

PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA

Item No. 6e

ACTION ITEM

Date of Meeting December 11, 2012

DATE: December 3, 2012

TO: Tay Yoshitani, Chief Executive Officer

FROM: David Soike, Director Aviation Facilities and Capital Program
Wayne Grotheer, Director, Aviation Project Management Group

SUBJECT: Vertical Conveyance Modernization, Aero Phase 1 Project at Seattle Tacoma International Airport (CIP #C800251)

Amount of This Request: \$1,625,000

Source of Funds: Existing Revenue Bonds and Future Revenue Bonds

Est. State and Local Taxes: \$1,021,000

Est. Jobs Created: TBD

Est. Total Project Cost: \$16,913,000

ACTION REQUESTED:

Request Port Commission authorization for the Chief Executive Officer to: (1) increase the scope of the Vertical Conveyance Modernization, Aero Phase I Project at the Seattle-Tacoma International Airport to add two new elevators at the South Satellite and relocate the South Satellite Transportation Security Administration (TSA) Passenger Checkpoint; (2) increase the total project budget by \$5,793,000 from \$11,120,000 to \$16,913,000; (3) prepare design and bid documents, and execute construction contracts for relocation of the TSA Checkpoint and (4) prepare design documents for the two added elevators in an amount not to exceed \$1,625,000 for items (3) and (4).

SYNOPSIS:

Passengers will benefit from this project by using faster, more reliable elevators. A year ago the Commission authorized design and abatement for this Vertical Conveyance Modernization, Aero Phase I project. At that time the project scope included complete elevator modernization for eight existing elevators, and the addition of hydraulic cooling to 11 other elevators. As design got underway during this last year, staff recognized the importance of constructing two additional new elevators at the South Satellite. These additional elevators are necessary to meet future peak loads, provide conveniently located elevators for travelers who cannot use escalators, and to avoid major disruptions to customer service in the heavily used South Satellite. Therefore staff requests a change to the scope and budget to allow for the construction of the two new elevators in this project.

The amount of this request for \$1,625,000 includes design for the additional two elevators and for relocation of a TSA checkpoint to create space for the two new elevators. The detailed scope

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is outlined later in this memo. Staff will return following completion of design to request authorization to proceed to construction for all of the elevators (existing and new). The total cost of these two new additional elevators including construction is \$5,543,000. This additional total cost will be transferred from the Aeronautical Allowance CIP that was included in the 2013-2017 capital budget and plan of finance. Therefore, there will be no net change to the Aviation capital budget.

The design work for the additional two elevators will be accomplished using an existing indefinite delivery, indefinite quantity (IDIQ) contract intended for this type of design work. The contract ordering period expires in May 2014. Some costs of this project will be funded by the issuance of revenue bonds in 2013 or 2014.

BACKGROUND:

The existing elevators included in this project were installed in 1970 and 1971. Due to their age and technology, the controls, drives, and door actuators of these elevators have become uneconomical to maintain. Unavailability of the freight elevators is causing problems such as having to move concessions goods through smaller passenger elevators. Three elevators in this project are currently out of service and cannot be repaired.

Installation of hydraulic oil cooling packages will improve the reliability of the existing hydraulic elevators, thus improving the Airport experience of passengers who are unable to use the stairs or escalators.

In 2011, the Commission authorized the design of modernization of eight existing elevators and hydraulic oil cooling upgrades for 11 existing elevators. In addition, the Commission authorized the design and abatement of regulated materials, or regulated materials management (RMM) at seven elevators. Design for RMM was completed, and a major construction contract for RMM was issued and awarded.

Subsequently, the negative impacts of taking the two operating South Satellite elevators (SSB and SSC) out of service to perform abatement without having the two new elevators operational became readily apparent. In short, taking one elevator out of service leaves only one elevator to provide vertical conveyance for those passengers unable to take the escalator from the Satellite Transit System (STS) Transit Station up to or down from the concourse level. Given the age of these two elevators, the risk of having the one functioning elevator break down would be too great to consider this a viable plan. Therefore, staff decided to seek Commission approval to pursue the design and construction of the two new elevators immediately.

The siting of the two new South Satellite elevators requires the relocation and shifting of the TSA passenger checkpoint on the STS Transit level. Related work includes the demolition of the currently closed restrooms adjacent to the non-sterile bypass corridor, shifting of the current bypass corridor to the former restroom area, and relocation of the TSA checkpoint into the previously vacated bypass corridor. All this demolition and relocation must occur prior to the construction of the two new elevators. See Attachment A.

