

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

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

**Item No.** 4d  
**Date of Meeting** October 28, 2014

**DATE:** October 20, 2014  
**TO:** Theodore J. Fick, Chief Executive Officer  
**FROM:** Dave Soike, Director, Aviation Facilities and Capital Program  
Wayne Grotheer, Director, Aviation Project Management Group  
**SUBJECT:** Gates B6, B8, B14, C3, and S15 Passenger Loading Bridge Installation and Replacement (CIP 800653)

<b>Amount of This Request:</b>	\$7,250,000	<b>Source of</b>	Airport
<b>Est. Total Project Cost:</b>	\$7,250,000	<b>Funds:</b>	Development Fund
<b>Est. State and Local Taxes:</b>	\$450,000		

**ACTION REQUESTED**

Request a single Commission authorization for the Chief Executive Officer to (1) proceed with design for the replacement/renewal of the passenger loading bridges (PLBs) at Gates B6, B8, B14 and S15 and the installation of a new PLB and fixed walkway at Gate C3; (2) purchase 4 new PLBs, a fixed walkway and one PLB refurbishment kit; (3) advertise and execute a major works construction contracts for the work up to two gates; and (4) use Port crews to perform site work and complete replacement of the PLB at up to four gates. The amount of this request is \$7,250,000.

**SYNOPSIS**

This project enables increased airline flight schedules for next summer. The increased activity across the Airport necessitates the operational use of every available aircraft position which in turn requires new PLBs be installed at gates C3, B6, B8, B14 and S15. The PLBs at B6, B8, and B14 will be converted from airline to Airport ownership consistent with the Port's overall PLB ownership strategy.

Airline activity growth at the Airport is requiring the installation of a new PLB at gate C3 and the mitigation of the risks of failure for older PLBs at gates B6, B8, B14 and S15. Currently gate C3 does not have a PLB as it was moved in 2008 to gate B3 to accommodate airline needs. The new PLB would be installed at the location of the one previously removed. The existing PLBs at gate B6, B8, and B14 are airline owned, are over 25 years old and have begun to experience significant electrical and control system problems. The Port will purchase new PLBs for installation at gates B6, B8, and B14. The existing PLB at Gate S15 is over 25 years old and will

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be replaced with a refurbished PLB recently removed from Gate S5. (S5 was removed as part of another project to create additional international gates.)

While CIP C800653 is included in the 2014- 2018 capital budget and plan of finance, the need to add a PLB to Gate C3 is new. The need to add a functioning PLB at C3 is due to the planned increased flight schedule next summer. This request for a single authorization for design, procurement and installation is needed to have this additional gate in operation by June 2015, in time for the busy airline summer schedule. This authorization includes purchase of four PLBs, a fixed walkway and kits to refurbish a PLB for S15.

### **BACKGROUND**

The passenger loading bridge at Gate C3 was removed in 2008, and there is infrastructure in place to provide for a new PLB to be installed. The gate will serve domestic flights and reduce the demand on heavily used South Satellite gates.

PLBs are considered to have a service life of 25 years before major refurbishment or replacement is required. The PLB at Gates B14 was manufactured and installed in 1983 and the two PLBs for Gates B6 and B8 in 1988. These PLBs have experienced significant electrical and control system problems over the past 20 months which have made them mechanically unreliable and often difficult to operate.

Aviation Maintenance completes regular preventive, corrective, and emergency maintenance on all Port owned PLBs, as well as providing customer service support for operations. Aviation Maintenance estimates a current average annual cost per PLB of approximately \$15,000 inclusive of all repair, maintenance and customer support activities, including 24/7 response. Costs to maintain older PLBs are significantly more than the average. Annual repair costs for S15 are about \$35,000. Since the age of B6, B8 and B14 are 25+ years, staff estimates annual maintenance costs are similar to S15. Further, the unplanned downtime experienced as a result of these emergency repairs seriously disrupted international airline operations at the South Satellite.

The PLBs at gates B6, B8, and B14 are airline-owned. While some maintenance has been performed by the airlines over the past 25 years, none of the major technical/operational systems of either PLB have been upgraded since the original installation. Port staff has inspected them and determined that they are beyond their useful life and are not candidates for refurbishment.

In addition, replacement of the existing PLBs would take each gate out of service for approximately three weeks compared to up to twelve weeks for a complete refurbishment, which is operationally unacceptable. After assessment by staff it was determined that due to the high demand for aircraft gates on Concourse B, the PLBs at gates B6, B8, and B14 should be replaced with new.

