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COMMISSION

AGENDA MEMORANDUM Item No. 8g

ACTION ITEM Date of Meeting July 26, 2022

DATE: July 26, 2022

TO: Stephen P. Metruck, Executive Director

FROM: Eileen Francisco, Director Aviation Project Management

Wendy Reiter, Director Aviation Security

SUBJECT: Baggage Optimization Phase 3 (CIP #C800612, WP #N 04420)

Amount of this request: \$34,215,000

Total estimated Phase 3 cost: \$432,430,000 – \$497,295,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to (1) execute an agreement with the Transportation Security Administrative (TSA) to provide clear access to screening equipment for Phase 2, (2) authorize \$34,215,000 for Phase 3 to complete pre-construction services, (3) utilize, advertise, and execute a General Contractor/Construction Manager (GC/CM) for Phase 3, (4) advertise and execute a project specific Construction Management (CM) and Airline Technical Representative (ATR) contract for Phase 3, (5) amend Service Agreement (SA) P-00317641 to add \$18,340,000 for a total contract value of \$49,500,000 to complete design services and provide construction support for Phase 3, and (6) utilize Port crews for Phase 3 activities, for Baggage Optimization Project at Seattle-Tacoma International Airport. The total amount of this request is \$34,215,000.

EXECUTIVE SUMMARY

Baggage Optimization 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 2027. The program allows the flexibility for bags to be checked in from any ticket counter and be conveyed to serve any gate. The project is being bid and constructed in three separate phases. Phase 1 has been completed, Phase 2 is under construction, and development of Phase 3 will begin in Q3 2022. Phase 2 is approximately 45% complete with an expected date of August 2024. Due to the lack of interconnectivity until the project is complete, near continuous operation, and a fixed footprint, this project is complex and has various constraints that requires detailed construction sequencing plans. As part of this request, Phase 3 project delivery is changing the delivery method from Design Bid-Build to GC/CM.

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JUSTIFICATION

Memorandum of Agreement:

The Port would like to enter into a Memorandum of Agreement (MOA) with the Transportation Security Administration (TSA) regarding a requested variance for service access and/or removal of the baggage screening machines in Phase 2. The requested variance includes sprinkler heads, piping, and a section of removable catwalk that impedes the maintenance envelope of the screening machines. When maintenance is needed or a screening machine needs to be removed and/or replaced, the Port will be responsible to shut down the fire protection system and sprinkler heads, take down pipe sections, and remove catwalk necessary to provide the proper clearance.

General Contractor/Construction Management:

Previous Baggage Optimization phases and baggage projects at SEA used traditional design-bidbuild , however, discussions with executives and airlines led the team to consider changing the project delivery method to GC/CM. GC/CM will allow for the contractor to be part of the complex design and intricate construction sequence development that will minimize risk to 24/7 baggage operations and gain earlier insight and control of construction costs. The Phase 2 audit and major airline carriers recommended that the GC/CM project delivery method be analyzed and considered for Phase 3.

Construction Manager Project Specific Contract:

The Baggage Optimization team does not have experience in delivering baggage projects utilizing the GC/CM method. The team would like to bring on board a construction management (CM)

firm that has expertise in GC/CM and ideally baggage and airports to be an advisor through the project process. The team would also like to gain knowledge and experience from this CM firm to deliver future baggage projects utilizing GC/CM.

**ATR Project Specific Contract:**

ATRs have played a critical role in successfully delivering Phase 1 and Phase 2 of the Baggage Optimization Program. Phase 3 would benefit from having a project specific ATR contract through the life of the project to serve as a liaison between the project and Airlines. Having an ATR that is consistent through the life of Phase 3 is critical to the success of delivering the project in such ways as decision making, communications, and implementation of plans. The contract will have a duration of five years in the amount of \$1.5M.

**Design Project Specific Contract:**

BNP Associates is the program's project specific design consultant that has designed the comprehensive program design and provided design services through construction. Their contract has been in place since 2014 and will require a contract amount increase to complete Phase 3 design, design services support through construction, and contract contingency. The request to add \$18,340,000 was determined by previous phases design fees and design support through construction fees. This Service Agreement P-00317641 increase is within Commission authorized project spending. In accordance with RCW 53.19, the Commission is notified that this

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amendment exceeds 50 percent value of the original contract, and this memorandum will be made available for public inspection. Contingency has also been included in the requested amount.

