

**PORT OF SEATTLE**  
**MEMORANDUM**

**COMMISSION AGENDA**  
**STAFF BRIEFING**

**Item No.** 7b  
**Date of Meeting** April 12, 2016

**DATE:** March 25, 2016  
**TO:** Ted Fick, Chief Executive Officer  
**FROM:** Elizabeth Leavitt, Director, Aviation Planning and Environmental  
**SUBJECT:** Sustainable Airport Master Plan (SAMP) Briefing

**SYNOPSIS**

This briefing provides an update on SAMP planning. Airport master plans begin with a wide range of alternative concepts, and generally conclude with one or two alternatives which are carried into environmental review along with a “no action” alternative. At this time, staff is presenting results of on-going analysis and not making a recommendation to Commission on a final preferred alternative(s); however, staff is seeking to narrow alternatives to include key elements that we have determined are required to meet all program needs and century agenda goals. As the SAMP team moves forward with additional analysis to solidify a recommendation for the Commission and prepare for environmental review, we will continue to work with internal and external stakeholders to flesh out options in other functional areas, such as airport support facilities and transportation related issues.

**SUMMARY OF SAMP PROGRESS**

The January SAMP planning update to Commission included preliminary conclusions from a second round of airside simulation modeling; an evaluation of one and two terminal options; rationale for locating major plan elements independent of one versus two terminals; and a strategy for mid-term landside improvements and operational measures to relieve roadway congestion.

Analysis to date has determined that three key plan elements are needed to meet all program requirements and century agenda goals: 1) additional aircraft accessible land in the South Aviation Support Area (SASA) for cargo facilities and/or aircraft maintenance, 2) hardstand south and north existing and future gates for holding aircraft during peak operating hours and parking aircraft overnight, and 3) accommodation of widebody aircraft on Concourse B to accommodate growth in international activity. All of these elements are included in Concept 4, which was presented to Commission in January and is also included in this briefing.

Airside simulation modeling determined that the airside will reach critical delay between 2029 and 2034 and that aprons for holding aircraft (aircraft hold positions) are essential to keeping aircraft moving and reducing delay. The SAMP team has since met with the representatives from the FAA and airlines to gather input on how best to simulate the use gates and aircraft hold positions in another round of airfield modeling. Through additional modeling with a refined rules base for use of gates and aircraft hold positions, the team will test variations on

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Concept 4 and gain a better understanding of the need for aircraft hold positions south and north of existing and future gates.

Over the coming months, the SAMP team will conduct additional airside and landside simulation modeling to refine requirements and alternatives. Additional work that will help shape alternatives and a future capital program includes: project phasing, cost estimates, locating support facilities and more detailed planning to set the geometry of gate expansion to the north, a second terminal and supporting roadways.

## **BACKGROUND**

In September 2012, the Port Commission approved scope and budget of \$6,000,000 for the creation of a Sustainable Airport Master Plan (SAMP). Since October of 2014, staff has briefed the Commission four times on SAMP planning progress, including: forecast results and challenges associated with planning to accommodate forecast activity; and preliminary options for terminal, landside and cargo development.

The master plan process provides an opportunity to take a comprehensive assessment of facilities capacity and forecasted demand over 5-, 10-, and 20-year timeframes. Airport master plans are typically prepared approximately every 10 years. The last formal master plan for Sea-Tac was developed in the mid-1990s and was focused primarily on the third runway.

The primary objective of an airport master plan is to provide a roadmap for the phased redevelopment/expansion of facilities, maintaining a balance of capacity in all key functional areas. Overall airport system capacity is limited by functional areas with the least capacity. Terminal and landside facilities are generally balanced to the fixed capacity of the airfield. Through alternatives development and evaluation, the SAMP will culminate in a capital improvement program and plan of finance that will deliver cost-effective projects to remove capacity pinch points, increase efficiency, integrate sustainability considerations, and provide a high level of service to airport customers.

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### **ATTACHMENTS TO THIS BRIEFING**

- PowerPoint presentation
- SAMP Public Outreach report

### **PREVIOUS COMMISSION ACTIONS OR BRIEFINGS**

- January 26, 2016 - Commission Briefing: "Sustainable Airport Master Plan (SAMP) Planning Update"
- September 8, 2015 - Commission Briefing: "Sustainable Airport Master Plan (SAMP) Planning Update"
- April 28, 2015 - Commission Briefing: "Sustainable Airport Master Plan (SAMP) Planning Update"
- March 24, 2015 - Commission Briefing: "Briefing on Sea-Tac Cargo as part of the Sustainable Airport Master Plan (SAMP)"
- January 27, 2015 - Commission Briefing: "Sustainable Airport Master Plan (SAMP) Planning Update"
- October 7, 2014 - Commission Briefing: "Sustainable Airport Master Plan (SAMP) Forecast and Facilities Challenges"
- February 28, 2014 - Commission authorization to amend the existing Sustainable Airport Master Plan (SAMP) service agreement with Leigh Fisher Associates for IAF-related planning tasks for an increase of \$3,650,000 and a new total contract amount of \$9,650,000
- September 5, 2012 - Commission authorization for SAMP development and to advertise and execute a contract for consulting services for the SAMP, with a total estimated value of \$6 million
- August 14, 2012 - Commission deferred consideration of a request to approve funding for the Sustainable Airport Master Plan (SAMP)
- June 27, 2012 - Commission Briefing: "Terminal Development Challenges"