



**COMMISSION
AGENDA MEMORANDUM**

Item No. 6b

ACTION ITEM

Date of Meeting November 27, 2018

DATE: October 22, 2018

TO: Stephen P. Metruck, Executive Director

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

SUBJECT: 2020 Airfield Pavement Replacement Projects (CIP # C800483)

Amount of this request: \$ 1,250,000

Total estimated project cost: \$13,100,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to authorize design and preparation of construction documents for the replacement of distressed pavements and related utilities for the 2020 Airfield Pavement portion of the 2016-2020 Airfield Pavement Replacement Program at the Seattle-Tacoma International Airport in the amount of \$1,250,000, and approve the use of a Project Labor Agreement (PLA) for this contract.

EXECUTIVE SUMMARY

This project is part of an ongoing Pavement Management and Maintenance Program (PMMP) as required by the Federal Aviation Administration (FAA), and a recognized best practice to provide a safe and operable pavement system. The focus of this program is to replace distressed and damaged pavement on the airfield. This project will take advantage of these replacements by also replacing in-pavement utilities and covers when it makes sense, as well as removing abandoned utilities within the general work area. The project includes emergent distressed areas on the airfield.

Replacing damaged pavement on the airfield supports the long-term strategy of the Port's Century Agenda objective to "Meet the region's air transportation needs at Seattle-Tacoma International Airport for the next 25 years." The PMMP maintains the integrity of airfield pavements and enables efficient airport operations. Deferring damaged pavement replacement could potentially increase risk to airfield operations, damage from ensuing Foreign Object Debris (FOD), increase the likelihood of critical or emergency work, and drive costs higher in the future. This project is included in the 2018 – 2022 capital budget and plan of finance. This work

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is included in the airport’s 5-year Airport Capital Improvement Plan (ACIP) submitted to the FAA for Federal Funding under the Airport Improvement Program (AIP).

JUSTIFICATION

The 2020 Airfield Pavement Program is a continuation of the programmatic approach of replacing aged and distressed pavement as part of a multi-year program. Many sections of airfield pavement have exceeded their 20-year service life and have become cracked and damaged.

This project will interface with other projects and airline operations so that the scope and schedule of this project will not be in conflict. Replacing distressed pavements on the airfield ensures safe operations at Seattle-Tacoma International Airport.

One of the Century Agenda goals is to use the Port’s influence as an institution to promote small business growth and workforce development. This project may include federal assisted fund which would require the utilization of the Disadvantage Business Enterprise (DBE) requirements. The Port will utilize its Diversity in Contracting program to support minority and women business enterprise (M/WBE) in the event federal funding is not applied.

DETAILS

Scope of Work

- (1) Replace aged and distressed concrete pavement:
 - a. at the south end of Taxiway B adjacent to Taxiway S
 - b. at Gate C17
 - c. along the Service Road at Cargo 3
 - d. emergent damaged individual concrete panels as identified
- (2) Replace sections of damage and failing asphalt:
 - a. at the ARFF Station adjacent to the North Satellite Taxilane
 - b. Cargo 2 east GSE storage area
- (3) Remove abandoned utilities, add or upgrade in-pavement utilities located within the distressed pavements work area when it makes sense.

Schedule

Design start	2018 Quarter 4
Commission construction authorization	2020 Quarter 1
Construction start	2020 Quarter 2
In-use date	2020 Quarter 4

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Cost Breakdown	This Request	Total Project
Design	\$1,250,000	\$1,250,000
Construction	0	\$11,850,000
Total	\$1,250,000	\$13,100,000

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 - Delay the project beyond 2020

Cost Implications: \$13,700,000

The estimate is based on the assumption of delaying this project to 2021. If the project is delayed beyond 2021, the cost estimate would be further increased to reflect annual escalation.

Pros:

- (1) No construction cost for 2020.
- (2) No construction impacts to aircraft operations or airport operations at affected areas by this project in 2020.

Cons:

- (1) Continued use of the pavement could result in increased FOD, creating additional safety hazards for aircraft ingestion.
- (2) This project would likely lose the opportunity to be combined with other construction projects if it's delayed beyond 2020. This would result in contracting inefficiencies and more impact to airfield operations.

