



**COMMISSION
AGENDA MEMORANDUM**

Item No. 4e

ACTION ITEM

Date of Meeting November 8, 2016

DATE: October 31, 2016

TO: Ted Fick, Chief Executive Officer

FROM: Jeffrey Brown, Director, Aviation Facilities and Capital Programs
Mike Tasker, Senior Manager, Aviation Facilities and Infrastructure
Wayne Grotheer, Director, Aviation Project Management Group

SUBJECT: South Satellite Structural Improvements (CIP #C800818)

Amount of this request: \$3,450,000

Total estimated project cost: \$3,600,000

ACTION REQUESTED

Request Commission authorization for the Chief Executive Officer to (1) prepare design and construction bid documents for the South Satellite Structural Improvements project at Seattle-Tacoma International Airport, (2) advertise and execute a major works construction contract, and (3) utilize Port crews for an estimated \$3,450,000.

EXECUTIVE SUMMARY

The South Satellite (SSAT) was built in 1970 and expanded in 1984. Recent structural analyses have shown that the existing building design dead load (i.e., weight of the built facilities) and live load (i.e., weight of the people in the building) exceed the capacity of the existing South Satellite (SSAT) structure per current building codes. The purpose of this project is to provide improvements to those portions of the building that are currently overloaded so that the SSAT structural framing will be adequate when loaded to design dead and live load limits. The SSAT is currently heavily utilized with significant passenger queuing and these loads are approaching design load limits. Given the status of the facility Port staff has combined the design and construction authorization requests in order to promptly complete the improvements.

JUSTIFICATION

This project addresses the existing structural overload condition in the SSAT building. This project contributes to the Port's Century Agenda (CA) strategic objective to advance this region as a leading tourism destination and business gateway. The fifteen international gates at the SSAT are a fundamental part of the Port's goals to double the number of international flights and destinations, and meet the region's air transportation needs at Sea-Tac Airport for the next 25 years. Not only will this project contribute to the CA objectives, but will also contribute to the Port's small business and minority and woman-owned business enterprise utilization goals within the scopes of work.

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DETAILS

The project will address existing dead and live load structural overload conditions in the SSAT by completing a number of structural improvements to columns and beams on the concourse, international corridor, and ramp levels of the building. The project will not address lateral load (i.e., wind and seismic) structural requirements. The majority of the work will be completed through a major works construction contract. The portion of work on the concourse level will be completed by Port Construction Services (PCS) since this work needs to be coordinated with the Airport Dining and Retail tenant construction effort. No significant operational impacts are anticipated to occur during the construction of this project since the majority of the work will occur in non-public space and will occur at night. Two significant risks were identified for this project: the existing construction market, and the need to relocate unknown utilities and systems to support the work. The total estimated project cost is estimated at \$3,600,000 and includes additional project contingency to address these risks.

Scope of Work

The scope of work includes beam to column strengthening at 26 locations, column strengthening at 12 locations, and haunch to column strengthening at four locations. A number of the existing columns currently support other systems that will need to be relocated to support the construction effort. These include: Wi-Fi antennas, conveyer controls, tug charging stations, door optical sensors, 400Hz electrical power conduits, mechanical piping, and other electrical and communication conduits. Asbestos abatement will also be required in support of the work.

Schedule

The activities outlined below are for the major works construction contract.

Activity

Construction start	2017 Quarter 4
Construction complete	2018 Quarter 3

Cost Breakdown

	This Request	Total Project
Design	\$628,000	\$778,000
Construction	\$2,822,000	\$2,822,000
Total	\$3,450,000	\$3,600,000

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ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Under this alternative the structural improvements are deferred and included in the upcoming SSAT modernization project. This project includes the modernization and expansion of the SSAT and is anticipated to be complete by 2027.

Cost Implications: \$0, Defers investment

Pros:

- (1) Defers the costs of the structural improvements.
- (2) Eliminates the risk that these improvements would be demolished by the upcoming SSAT modernization project.