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Below is a listing of the elevators, including the two new elevators:

Elevator #	Location	Action	Year Installed
SSAF	Freight Elevator at SSAT.	Modernize	1970
SSB	Passenger elevator at SSAT, serves STS, Ramp, FIS	Modernize	1970
SSC	Passenger elevator at SSAT, serves STS, Ramp, FIS & Concourse	Modernize	1970
SSM	Passenger elevator at SSAT, serving STS and Concourse	Construct New	New
SSN	Passenger elevator at SSAT, serving STS and Concourse	Construct New	New
MT-2	Passenger elevator at Main Terminal	Modernize	1970
MT-6	Passenger elevator at Main Terminal	Modernize	1970
MT-7	Passenger elevator at Main Terminal	Modernize	1970
NSCF	Freight Elevator at North Satellite	Modernize – design on hold.	1971
C4	Passenger elevator at end of Concourse C. serving STS Transit Station	Modernize	1970
Eleven Hydraulic Elevators	B, J, K, L, D1, MT-9, MT-20, MT-30, MT-40, MT-5, and MT-8	Add hydraulic oil cooling packages	Various

PROJECT JUSTIFICATION:

The work planned under this project represents a critical component in the improvement of the vertical conveyance system throughout the Airport. This project will provide complete modernization of seven elevators, construction of two new elevators at the South Satellite, and the installation of hydraulic oil cooling packages for 11 hydraulic elevators.

Project Objectives:

- Provide a safe and reliability delivery route for concessionaires at both South and North Satellites.

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- Improve passenger travel at South Satellite and Main Terminal by installing new ADA-compliant fixtures and signage.
- Improve passenger travel at the South Satellite to and from the STS level for those passengers unable to use the existing escalators or stairs.
- Improve overall system reliability and performance by providing efficient microprocessor logic for elevator dispatch and individual motor control.
- Replace aging components to ensure 20+ years of reliable service without the need for additional investments other than normal maintenance costs.
- Provide firefighters' operation to comply with current life/safety code requirements.
- Upgrade existing car and hoist way door equipment to provide reliable operation.
- Upgrade elevator car and corridor pushbuttons and signal fixtures to comply with current requirements of the Americans with Disabilities Act (ADA).
- Upgrade existing building conditions to comply with current national, state and city elevator safety codes and building code requirements.
- Remove regulated materials – asbestos fireproofing to eliminate the cost and litigation risk of ongoing hazmat containment and clean-up protocol requirements in the elevator shafts.
- Work with building officials to accommodate code required upgrades to structural seismic and shaft wall fire rating performance criteria.
- Provide components that reduce overall energy consumption.
- Connect to the existing Port elevator/escalator monitoring system, LiftNet, for quick response in case of failure.
- Improve reliability of elevators to handle current and future passenger loads.

PROJECT SCOPE OF WORK AND SCHEDULE:

Scope of Work:

Develop infrastructure to modernize seven existing elevators, construct two new elevators and retrofit hydraulic oil cooling systems for 11 existing hydraulic elevators. Infrastructure development will, at a minimum, include:

- 1) Site preparation for installation of elevators and oil cooling systems.
- 2) Removal of regulated materials as required.
- 3) Installation of electrical power and control systems.
- 4) Installation of communication system.
- 5) Installation of elevator and oil cooling equipment.
- 6) Installation and revisions to fire sprinkler systems.
- 7) Structural, electrical and mechanical revisions to the base building.
- 8) Relocation of TSA South Satellite passenger screening checkpoint.
- 9) Commissioning of elevator systems.
- 10) Testing of installed elevator systems.
- 11) Closeout of completed project.

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Schedule:

- Authorize Design- original scope October 2011
- Authorize Design – amended scope December 2012
- Complete Design August 2013
- Authorize Construction Contract September 2013
- Advertise Construction October 2013
- Construction Start January 2014
- Construction Complete July 2015

FINANCIAL IMPLICATIONS:

<i>Budget/Authorization Summary:</i>	Capital	Expense	Total Project
Original Budget	\$10,160,000	\$960,000	\$11,120,000
Budget increase (decrease)	\$5,543,000	\$250,000	\$5,793,000
Revised Budget	\$15,703,000	\$1,210,000	\$16,913,000
Previous Authorizations	\$1,645,000	\$1,346,850	\$2,991,850
Current request for authorization	\$1,625,000	\$0	\$1,625,000
Total Authorizations, including this request	\$3,270,000	\$1,346,850	\$4,616,850
Remaining budget to be authorized	\$12,433,000	\$ (136,850)	\$12,296,150
Total Estimated Project Cost	\$15,703,000	\$1,210,000	\$16,913,000

