



**COMMISSION
AGENDA MEMORANDUM**

Item No. 9b

BRIEFING ITEM

Date of Meeting October 23, 2018

DATE: October 16, 2018

TO: Stephen P. Metruck, Executive Director

FROM: Jeffrey Brown, Director AV Facilities and Capital Program
Wendy Reiter, Director, Aviation Security
Wayne Grotheer, Director, Aviation Project Management

SUBJECT: Baggage Optimization Project Update (CIP #C800612)

EXECUTIVE SUMMARY

The Baggage Optimization project replaces six individual baggage screening systems with a centralized system that optimizes operation of the checked baggage system at Seattle-Tacoma International Airport. The purpose of this project is to optimize the baggage system to achieve the maximum outbound baggage capacity within the current airport footprint. The project increases screening capacity for greater baggage volumes, increases flexibility to allow bags to be checked in from any ticket counter and be conveyed to any makeup device, meets the established minimum-connect-time goal, and increases energy efficiency. Additional benefits include increased reliability, redundancy, and security. Meeting travelers' baggage needs will significantly contribute to increased customer service, and address growing passenger demands of the region. The project is currently scoped to accommodate 60 million annual passengers (MAP) and will be implemented through three phases of construction.

The project is being bid and constructed in three separate phases. Phase 1 is currently on budget but has recently experienced schedule setbacks of an estimated three to six months. The biggest risks to the project are schedule delays and baggage handling market conditions during Phase 2 and 3 bids.

PROJECT UPDATE

Phase One

Notice to Proceed was issued to the Phase 1 prime contractor, PCL Construction Services Inc., on May 26, 2017. Construction is currently underway, including the following activities and accomplishments:

- (1) New Central Terminal ramp to the basement has been completed.
- (2) Maintenance breakroom in Concourse B has been completed.
- (3) Conveyor delivery and installation is continuous.
- (4) Construction on utilities and infrastructure continues.

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(5) Conveyor Factory Acceptance Test has been conducted but will need to be retested.

Upcoming critical elements include conveyor deliveries and installation, computer programming, and purchase of network equipment for the baggage handling system.

On-going stakeholder coordination continues to be essential, particularly with other projects, Aviation Maintenance, and airport tenants.

The contractor has been maintaining two work shifts, Monday – Friday. As of the latest September pay application, 103,726 work hours have been reported and work complete is estimated to be 60 percent.

Contracting requirements (status as of Oct 2018)

<u>Program</u>	<u>Requirement/Goal</u>	<u>To-Date</u>
Small Business Enterprise (SBE)	15% of total contract	16.10%
Small Contractors & Suppliers (SCS)	5% of SBE	11.90%
Apprenticeship	15% of total hours	20.27%

Phase Two

The Port of Seattle and the Design Consultant continue to develop bid documents for Phase 2. The Consultant has completed separating the Phase 2 design from the comprehensive 100% design package; held working construction sequencing meetings and has developed construction documents for the previously approved scope increase to bring the new baggage system to a capacity of 60 MAP.

Bi-weekly coordination meetings are underway with the Consultant, internal Port departments, and Airlines. Critical upcoming activities include review of the 100% design that was received in mid-August, obtaining the airport building permit, and preparing bid documents. We expect to request Commission authorization for Phase 2 construction in Q1 2019 and to advertise in Q2 2019, pending an anticipated completion of Phase 1 in Q4 of 2019.

SCHEDULE AND BUDGET

Schedule

Based on the most current contractor schedule, Phase 1 is 77 days behind schedule (based on baseline schedule set in April 2015). Holding this schedule would place Phase 1 Substantial Completion in 2019 Quarter 4. However, the contractor has fallen behind on conveyor submittals, fabrication, and has been further delayed by a failed Factory Acceptance Test (FAT). The contractor has continued to miss key start dates and mitigates by shortening schedule durations to show minimized schedule delay. The Port Project Team feels that the project is currently six-months behind schedule due to the contractor delays.

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To address the performance and schedule concerns, the Port Baggage Team has implemented the following:

- Three additional design review meetings were held to help the Contractor understand the project requirements.
- Port staff was sent to Denver to meet with both the Contractor and Designer in order to speed up critical submittal reviews.
- Multiple letters have been issued documenting the delay caused by the Contractor.
- The Project Team now meets on-site with the Contractor’s Executives quarterly to discuss ways to mitigate the schedule delays. Actions resulting from these meetings:
 - BHS Installation Foreman were swapped with other projects to help speed production,
 - Night shift hours were adjusted to provide for more Port oversight,
 - The Contractor added a Field Engineer to assist with field layout,
 - BHS Subcontractor field staff were increased to speed installation and improve quality, and
 - Three additional BHS installation crew were added (total of five) to mitigate submittal and fabrication delays.
- To avoid further delay resulting from another failed FAT, the Team required the Contractor to provide a recovery schedule showing weekly milestones leading up to the re-test. Beginning September 19th, a Port representative along with a member of the Design Consulting Firm will travel weekly to the BHS Contractor headquarters in Michigan to verify successful completion of the designated milestones. All required tests will be successfully demonstrated prior to the official FAT retest, greatly minimizing the chance for another failure.
- Laydown area to store uninstalled conveyor has become a point of contention. The Port has secured warehouse space to free the area of stored conveyor and speed installation at the site.

