

PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA

Item No. 6g
Date of Meeting May 4, 2010

DATE: April 27, 2010

TO: Tay Yoshitani, Chief Executive Officer

FROM: Michael Ehl, Director Aviation Operations
Peter Garlock, Chief Information Officer

SUBJECT: Flight Information Management System (FIMS) Upgrade – CIP# C-101117

REQUESTED AMOUNT: \$5,400,000 **SOURCE OF FUNDS:** Airport Development Fund

SALES TAX: \$170,000 **TOTAL PROJECT COST:** \$7,000,000

ACTION REQUESTED:

Request authorization for the Chief Executive Officer to approve all work and contracts including executing and amending any and all necessary contracts and service directives to purchase and implement IT hardware and software; plus casework design services for the Flight Information Management System (FIMS) Upgrade Project in an amount not to exceed \$5,400,000 toward an ultimate project cost of \$7,000,000. This project is being authorized using the procedures outlined in Section 5 of Resolution No. 3605.

SYNOPSIS:

FIMS provides real-time airline flight information throughout the airport to passengers and tenants. More importantly, FIMS collects and stores data that is used to monitor and optimize a wide range of airport operations. Given the critical nature of this system, it is imperative that it be kept up to date with the latest technology and functionality.

Sea-Tac's current system, which was designed over six years ago, has become increasingly unreliable, and major system failures are occurring far too often. The existing system's design does not provide adequate functionality to meet today's needs considering the changing nature and complexity of airline operations.

This project will deliver a highly advanced and flexible replacement FIMS that will provide many new features and capabilities such as visual paging, emergency notifications, and a much broader range of information functionality. It will also provide much improved access to business intelligence information that is used to optimize airport operations and allocate airport resources such as common use gates and ticket counters. The project will replace outdated and costly to maintain rear projection displays with flat screen technology throughout the airport.

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The FIMS project is a major communication system and this authorization includes the design, competitive procurement, and implementation of flight data collection systems technology, as well the design of casework upgrades which will accommodate the latest information display technology. The casework construction elements will be requested in a second subsequent authorization following design completion. Construction may be performed by a combination of Port Construction Services, maintenance crews, small works contractors and/or through a major works contract.

This project is being authorized through the two-step process authorized in Section 5: Non-public Works. It is classified as such because it falls into the definition of an ICT project as determined by 5.1 of that section: "ICT projects may include (but would not be limited to) the major upgrade or replacement of an information or communication hardware or software system." Because of this, according to Section 5, "Commission authorization will generally be required only for review of project feasibility and authorization of funds for the acquisition of all necessary goods, materials, and services necessary to implement and complete the project." This does not remove, however, the necessity for the above-mentioned authorization for casework construction elements.

This project was included in the 2010-2014 capital budget and plan of finance as a business plan prospective project within CIP# C-101117, FIMS Phase II.

BACKGROUND:

In March 1997, Seattle-Tacoma International Airport initiated a comprehensive strategic plan to design and implement information systems technology comparable to that being deployed at progressive airports throughout North America. The FIMS system was approved in 2004 to provide centralized real-time flight information to travelers and to replace numerous proprietary airline flight information systems and displays. While FIMS has been operational, many necessary improvements were identified. Those important project requirements and improvements include:

- The capability to provide additional information throughout the airport such as Visual Paging, Emergency Notification, and Way-finding. The current system cannot support these services. Consequently, Sea-Tac does not fully meet requirements of the Americans with Disabilities Act (ADA) for airports to provide visual paging to the deaf and hard of hearing.
- Because the several hundred information displays deployed in 2004 were selected several years prior to actual installation, they are now long past their design life. Maintenance costs for these displays are increasing significantly because of the cost of failing projector bulbs used to illuminate the displays, plus the labor costs required to replace them. The weight of the displays and the casing configuration requires at least two people for service calls. Current flat screen display technology is more energy efficient, requires no maintenance, and has a high mean time to failure rate.

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- The current FIMS system runs on a very old, unsupported software operating system prone to failure and increased security risks. In the past year, there have been several lengthy airport-wide flight information display outages which negatively affected airlines and passengers.
- Several critical features not available in the current FIMS system will be added to the new system, such as flight leg information, system status monitoring, historical data archiving, and related management reports needed for planning and invoicing.

