

PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA
ACTION ITEM

Item No. 6c
Date of Meeting November 5, 2013

DATE: October 28, 2013
TO: Tay Yoshitani, Chief Executive Officer
FROM: David Soike, Director, Aviation Facilities and Capital Program
Wayne Grotheer, Director, Aviation Project Management Group
SUBJECT: C60 – C61 Baggage Handling Systems Modifications Project at Seattle-Tacoma International Airport (CIP #C800168)

Amount of This Request:	\$10,075,825	Source of Funds:	Airport Development Fund and future revenue bonds
Est. Total Project Cost:	\$11,864,825		
Est. State and Local Taxes:	\$722,000		

ACTION REQUESTED

Request Commission authorization for the Chief Executive Officer to: (1) adjust the scope of work for the construction of the C60-C61 Baggage Handling System (BHS) Modification Project at Seattle-Tacoma International Airport to meet airline and TSA needs; (2) advertise, award, and execute a major public works contract for the construction of the project; and (3) authorize the use of Port crews in support of the project and for removal of regulated materials. This request of \$10,075,825 is in addition to the \$1,789,000 that was previously authorized for a total project authorization of \$11,864,825.

SYNOPSIS

This project implements upgrades to the baggage handling system that serves the Airport's A Concourse and South Satellite. It increases baggage make-up capacity, replaces outdated drive technology, and updates computer systems to accommodate current, critical capacity needs on the C60-C61 system. The project was approved by an airline majority-in-interest ballot in March 2012, and was included in the 2014 – 2018 capital budget and plan of finance.

Although the Commission earlier approved a long-term, terminal-wide baggage optimization project in cooperation with the Transportation Security Administration (TSA), this C60-C61 baggage project is still necessary for two reasons. First, the project is necessary to make near-term system improvements that cannot be completed by optimization because it will be several years before system-wide optimization is completed and can alleviate the capacity needs of this individual baggage system. C60-C61 is the Airport's oldest outbound individual baggage system and transports over 3 million bags per year. The existing computer hardware and software is aging and must be upgraded to improve near-term system performance to meet current airline

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needs. System performance must be increased because airline realignment added United Airlines (and merged Continental Airlines) onto the system, increasing baggage load on C60-C61 from 29% to 35% of total Airport baggage load. Second, the project is necessary to add baggage make-up device capacity that has been requested by Delta Airlines to enable them to support next year's added flights at the Airport.

The scope of work for the project has been adjusted with additions and deletions to meet both airline and TSA needs as noted in the scope section of this memorandum. The net effect upon the budget of this project of these scope adjustments is \$895,825 as noted in the scope and financial sections of this memorandum.

Approximately 45% of the cost of this project is expected either still to be in place, or has the potential to be reused within the later optimization project. The majority of remaining cost is the computer hardware and software. Hardware and software typically have a relatively short lifespan, and would not be reusable for the larger and reconfigured baggage optimization project. However, the new C60-C61 hardware and software will last until the optimization project is operationally linked up with C60-C61 in approximately 5 to 10 years

BACKGROUND

The C60-C61 systems were in the process of being assembled as part of the South Terminal Expansion Program (STEP) including construction of Concourse A when the events of September 11, 2001, occurred. As a result, the bag screening capability of C60-C61 was dramatically and rapidly built to meet federal requirements while those requirements were still being developed. C60-C61 was one of the first operational in-line baggage scanning systems in the country. New federal screening requirements have continued each year since the system was built, but operating agreements with local TSA management enabled us to operate the system in an interim condition with only a few refinements. The system is aging and is in need of refurbishment to meet airline operational demands.

Collaborative work with the TSA has enabled adjustment of the scope of this project to be only what is necessary for shorter-term operational needs. This is in consideration of the Commission's authorization of a long-term, terminal-wide program for baggage system optimization. Some longer-term scope elements have been shifted to optimization, while shorter-term ones remain in this C60-C61 project. The scope of this project will meet the demands of airlines' current needs over the next five years with operational performance and reliability improvements.

PROJECT JUSTIFICATION AND DETAILS

The work planned is a critical component in providing improved operational baggage in-line screening for the south end of the Airport to meet airlines' current growth demands and performance requirements.

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Project Objectives

- Increase baggage make-up capacity for airlines
- Improve efficiency and maintain reliability throughput of the baggage system to benefit the Airport and airlines by serving a growing number of passengers

Scope of Work

The scope of work for the project has been adjusted with additions and deletions to meet both airline and TSA needs. The airlines have requested added make-up device capacity with baggage tug access to meet growing baggage volume associated with added flight activity. Make-up devices have an estimated lifespan of 15 years and these particular make-up devices will still be used after the later optimization project is completed. The TSA has requested that the Checked Baggage Resolution Area (CBRA) be deleted from the scope and instead moved to the future optimization project. This change meets longer-term TSA goals, which enabled the previously approved grant for optimization to be increased by approximately \$7 million.

Airport staff have determined that it is necessary replace aging Automatic Tag Readers (ATR's) that read bag tags used to track and direct bags to the appropriate make-up device to be loaded onto each airline's correct flight. New ATRs have improved read rates that minimize mistracked bags and thereby minimize costs for airlines. New ATRs have estimated lifespans of approximately eight years and can be relocated and reused elsewhere if necessary for the later, more comprehensive, optimization project. Airport staff and the TSA have cooperated to find a way to avoid relocating TSA-owned Explosive Detection System (EDS) machinery so that it has to be moved only once later when necessary for the optimization project. The net effect upon the budget of this project of these scope adjustments is \$895,825 as noted in the financial section of this memorandum.

