

PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA

Item No. 5e

ACTION ITEM

Date of Meeting November 6, 2012

DATE: October 29, 2012

TO: Tay Yoshitani, Chief Executive Officer

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

SUBJECT: Concourse C Vertical Circulation Project CIP #C800547

Amount of This Request: \$3,155,000

Source of Funds: Airport Development Fund and future revenue bonds

Est. State and Local Taxes: \$1,175,000

Est. Jobs Created: N/A

Est. Total Project Cost: \$19,300,000

ACTION REQUESTED:

Request Commission authorization for the Chief Executive Officer to proceed with the Concourse C Vertical Circulation project, prepare design documents, and use Port crews to support site investigation needed to develop the contract documents. The amount of this request is \$3,155,000, and the total project cost is \$19,300,000.

SYNOPSIS:

This project is a component of the North Sea-Tac Airport Renovation (NorthSTAR) program. The purpose of this project is to install ramps to improve passenger circulation and safety, enhance customer service, and improve operational efficiency at three locations on Concourse C by replacing the existing stairs used for ground enplaning/deplaning with covered, weatherproof, bi-directional sloped walkways and elevators, which will result in a safer path of travel. Completing this project also allows more efficient use of Concourse C by regional carriers and will better support future passenger growth.

New interior corridors and ground level covered walkways to the aircraft will be provided by Alaska Air Group (AAG) to complement the new circulation cores. Sustainable materials and Energy Star-rated elevators will be addressed during design. This project was included in the 2013-2017 capital budget and plan of finance. The work will be done using an existing indefinite delivery, indefinite quantity (IDIQ) design contract that has an end date of December 30, 2015.

BACKGROUND:

The Concourse C Vertical Circulation Project (Project) is one project within the NorthSTAR program. The Project consolidates the AAG regional aircraft operations at Concourse C in

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preparation for the future renovation of the North Satellite (NSAT) that includes reconfiguration and expansion of the number of NSAT aircraft gates consistent with the NSAT project and NorthSTAR program goals. Currently, AAG's regional aircraft are located on Concourses B and C. Concourse C is currently configured for regional aircraft at Gates C2-4 utilizing uncovered exterior stairs and a single hydraulic elevator from the concourse for ground loading/unloading of passengers. Gates C10-12 and C14 are configured for passenger jets utilizing passenger loading bridges. The proposed project will improve the safety of the vertical circulation to the regional aircraft at the existing C2-4 gates and provide for new vertical circulation cores to regional aircraft at Gates C10-12 and C14.

PROJECT JUSTIFICATION:

The current Concourse C regional operation utilizes uncovered exterior stairs with insufficient and inadequate elevator capacity. This configuration creates a safety concern for passengers that carry luggage down the stairways. Due to the need to utilize stairs, use of the elevator is higher than typical, especially for handicapped and elderly passengers. The elevator has reached the end of its useful life and has limited reliability. As a result, the existing arrangements do not promote passenger safety and customer service and do not achieve operational efficiency for the airline. Further, the configuration of the gates and aircraft do not permit further consolidation of regional aircraft operations on Concourse C.

The Project will enhance customer service and safety by providing new exterior weather protected walkways with elevators, improving safer passenger circulation between the aircraft and concourse level and improve airline operational efficiency. The covered 1:20 sloped walkways with elevator(s) will provide a higher level of service with improved safety to passengers than the existing stairs and single unreliable elevator at Gate C2. The slope of walkways is less steep than typical 1:12 ramps, thus encouraging use by passengers and minimizing lines/waiting time at the elevator(s). The walkways will also be low maintenance. The new elevators will be non-hydraulic and energy efficient, providing faster and more reliable service than the current hydraulic elevator, enhancing passenger circulation capacity and improving service for mobility-challenged passengers.

Project Objectives:

- Upgrade the Concourse C facilities for regional operations consistent with the NorthSTAR program projections.
- Provide safer access to the ramp level by providing weather protected sloped walkways and elevators.
- Improve customer service and safety by providing new vertical circulation cores between the concourse and ground level for access to/from regional aircraft.
- Improve efficiency of the regional operations through consolidation of regional aircraft on Concourse C.
- Complete the project in the needed time frame to facilitate the schedule for the other NorthSTAR program improvements.

