



**COMMISSION
AGENDA MEMORANDUM**

Item No. 6f

ACTION ITEM

Date of Meeting March 12, 2019

DATE: March 4, 2019
TO: Stephen P. Metruck, Executive Director
FROM: Michael Ehl, Director, Aviation Operations
Wayne Grotheer, Director, Aviation Project Management
SUBJECT: 2019 Airfield Pavement Replacement Project (CIP #C800483).

Amount of this request: \$10,440,000
Total estimated project cost: \$11,800,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to advertise and execute a major works construction contract for the replacement of distressed pavements and related utilities for the 2019 portion of the 2016-2020 Airfield Pavement Replacement Program at the Seattle-Tacoma International Airport. This authorization is for \$10,440,000 with a total project cost of \$11,800,000.

EXECUTIVE SUMMARY

This project is part of an ongoing Pavement Management and Maintenance Program (PMMP) as required by the Federal Aviation Administration (FAA). 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 utility infrastructure when it makes sense, as well as removing abandoned utilities within the general work area. The project includes emergent distressed pavement areas on the airfield as well as areas surrounding the aircraft gates.

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. If deferred, the future repair cost would be greater due to annual escalation cost and Foreign Object Debris (FOD) generated from the failing pavements will continue to pose a risk to the aircraft engine and expose the Port to liability issues. This project is included in the 2019 – 2023 capital budget and plan of finance.

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JUSTIFICATION

The 2019 Airfield Pavement Project is a continuation of the programmatic approach of replacing aging 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.

The damaged pavements in these areas are no longer structurally adequate to handle the constant traffic weight of large vehicles and ground support equipment (GSE). There have been issues with FOD being tracked onto the active aircraft movement areas. Replacing distressed pavements on the airfield ensures safe operations at Seattle-Tacoma International Airport.

Most of the 2019 airfield work will not impact airline and airport operational areas and does not have completion date deadlines.

Diversity in Contracting

Through the Diversity in Contracting (DC) program, women and minority-owned business enterprise (WMBE) aspirational goals will be included in this procurement. Specific WMBE outreach efforts will be conducted through the Port of Seattle's Small Business Generator (PortGen) program, which includes targeted announcements to those interested WMBEs within the categories of the project's scope of work. The WMBE goal for this project is 5%.

DETAILS

Scope of Work

This project will:

1. Replace failing asphalt pavement located south of the Cargo 4 Maintenance Facility.
2. Replace failing asphalt pavement located at the Concourse D Apron near Gate D11.
3. Replace failing asphalt pavement located along the western edge of the South Satellite Apron.
4. Replace failing asphalt pavement in the fire lane located east of Hardstand 7 and behind the Alaska Airlines Hangar.
5. Upgrade a damaged electrical handhole utility located on the service road leading to the Fuel Farm.
6. Replace individual panels of damaged concrete at various locations on Taxilanes and Apron areas as determined by current inspections.
7. Replace a failed electrical lighting Surface Movement Guidance Control System conduit and related electrical handhole along Taxiway A.

This project will interface with other projects and airline operations. Continual coordination with Airport Operations, airlines, and related tenants is done to ensure the least possible operational impact during construction. The construction impacts to Taxiway A will be minimal as that work will mostly be performed during night shift.

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Schedule

Construction start	2019 Quarter 3
In-use date	2019 Quarter 4

Cost Breakdown	This Request	Total Project
Design	\$0	\$1,360,000
Construction	\$10,440,000	\$10,440,000
Total	\$10,440,000	\$11,800,000

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Delay the project beyond 2019

Cost Implications: \$12,064,000

The estimate is based on the assumption of delaying this project to 2020. If the project is delayed beyond 2020, the cost estimate would be further increased to reflect annual escalation.

Pros:

- (1) No construction cost for 2019.
- (2) No construction impacts to aircraft operations or airport operations at affected areas by this project in 2019.

Cons:

- (1) Continued use of the pavement could result in increased FOD, creating additional safety hazards for aircraft ingestion.

This is not the recommended alternative.

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

Cost Implications: \$3,800,000

Pros:

- (1) Reduced total construction cost for 2019.
- (2) The replacement of damaged concrete panels helps with ensuring safe aircraft operations.
- (3) Meets FAA Pavement Management Maintenance Program requirement.

Cons:

- (1) Continued use of the aging 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 2019 construction season.

Cost Implications: \$11,800,000

Pros:

- (1) Programmatic replacement of distressed pavements provides stable structural support to aircraft and airport operations.
- (2) Continue to support the Port’s Century Agenda.
- (3) SMGCS route on Taxiway A will be repaired to provide for safe low-visibility operations.

Cons:

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

This is the recommended alternative.

FINANCIAL IMPLICATIONS of 2019 Airfield Pavement Project C800483

<i>Cost Estimate/Authorization Summary</i>	Capital	Expense	Total
COST ESTIMATE			
Revised Budget	\$10,300,000	\$0	\$10,300,000
Budget Transfer from 2020-2024 Pavement Replacement Program CIP	\$15,200,000		\$15,200,000
Budget Increase	\$300,000		\$300,000
Revised Current Budget	\$25,800,000	\$0	\$25,800,000
AUTHORIZATION			
Previous authorizations	\$4,155,000		\$4,155,000
Current request for authorization (2019 Construction)	\$10,440,000		\$10,440,000
Total authorizations, including this request	\$14,595,000	\$0	\$14,595,000
Remaining amount to be authorized	\$11,205,000	\$0	\$11,205,000

Annual Budget Status and Source of Funds

The Airfield Pavement Program (C800483) is included in the 2019-2023 capital budget and plan of finance with a budget of \$10,300,000. The budget of \$15,200,000 was moved from C800930 Airfield Pavement Replacement 2021-2024 to accommodate the 2020 airfield pavement improvements. The budget increase of \$300,000 was transferred from the Aeronautical Allowance C800753 to cover the additional cost of Taxiway A Conduit Repair. The funding sources for this project will be the Airport Development Fund (ADF), future revenue bonds, and Airport Improvement Program (AIP) grant.

Financial Analysis and Summary

Project cost for analysis	\$25,800,000
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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	\$0.07 in 2020

Future Revenues and Expenses (Total cost of ownership)

ATTACHMENTS TO THIS REQUEST

Diagram of 2019 Airfield Pavement Replacement Project

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

- October 22, 2018 – The Commission authorized design funds for construction documents, for replacement of distressed pavement and related utilities in the 2020 portion of the 2016-2020 Airfield Pavement Program.
- 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 in the 2017 portion of the 2016-2020 Pavement Program.
- 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.