Specific work includes:

- Port crews will install new C60 make-up device to increase make-up capacity.
- Port crews will manage any incidental regulated materials management.
- Relocate and expand existing C61 make-up device to increase make-up capacity.
- Demolish unused conveyor equipment.
- Remove and replace outdated Variable Frequency Drives (VFD) technology.
- Replace the existing obsolete C60 and C61 computers, which are no longer supported by the manufacturer, with a new combined upper level control system in one location.
- Provide comprehensive system baggage reporting capabilities.
- Incorporate new server and networking standards into the baggage handling computer system.
- Provide new Facility Monitoring System (FMS) tie-ins to improve fault monitoring capabilities.
- Upgrade outdated programmable logic controllers (PLC) program.
- Replace existing 10-head Automatic Tag Readers (ATR) with 12 head ATRs to improve read rate and system performance and reduce manual encoding requirements.

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Schedule

Authorize Construction Contract	November 2013
Advertise	December 2013
Construction Start	February 2014
Project Completion	December 2014

FINANCIAL IMPLICATIONS

<i>Budget/Authorization Summary</i>	Capital	Expense	Total Project
Original Budget	\$10,969,000	\$0	\$10,969,000
Budget Increase	\$895,825	\$0	\$895,825
Revised Budget	\$11,864,825	\$0	\$11,864,825
Previous Authorizations	\$1,789,000	\$0	\$1,789,000
Current request for authorization	\$10,075,825	\$0	\$10,075,825
Total Authorizations, including this request	\$11,864,825	\$0	\$11,864,825
Remaining budget to be authorized	\$0	\$0	\$0
Total Estimated Project Cost	\$11,864,825	\$0	\$11,864,825

<i>Project Cost Breakdown</i>	This Request	Total Project
Construction	\$7,940,859	\$7,940,859
Construction Management	\$1,149,000	\$1,149,000
Design	\$0	\$1,273,825
Project Management	\$199,966	\$715,141
Permitting	\$64,000	\$64,000
State & Local Taxes (estimated)	\$722,000	\$722,000
Total	\$10,075,825	\$11,864,825

Budget Status and Source of Funds

This project was included in the 2014-2018 capital budget and plan of finance as a business plan prospective project, CIP #C800168. The budget increase results from the net change of adding ATRs and eliminating scope for the CBRA. The source of funds for this project will be the Airport Development Fund and future revenue bonds. The plan of finance assumes a revenue bond issue will be needed in 2014 to fund this and many other projects. A TSA grant is no longer included in the funding plan for this project as the grant will be reprogrammed to the Baggage Optimization project.

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Financial Analysis and Summary

CIP Category	Renewal/Enhancement
Project Type	Security
Risk adjusted discount rate	N/A
Key risk factors	N/A
Project cost for analysis	\$11,864,825
Business Unit (BU)	Terminal
Effect on business performance	NOI after depreciation will increase
IRR/NPV	N/A
CPE Impact	CPE will increase by \$.10 in 2015.

Lifecycle Cost and Savings

The renovation of existing baggage systems in this project will decrease the risk of unforeseen failures of aging equipment that can create operational challenges. The renovations will increase make-up capacity and increase availability (operational up-time as a result of newer components with less risk of failure), but the renovations will not appreciably decrease the number of preventative maintenance activities performed on the systems.

STRATEGIES AND OBJECTIVES

This project promotes the Port's Century Agenda objectives to make Sea-Tac Airport the West Coast "Gateway of Choice" for international travel, meet the region's air transportation needs at Seattle-Tacoma International Airport for the next 25 years, and encourage the cost-effective expansion of domestic and international passenger and cargo service.

TRIPLE BOTTOM LINE

Economic Development

This project will increase the long-term ability of the Airport to serve United Airlines who has moved onto the system, and to serve Delta Airlines' future growth. This project improves the efficiency of the existing systems and adds long-term make-up capacity.

The Office of Social Responsibility (OSR) will provide support in determining small business participation, as described in the small business Resolution No. 3618. The project manager will work with the Office of Social Responsibility (OSR) to determine small business participation opportunities, in accordance with Resolution No. 3618.

Environmental Responsibility

The project demonstrates environmental sustainability by improving existing Port assets to extend their life and better utilizing existing resources.

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Community Benefits

This project will increase the capacity of future airline growth. Long-term vitality of the Airport benefits the regional economy, the local environment, and nearby communities.

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1) – Do nothing. This would not address Delta’s urgency to increase the baggage handling efficiency and make-up capacity to meet their current growth. This is not the recommended alternative.

Alternative 2) – Proceed with the original scope and address all of TSA, Port, and airline concerns. The capital expenditures associated with the TSA’s CBRA would be discarded within the next five years in the Baggage Optimization project. This is not the recommended alternative.

Alternative 3) – Perform the modifications to install and expand C60-C61 make-up devices to increase capacity, upgrade the computers and PLC equipment, and replace the ATRs to increase reliability and performance of the baggage systems. This alternative does not include the TSA’s CBRA work; instead it is to be provided elsewhere in the Airport within the later and separate Baggage Optimization project. The capital expenditures within this scope are expected to serve more than five years, and many components may be reused within the Baggage Optimization project. **This is the recommended alternative.**

ATTACHMENTS TO THIS REQUEST

- None

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

- May 22, 2012 – Authorization for Design
- August 6, 2013 – Checked Baggage Recapitalization/Optimization Project Briefing
- August 20, 2013 – Checked Baggage Recapitalization/Optimization Project Follow-up Briefing
- September 10, 2013 – Checked Baggage Recapitalization/Optimization Project Funding Authorization