**Port Construction Crews:**

Port construction crews have been utilized throughout the Baggage Optimization Phase 1 and Phase 2. They will be used to perform manual baggage handling services and construction services outside of the major contract work.

**Diversity in Contracting**

The project team will work with Diversity in Contracting team to conduct outreach and setting a Women and Minority Owned Business Enterprise (WMBE) aspirational goal for the future GC/CM construction contract.

**DETAILS**

**Scope of Work**

Phase 3 concludes the Baggage Optimization Program (BOP) allowing for complete baggage flexibility to check in any bag into any ticket counter and be delivered to any airplane. It also accommodates for passenger volume growth and meets TSA safety mandates. This phase will tie-in all the south end systems to centralized screening, including the International Arrivals Facility (IAF), and finalize the sortation and ticket counter connections.

**Schedule**

Phase 1 was completed in Q2 2020. Phase 2 is currently under construction and scheduled to be completed in Q3 2024. Phase 3 design is scheduled to start in Q3 2022 and is schedule d to be constructed by Q2 2027.

**Phase Design Construction**

Phase 1 Q3 2015 Q1 2016 - Q2 2020

Phase 2 Q1 2020 Q3 2020 – Q3 2024

Phase 3 Q1 2023 – Q1 2024 Q1 2024 – Q2 2027

**Activity**

Commission design authorization 2013 Quarter 1

Design start – Phase 3 2022 Quarter 2

Commission construction authorization 2024 Quarter 4

Construction start 2024 Quarter 4

Substantial Completion 2027 Quarter 2

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Cost Breakdown This Request Total Project

Design \$16,642,000 \$42,157,000  
Construction \$17,573,000 \$390,293,000  
Total – Phase 3 \$34,215,000 \$432,450,000

#### ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Complete the Phase 3 as traditional design bid build instead of GC/CM. This alternative would still allow for the Baggage Optimization Program to be completed.

Cost Implications: Phase 3 Estimate: \$367M - \$460M

##### Pros:

(1) Baggage projects at the Port have traditionally been delivered successfully as design bid build projects; this includes Baggage Optimization Phases 1 and 2. Through various baggage projects the plans and specifications have continually been refined; BHS equipment and components have been studied and implemented in previous phases; and construction sequencing documents are developed and vetted with constructability and minimizing operational impacts while keeping overall schedule in mind.

(2) The baggage team is adept in developing and understanding the construction documents, requirements, and delivery of design bid build baggage projects. This internal team includes subject matter experts in baggage design and operations that enables the Airlines to continue operations with minimal impacts during complex construction sequencing.

(3) Phase 3 completes the Baggage Optimization program allowing for a complete baggage flexibility, allows for growth, meets TSA mandates, and honors the Other Transaction Agreement (OTA) with TSA.

##### Cons:

(1) Construction costs and the bidding market have been volatile in recent years and puts the project at a high risk for unbudgeted increase in construction costs and the potential for less-than-optimal bidders interested in the project. This risk is not fully accounted for in the Phase 3 Estimated Costs above. As an example, the Phase 2 low bidder proposal was approximately \$114 million over the engineer's estimate (approximately 64% over) at the time of bid. As we have seen in Phase 2, the supply chain for essential construction material has been an issue, and is something that we cannot accurately predict.

(2) Utilizing design bid build does not allow for the contractor to be part of the discussion during design development, selection is based on low bid rather than qualifications, there is no flexibility in the contract for changes, and the risk is put onto the contractor and is reflected in the bids.

This is not the recommended alternative.

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Alternative 2 – Approve the request to proceed with Phase 3 and to change the project delivery to GC/CM.

Cost Implications: Phase 3 Estimate: \$400M - \$500M

Construction cost and total Phase 3 cost will be refined as the project goes through the GC/CM process. Commission will be updated regularly prior to finalizing the maximum allowable construction cost (MACC).

##### Pros:

(1) Phase 3 completes the Baggage Optimization program allowing for complete baggage flexibility, allows for growth, meets TSA mandates, and honors the OTA with TSA.