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Therefore, this project will purchase new PLBs for installation at gates B6, B8, and B14. The existing airline-owned PLBs will be removed by the airlines at their expense and this work is not part of this project.

This project was approved by Majority-In-Interest on March 6, 2014.

### **PROJECT JUSTIFICATION AND DETAILS**

Historically, airlines primarily owned and maintained PLBs, but over the past couple of decades the Port has been strategically purchasing the PLBs as opportunities become available. Southwest Airlines, in an effort to reduce its operational costs and improve PLB reliability has requested that the Port replace the PLBs at gate B6, B8, and B14 with new or refurbished PLBs that meet their operational needs. Southwest has requested that B14, the oldest and least reliable PLB, be replaced by June 1, 2015 to meet their projected flight schedule requirements.

Proposed flight activity forecast for 2015 indicates a need to install a new PLB at gate C3 by June 1, 2015. Delta Air Lines has requested this to meet their projected flight schedule requirements.

The PLBs at gates B6, B8 and S15 will be replaced in the fall of 2015.

The Southwest request is consistent with the Airport's strategy of opportunistically acquiring airline PLBs so that the Airport can maintain them to the same high standards to ensure operational reliability. The operational failure of a PLB, whether airline-owned or Port owned, negatively affects operations and airline service while significantly inconveniencing the traveling public.

Gate S15 is capable of accepting international wide body aircraft and provide access to the South Satellite international arrivals facility. Having this bridge out of operation for even a short period of time significantly impacts the Port's ability to safely and efficiently accommodate international passenger operations at the South Satellite.

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

The objectives of this project are:

- To provide safe and reliable equipment at the Airport's gates.
- To minimize unplanned PLB and gate downtime.
- To improve the efficient use of Port owned PLBs.

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

- Design for this scope of work will be provided under existing design services indefinite delivery, indefinite quantity (IDIQ) contracts.

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- Purchase and installation of new PLBs, associated fixed walkway and related components at Gates B6, B8, B14, C3, and S15 along with necessary architectural, electrical, data and mechanical infrastructure upgrades to meet new PLB standards and current code requirements.
- Port Construction Services (PCS) will perform work associated with preparing the foundations replacement and construction management services for the PLB installations at Gates B6, B8, B14 and S15.
- Installing and commissioning the new PLB and fixed walkway at C3 and installing the refurbish PLB at S15 will be completed as part of major works construction contracts. The PLB will be provided as owner-furnished equipment.
- Installing the refurbished PLB at Gate S15 will be completed either by PCS or as part of major works construction contracts depending on its total cost which will be determined once design is complete.
- The new bridges will be connected to the Port's Facility Monitoring System so any malfunction that shuts the bridge down will be promptly reported to Maintenance for faster response.

### ***Schedule***

Complete Design	March 2015
Start Construction	April 2015
Complete Construction	October 2015

## **FINANCIAL IMPLICATIONS**

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

	Capital	Expense	Total Project
Original Budget	\$7,250,000		\$7,250,000
Budget transfer	-\$950,000		-\$950,000
Budget increase	\$900,000	\$50,000	\$950,000
Revised budget	\$7,200,000	\$50,000	\$7,250,000
Previous Authorizations	\$0	\$0	\$0
Current request for authorization	\$7,200,000	\$50,000	\$7,250,000
Total Authorizations, including this request	\$7,200,000	\$50,000	\$7,250,000
Remaining budget to be authorized	\$0	\$0	\$0
Total Estimated Project Cost	\$7,200,000	\$50,000	\$7,250,000

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

#### **This Request and Total Project**

Design	\$1,000,000
Construction	\$5,800,000
State & Local Taxes (estimated)	\$450,000
Total	\$7,250,000

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

This project is included in the 2015-19 capital budget and plan of finance within CIP #C800653 with a budget of \$6,300,000. The capital budget increase of \$900,000 will be transferred from the Aeronautical Allowance CIP (C800404), resulting in no net change to the airport capital budget. The funding source will be the Airport Development Fund and future revenue bonds. Consistent with the plan of finance, the Port plans to issue revenue bonds in 2015 to fund a number of projects. The \$50,000 project expense is included in the 2015 airport operating budget.

### ***Financial Analysis and Summary***

<b>CIP Category</b>	Renewal and Enhancement
<b>Project Type</b>	Renewal & Replacement
<b>Risk adjusted discount rate</b>	N/A
<b>Key risk factors</b>	N/A
<b>Project cost for analysis</b>	\$7,250,000
<b>Business Unit (BU)</b>	Terminal – Passenger Loading Bridges
<b>Effect on business performance</b>	NOI after depreciation will increase
<b>IRR/NPV</b>	N/A
<b>CPE Impact</b>	CPE will increase by \$.03 in 2016, but no change to business plan forecast as this project was included.

