**COMMISSION**
**AGENDA MEMORANDUM** **Item No.** 8e

**ACTION ITEM** **Date of Meeting** April 27, 2021

**DATE:** April 19, 2021

**TO:** Stephen P. Metruck, Executive Director

**FROM:** Eileen Francisco, Acting Director, AV Facilities & Capital Programs
Wayne Grotheer, Director Aviation Project Management

**SUBJECT:** **S. 188th St. Tunnel Lighting (C801157)**

**Amount of this request:** $4,610,000
**Total estimated project cost:** $24,500,000

## ACTION REQUESTED

Request commission authorization for the Executive Director to (1) complete design, (2) execute a professional services agreement for design services, and (3) enter into a reimbursable agreement with the Federal Aviation Administration for the S. 188th St. Tunnel Lighting project at Seattle-Tacoma International Airport (SEA). The amount being requested under this authorization is $4,610,000 for a total authorization of $4,900,000 and a total estimated project cost of $24,500,000.

## EXECUTIVE SUMMARY

The S. 188th St. tunnel structure is located beneath Runway 34R. It was originally constructed in 1960. Based upon an existing easement, SEA owns the 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, many of the existing systems are deficient. This project will address the structure, lighting, and other systems to ensure the tunnel is brought to a satisfactory level of service.

## JUSTIFICATION

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 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 is working with the Diversity in Contracting Department to determine participation opportunities and will set appropriate aspirational goals for women and minority business enterprises (WMBE) participation in the design and construction contracts.

**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.

The City of SeaTac (City) will also be performing a pavement overlay of S. 188th St., including the section of pavement located within the tunnel, during the summer of 2021. SEA and City staffs are currently coordinating on that scope of work to ensure the objectives of both agencies can be achieved.

One of the projects proposed in the Sustainable Airport Master Plan Near-Term Projects environmental review effort is the extension of Taxiway A/B. This proposed project would include the extension of the tunnel structure to the east as the Taxiway is extended to the south over S. 188th St. Currently, the following scope has been identified to be included with the proposed extension of Taxiway A/B, and is not included in this project: smoke control, fire suppression, egress pathway improvements, airfield grading and drainage, hydrant stand pipes, seismic retrofitting, and structural improvements to support additional airfield loading. Both project teams will continue to coordinate as each project progresses.

The project team identified a Federal Aviation Administration fiber line that may or may not be impacted from construction. Authorization to enter a reimbursable agreement is a precautionary measure in case it is determined that such an agreement would be necessary for design reviews or construction impacts.

***Scope of Work***

Scope of work for this project includes structural (crack sealing/spall repair), civil (sidewalk, 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***

| | |
|---|---|
| Design start | 2021 Quarter 3 |
| Commission construction authorization | 2022 Quarter 4 |
| Construction start | 2023 Quarter 2 |
| In-use date | 2024 Quarter 2 |

| ***Cost Breakdown*** | This Request | Total Project |
|---|---|---|
| Design | $4,900,000 | $4,900,000 |
| Construction | $0 | $19,600,000 |
| Total | $4,900,000 | $24,500,000 |

**ALTERNATIVES AND IMPLICATIONS CONSIDERED**

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

Cost Implications: $0

Pros:

(1) No cost incurred immediately.

Cons:

(1) Ignores critical life safety system deficiencies putting the public at risk.

This is not the recommended alternative.

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

Cost Implications: $6,200,000

Pros:

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

Cons:

(1) Not all critical life safety deficiencies are addressed.
(2) Power system improvements may not be sufficient to support other life safety systems when remedied.

This is not the recommended alternative.

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

Cost Implications: $24,500,000

Pros:

(1) Addresses critical life safety system deficiencies as quickly as possible.

Cons:

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

***This is the recommended alternative.***

## FINANCIAL IMPLICATIONS

***Cost Estimate/Authorization Summary***

| | Capital | Expense | Total |
|---|---|---|---|
| **COST ESTIMATE** | | | |
| Original estimate | $6,200,000 | $0 | $6,200,000 |
| Current change | $18,300,000 | $0 | $18,300,000 |
| Revised estimate | $24,500,000 | $0 | $24,500,000 |
| **AUTHORIZATION** | | | |
| Previous authorizations | $290,000 | $0 | $290,000 |
| Current request for authorization | $4,610,000 | $0 | $4,610,000 |
| Total authorizations, including this request | $4,900,000 | $0 | $4,900,000 |
| Remaining amount to be authorized | $19,600,000 | $0 | $19,600,000 |

### *Annual Budget Status and Source of Funds*

This project, CIP C801157, was included in the 2021-2025 capital budget and plan of finance with a budget of $6,200,000. A budget increase of $18,300,000 was transferred from the Aeronautical Reserve 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 has been submitted to the airlines for the Majority-in-Interest ballot due on April 26, 2021.

### *Financial Analysis and Summary*

| | |
|---|---|
| Project cost for analysis | $24,500,000 |
| 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 | $.08 in 2024 |

### *Future Revenues and Expenses (Total cost of ownership)*

According to the existing easement agreements the City of SeaTac is responsible for the on-going operating and maintenance cost of the roadway, sidewalks and pedestrian barrier. The Port is responsible for the tunnel structure and all the systems within the tunnel. There will be an increase in the operation, preventative maintenance and unplanned maintenance costs for

the tunnel. Most of which will be due to reestablishing systems that were original to the construction of the tunnel and are no longer functioning. The remaining consideration would be for additional components used to control and monitor equipment as advances in technology has added this capability.

**ATTACHMENTS TO THIS REQUEST**

(1) Presentation slides

**PREVIOUS COMMISSION ACTIONS OR BRIEFINGS**

None