



**COMMISSION
AGENDA MEMORANDUM**

Item No.

11a

BRIEFING ITEM

Date of Meeting

April 26, 2022

DATE: April 19, 2022

TO: Stephen P. Metruck, Executive Director

FROM: Jeffrey Brown, Aviation Chief Development Officer
Wayne Grotheer, Director Aviation Project Management

SUBJECT: Baggage Optimization Program Update – Quarter 2, 2022

EXECUTIVE SUMMARY

Baggage Optimization Program (BOP) is an airport-wide public safety and security program that improves customer service for both airlines and passengers. This is a long-term, three-phase program that is anticipated to be completed in 2026. Prior to Baggage Optimization the Airport baggage system was actually six separate systems. Modifying the separate systems was the best way to rapidly increase security after September 11. However, to meet long-term growth needs of the overall Airport, BOP replaces six aging individual baggage screening systems with one centralized system at Seattle-Tacoma International Airport. The new system will meet Transportation Security Administration (TSA) safety and security requirements while ensuring reliability, flexibility and efficiency for airlines and passengers. When complete, BOP enables the flexibility for bags to be checked in from any ticket counter and be efficiently conveyed to any airplane gate. This program allows the airport to meet the demands of growing airlines. Due to the lack of interconnectivity until the project is complete, continuous 24/7 operation, and a fixed footprint this project is complex and has various constraints that require detailed construction sequencing plans.

PROGRAM STATUS UPDATE

BOP is being bid and constructed in three separate phases. Phase 1 focused on the central terminal building, the core of the centralized screening system, and installed eight new screening machines. Phase 1 construction was complete Q2 2020 and was \$37M under budget at \$98M total cost.

Phase 2 is under construction to install four additional screening machines, new tenant storage and maintenance shop, final baggage handling system sortation matrix, and additional capacity to South Satellite. Phase 2 was delayed approximately six months due to a negative Majority-In-Interest (MII) vote when the airlines did not support the budget increase needed due to unexpected high bids. However, together with the Contractor, the Port team worked to regain the time by taking advantage of low passenger volume due to COVID-19 to re-sequence the construction steps and through efficiencies receive credits and gain back six months.

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In Phase 2, the project team together with the Airline stakeholders have completed over 375 major and complex shutdowns including the baggage system in a 24/7 operating airport. Phase 2 is within budget and is approximately 45% complete. Phase 2 is scheduled for completion in Q2 2024.

Phase 3 is the final phase of the program. It will focus on the tie-in of the south end systems to centralized screening, tie-in of the International Arrivals Facility (IAF), and finalize the sortation and ticket counter connections. After conducting lessons learned from previous phases and discussions with executives and airlines, Phase 3 project delivery method is recommended to be General Contractor/Construction Manager (GC/CM) to allow for the contractor to be part of the design and gain earlier insight and control of construction costs. The following will be brought to Commission later in 2022: 1) recommendation and request to change the project delivery method; 2) increase the design consultant's contract amount to complete Phase 3 design; 3) advertise and execute a project specific construction management contract to provide GC/CM expertise; and 4) advertise and execute a contract for preconstruction services. As the Phase 3 estimate is better defined, a request for a budget increase will also be brought to Commission. Development of Phase 3 design will begin in Q3 2022.

PROJECT RISKS AND MITIGATION

- Supply Chain – The impacts of COVID-19 on the supply chain are currently causing delayed manufacturing and delivery of critical equipment that could impact the project schedule if delays continue. We are seeing delays of motors, gear boxes, bearings, power turns, and fiber optic cable, all of which are major required components of the baggage system. Cost or schedule impacts (or both) are possible. The team is mitigating some of the issues with early shipment and storage of delivered material in an offsite warehouse and continued outreach to suppliers. The team is also prioritizing equipment and approving alternative products.
- Project Coordination - There are four other projects that are critical for BOP coordination in order to mitigate risks of incompatibility in equipment, design, or construction. The BOP team is involved in coordination, design reviews, and planning to manage the risks and expectations.
 1. International Arrivals Facility (IAF) – In order for BOP Phase 2 to start construction of the South Satellite baggage feeds and makeup devices for loading to baggage carts, the project requires IAF to be fully operational. Delays of the IAF opening directly impact the construction schedule and delays are costing about \$10,000 per day for the BOP Phase 2 contract.
 2. C Concourse Expansion – This project will transfer scope and budget to the Baggage Optimization Project to manage, design, and construct conveyor transfer lines that are impacted by C Concourse Expansion construction pending Commission action in Q2 2022. The baggage work will be done by the BOP project to minimize construction and operational risk and operational constraints.

