

PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA
STAFF BRIEFING

Item No.	<u>7a</u>
Date of Meeting	<u>August 6, 2013</u>

DATE: July 30, 2013
TO: Tay Yoshitani, Chief Executive Officer
FROM: Dave Soike, Director, Aviation Facilities and Capital Program
Wendy Reiter, Director, Aviation Security and Emergency Preparedness
SUBJECT: Checked Baggage Recapitalization/Optimization Project Briefing

SYNOPSIS

The Transportation Security Administration (TSA) has near-term challenges, and the Seattle Tacoma International Airport (Airport) has both near-term and long-term challenges, related to handling checked baggage.

The TSA's challenge is imminent and financially driven because its costs are too high at airports across the country. The TSA financial challenges at our Airport are driven by three factors: (1) the Explosive Detection System (EDS) machines, which were installed after September 11, 2001, are very expensive to maintain and are approaching the end of their design life so their reliability will soon decrease; (2) the TSA inspection facilities are spread in six areas across the Airport, which does not allow efficient staffing; and (3) TSA employee-injury and safe-working-condition issues have arisen due to existing work areas that are confined and non-air-conditioned. These financially driven problems are exacerbated by the continuing federal budget pressures.

The Airport's near-term challenge is that a few of the existing separate baggage handling systems, that are literally built immediately around the aging EDS machines, are reaching their operational capacity maximums due to year-over-year passenger growth or because of relocating large peak baggage loads onto certain systems. While this is important, the Airport's long-term challenge is far more consequential. The long-term challenge is that the existing separate baggage systems cannot be grown to effectively handle the loads that Airport will have to handle in the future. The Airport handles 33 million annual passengers (MAP), but it must continue to operate in an efficient manner all the way to the Airport's maximum capacity of 60 MAP. Twice the baggage load is a huge stretch for separate systems, some of which are now struggling under current peak loads.

A way has been found to solve both the TSA and the Airport's problems. TSA and Airport staff have been working together based on the January 22, 2013, Commission authorization and the January 8, 2013, Commission briefing, to identify options and analyze them. The best option uses the available TSA funding to solve their near-term problems by aggregating their inspection facilities from six to one. This option also makes significant progress toward building a single baggage processing facility that benefits the TSA short-term needs and allows the Airport to make great headway toward

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reconfiguring its baggage system to effectively allow it to expand efficiently all the way to 60 MAP in the future.

It was fortunate that TSA brought the Airport an opportunity to first study, and then to design, baggage improvements that meet both the Airport's needs and TSA needs. The TSA will pay the major share of both the study and the final design needs.

When the Commission authorized proceeding with design to the 30-percent level last January, it also allowed the Airport to take the opportunity to take advantage of the first federal offer for funding. The resulting design is nearing completion, and has created a unique second opportunity for the Airport in that TSA is willing to invest significant federal monies (approximately one-third of the total cost) toward a Seattle baggage project.

This second and very large opportunity for federal funding has recently been offered to the Port. The offer is between \$50 million and \$100 million of federal cost sharing. To receive it, the Port must agree to fund its share (the remaining two-thirds currently estimated between \$150 million and \$200 million) over many years. Further, the Airport must accept the federal funding by September 10, 2013, to meet pending federal fiscal year budget deadlines. This approximate one-third offer of funding by the federal government for the entire project is unique in that worsening federal fiscal pressures are expected to significantly minimize chances of such funding in the future. Federal budget pressures next year may both further limit the amount of federal participation and limit the continuing nature of the annual proposed TSA share.

This briefing and associated PowerPoint presentation will provide an update on various elements of the proposed project including:

- History of the baggage system.
- Age, function, and location of the various baggage systems including current operating challenges.
- Existing limited capacity of the systems versus capacity necessary for the future.
- Alternatives considered.
- Discussion of similar challenges and work at other airports across the county.
- Recapitalization and optimization scenarios and cost estimate ranges and upcoming timelines for federal cost sharing.
- Recommendation and next steps.

Airport staff will return to the Commission on September 10, 2013, to seek the Commission's authorization for an agreement with TSA covering cooperative baggage improvements and budget for continued design.

BACKGROUND

The Airport system of baggage conveyors is one of the most complex systems in the Airport. It gets high use and is aging. Portions of the system were rebuilt in rapid fashion immediately after the events of September 11, 2001. Installing these new

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baggage systems was expensive, took a number of years to complete and did not always proceed as planned due to changes in TSA requirements and the evolution of technology.

As it is now built, the Airport system is not a single system, but rather many separate systems that bags must transfer between. Separate systems were the best way to rapidly increase security after September 11, and those separate systems were designed to include a nominal amount of passenger growth. In addition, as specific airline needs emerged over the ensuing years, or as airlines were relocated, the separate systems have been modified to meet the carriers' specific operating needs. Although various baggage projects have occurred to meet operating needs over the years, the systems continue to have limited capacity to meet both near- and long-term growth needs of the Airport overall.

