



**COMMISSION
AGENDA MEMORANDUM**

Item No. 4d

ACTION ITEM

Date of Meeting February 28, 2017

DATE: February 17, 2017

TO: Dave Soike, Interim Chief Executive Officer

FROM: Jeffrey Brown, Director Aviation Facilities and Capital Programs
Wayne Grotheer, Director, Aviation Project Management Group

SUBJECT: Passenger Loading Bridge Renewal/Replacement (CIP #C800793)

Amount of this request: \$2,200,000

Total estimated project cost: \$10,000,000

ACTION REQUESTED

Request a single Commission authorization for the Chief Executive Officer to (1) proceed with design for the replacement of the passenger loading bridge (PLB) at Gate B10 and the PLB and fixed walkway at Gate S11; (2) purchase two new PLBs and a fixed walkway; (3) use Port crews and small works contracts. The amount of this request is \$2,200,000.

EXECUTIVE SUMMARY

Reliable, well operating passenger loading bridges are critical to airline and airport operations. Port staff has created a prioritized list of PLBs whose age and condition indicate a need for replacement or refurbishment. Nine PLB's (and associated fixed walkways) considered to be at highest risk for failure are scheduled for replacement or under this project: Gates B10, C9, C11, C14, C15, C16, C18, D11, & S11.

To minimize impacts to airlines and airport operations, these nine PLB's will be replaced over the next four years. Staff will request future Commission authorization for the next phases of this work scheduled for 2018 through 2020. These PLB's are part of the extended-year sourcing that is one of the procurement excellence initiatives.

JUSTIFICATION

The PLB's at Sea-Tac have high utilization compared to airports with comparable annual enplanements. In 2015, Sea-Tac processed approximately 217,000 passengers per gate, the highest of all peer airports and well above the national average of approximately 153,000. Any unplanned downtime due to PLB or fixed walkway failure impacts airlines and customer service. PLBs have a service life of approximately 25 years before major refurbishment or replacement is required. Many of the parts for 25+ year old PLB's are no longer available, as a result, repair time is extended while parts are fabricated, remanufactured or used parts are located from

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other PLB's owners. Unplanned downtime caused by failure of obsolete parts can extend for several weeks, seriously disrupting airline operations.

DETAILS

AVPMG has worked in conjunction with AV Operations, AV Planning, AV Facilities and Infrastructure and AV Maintenance to create a prioritized list of Passenger Loading Bridges (PLBs) whose age and condition are cause for replacement or refurbishment.

PLB's at B10, C9, C15, D11, & S11 are 30+ years old.

- Scheduled for replacement in 2017 (this authorization)
 1. S11 Bridge and Walkway -- 1983 (A3 60/119)
 2. B10 Bridge -- 1987 (A3 58/110)

- Scheduled for replacement in 2018 (future authorization)
 1. C15 Bridge -- 1970's (A3 60/119)
 2. C9 Bridge -- 1980's (A3 44/78)
 3. D11 Bridge -- 1984 (?)

PLBs at C11, C14, C16, & C18 are 25+ years old.

- Scheduled for replacement in 2019 (future authorization)
 1. C11 Bridge – 1992 (A2 57/84)
 2. C14 Bridge – 1990 (AD2 61/91 185L)

- Scheduled for replacement in 2020 (future authorization)
 1. C16 Bridge – 1992 (A2 59/78)
 2. C18 Bridge _ 1992 (A3 58/110 125R)

Replacement of the PLBs is preferred as it will take the gates out of service for only 2 weeks while a complete refurbishment could leave the gate inoperative for 6-12 weeks.

Scope of Work

- 1)** Design services for this scope of work will be provided under existing indefinite delivery, indefinite quantity (IDIQ) design services contracts.
- 2)** Purchase and installation of new PLBs, associated fixed walkway and related components at Gates B10 and S11 along with necessary architectural, electrical, data and mechanical infrastructure upgrades to meet new PLB standards and current code requirements.
- 3)** Port Construction Services (PCS) will perform work associated with preparing the foundations upgrade or replacement and provide construction management services for the PLB installations at both gates.

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- 4) The new bridges will be connected to the Port’s facility monitoring system so any malfunction that shuts the bridge down will be promptly reported to Maintenance for faster response.

Schedule

Installation of B10 and S11 is scheduled for the fall of 2017.

Activity

Design start	2017 Quarter 1
Construction start	2017 Quarter 3
In-use date	2017 Quarter 4

Per the terms of the airline signatory lease and operating agreement (SLOA), the airlines will have an opportunity to object to this project through a majority-in-interest (MII) vote. The MII ballot will be submitted to the airlines in early March.

Cost Breakdown

	This Request	Total Project
Design	\$400,000	\$1,500,000
Construction	1,900,000	\$8,500,000
Total	\$2,300,000	\$10,000,000

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Refurbish the gates in place.

Cost Implications: Total project for nine PLBs \$7,500,000 (\$1,670,000 for PLBs at B10 & S11)

Pros:

- (1) Lowest first cost

Cons:

- (1) Increased downtime and impact to airport operations (6-12 week downtime)
- (2) Reduced PLB service life (15 year service life)
- (3) Highest total cost of ownership
- (4) Does not provide for new PLB models to adjust for evolving airline fleet mix

This is not the recommended alternative

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Alternative 2 – Replace the existing PLB’s with new equipment.

Cost Implications: Total project for nine PLBs \$ 10,000,000 (\$2,300,000 for PLBs at B10 & S11)

Pros:

- (1) Minimizes gate downtime and impact to airport operations (2-3 week downtime)
- (2) Greatest PLB service life (25 years)
- (3) Lowest total cost of ownership
- (4) Allows for adjustment to PLB models to account for evolving fleet mix.

Cons:

- (1) Highest first cost

This is the recommended alternative.

FINANCIAL IMPLICATIONS

<i>Cost Estimate/Authorization Summary</i>	Capital	Expense	Total
COST ESTIMATE			
Original estimate	\$10,000,000	\$0	\$10,000,000
AUTHORIZATION			
Previous authorizations (preliminary funds)	\$100,000	0	\$100,000
Current request for authorization	\$2,200,000	0	\$2,200,000
Total authorizations, including this request	\$2,300,000	0	\$2,300,000
Remaining amount to be authorized	\$7,700,000	\$0	\$7,700,000

Annual Budget Status and Source of Funds

The Passenger Loading Bridges Project CIP#C800793 is included in the 2017-2021 capital budget and plan of finance with a budget of \$10,000,000. The funding sources will include the Airport Development Fund and future revenue bonds.

Financial Analysis and Summary

Project cost for analysis	\$10,000,000
Business Unit (BU)	Passenger Loading Bridges
Effect on business performance (NOI after depreciation)	NOI after depreciation will increase
IRR/NPV (if relevant)	N/A
CPE Impact	\$.04 in 2021

ATTACHMENTS TO THIS REQUEST

None

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

None