

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

**COMMISSION AGENDA**

**Item No.** 6d

**Date of Meeting** March 23, 2010

**DATE:** March 5, 2010

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

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

**SUBJECT:** C1 to C88 Baggage Handling System connection project at Seattle-Tacoma International Airport (CIP # C800170).

**Amount of This Request:** \$2,752,000

**Source of Funds:** Airport Development Fund

**Amount of Sales Tax:** \$201,000

**Number of Workers Employed:** 18

**ACTION REQUESTED:**

Request Port Commission authorization for the Chief Executive Officer to advertise for construction bids, award the contract and construct the C1 to C88 Baggage Handling Connection project (CIP # C800170) and authorize Port Construction Services to self perform work and issue small works contracts in support of the project at Seattle-Tacoma International Airport (Airport) for an additional amount of \$2,752,000, bringing the total authorization to \$3,032,000.

**SYNOPSIS:**

This memorandum requests approval to advertise for construction bids and authorization to award construction contracts to connect the Alaska Airlines' baggage screening and sortation system (C1 Baggage Handling System (BHS)) to the United Airlines/North Satellite baggage screening and sortation system (C88 BHS). The Commission previously authorized \$280,000 to complete design on August 11, 2009. Based on the design work, the project budget has increased by \$232,000. This authorization for construction will increase the project authorization by \$2,752,000 for an estimated total project cost of \$3,032,000.

**BACKGROUND:**

Alaska Airlines and Horizon Air currently share a baggage conveyor system that consists of inline security screening and sortation of passenger baggage. This system is designated as the C1 BHS. Once bags are processed through the screening portion of the system, screened bags are made available to Alaska Airlines on the D-concourse through the secondary sortation portion of the system designated C92. It is a self-contained system that does not have any connectivity to other baggage systems.

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United Airlines, Air Canada, and Jazz use a system with similar characteristics called the C88 BHS. It provides baggage screening and conveyance from the main terminal to the North Satellite where United Airlines, et al. depart their flights.

With the increasing expansion of Alaska Airlines' operations to the North Satellite, they have requested a connection from the C1 BHS to the C88 BHS. This project creates the connection that will allow Alaska Airlines to send bags from their current passenger check-in locations in the main terminal to the North Satellite, in addition to the current D-concourse location, without having to modify their passenger check-in facilities.

This project will provide greater flexibility for Alaska Airlines' departure operations and relieve some of the congestion they currently experience on the D-Concourse (C92) portion of the baggage sortation system. Gate use flexibility also increases with this plan and the amount of 'across the ramp' baggage tug and cart traffic is reduced, thereby improving ramp safety.

The connection will contain a 'high speed diverter' configuration that will physically divert bags from the C1 system to the C88 system via connecting conveyors with tracking and programming to designate which bags are diverted.

Prior to having any exact design information, Port staff initially estimated that the project would cost approximately \$2.8 million. This estimate was used within the annual budget forecast. The Commission authorized \$280,000 on August 11, 2009, to perform full design of the C1 to C88 baggage connection project. As site surveys occurred and design progressed, greater information became available to make a more accurate cost estimate. The length of conveyor necessary has increased and the cost per linear foot rose due to the types of conveyor sections that are needed. As a result, the overall project cost has risen by 8%, or \$232,000, during design phase, which increased the total project budget amount from \$2.8 million to \$3,032,000. The current design eliminates a manual encode station on the C92 BHS which provides operational cost savings of \$350,000 to \$450,000 annually for Alaska Airlines.

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

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

This project will connect the new C1 Baggage Screening Facility to the C88 North Satellite Baggage Sortation System by December 2010 for \$3,032,000.

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

- 1) Improve future flexibility in baggage introduction point to ultimate destination, i.e., common use ticket counters.
- 2) Address Alaska Airline's request to connect baggage from their ticket counters to North Satellite sortation system.
- 3) Provide a connection consisting of two new conveyor paths that connect both systems post-screening.

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

Develop infrastructure to accommodate the installation and operation for two conveyor line connections from C1 mainlines to C88 conveyor lines. Infrastructure development will, at a minimum, include:

- 1) Site preparation for installation of conveyors.
- 2) Removal of regulated materials as required.
- 3) Installation of electrical power and control systems.
- 4) Installation of communication system.
- 5) Installation of conveyor equipment.
- 6) Re-striping tug lanes and bagwell area.
- 7) Installation and revisions to fire sprinklers systems.
- 8) Structural and mechanical revisions to the base building.
- 9) Commissioning of conveyor systems.
- 10) Testing of conveyor systems.
- 11) Closeout of completed project.

## **STRATEGIC OBJECTIVES:**

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

The project provides enhanced capacity and flexibility in critical baggage infrastructure, especially for the Airport's largest customer in utilizing the North Satellite.

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

This project is in alignment with the Port's goal of improving the long term sustainability of its facilities and operations. This project supports and encourages airline environmental initiatives. This project has a generally positive effect on the environment to the extent that automated baggage handling systems reduce airport and airline reliance on less energy efficient baggage conveyance alternatives (tugs, trucks, etc.). Passengers will benefit from faster, more reliable, baggage screening.