The Airport is faced with two problems: the existing separate systems have major subsystems, such as the controls, that are aging and must be replaced, and each system has no capacity or adjacent room to be expanded to meet growing passenger demands. Passenger growth is expected to increase from 33 million annual passengers to 60 million annual passengers over approximately the next two to three decades. The Airport is faced with developing a long-term strategy and associated set of projects to continue to deliver bags for both traveler and airline customers. This is a major and near-term challenge for the Airport due to high capital costs, complexity to keep operations on-going during construction, and major space constraints in order to double the system's capacity to meet future growth.

Although the challenge is large, the Airport is fortunate that the TSA is simultaneously considering making investments in airports across the country. The TSA is pressured by federal budget constraints and sequestration such that they are willing to invest to the degree that their investments lower their own operating costs. The TSA at Seattle-Tacoma International Airport has higher operating costs because of multiple systems in six locations versus what they would have with a consolidated baggage system. Therefore the Airport staff members are programming the Airport's long-term baggage system growth plan while keeping the TSA needs and potential funding in mind. Airport and TSA staff has been working cooperatively to determine the best long-term plan to benefit both parties.

Chain of Custody: Checked baggage at airports across the United States is screened for explosives and other dangerous materials before it is loaded onto aircraft. The typical chain of custody flow of a checked bag is as follows: it begins with the traveler (who bring bags to the airport); it transitions to the airlines (at ticketing counters), transfers to Airport (as it moves along conveyors); then moves into TSA's control (which owns, operates, and maintains the screening machines); then back to the Airport (further conveyor travel); and finally to the airlines (or their contractors who load bags onto the aircraft). The TSA-owned machines are the central security function within the entire complex transportation system carrying bags from ticketing to aircraft.

Future Growth of Airport: Parts of the Airport baggage system controls and software are aging and certain systems are experiencing problems at peak loads, such as mistracked

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bags. The Airport has a clear need to both reinvest in the baggage system to meet current demands, and also to meet medium-and-longer-term demands. Medium-term demands include being able to handle 50 percent more travelers in a decade and thus grow to 45 million annual passengers (MAP). The work of the 30% design has focused on preparing designs and associated cost estimates to reach the 45 MAP horizon. Longer-term demands include being able to handle nearly 100 percent growth, thus growing to 60 million annual passengers which is the expected top-end limit of the Airport based on both airfield and landside capabilities. The design has also focused building in easy growth capability into the plan. Thus inherent in the 30% design is the ability to reach 60 MAP with minimal changes to the TSA security scanning and search areas. Published Federal Aviation Administration growth rates indicate the Airport will reach its top-end limit (maximum operating capacity) sometime between two to three decades from now.

Earlier Port Authorization: On January 22, 2013, the Commission authorized \$5,000,000 for staff to begin and complete design to a 30-percent level for a project to either install new federally owned baggage scanning machines into the Airport's baggage system ("recapitalization" in federal terms), or reconfigure the system to receive new federally owned machines ("optimization" in federal terms). The 30-percent design for the TSA screening system is complete, while the 30-percent Airport design is ongoing.

Independent Consultant: The Port retained a baggage consultant, Vic Thompson Company, which has done an independent cost estimate to validate the cost estimate of the designer (BNP Associates) retained earlier by the Airport. In addition, these two estimates will be used to validate two separate estimates being prepared by the TSA's consultants. Other than preparing the estimate, Vic Thompson Company is not currently associated with the Airport's project. We have asked them to provide an independent presentation to share their thoughts on recapitalization versus optimization with the Port Commission on August 6, 2013. Its PowerPoint Presentation is also attached.

ATTACHMENTS TO THIS BRIEFING

- Airport PowerPoint Presentation associated with this memo dated July 30, 2013.
- Vic Thompson PowerPoint Presentation dated August 6, 2013.
- Airport PowerPoint Presentation associated with the January 8, 2013, Commission authorization request. This PowerPoint is provided as background and for context of earlier decisions for newer Commissioners what have more recently joined the Commission.

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

- January 22, 2013 – The Commission authorized \$5,000,000 for staff to begin design, to take design to 30%, and to enter into an agreement to allow reimbursement from the federal government to the Port for eligible elements of the 30% design work.
- January 8, 2013 – Baggage Systems Briefing.

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- August 14, 2012 – Baggage system recapitalization/optimization was noted in the 2013 Business Plan and Capital Briefing as a significant capital project not included in 2013-17 capital program.
- August 7, 2012 – Baggage system recapitalization/optimization was referenced as one of the drivers for the need to develop an Airport Sustainability Master Plan.
- June 26, 2012 – The Airport’s baggage systems were discussed during a briefing on Terminal Development Challenges.
- May 10, 2012 – TSA’s interest in a national recapitalization/optimization plan for all baggage screening operations was referenced in a design authorization request for the C60 – C61 Baggage Handling System Modifications Project.