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PROJECT SCOPE OF WORK AND SCHEDULE:

Scope of Work:

This request includes the following design elements:

- Three sets of 1:20 sloped enclosed exterior walkways from concourse to ground level at Gates C2-4, C10-12, and C14 on Concourse C.
- Machine-room-less elevators at each gate location; 2 at C2-4 and 1 at C10-12 and C14.
- Steel frame structure with concrete slab over metal decking.
- Concrete foundations.
- Glass and metal panel weather enclosures.
- Demolition of existing exterior stairs where applicable, and interior hydraulic elevator C-2 at Gate C2.

Schedule:

Commission Authorization for Design	November 2012
Design Complete	July 2013
Commission Authorization to Bid Work	August 2013
Construction Start	November 2013
Construction Complete	September 2014

FINANCIAL IMPLICATIONS:

<i>Budget/Authorization Summary:</i>	Capital	Expense	Total Project
Original Budget	\$0	\$0	\$0
Previous Authorizations	\$0	\$0	\$0
Current request for authorization	\$3,155,000	\$0	\$3,155,000
Total Authorizations, including this request	\$3,155,000	\$0	\$3,155,000
Remaining budget to be authorized	\$16,145,000	\$0	\$16,145,000
Total Estimated Project Cost	\$19,300,000	\$0	\$19,300,000

<i>Project Cost Breakdown:</i>	This Request	Total Project
Construction	\$0	\$12,400,100
Construction Management & CPO	\$300,000	\$1,800,000
Design	\$1,775,000	\$1,775,000
Project Management, Airport Directs, & Permitting	\$1,050,000	\$1,650,000
RMM	\$30,000	\$49,900
Art Program & Scope Reserve	\$0	\$450,000
State & Local Taxes (estimated)	\$0	\$1,175,000
Total	\$3,155,000	\$19,300,000

Budget Status and Source of Funds:

The Concourse C Vertical Circulation Project CIP #C800547 was included in the 2013 – 2017 capital budget and plan of finance. The funding sources for this project will include the Airport

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Development Fund 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 in the 2013 – 2017 capital budget.

Financial Analysis and Summary:

CIP Category	Terminal & Tenants – Interior Improvements
Project Type	Major Construction
Risk adjusted discount rate	N/A
Key risk factors	N/A
Project cost for analysis	\$19,300,000
Business Unit (BU)	Air Terminal Operations
Effect on business performance	NOI after depreciation will increase
IRR/NPV	
CPE Impact	Will increase by \$0.08 by 2015, but no change to business plan forecast as this project was included.

Lifecycle Cost and Savings:

Through the utilization of 1:20 sloped walkways versus escalators for the primary means of access/egress; the additional yearly escalator maintenance cost of \$100,000 per year will be avoided when considering the long-term maintenance costs associated with escalators as the alternative. The six escalators that would have been added would be an additional \$100,000 per year total for all six at current rates (approximately \$1,500 per escalator per month). Elevators for the mobility-impaired passengers are required.

The new elevators will add a net of \$66,000 to the maintenance cost per year. This is the net result of four traction elevators being added, and one hydraulic elevator being removed. This addition would still be required for either option to accommodate mobility-impaired passengers and carts not suitable for escalators. Most important, if walkways are installed, vertical circulation will not be impeded by escalator accidents, power failure, or maintenance downtime thus providing world-class service.

We will also be removing three passenger loading bridges at C10, C12, and C14 as a result of this project. The resources that would have been utilized for these passenger loading bridges will be re-deployed to support the bridges that will be added to the Port's responsibility as a result of the Airline Realignment program, and the addition of a loading bridge at gate B1.

STRATEGIC OBJECTIVES:

The project also supports the Century Agenda goal of "Meet the region's air transportation needs at Sea-Tac Airport for the next 25 years." The upgrade of the vertical circulation between the concourse and aircraft ramp levels through provision of enclosed gently sloped walkways and elevators will enhance the customer service experience compared to the current access/egress via stairs and limited elevator access. Further, the upgraded vertical circulation will better support future passenger growth for regional air service passengers. In addition, completion of this project will facilitate further improvements at the North Satellite as part of the NorthSTAR program.

