

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

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**COMMISSION AGENDA**

**ACTION ITEM**

**Item No.** 6a

**Date of Meeting** March 26, 2013

**DATE:** March 22, 2013  
**TO:** Tay Yoshitani, Chief Executive Officer  
**FROM:** Michael Ehl, Director, Airport Operations  
Wayne Grotheer, Director, Aviation Project Management Group  
**SUBJECT:** 2013 Airfield Apron Pavement and Joint Seal Replacement (CIP#102573)  
Construction

**Amount of This Request:** \$8,967,000      **Source of Funds:** Existing Revenue Bond Proceeds

**Est. State and Local Taxes:** \$683,000      **Est. Jobs Created:** 38

**Est. Total Project Cost:** \$9,377,000

**ACTION REQUESTED:**

Request Commission authorization for the Chief Executive Officer to advertise and execute a single construction contract comprised of Airfield Panel Replacement and Joint Seal Replacement (CIP #102573) and Runway 16C/34C Panel Replacement. This authorization request is for \$8,967,000, and the estimated total cost of the complete project is \$9,377,000. **Authorization is also requested to perform this contract under a project labor agreement (PLA).**

**SYNOPSIS:**

Multiple projects to be constructed on the airfield in 2013 have been combined into a single construction contract in order to minimize disruption to the airlines and Airport patrons. Advertising these contracts as one project is advisable due to the coordination requirements for multiple jobs affecting the airfield movement area in multiple locations.

This year's pavement and joint seal replacement project is part of a comprehensive plan to replace the most damaged, aged, and travelled concrete on the airfield as well as replacing failed pavement joint seal.

Runway 16C/34C Panel Replacement includes replacement of deteriorating concrete pavement panels and joint seal. Runway 16C/34C is scheduled to be replaced in 2016. Replacement of these panels will be paid for as an expense project because it does not meet the requirements for capitalization.

Estimated total project cost includes \$200,000 previously authorized for design of the panel and joint seal replacement and \$210,000 of expense funds for panel replacement on Runway 16C/34C.

## **COMMISSION AGENDA**

Tay Yoshitani, Chief Executive Officer

March 22, 2013

Page 2 of 6

In return for the Port's promise to require in its bid specifications that all successful bidders agree to be covered by a PLA, unions promise labor peace through the life of the contract. The provisions of a PLA will help ensure that this project is completed during one summer construction season, minimizing the impact on international and domestic travelers and carriers.

Funding for this project is included in the 2013-2017 capital budget and plan of finance.

### **BACKGROUND:**

Starting in 2009, Airport staff conducted visual surveys of pavement on the airfield to determine which pavement needed replacing, and in what priority. Work in 2013 will focus on replacing deteriorated panels on non-runway areas. Pavement joint seals will be replaced in both taxiway and taxiway areas.

Many of the concrete pavements that are currently failing were originally installed as early as 1970 with a design life of 20 years. Typical degradation of the concrete is occurring. The concrete and joint seal work must occur in phases to minimize impacts to airline operations.

The airfield pavement replacement is part of a multi-year program to replace some of the worst pavement and joint seal on the airfield in non-runway areas. The project will replace areas of concrete most susceptible to deterioration due to repeated aircraft loading and age and current condition of the pavement. Additional non-runway panels may be replaced if they become unserviceable.

It is necessary to use expense funds for the 16C/34C runway panel replacement due to the planned total replacement of the runway in 2016. There are currently six panels on runway 16C/34C identified for replacement and another 34 that are being monitored. Given that pavement distress will continue to occur between now and construction, additional panels will likely be added. Staff believes that the \$210,000 should be enough to cover the costs, should a small number of additional panels require replacement this year.

### **PROJECT JUSTIFICATION:**

Much of the concrete pavement on the airfield has exceeded its service life and deteriorated to the point of needing replacement. Concrete debris resulting from the deteriorating pavement can become a hazard for aircraft and personnel. The replacement of pavement panels requires phasing by area. Replacing joint seal is the primary method for extending the life of concrete pavement.

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

- Maintain the structural integrity of the pavements by the replacement of deteriorated and aged pavement panels and joint sealant on runway and non-runway areas.
- Replace joint sealant between existing concrete panels on non-runway areas in an effort to prolong the life of the existing concrete.

## **COMMISSION AGENDA**

Tay Yoshitani, Chief Executive Officer

March 22, 2013

Page 3 of 6

### **PROJECT SCOPE OF WORK AND SCHEDULE:**

**Scope of Work:** This request includes the following elements:

- Approximately 126,000 square feet of panel replacement on Taxilane W.
- Replace approximately 104,000 linear feet of joint seal on Taxiway B and Taxilane W.
- Runway panel replacement of approximately six panels.
- Utility repair or removal of IWS, sewer, and/or waterlines if within the footprint of the panel replacement

#### ***Schedule:***

Design Start	September 2012
Design Complete	February 2013
Commission Authorization to Bid Work	March 2013
Construction Start	June 2013
Construction Complete	October 2013

### **FINANCIAL IMPLICATIONS:**

<b><i>Budget/Authorization Summary:</i></b>	Capital	Expense	Total Project
Original Budget	\$30,800,000	\$210,000	\$31,010,000
Budget Decreases (2012)	\$(537,965)	\$0	\$(537,965)
Revised Budget	\$30,262,035	\$210,000	\$30,472,035
Previous Authorizations	\$12,378,035	\$0	\$12,378,035
Current request for authorization	\$8,967,000	\$210,000	\$9,177,000
Total Authorizations, including this request	\$21,345,035	\$210,000	\$21,555,035
Remaining budget to be authorized	\$8,917,000	\$0	\$8,917,000

<b><i>Project Cost Breakdown:</i></b>	Total Project
Construction	\$7,185,000
Construction Management	\$1,109,000
Design	\$200,000
Project Management	\$200,000
Permitting	\$0
State & Local Taxes (estimated)	\$683,000
Total	\$9,377,000

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

##### **Airfield Pavement and Joint Seal:**

The airfield panel and joint seal replacement is included in the 2013-2017 capital budget and plan of finance. The airfield panel and joint seal replacement project, CIP #102573, is part of a multi-year program to replace deteriorating pavement panels and joint seal. The funding source for this authorization will be existing revenue bond proceeds.