This is not the recommended alternative.

Alternative 2 – Only replace the individual damaged concrete panels on taxiways, runways and apron.

Cost Implications: \$2,000,000

Pros:

- (1) Reduced total construction cost for 2020.
- (2) The replacement of damaged concrete panels help with ensuring safe aircraft operations

Cons:

- (1) Continued use of the aged and distressed asphalt pavement would result in increased FOD and potentially increase risk to airfield operations.
- (2) Deferring asphalt replacement would likely drive costs higher in the future.

This is not the recommended alternative.

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Alternative 3 – Replace distressed pavements and supporting projects on the airfield during the 2020 construction season.

Cost Implications: \$13,100,000

Pros:

- (1) Programmatic replacement of distressed pavements provide stable structural support to aircraft and airport operations.
- (2) This project could be combined with other construction projects during the 2020 construction season to increase efficiencies and minimize impacts to airport operations.
- (3) Support the Port’s Century Agenda.

Cons:

- (1) Earlier capital spending than the other alternatives.

This is the recommended alternative.

FINANCIAL IMPLICATIONS of 2020 Airfield Pavement Replacement Projects C800483

<i>Cost Estimate/Authorization Summary</i>	Capital	Expense	Total
COST ESTIMATE			
Original estimate	\$32,300,000	\$0	\$32,500,000
Budget Transfers – to Taxiways	(\$22,000,000)	\$0	(\$22,000,000)
Budget Transfers from 2020-2024 Pavement Replacement Program CIP	\$15,200,000	\$0	\$15,200,000
Revised Current Budget	\$25,500,000	\$0	\$25,500,000
AUTHORIZATION			
Previous authorizations	\$2,875,000	\$0	\$2,875,000
Current request for authorization	\$1,250,000	\$0	\$1,250,000
Total authorizations, including this request	\$4,125,000	\$0	\$4,125,000
Remaining amount to be authorized	\$21,375,000	\$0	\$21,375,000

Annual Budget Status and Source of Funds

The Airfield Pavement Program (C800483) is included in the 2018-2022 capital budget and plan of finance with a budget of \$31,026,000. The budget of \$22 million was moved to the 2018 Taxiway Improvement project C800914. The budget transfer of \$15.2M was moved from C800930 Airfield Pavement Replacement 2021-2024 to accommodate the 2020 airfield pavement improvements estimated to be \$13,100,000. The funding sources for this project will be the Airport Development Fund (ADF), future revenue bonds and Airport Improvement Program (AIP) grant.

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Financial Analysis and Summary

Project cost for analysis	\$25,500,000
Business Unit (BU)	Airfield Movement Area
Effect on business performance (NOI after depreciation)	NOI after depreciation will increase
IRR/NPV (if relevant)	N/A
CPE Impact	\$.07 in 2021

Future Revenues and Expenses (Total cost of ownership)

Annual Operating and Maintenance costs are not anticipated to change appreciably. The estimated life expectancy for this project is 20 years for concrete pavement. Replacing pavement will result in maintenance cost avoidance.

ATTACHMENTS TO THIS REQUEST

- (1) Presentation slides

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

October 9, 2018 – The Commission authorized design funds for construction documents for replacement of distressed pavement and related utilities in the 2019 portion of the 2016-2020 Airfield Pavement Program.

November 14, 2017 – The Commission authorized advertisement and execution of a single construction contract which included the 2018 Airfield Pavement Replacement as part of the 2018 Taxiway Improvement Projects and approved non-use of PLA.

May 9, 2017 – The Commission authorized design funds for construction documents for replacement of distressed pavement and joint sealant replacement in the 2018 portion of the 2016-2020 Airfield Pavement Program, and approved use of PLA.

October 25, 2016 – The Commission authorized advertisement and execution of contract for retrofits of 400 Hz In-ground power units and reconstruction of existing pavement at Cargo 2.

February 24, 2015 – The Commission authorized design funds for construction documents, for replacement of distressed pavement and joint seal in the 2016 portion of the 2016-2020 Pavement Program.