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ENVIRONMENTAL SUSTAINABILITY:

This project will explore and identify sustainability goals during the design phase. Sustainability goals to be explored include Energy Star-rated elevator equipment, LED lighting systems, recycling of demolished materials, use of recycled and/or regional materials for the structure, and low-emitting materials and products relative to indoor environmental quality.

BUSINESS PLAN OBJECTIVES:

This project is consistent with the Airport's business plan objective to operate a world-class international airport by anticipating and meeting the needs of our tenants, passengers, and the region's economy. The project upgrades the Concourse C facilities for regional air passengers, improves operational efficiency, and contributes to the air service growth as part of the NorthSTAR program. Further, the project contributes to the business plan objective to minimize long-term total costs of ownership through construction of low-maintenance enclosed sloped walkways rather than higher maintenance escalators.

TRIPLE BOTTOM LINE SUMMARY:

This project benefits the Airport customers and business partners through improved terminal facilities, supports environmental goals through incorporating environmental sustainability elements, and supports small-business participation.

ALTERNATIVES CONSIDERED AND THEIR IMPLICATIONS:

Alternative 1 - Do Nothing: The existing use of stairs and unreliable elevator access at Gate C2 would remain as is. Passenger circulation and customer service would not improve and these gates would be inefficient operationally. Nothing would be done to facilitate the expansion/upgrade of Concourse C in this area. This alternative is not recommended.

Alternative 2 - Vertical Circulation Cores with 1:12 Ramps and Elevator(s): This alternative provides for steeper 1:12 sloped ramps and elevator(s) at each of the three gate locations. The steeper ramps require persons in wheelchairs to be assisted by airline personnel, a lost opportunity to lower airline personnel costs, and decreases the likelihood of mobility-challenged passengers using the ramps. This approach results in increased use of the elevators that increases wait times/lines at the elevator(s) and reduces passenger loading/unloading efficiency. The smaller building footprint of the 1:12 ramp structure does potentially reduce the capital cost by 10% and has a less but undefined potential impact on Alaska's regional aircraft operations. This alternative is not recommended.

Alternative 3 - Vertical Circulation Cores with Escalators and Elevator(s): This alternative includes vertical circulation cores with two escalators at each of the three gate locations instead of walkways, as well as including elevator(s) as in the above alternatives. The escalators provide a smaller building footprint than the walkway option, resulting in a lower capital cost of approximately \$3 million and less impact on aircraft ramp space. The long-term maintenance costs of the escalators over their 25-year life results in a higher lifecycle cost of approximately \$2 million than constructing walkways. Further, the reliability of semi-exterior escalators is typically less than interior units, resulting in more downtime and use of the stairs by passengers. This alternative is not recommended.

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Alternative 4 - Vertical Circulation Cores with 1:20 Walkways and Elevator(s): This alternative provides the best combination of customer service, improved facilities, and additional capacity for future airline growth. The gently-sloped, 1:20 bi-directional walkways and elevator(s) at the three gate locations encourage efficient passenger access and flows between the concourse and ground levels, facilitating aircraft loading and unloading to improve customer service objectives. The slope of the 1:20 walkways provides easy access for passengers, encouraging use of the walkways and minimizing wait times/lines at the elevators. The walkways will be constructed of materials requiring a minimal level of maintenance, which more than offsets the higher capital cost associated with the larger building footprint when compared to escalators. **This is the recommended alternative.**

OTHER DOCUMENTS ASSOCIATED WITH THIS REQUEST:

- Project Site Layout Overview

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS:

- June 26, 2012 – Update briefing on the NorthSTAR program.
- April 4, 2012 – Authorizations for the North Sea-Tac Airport Renovations (NorthSTAR) program for: 1) preliminary project funding; 2) execution of consulting contracts for design/construction support services and project management services; and 3) use of Port crews and consultants to conduct regulated materials management surveys and field support services for preliminary project planning tasks.