Cons:

- (1) The SSAT building would continue to experience additional building degradation and damage (overload condition) until the SSAT modernization project is complete. Under this alternative there is considerable risk that there could be significant structural damage, including failure, given current building usage.
- (2) The SSAT building would be out of compliance with current building code requirements. Remodeling projects that impact building design and live load requirements would be on-hold until the SSAT modernization project is complete.
- (3) Lateral load requirements would not be addressed until the modernization project is complete. The SSAT building would remain at risk for additional damage should wind or seismic events occur.

This is not the recommended alternative.

Alternative 2 – Under this alternative the scope of the structural improvements is expanded to address dead and live load as well as lateral load requirements. This work is anticipated to be complete by 2020.

Cost Implications: \$30 million to \$45 million

Pros:

- (1) With the completion of the work, the SSAT building degradation and damage from continued normal use would be minimized.
- (2) The SSAT building would be in compliance with current building code requirements and could support remodeling efforts.
- (3) Lateral load requirements would be addressed and would minimize the potential for additional damage should wind or seismic events occur.

Cons:

- (1) This alternative requires the investment of \$30-\$45 million in the current five year CIP.
- (2) There is significant risk that these improvements would be demolished by the upcoming SSAT modernization project.

This is not the recommended alternative.

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Alternative 3 – Under this alternative the structural improvements are completed that address existing dead and live load requirements. This work is anticipated to be complete by 2018.

Cost Implications: \$3.6 million

Pros:

- (1) There is limited risk that these improvements would be demolished by the upcoming SSAT modernization project.
- (2) With the completion of the work, the SSAT building degradation and damage from continued normal use would be minimized.
- (3) The SSAT building would be in compliance with current (dead and live load) building code requirements and could support limited remodeling efforts.

Cons:

- (1) This alternative requires the investment of \$3.6 million.
- (2) Lateral load requirements would not be addressed until the SSAT modernization project is complete. The SSAT building would remain at risk for additional damage should wind or seismic events occur.

This is the recommended alternative.

FINANCIAL IMPLICATIONS

<i>Cost Estimate/Authorization Summary</i>	Capital	Expense	Total
COST ESTIMATE			
Original estimate	\$1,000,000	\$0	\$1,000,000
Cost increase	\$1,880,000	\$720,000	\$2,600,000
Revised estimate	\$2,880,000	\$720,000	\$3,600,000
AUTHORIZATION			
Previous authorizations	\$150,000	\$0	\$150,000
Current request for authorization	\$2,730,000	\$720,000	\$3,450,000
Total authorizations, including this request	\$2,880,000	\$720,000	\$3,600,000
Remaining amount to be authorized	\$0	\$0	\$0

Annual Budget Status and Source of Funds

The SSAT Structural Improvements project (CIP #C800818) was included in the 2016-2020 capital budget and plan of finance as a business plan perspective project with a total capital budget of \$1,000,000. The cost increase is predominantly attributed to the addition of the system relocation costs, asbestos abatement expense costs, and construction market risk. Additional capital budget of \$1,880,000 was transferred from the Aeronautical Allowance (CIP #C800753), resulting in no net change to the capital budget. The additional expense budget of \$720,000 is for asbestos abatement costs. This will be accounted for as an environmental

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remediation liability. Both the capital and expense portions of this project will be funded by the Airport Development Fund.

Financial Analysis and Summary

Project cost for analysis	\$3,600,000
Business Unit (BU)	Terminal Building
Effect on business performance (NOI after depreciation)	NOI after depreciation will increase
IRR/NPV (if relevant)	N/A
CPE Impact	\$0.02 in 2018 (RMM) and \$0.01 in 2019

Future Revenues and Expenses (Total cost of ownership)

No future revenues or expenses are anticipated as a result of the completion of this project.

ADDITIONAL BACKGROUND

Airport Dining and Retail is conducting competitive solicitations for units in the SSAT. This includes unit SS-7 an upscale bar with food, unit SS-2A a gourmet coffee unit, units SS-2B and SS-2C quick service restaurants, food court seating, and optional food services in the SSAT. The structural improvements on the concourse level that are the subject of this request are located within three of the dining units (SS-2A, SS-2B, and SS-2C). This work is planned to be completed by PCS and coordinated with the planned tenant build-out of these areas. These units are anticipated to be open by May 2018.

ATTACHMENTS TO THIS REQUEST

None

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

None