



**COMMISSION
AGENDA MEMORANDUM**

Item No. 8g

ACTION ITEM

Date of Meeting June 27, 2023

DATE : June 16, 2023

TO: Stephen P. Metruck, Executive Director

FROM: Keri Stephens, Director, Aviation Facilities and Capital Programs
Eileen Francisco, Director Aviation Project Management

SUBJECT: S. 188th St. Tunnel Improvements (C801157)

Amount of this request: \$29,600,000

Total estimated project cost: \$34,500,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to take all steps necessary as identified in section 3.2.3 Resolution 3810 (Delegation of Authority) and include a Project Labor Agreement to complete the S 188th St. Tunnel Improvement project at Seattle-Tacoma International Airport (SEA). This request is in the amount of \$29,600,000 for a total authorization of \$34,500,000.

EXECUTIVE SUMMARY

The S 188th St. tunnel structure is located beneath Runway 34R and was originally constructed in 1960. Based upon an existing easement the Port owns the S. 188th St. tunnel structure and the City of SeaTac owns the S 188th St. roadway. This project has assessed the tunnel for current code requirements. Based on the findings of that assessment, almost all the existing systems are either deficient or non-functional. This project will address the structural condition, lighting, and other systems to ensure the tunnel is brought back to a satisfactory level of service. The budget increase is due to code required changes for ventilation. Additionally, the project will be utilizing management reserve for the budget increase, therefore, majority-in-interest approval from the Airlines will not be required.

JUSTIFICATION

This project supports the Century Agenda strategic goal and objective to advance this region as a leading tourism destination and business gateway by meeting the region's air transportation needs by delivering vital infrastructure in a sustainable and cost-effective manner.

The life safety systems in the tunnel are original to its construction. These systems include ventilation, back-up power, and fire detection, most of which are currently missing or

Meeting Date: June 27, 2023

inoperable. Tunnel lighting, the sole exception, was partially replaced in the 1990s, however many of the light fixtures have failed and replacement parts are no longer available. This project will replace or restore these systems to reduce life safety risk, improve lighting, driver and pedestrian safety and improve energy efficiency.

Diversity in Contracting

The project team has been working with the Diversity in Contracting Department and set 13% aspirational goals for women and minority business enterprises (WMBE) participation in the construction contract. The design contract includes a 15% WMBE participation requirement and is currently trending above the goal.

DETAILS

The tunnel is periodically inspected by Port of Seattle engineering in accordance with the Washington State Department of Transportation's Bridge and Tunnel inspections. The inspection performed in 2018 daylighted concerns over the age and condition of multiple tunnel systems. This and other elements initiated the process to first address the lighting system.

SEA later decided to expand the scope to further assess all the existing life safety systems. SEA engaged a design consultant to assess the condition of the lighting and life safety systems. The consultant produced a list of recommendations and those recommended for immediate action formed the basis of the scope of work.

Due to limits of the previous delegation of authority the condition assessment did not include a Computation Fluid Dynamics (CFD) model of the tunnel. During design a CFD model was performed, and it was discovered that the existing ventilation would need to be entirely redesigned to meet today's ventilation requirements. The improvements will require the closure of the existing tunnel vents which will impact airfield operations. The project team is conducting Safety Risk Management sessions with airfield operations, the FAA, and the airlines which will determine how best to manage the impacts. This change, plus higher than anticipated cost escalation, led to the increase in the project budget from \$24,500,000 to \$34,500,000.

Additional improvements for the tunnel such as smoke control, fire suppression, egress pathway improvements, airfield grading and drainage, hydrant stand pipes, seismic retrofitting, and structural improvements to support additional airfield loading are planned under the Sustainable Airport Master Plan Near term projects.

Meeting Date: June 27, 2023

Scope of Work

Scope of work for this project includes structural (crack sealing/spall repair), civil (signage), electrical (lighting, power, emergency power), mechanical (ventilation, fire protection), communication and special system (fire detection/alarm, carbon monoxide monitoring, security, egress/traffic management) improvements.

