

This document is a text-only recovery of the original PDF file. Any graphics that were in the original PDF are not included here.
If you need the original document, please contact the Commission Clerk at the Port of Seattle.

Item No. 10_supp
Meeting Date: July 23, 2024
Satellite Transit System Renewal &
Replacement
Seattle-Tacoma International
Airport

Historical Context - Existing STS

- Satellite Transit System (STS) consists of two loops (North and South Loop) and the shuttle connector.
- STS helps passengers travel to their gates quickly in 2-5 mins and access N and S Concourses.
- STS carried approx. 28 Million Passengers in 2023.

2

STS Program Goal/ Purpose

- Timely and cost-effective renewal and replacement of STS is required to continue operation and maintain efficient airport.
- The Preferred Solution will accommodate near and long-term demand considering:
 1. Replace end of life vehicles and rehabilitate aging STS tunnels.
 2. Minimize impact to existing STS infrastructure and operations during construction.
 3. Enabling project constructing a new pedestrian connector between N and D Concourse

3

History of STS

- 1973: SEA's STS was first implemented with 9 vehicles and was one of the first STS in the US.
- 1982: 12 additional vehicles were added, totaling to 21 vehicles.
- 2003: STS was modernized with new 21 vehicles and radio-based train control system.
- 2020-2027: Replace train control system as it is approaching end of useful life (in construction).
- 2030-2035: STS vehicles will reach the end of useful life (reaching design mileage of 1 million miles) and must be replaced.

4

Existing STS Conditions and Challenges

End of Life - STS Vehicles Aging STS Tunnel Future Growth
Vehicle service life will end between Major rehabilitation/ replacement North and South Loops cannot serve 2030-2035 of STS tunnels is needed to extend the forecasted passenger demand useful life past 2030 without modification
Existing vehicles are discontinued
Standard STS vehicles on the market cannot fit in the existing tunnels
Existing STS Loops

5

PDD Purpose

- Project Definition Document (PDD) is required as a bridging document before project design.

Project Scope

- PDD will be used as a starting point to refine the project concept to approx. 15% design level of the Preferred Solution.
- PDD will address sustainability goals.
- The total duration of PDD is 112 weeks.

6

PDD to address existing STS Conditions and Challenges

- Evaluate alternative structural rehabilitation concepts
- Review previous study and concept
- Develop preferred analyze existing conditions concept to 15% Design for Future Growth
- Perform additional site surveys STS tunnel and North
- Conduct Risk Assessment Pedestrian Connector

End of Life of

Aging Tunnel • Develop different STS vehicle concepts for STS system replacement

7

STS Replacement Program Timeline
2024 2030 2036

PDD Pre- Design/Vehicle Construction Project Completion
design/Engineering Procurement

8

Requested Action

Request Commission authorization for the Executive Director:

1. Advertise and execute contracts for technical consulting, project definition services, and project management support
2. Prepare pre-design and bridging documents
3. Utilize Port crews, in support of the STS Renewal & Replacement project (CIP #801377) at the Seattle-Tacoma International Airport (SEA).

The amount of this request is \$9,000,000.

The total program cost will be determined by the PDD, and the project team will be back at Commission prior to additional authorization.

9