(2) GC/CM project delivery method for Phase 3 follows the audit recommendation with the support of Airport Executives and Airlines.

(3) This project delivery method will also bring the contractor in earlier to assist in developing a better understanding of construction costs and construction sequencing.

(4) GC/CM mitigates risk between the Port, designer, and the contractor. GC/CM estimates will be generated during each phase of the design process. This will allow more price certainty, and provides the ability to adjust the design and sequencing efforts to better manage estimated costs to the budget prior to finalizing the Maximum Allowable Construction Costs (MACC). This method better addresses the risk of a significantly large bid overage as was experienced in Phase 2.

##### Cons:

(1) Baggage projects at the Port have historically been delivered as design-bid-build. The

BOP team is inexperienced in GC/CM project delivery, however, part of this request is to hire a consultant construction management team as advisors.

(2) The design of the baggage handling system for all three phases was completed to receive federal funding. GC/CM typically benefits from bringing the contractor on earlier in the design phase. However, the construction sequencing, mechanical, electrical, structural, and architectural is at about 30% design.

This is the recommended alternative.

#### FINANCIAL IMPLICATIONS

Phase 1 was completed at \$101,275,000. Phase 2 has a budget of \$415,675,000 with a substantial completion date of Q3 2024. However, now that we are anticipating about a \$20M savings, barring any major issues, that amount can be rolled into Phase 3. The team has been projecting a range of \$400-\$500M for Phase 3, with a likely cost of \$432,450,000.

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Current Estimate At

Budget Budget Delta Notes

Authorization Completion

Phase 1 \$101,375,000 \$101,375,000 \$101,375,000 \$ -

• Savings of \$20M as of June 2022

Phase 2 \$415,675,000 \$415,675,000 \$395,675,000 \$(20,000,000) • Substantial Completion Q3 2024

• Commission Range

presented April

2022 is \$400M -

\$500M

• MII anticipated Q3

Phase 3 \$313,000,000 \$13,000,000 \$432,450,000 \$119,430,000 2024

• Additional budget

request assumes a

\$20M unspent

from Ph2 will be

transferred

Executive

Management \$10,000,000 \$10,000,000 \$10,000,000 \$ -

Reserve

• Commission

Transfer \$15,500,000 \$15,500,000 \$15,500,000 \$ - approval April

2022

TOTAL \$855,550,000 \$555,550,000 \$955,000,000 \$99,430,000

stimate/Authorization Summary Capital Expense Total

#### COST ESTIMATE

Original estimate \$317,000,000 \$150,000 \$317,150,000

Previous changes – net \$538,084,000 \$316,000 \$538,400,000

Current change \$99,050,000 \$400,000 \$99,450,000

Revised estimate \$954,134,000 \$866,000 \$955,000,000

#### AUTHORIZATION

Previous authorizations \$555,084,000 \$466,000 \$555,550,000

Current request for authorization \$34,215,000 \$0 \$34,215,000

Total authorizations, including this request \$589,299,000 \$466,000 \$589,765,000

Remaining amount to be authorized \$364,835,000 \$400,000 \$365,235,000

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Annual Budget Status and Source of Funds

This project, C800612, was included in the 2022-2026 capital budget and plan of finance with a budget of \$839,584,000. The budget increase of \$9 9,050,000 was transferred from the Aeronautical Reserve CIP C800753 resulting in zero net change to the Aviation capital budget. This project has prior Majority In Interest (MII) airlines approval for Phase 1 and 2. The Phase 3 MII ballot is anticipated in 2023. The funding source would be future revenue bonds.

Financial Analysis and Summary

Project cost for analysis \$955,000,000

Business Unit (BU) Baggage System

Effect on business performance NOI after depreciation will increase due to inclusion of (NOI after depreciation) capital (and operating) costs in airline rate base

IRR/NPV (if relevant) N/A

CPE Impact \$0.26 in 2020, \$1.03 in 2024 and \$2.75 in 2028

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 REQUEST

(1) Presentation slides

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

- April 19, 2022 – Baggage Optimization Program Update – Quarter 2, 2022
- 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

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