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3. North Main Terminal Redevelopment Project (NMTRP) – The two projects are currently coordinating critical ticket counter main line connections, odd size baggage handling scope, construction sequencing, and schedule to minimize risk and operational impacts on both the BOP and NMTRP projects.
 4. North Main Terminal Utilities Upgrade Project (NTUUP) – This project intends to transfer scope to BOP to construct a utilidor in the area of BOP Phase 2 construction and be sequenced within the construction schedule with minimal disruptions to either project.
- Airline Operational Impacts – Constructing a complex project in a 24/7 operating airport with minimal disruptions to live operations and within the same space as the existing system will continue to be a challenge. The baggage team continues to take steps to communicate with all stakeholders including Airline Technical Representatives (ATR) and develop detailed plans, run trials, and monitor the work.
 - Airline Manual Baggage Handling – Constructing the new baggage system while maintaining the existing system will at times leave long term temporary conditions within the baggage system. The temporary conditions may result in manual baggage handling of the bags by an Airline employee due to construction and schedule complexity. The baggage team has tried to identify the most impactful steps in the construction and coordinates frequently with the Airlines and ATR to minimize the risk and impact to operations.

Program Schedule

Phase 1 was completed in Q2 2020. Phase 2 is currently under construction scheduled to be completed in Q2 2024; however, the end date is tied to the IAF opening and supply chain issues. Phase 3 design is scheduled to start in Q3 2022 and is scheduled to be constructed by Q3 2026.

<u>Phase</u>	<u>Design</u>	<u>Construction</u>
Phase 1	Q3 2015	Q2 2020
Phase 2	Q1 2020	Q3 2020 – Q2 2024
Phase 3	Q2 2023 – Q1 2024	Q1 2024 – Q3 2026

Program Budget

Phase 2 budget and authorization includes \$10M executive director reserve. At this time the project has not utilized any funds from the reserve. Phase 3 has not started construction and in the process of developing an estimate. The current range for Phase 3 is between \$400M - \$500M. Phase 3 authorization of \$13M is for design and pre-construction funding. TSA

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contributes \$94M to the overall project budget. The Port has been reimbursed for more than \$65M to date from TSA (March 2022).

<u>Phase</u>	<u>Current Budget</u>	<u>Forecast at Completion</u>	<u>Current Authorization</u>
Phase 1	\$101,375,000	\$97,488,982	\$101,375,000
Phase 2	\$425,675,000	\$415,675,000	\$425,675,000
Phase 3	\$313,000,000	\$400,000,000 to \$500,000,000	\$13,000,000
Total	\$840,050,000	\$914M - \$1.1B	\$540,000,000

Diversity in Contracting

Baggage Optimization Phase 2 has a WMBE goal of 2% due to the nature of the scope of work primarily being baggage conveyors and limited building work. The project is approximately 45% complete and WMBE utilization is at 1.21% of the total contract; the project is on track for meeting the 2% goal.

ADDITIONAL BACKGROUND

The Baggage Optimization project was scoped in 2012 to accommodate 45 million annual passengers (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.

ATTACHMENTS TO THIS BRIEFING

- (1) Presentation slides

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

- January 28, 2020 – Commission Authorization to (1) execute a construction contract with the low responsive and responsible bidder for the Baggage Optimization Phase 2 Project at Seattle-Tacoma International Airport, notwithstanding the low bid exceeding the estimate at time of bid by more than 10 percent, and (2) authorize an additional \$190,737,800 for Phase 2 construction and Phase 3 design for a total program authorization of \$540,050,000

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- April 23, 2019 – Commission Authorization to (1) advertise, award, and execute a construction contract for the Baggage Optimization Phase 2 project at Seattle-Tacoma International Airport; (2) employ a project labor agreement (PLA); and (3) utilize Port crews and small works contracts to perform construction work
- February 26, 2019 – Baggage Optimization Quarter 4 Project Briefing
- October 23, 2018 – Baggage Optimization Quarter 3 Project Briefing
- 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