Schedule

Construction start	2023 Quarter 4
In-use date	2024 Quarter 4

Cost Breakdown

	This Request	Total Project
Design	\$3,050,000	\$7,950,000
Construction	\$26,550,000	\$26,550,000
Total	\$29,600,000	\$34,500,000

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Defer scope to later projects or no action.

Cost Implications: \$2,710,000

Pros:

- (1) No additional costs incurred.

Cons:

- (1) Ignores critical life safety system deficiencies.
- (2) Cost incurred to date would need to be expensed.

This is not the recommended alternative.

Alternative 2 – Replace existing lighting and backup power generation in the tunnel.

Cost Implications: \$8,200,000

Pros:

- (1) Addresses lighting deficiency.
- (2) Lower capital investment by the Port.

Cons:

- (1) Ignores critical life safety system deficiencies.

This is not the recommended alternative.

Meeting Date: June 27, 2023

Alternative 3 – Bring lighting and life safety systems up to a satisfactory level of service.

Cost Implications: \$34,500,000

Pros:

- (1) Addresses critical life safety system deficiencies.
- (2) Supports the 1960 easement agreement in that the Port would maintain the tunnel and associated fire life safety systems.
- (3) Improves lighting, air quality and general conditions inside the tunnel.
- (4) Better protects the public, tunnel, and airfield from fire damage.

Cons:

- (1) Larger capital investment by the Port.
- (2) Future projects may impact improvements.

This is the recommended alternative.

FINANCIAL IMPLICATIONS

<i>Cost Estimate/Authorization Summary</i>	Capital	Expense	Total
COST ESTIMATE			
Original estimate	\$6,200,000	\$0	\$6,200,000
Previous changes – net	\$24,500,000	\$0	\$24,500,000
Current change	\$9,975,000	\$25,000	\$10,000,000
Revised estimate	\$34,475,000	\$25,000	\$34,500,000
AUTHORIZATION			
Previous authorizations	\$4,900,000	\$0	\$4,900,000
Current request for authorization	\$29,575,000	\$25,000	\$29,600,000
Total authorizations, including this request	\$34,475,000	\$25,000	\$34,500,000
Remaining amount to be authorized	\$0	\$0	\$0

Annual Budget Status and Source of Funds

This project (CIP #C801157) was included in the 2023-2027 capital budget and plan of finance with a budget of \$24,500,000. A budget increase of \$9,975,000 was transferred from the Aeronautical Allowance¹ (CIP #C800753) resulting in zero net change to the Aviation capital budget. The funding source will be the Airport Development Fund (ADF) and revenue bonds. This project received Majority-in-Interest (MII) approval from the airlines in April 2021. With the budget increase, Port management elected to utilize the MII Management Reserve²

¹ The Aeronautical Allowance is included in the Capital Improvement Plan to ensure funding capacity for unspecified projects, cost increases for existing projects, new initiatives, and unforeseen needs. This ensures funding capacity for unanticipated spending within the dollar amount of the Allowance CIP.

² The Signatory Lease and Operating Agreement (SLOA) requires airline’s approval for New Projects meeting the Majority-In-Interest (MII) threshold. The Port may increase the budgets of New Projects up to an aggregate additional \$210,000 million dollars in Management Reserve without further MII review.

Meeting Date: June 27, 2023

provision within the Signatory Lease Operating Agreement (SLOA) without requiring additional MII approval from the airlines.

Financial Analysis and Summary

Project cost for analysis	\$34,500,000
Business Unit (BU)	Airfield Movement Area
Effect on business performance (NOI after depreciation)	NOI after depreciation will increase due to inclusion of capital (and operating) costs in airline rate base
IRR/NPV (if relevant)	N/A
CPE Impact	\$.11 in 2025

Future Revenues and Expenses (Total cost of ownership)

This project will have an impact on Aviation Maintenance annual operating and maintenance (O&M) costs. Aviation Maintenance is looking to outsource the maintenance of all systems being installed in the Tunnel.

ATTACHMENTS TO THIS REQUEST

- (1) Presentation Slides

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

April 27, 2021 – The Commission authorized design for \$4,610,000.

January 24, 2023 – The Commission authorized a design services contract amendment for \$1,200,000.