## **FINANCIAL IMPLICATIONS:**

### **Budget/Authorization Summary**

Original Budget	\$2,800,000
Budget Increase	\$232,000
Revised Budget	\$3,032,000
Previous Authorizations	\$280,000

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Current request for authorization	\$2,752,000
Total Authorizations, including this request	\$3,032,000
Remaining budget to be authorized	\$0

<b><u>Project Cost Breakdown</u></b>	<b><u>This Request</u></b>	<b><u>Total Project</u></b>
Construction costs	\$2,111,000	\$2,111,000
Port furnished equipment	\$0	\$0
Sales tax	\$201,000	\$201,000
Outside professional services	\$151,000	\$351,000
Aviation PMG and other soft costs	\$ 289,000	\$369,000
Total	\$2,752,000	\$3,032,000

### **Source of Funds**

This project (CIP # C800170) was included in the 2010-14 capital budget and plan of finance as a committed project with a budget of \$2.8 million. The budget increase will be transferred from the Aeronautical New Projects Allowance (CIP # C102165), so there will be no change in the overall Aviation capital budget. The funding source will be the Airport Development Fund and/or future revenue bonds.

### **Financial Analysis**

<b><i>CIP Category</i></b>	Renewal/Enhancement
<b>Project Type</b>	Infrastructure Upgrade
<b>Risk adjusted Discount rate</b>	N/A
<b>Key risk factors</b>	N/A
<b>Project cost for analysis</b>	\$3,032,000
<b>Business Unit (BU)</b>	Terminal
<b>Effect on business performance</b>	Increase NOI after depreciation
<b>IRR/NPV</b>	N/A
<b>CPE Impact</b>	Will increase CPE by \$.02. However, no change to 2010-14 business plan forecast since budget for Aeronautical New Projects will be reduced.

Upon completion of this project, the Airport will incur increased Operation and Maintenance (O&M) costs of about \$65,000 per year. These O&M costs are the expenses related for required staffing, tools and supplies and the requirement for ongoing maintenance and periodic component renewal as well as energy consumption.

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### **ECONOMIC IMPACTS:**

The Airport will generate additional lease income from Alaska Airlines.

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

There are significant benefits with reductions in baggage tug / cart vehicles on the ramp. Reduced ramp vehicular traffic will result in lower fuel consumption and therefore less carbon air emissions. The project will improve the efficiency of the airlines' operations.

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

This project will provide tangible improvements to BHS operational flexibility. This common use system will allow for maximum utilization by multiple airlines, help insure passenger safety, improve Airport security, and improve customer service for both passengers and airline partners. This project is expected to help reduce the overall operating costs of the airlines. Reduced ramp vehicular traffic will result in increased ramp safety, decreased air emissions, and decreased fuel consumption.

### **PROJECT SCHEDULE:**

- |   |                |
|---|----------------|
| • Commission Authorization to Start Design            | August 2009    |
| • Start Design  | September 2009 |
| • Design complete                                     | March 2010     |
| • Commission Authorization to Bid and Increase Budget | March 2010     |
| • Bid Advertisement                                   | April 2010     |
| • Commission Authorization to Award (if necessary)    | May 2010       |
| • Construction Start                                  | July 2010      |
| • Construction Complete                               | December 2010  |

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

Alternative 1: Connect the C1 baggage sortation (with screening matrix) to the C88 make-up system in the North Satellite. This will give Alaska Airlines the baggage make-up capacity at the correct location in relationship to their gates at the North Satellite. The Airport will also be able to generate additional lease income from Alaska utilizing the Satellite piers. This is the recommended alternative.

Alternative 2: Connect bag flow to an existing make-up device in the bagwell. This alternative would add tug congestion to the bagwell and necessitate longer transit times for bags to be tugged to aircraft across the ramp at the North Satellite. This is not the recommended alternative.

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Alternative 3: Alaska Airlines could segregate their North Satellite operations to vacant ticket counters; however, that would necessitate a “split” ticketing operation on both sides of United Airlines ticketing area. This would increase Alaska operating costs, confuse passengers and degrade customer service. This is not the recommended alternative.

Alternative 4: Construct an additional new building envelope to house an additional baggage conveyor. This would increase areas to be heated and cooled while disrupting operations and requiring relocations. This is not the recommended alternative.

### **PREVIOUS COMMISSION ACTION:**

On October 23, 2007, the Commission authorized construction of Interim and Final Baggage Screening Systems at Seattle-Tacoma International Airport, for a total authorization of \$230,517,104.

On August 11, 2009, the Commission authorized full design documents; prepare, execute, award, and amend service agreements; and execute service directives for C1 to C88 Baggage Handling Connection project (CIP # C800170) at the Seattle-Tacoma International Airport for a cost of \$280,000.

### **ATTACHMENTS:**

None.