### ***Lifecycle Cost and Savings***

Aviation Maintenance completes regular preventive, corrective and emergency maintenance on all Port-owned PLBs, as well as providing customer service support for operations. Aviation Maintenance estimates a current annual cost per PLB of approximately \$15,000 inclusive of all repair, maintenance and customer support activities, including 24/7 response.

As a result of an earlier Continuous Process Improvement Lean workshop to improve maintenance work flow on PLBs, and due to the removal of other PLBs as part of other projects, no additional Airport maintenance craft full-time-equivalent personal are necessary in order to maintain these additional Airport owned bridges. Aviation Maintenance does not anticipate adding staff to support these PLB's. Facility wide, other PLB's are being removed from service as components of other projects. Aviation Maintenance will be reallocating resources to absorb the additional assets generated by this project.

## **STRATEGIES AND OBJECTIVES**

By replacing the airline-owned PLBs that are at the end of their useful operational life with new Port-owned PLBs, this CIP advances the Port's strategic goal to operate a world-class international Airport.

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### **TRIPLE BOTTOM LINE**

#### ***Economic Development***

This project demonstrates environmental sustainability by replacing outdated, inefficient and unreliable PLBs. This will allow the Port to provide its tenants and the general public with the updated, dependable and more efficient equipment that they need to support and grow their business. The resulting improvement to the Port's PLB inventory will promote net operating income through ongoing gate leases to airlines with a corresponding decrease in repair and capital expenditures.

#### ***Environmental Responsibility***

This project will install a new PLB, associated fixed walkway and related equipment to replace aging, less energy efficient equipment at Gate B6, B8, B14 and S15 and install a new efficient PLB at gate C3.

New PLBs employ the use of advanced electronics, materials and finishes that provide enhanced energy efficiency and improved air quality through:

- Installation of Energy Star compliant equipment/components where applicable.
- Use of up to 30% pre-consumer recycled content in PLB flooring.
- Use of repurposed rubber from spent aircraft tires for PLB control cab bogies (under-cab assemblies)
- Use of No/Low VOC (volatile organic compound) paints, adhesives and finishes wherever possible.
- Use of the most energy efficient lamps provided for this application.
- Provision for increased passive ventilation in newly manufactured PLBs over older models.

#### ***Business Plan Objectives***

- This project supports the Aviation Division's strategic goal to operate a world-class international Airport by providing safe and secure operations, anticipating and meeting the needs of our tenants and passengers and by managing Port assets to minimize the long-term total cost of ownership. Having operationally reliable and aesthetically pleasing PLBs at gates B6, B8, B14, C3 and S15 are advantageous to the Port as the premier gateway to and from the Northwest.

#### ***Community Involvement***

The Project Manager will work with the Office of Social Responsibility to determine small business participation opportunities, in accordance with small business Resolution No. 3618.

### **ALTERNATIVES AND IMPLICATIONS CONSIDERED**

**Alternative 1)** Install a new PLB at Gate C3 and have Southwest continue to own and operate their gates. Installing the PLB at gate C3 will provide operational flexibility for additional flights. However, not replacing the PLBs at gates B6, B8, B14 and S15; which have an increasing trend of mechanical and electrical failures, will impact safety, increase emergency

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maintenance costs, and risk higher PLB downtime. This would reduce the Port's ability to accommodate domestic and international flights as well as result in lost revenue. This is not the recommended alternative.

**Alternative 2)** Do nothing. This alternative would not provide operational flexibility for regional flights and would not meet airline flight schedule needs. It would not mitigate the risk for PLB failure. This is not the recommended alternative.

**Alternative 3)** Install a new PLB at C3, replace the airline-owned PLBs at gates B6, B8, and B14, and install a refurbished PLB at S15. Installing the PLB at gate C3 will provide operational flexibility for additional flights. Replacing the PLBs at gates B6, B8, B14 and S15, which are at risk of future service interruptions, with new or refurbished Port-owned PLBs will provide safe, high quality facilities for Airport passengers, increased operational reliability and take gates B6, B8, B14 and S15 out of operation for the shortest period of time possible. **This is the recommended alternative.**

## **ATTACHMENTS TO THIS REQUEST**

- None

## **PREVIOUS COMMISSION ACTIONS OR BRIEFINGS**

- None