PROJECT DESCRIPTION AND SCOPE OF WORK:

Project Statement

Competitively procure, develop, and install a replacement Flight Information Management System that provides a flexible display framework for flight information, visual paging, and emergency notification features; upgraded monitors and infrastructure hardware; and a redesigned Resource Management System.

Project Objectives

- Replace the current Flight Information Display System (FIDS) with a flexible display architecture that will meet current and future requirements for information dissemination.
- Deliver a Visual Paging solution that meets ADA requirements. By utilizing common displays, the cost of stand-alone custom signage is avoided.
- Upgrade displays with devices that require little or no maintenance and have a high mean time to failure.
- Provide real-time automated system monitoring to immediately notify staff of any system problems.
- Implement a Resource Management System that meets the operational needs of the Airport and its airline customers.

Scope of Work

- Select a new Flight Information System through RFP process.
- Provide multi-functional, flexible signage system that will initially include flight, gate, and baggage information, emergency notifications and visual paging but will also allow the airport to easily add advertising, way-finding, or other messaging requirements.
- Competitively procure new monitors
- Design casework upgrades
- Replace all systems infrastructure hardware with ICT standard virtualized servers.
- Implement software development and systems test platforms to provide support and future enhancements.

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- Utilize the new International Air Transport Association standards for airline data feeds.

The casework construction elements will be requested in a subsequent authorization following design completion.

STRATEGIC OBJECTIVES:

This project supports the following Port strategies:

- *Ensure Airport and Seaport vitality:* The reduction of maintenance and operations costs positively impacts the cost to the airlines. There are also potential revenue opportunities for the Port by placing advertising on flight information displays.

FINANCIAL IMPLICATIONS:

Budget/Authorization Summary:

Original Budget	\$7,000,000
Budget Transfers	\$0
Revised Budget	\$7,000,000
Previous Authorizations	\$0
Current request for authorization	\$5,400,000
Total Authorizations, including this request	\$5,400,000
Remaining budget to be authorized	\$1,600,000

Project Cost Breakdown:

Port of Seattle Labor and Contractors	\$1,800,000
Vendor Implementation	\$680,000
Software Licenses & Hardware	\$1,800,000
Casework Design	\$150,000
Contingency ~15%	\$800,000
Tax 9.5%	\$170,000
Total	\$5,400,000

Source of Funds:

This project was included in the 2010-2014 capital budget and plan of finance as a business plan prospective project within CIP# C-101117, FIMS Phase II. The source of funds is 100% Airport Development Fund.

Financial Analysis Summary:

CIP Category	Renewal/Enhancement
Project Type	Technology
Risk adjusted Discount rate	7.0%
Key risk factors	NA
Project cost for analysis	\$7,000,000

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Business Unit (BU)	Aviation Operations
Effect on business performance	NA
5 Year NPV	\$110,000
CPE Impact	.12 in 2012 no change from forecast as this project was included in business plan forecast

PROJECT SCHEDULE:

Commission Approval	May 2010
Casework Design Complete	December 2010
Flight Information System Procurement Complete	February 2011
Flight Information Display Software Complete	June 2011
Project Completion	December 2012

ALTERNATIVES CONSIDERED/RECOMMENDED ACTION:

1. *Replace FIMS:* Replace current FIMS system with an integrated system of flexible display software, state of the art display technology, and an Airport Resource Management system selected through a formal Request for Proposal process. This solution will provide a positive return on investment within five years of project completion, compared with the alternative solution. In addition, the new display architecture will provide flexibility in meeting current and future signage needs with minimal cost. **This is the recommended solution.**
2. *Upgrade Current System:* Upgrade current FIMS Software and Hardware. This alternative will not provide additional functionality or allow for internal development of future enhancements. This is not the recommended solution.
3. *Do Nothing.* This alternative risks system failure and disruption to customer activity. This is not the recommended alternative.

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS:

No previous Commission actions or briefings for CIP# C-101117, FIMS Phase II.

ATTACHMENTS:

None