## **COMMISSION AGENDA**

Tay Yoshitani, Chief Executive Officer

March 22, 2013

Page 4 of 6

### **Runway Pavement:**

The funding source for the \$210,000 budgeted for the replacement of panels on Runway 16C/34C will be transferred from the Aviation Division Contingency Budget.

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

<b>CIP Category</b>	New/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>	\$9,377,000
<b>Business Unit (BU)</b>	Airfield
<b>Effect on business performance</b>	NOI after depreciation will occur
<b>IRR/NPV</b>	N/A
<b>CPE Impact</b>	\$0.05 in 2013, no change from business plan forecast

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

Annual Operating and Maintenance costs are not anticipated to change appreciably. The replacement of concrete panels and joint seal will result in cost avoidance for maintaining them.

### **STRATEGIC OBJECTIVES:**

This project supports the Century Agenda objective to “meet the region’s air transportation needs at Sea-Tac Airport for the next 25 years” by maintaining a safe operating environment as well as maximizing asset utilization.

### **ENVIRONMENTAL SUSTAINABILITY:**

During repair and maintenance activities, various sustainable practices will be considered and implemented when practicable. These include, but are not limited to, performing a lifecycle analysis of materials used to ensure that resources being used and/or recycled are environmentally and economically practical; utilizing onsite water for dust control and irrigation; the reuse of materials such as concrete and soil; and employing low emission construction equipment.

### **BUSINESS PLAN OBJECTIVES:**

This project furthers the Airport’s business plan objectives to operate a world-class international airport by ensuring safe and secure operations and by managing our assets to minimize the total long-term cost of ownership.

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

1. Do nothing. This alternative would result in an increasing risk of aircraft ingesting concrete debris into aircraft engines on non-runway areas and Runway 16C/34C resulting in the potential need for closure of ramp areas or the center runway. This alternative is not recommended.
2. Replacement of pavement and joint seal material in non-runway areas. Replacement of the most distressed concrete panels on Runway 16C/34C. **This is the recommended alternative.**

## **COMMISSION AGENDA**

Tay Yoshitani, Chief Executive Officer

March 22, 2013

Page 5 of 6

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

None.

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

- On July 24, 2012, the Commission authorized \$200,000 and for the Chief Executive Officer to complete the design and perform any advance preparatory work for the 2013 Airfield Apron Pavement Replacement project.
- On January 24, 2012, the Commission authorized \$5,172,000 and for the Chief Executive Officer to advertise and execute a construction contract for the replacement of airfield pavement and joint seal replacement.
- On July 26, 2011, the Commission authorized \$465,000 and for the Chief Executive Officer to complete the design and perform any advance work in support of the 2012 Pavement and Joint Sealant Project for non-runway concrete pavement panels, joint seal replacement, spall repair, and associated or temporary facilities, such as striping, lighting, etc., on the Aircraft Operations Area.
- On March 1, 2011, the Commission authorized \$6,235,000 and for the Chief Executive Officer to advertise and execute a construction contract that included slot drain, pavement, and joint seal replacement at the South Satellite and perform installation of temporary common use podiums and minor removal of hazardous materials through Port Construction Services.
- On August 10, 2010, the Commission authorized \$394,000 and for the Chief Executive Officer to direct staff to: 1) proceed with project management, design, environmental support, and preparation of 100 percent design level construction documents for the replacement of slot drains, pavement and joint seal at the South Satellite at Seattle-Tacoma International Airport; 2) execute and award outside professional service agreements; 3) pre-purchase common-use gate equipment; and 4) allow Port Construction Services to self-perform, advertise for bids, and execute and award small works construction contracts for common use equipment installation.
- On September 22, 2009, senior Aviation staff briefed the Commission on Seattle-Tacoma International Airport Facility Functionality and Readiness.

#### C800112 – Runway 16C/34C Panel Replacement

- On July 26, 2011, the Commission authorized the Chief Executive Officer to modify the Scope of Work for the Runway 16C/34C Surface Panel Replacement project by extending the project period through the end of 2012, and approval of the use of \$200,000 of the previously authorized funds to prepare design documents for surface panel replacement construction contract to be advertised and constructed in 2012.
- On February 9, 2010, the Commission authorized \$5,650,000 for the design, advertisement, and award of a construction contract for the 2010 Airfield Improvement Projects – Contract 1, consisting of panel replacements on Runway 16C/34C.
- On February 26, 2008, the Commission authorized \$450,000 for joint seal replacement on runway 16C/34C (CIP 800112).

## **COMMISSION AGENDA**

Tay Yoshitani, Chief Executive Officer

March 22, 2013

Page 6 of 6

*Note: On October 30, 2003, runway 16 Right/34 Left (16R/34L) was renamed runway 16C/34C, in preparation for the Third Runway to assume the runway 16R/34L designation.*

- On January 14, 2003, the Commission authorized \$5,000,000 for a multi-year program of panel replacement on runway 16R/34L (CIP 102037).
- On November 26, 1996, the Commission authorized \$2,000,000 for a multi-year program of panel replacement on runway 16R/34L (CIP 100663).
- On June 13, 1993, the Commission authorized \$10,422,000 for runway 16R/34L rehabilitation and other airfield improvements (CIP 100663).