS crews and utilization of small works contracts, and the removal of the project labor agreement, which has increased competition among smaller contractors. The result is an overall cost savings and unspent authority.

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

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

This project will replace existing passenger loading bridges with new standardized bridges that are managed and maintained by the Airport.

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

The intent of this project is to replace passenger loading bridges that have reached their useful life, and incrementally further the Airport's vision to optimize gate assignment flexibility with Airport-owned passenger loading bridges, which can be utilized by any air carrier. This project will improve customer service by providing new or renovated facilities and correcting code deficiencies.

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

This project will replace old passenger loading bridges at various gates. It will include demolition, abatement and removal/surplus of the existing loading bridges, design and installation of a modified rotunda column foundation, and procurement and installation of new passenger loading bridges and associated equipment. In some cases, excavation and new footings may be required and perhaps even shifting of the positions for the passenger loading bridge installations. Each loading bridge is its own project and separate asset.

In evaluating best project delivery method, the Central Procurement Office and Aviation Project Management have determined that each passenger loading bridge should be its own independent project. This will allow for the best flexibility for airlines, gate utilization, and construction. The current plan is to procure the equipment, issue small works contracts, and have PCS self perform work. Expense funding for asbestos abatement will be included in the Operating Budget request, if necessary.

In lieu of bridge replacement, funding may be utilized for purchase of existing airline-owned passenger loading bridges, to further Airport flexibility in accommodating revised gate assignments.

### **STRATEGIC OBJECTIVES:**

#### **Ensure Airport and Seaport Vitality**

The project provides enhanced reliability and performance for critical gate equipment in significant areas of the Airport, which facilitates use of the Airport by the traveling public.

#### **Exhibit Environmental Stewardship through Our Actions**

This project is consistent with the Port's goal of improving the long-term sustainability of its facilities and operations by replacing equipment that has reached the end of its useful life. This project supports and encourages Airport environmental initiatives. This project has a generally positive effect on the environment to the extent that the gate equipment is old and outdated and will be replaced with more energy efficient equipment.

### **FINANCIAL IMPLICATIONS:**

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

Original Budget	\$ 6,000,000
Budget Increase	\$ 0
Revised Budget	\$ 6,000,000
Previous Authorizations	\$ 4,337,000

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Budget Spent to date	\$ 3,100,000
Unused Authorization	\$ 1,237,000
Current request for Authorization	\$ 1,663,000
Total current Authorization plus unused Authorization	\$ 2,900,000
Total Authorizations, including this request	\$ 6,000,000
Remaining budget to be authorized	\$ 0

<b><u>Project Cost Breakdown</u></b>	<b><u>This Request Unused budget plus Current</u></b>	<b><u>Total Project</u></b>
Construction costs	\$ 2,124,000	\$ 4,301,000
Sales tax	\$ 201,000	\$ 474,000
Outside professional services	\$ 275,000	\$ 472,000
Aviation PMG and other soft costs	\$ 300,000	\$ 753,000
Total	\$ 2,900,000	\$ 6,000,000

### **Operating Budget Implications**

Lifecycle Maintenance Responsibilities estimated @ 20 years per bridge

Annual Avg. Maintenance Cost – Per Bridge	\$ 35,000
Adding bridges above the 52 currently maintained (does not pertain to replacement bridges) will require additional Maintenance staff (next 1-5 additional bridges will require a two (2) person mechanical maintenance crew and one (1) additional electrician).	

### **Source of Funds**

This project is included in the 2010-2014 capital budget and plan of finance under CIP # C800105. Funding will be provided by the Airport Development Fund.

### **Financial Analysis**

<b><i>CIP Category</i></b>	Renewal/Enhancement
<b>Project Type</b>	Renewal/Enhancement
<b>Risk adjusted Discount rate</b>	Not Applicable
<b>Key risk factors</b>	Not Applicable
<b>Project cost for analysis</b>	\$1,663,000
<b>Business Unit (BU)</b>	Air Terminal

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<b>Effect on business performance</b>	Costs will be recovered through rates and charges
<b>IRR/NPV</b>	Not applicable
<b>CPE Impact</b>	Increase \$0.01 in 2012 but no change compared to business plan forecast, as this project was included.

### **ECONOMIC IMPACTS:**

This project does not create any incremental economic impacts; it primarily helps preserve existing business activities at the Airport.

### **ENVIRONMENTAL SUSTAINABILITY/COMMUNITY BENEFITS:**

New passenger loading bridges feature variable-frequency alternating current drives that are more energy efficient than the old direct current motor drives of the passenger loading bridges they replace. Also, new passenger loading bridges utilize more energy efficient digital programmable logic controllers.

This project will remove passenger loading bridges that may contain asbestos and lead paint.

### **TRIPLE BOTTOM LINE SUMMARY:**

This purchase of passenger loading bridges will require an initial capital investment for the new passenger loading bridges, but will result in decreased operations and maintenance costs at the various gate locations. The new equipment will provide reduction in trouble calls and use less energy. It also improves customer service at these gate locations and provides expansion opportunities for growth. This action supports Airport operations, which benefits the regional economy and traveling public. This project helps the environment by reducing energy consumption by providing energy efficient equipment.

### **PROJECT SCHEDULE:**

- Passenger Loading Bridges Purchase Order Issued August 2010
- Complete Design January 2011
- Start Construction February 2011
- In-use Date for two bridges\* May 2011
- In-use Date for one bridge\* December 2011
- In-use Date for one bridge\* February 2012
- Project Completion March 2012

\* Bridges may be substituted for purchasing airline-owned passenger loading bridges.

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### **ALTERNATIVES CONSIDERED/RECOMMENDED ACTION:**

Alternative 1: Procure up to four New Loading Bridges and Install up to four New Loading Bridges Manufactured by JBT. This alternative provides new equipment with full warranties. This alternative will help ensure continuous operation of these Airport gates. Depending upon the situation, purchase of an airline bridge, rather than procuring one, may be the most effective way to accommodate flexibility in airline gate assignments. **This is the recommended alternative.**

Alternative 2: Do Nothing. This alternative essentially allows the existing gate equipment to run to failure. At failure these gate positions would encounter an unplanned closure and would be unusable until one of the other alternatives is implemented. This alternative would result in unutilized passenger gates and could impact airlines. This is not the recommended alternative.

Alternative 3: Prolong the Life of Existing Passenger Loading Bridges. Several major components, such as drive gears, need to be replaced. Hinges, floor panels and stairs are rusted out and would need to be replaced before they become a safety hazard. Increasingly, part replacement requires complete fabrication as parts are becoming harder to find. This could result in long and unanticipated gate closures, impacting airline operations. This is not the recommended alternative.

Alternative 4: Procure New Loading Bridges from other manufacturers. This option might result in a lower first cost for the bridge equipment due to a competitive procurement. However, other costs will be higher due to the lack of standardization. These include increased airline costs due to additional airline staff re-training for unfamiliar equipment in order to maintain consistent and safe operations, increased parts inventory, and additional maintenance staff training. This is not the recommended alternative.

### **PREVIOUS COMMISSION ACTION:**

On October 14, 2008, the Commission authorized \$1,917,000 to design, purchase, and install two aircraft passenger loading bridges and associated equipment.

On July 24, 2007, the Commission authorized the expenditure of \$2,420,000 for the purchase and installation of three passenger loading bridges and associated equipment.