<i>Project Cost Breakdown:</i>	This Request	Total Project
Construction	\$400,000	\$11,401,000
Construction Management	\$100,000	\$1,175,000
Design	\$662,000	\$1,707,000
Project Management and other soft costs	\$375,000	\$1,351,000
Permitting	\$50,000	\$258,000
State & Local Taxes (estimated)	\$38,000	\$1,021,000
Total	\$1,625,000	\$16,913,000

Budget Status and Source of Funds:

This project (CIP #C800251) was included in the 2013-2017 capital budget and plan of finance. The budget increase of \$5,543,000, due to the addition of two new elevators at the South Satellite, has been transferred from the Aeronautical Allowance CIP #C800404, a business plan prospective project, resulting in no net change to the Aviation capital budget. The funding sources will include existing revenue bonds and future revenue bonds. As discussed at the plan of finance briefing on October 23, 2012, the Port plans to issue revenue bonds in 2013 or 2014 to fund a number of projects included in the 2013 – 2017 capital budget.

Expense funds will be used for the RMM major construction contract, and supporting/monitoring work will be performed by Port Construction Services.

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Financial Analysis and Summary:

CIP Category	Renewal/Enhancement
Project Type	Infrastructure Upgrade
Risk adjusted discount rate	N/A
Key risk factors	N/A
Project cost for analysis	\$16,913,000
Business Unit (BU)	Terminal Cost Center
Effect on business performance	NOI after depreciation will increase
IRR/NPV	N/A
CPE Impact	Will increase CPE by \$0.07 in 2016. However, no change to business plan forecast since budget for Aeronautical New Projects will be reduced.

Lifecycle Cost and Savings:

From a financial analysis perspective, the Port will incur increased Operation and Maintenance (O&M) expense-related costs of about \$64,000 per year for the two new elevators. These O&M costs are the expenses related to required staffing, tools and supplies, and the requirement for ongoing maintenance and periodic component renewal, as well as energy use. However, these are normal O&M costs, which are expected to be offset to some degree by lower damage repair costs to the current SSB and SSC elevators once the two new passenger elevators are put into service. The Port will spend less maintenance funds on emergency and/or urgent repairs to existing vertical conveyance equipment.

The primary benefit of this project will be realized by inbound and outbound domestic, as well as outbound international, passengers who are not able to use the escalators. There will be increased efficiencies as the non-sterile bypass corridor will no longer need to be staffed, saving approximately \$160,000 annually in expense costs.

STRATEGIC OBJECTIVES:

This project contributes to accommodating the Port's Century Agenda Goal to meet the region's air transportation needs at Sea-Tac Airport for the next 25 years. The project provides enhanced capacity and flexibility in critical terminal vertical circulation infrastructure, complementing the Terminal Escalator Modernization (44 Escalator) Project that is currently underway.

ENVIRONMENTAL SUSTAINABILITY:

This project demonstrates environmental sustainability by improving existing Port assets, better utilizing existing resources, and reducing energy consumption. The project is in alignment with the Port's goal of improving the long-term sustainability of its facilities and operations. This project also supports and encourages airline environmental initiatives.

BUSINESS PLAN OBJECTIVES:

The anticipated growth in international enplanements will require additional capacity in moving passengers from the STS Transit Station to the Concourse level, especially for those passengers traveling with children in strollers or otherwise unable to utilize the escalators. This supports the

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Aviation Division's strategic goal of operating a world-class international airport by anticipating and meeting the needs of our tenants, passengers, and the region's economy.

ALTERNATIVES CONSIDERED AND THEIR IMPLICATIONS:

Alternative 1: The "Do Nothing" alternative results in continued customer service disruptions and increased maintenance costs. Many parts are no longer available and have to be custom manufactured, where possible. At some point in time, even custom fabricating replacement parts will not be available, and the elevators will have to be modernized using maintenance funds, all at a greater cost than proceeding with a designed and competitively bid modernization project. This is not the recommended alternative.

Alternative 2: Construct the two new elevators at South Satellite (SSM and SSN) in this phase, in addition to modernizing the above listed elevators. Design of elevator NSCF has been put on hold pending scope definition associated with the NorthSTAR work at the North Satellite. **This is the recommended alternative.**

OTHER DOCUMENTS ASSOCIATED WITH THIS REQUEST:

Attachment A – Relocated TSA checkpoint.

Attachment B – Location of all elevators within Aero Phase I.

Attachment C – Exterior view of new elevators at South Satellite.

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS:

October 25, 2011 – The Commission authorized \$2,991,850 for design and RMM design and abatement.