Phase 2 design efforts started on October 31, 2017, and 100-percent design documents were received mid-August 2018. Phase 2 advertisement in Q1 2019 was contingent upon on-time Phase 1 completion and will now be delayed for three to six months to avoid overlapping of Phase 1 and 2 work. The South Satellite (SSAT) portion of Phase 2 is dependent on the International Arrivals Facility (IAF) project being operational in order to demolish the baggage system in the SSAT tunnel and begin construction. The overall project is now scheduled for Phase 3 (the final phase) to obtain Substantial Completion in 2025 Quarter 2 (based upon a Contractor delay of 77 days to Phase 1).

Phase 1 Substantial Completion (based on current Contractor schedule showing 77-day delay)	2019 Quarter 4
Phase 2 Substantial Completion	2022 Quarter 3
Phase 3 Substantial Completion	2025 Quarter 2

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Budget

The Baggage Optimization Phase 1 portion of work is on budget as currently scoped.

The budget summary for the project to date is as follows:

Total Project Budget	\$445,050,000
Total TSA Contribution	\$94,043,296
Total Commission Authorization to Date	\$136,312,200
Amount Spent to Date (as of 10/04/18)	\$58,566,741
TSA Reimbursement to Date (as of 10/04/18)	\$27,005,449

The team reported in June that updated budget estimates for the remaining Phase 2 and Phase 3 scopes of work were being prepared. Price increases in the baggage handling and steel markets have created a budget concern, and the latest estimates reflect market condition increases. The team has performed a sensitivity analysis with particular emphasis on appropriate escalation rates to carry through the project, as well as market contingency to account for PLA and Small Business requirement premiums. The sensitivity analysis shows that these conditions have the potential to require a budget increase of \$27M to \$69M, with most likely scenario requiring an additional \$46M being added to the budget. The exact budget requirements will not be known until bids are received.

To minimize the market condition increases, the Port Baggage Team is conducting marketing meetings with contractors to develop interest in the future phases of the project to create a more competitive bidding environment.

ADDITIONAL BACKGROUND

The Baggage Optimization project was scoped in 2012 to accommodate 45 MAP with an expandable design to accommodate future growth. At the time, growth forecasts were flat and predicted that 45 MAP would be adequate through 2027. The decision was made to proceed in building an expandable 45 MAP system with the expectation that an expansion would occur in the future in time to accommodate growth up to the 60 MAP level. Due to unprecedented growth at the airport, the 45 MAP threshold was met in 2016, over ten years earlier than anticipated. In June 2017, the Commission authorized the project to incorporate a capacity expansion of the Baggage Optimization project in order for the new outbound baggage system to accommodate 60 MAP. The additional capacity will be incorporated into Phases 2 and 3 and will add 14 months to the overall project schedule and a net budget increase of \$126 million. The \$126 million increase is included in the overall budget of \$445 million.

ATTACHMENTS TO THIS BRIEFING

- (1) Presentation slides

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PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

- June 12, 2018 – Baggage Optimization Quarter 2 Project Briefing
- January 9, 2018 – Baggage Optimization Quarter 4 Project Briefing
- September 26, 2017 – Baggage Optimization Quarter 3 Project Briefing
- June 27, 2017 – Commission authorization to (1) authorize additional design and project management funds to expand the capacity to 60 million annual passengers (MAP); (2) use Port crews and small works contracts to perform additional construction work; and (3) amend Service Agreement P-00317641 to add \$10,160,000
- October 25, 2016 – Baggage Optimization Quarter 4 Project Briefing
- July 12, 2016 – Commission authorization to advertise and execute a contract for construction Phase 1
- June 28, 2016– Baggage Program Briefing
- May 17, 2016 – Checked Baggage Optimization Project Briefing
- March 8, 2016 – Commission authorization for the Chief Executive Officer to amend the Baggage Optimization Design Services contract
- June 23, 2015 – Checked Baggage Optimization Project Briefing
- September 10, 2013 – The Commission authorized the execution of an Other Transaction Agreement (OTA) with TSA for reimbursable costs for design; construction, and to authorize \$15 million to continue from 30% to 100% design; and execute a consultant service agreement for program management support services
- August 20, 2013 – Response to questions from Commissioners asked during August 6, 2013 Commission Meeting
- August 6, 2013 – The Commission was briefed on the near-term and long-term challenges related to handling checked baggage at the Airport
- January 22, 2013 – The Commission authorized \$5 million for staff to begin design through 30%, and to enter into an agreement to allow reimbursement from the federal government to the Port for eligible elements of the 30% design effort
- January 8, 2013 – Baggage Systems Briefing
- 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