



**COMMISSION
AGENDA MEMORANDUM**

Item No. 8c

ACTION ITEM

Date of Meeting November 10, 2020

DATE: October 19, 2020

TO: Stephen P. Metruck, Executive Director

FROM: Tina Soike, Engineering Director
Janice Zahn, Assistant Engineering Director, Construction Services

SUBJECT: Concourse C New Power Center (CIP #C800724) Change Order Over \$300,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to execute a change order to Contract MC-0319131 Concourse C New Power Center for relocation of the 400 Hz Power system conduits from Gate C 9 Passenger Loading Bridge (PLB), Seattle-Tacoma International Airport for an estimated amount not-to-exceed \$600,000.00.

EXECUTIVE SUMMARY

This change order request requires no additional budget (zero dollars) because it can be accommodated within previously authorized budgets, and it requires no additional time (zero days) because it can be accommodated within existing contract schedule parameters. Funding for this work will be transferred from the PLB program (CIP#C800793) to Concourse C New Power Center project (CIP #C800724). Total authorized by Commission for the PLB CIP#C800793 is \$13,000,000.00. Total Authorized for Concourse C New Power Center CIP#C800724 is \$10,500,000.00. Final costs are still under negotiations, but if the full not-to-exceed amount of \$600,000.00 were to be issued as a change order, this would represent 5.7% increase to the Concourse C New Power Center budget and over 10% of the major construction contract value. Commission action is required under the General Delegation of Authority because the value of the change order is estimated to exceed \$300,000 and potentially 10% of the contract value.

This change order work to reroute existing 400Hz conduits is required to complete the PLB replacement at Gate C9. The location of the existing and proposed new 400 Hz conduits are within the same project footprint as the Concourse C power center project. To reduce the risk to both projects with multiple contractors in the same location, executing this work by the Concourse C New Power Center contractor is the recommended alternative.

Description of Change Order

This change order will remove and relocate four existing 400Hz conduits attached to the fixed walkway portion of the C9 PLB. These conduits will be removed from the C9 PLB and relocated

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to new supports along the Concourse C building. Removing and relocating these 400Hz conduits will allow replacement of the C9 PLB without shutting down the 400 Hz power for an extended period of time to 8 other operating gates and significantly affecting airline operations.

Background

The proposed pathway of the relocated conduits shares the same working space as the Concourse C Power New Center project currently under construction. The PLB project schedule overlaps with the Concourse C Power Center and both projects are in the same physical workspace with significantly increase risks to both projects. To avoid multiple contractors working in the same space and reduce or eliminate the risk of increased cost and time impacts for both projects, the best alternative is to perform the work as a change order to the Concourse C New Power Center project.

The PLBs at Sea-Tac Airport have a high utilization in comparison to airports with comparable annual enplanements. In 2019, Sea-Tac Airport processed approximately 336,000 passengers per bridge, well above the average of the top 20 airports of approximately 220,000 passengers. The PLBs that are being replaced are at, or near, their end of life. Any unplanned downtime due to PLB or fixed walkway failure impacts airlines and customer service.

Gate C9 is one of the two bridges that will be replaced in 2021. The Gate C9 bridge has the additional difficulty that the power lines to the 400 hz generators, and the resulting distribution lines to eight (8) other Concourse C gates, run along the fixed walkway section of the Gate C9 PLB. In order to safely replace the fixed walkway section, the cables and conduits need to be removed and rerouted; after which, the conduits and cables can be reconnected. This method would leave eight (8) gates without gate 400 hz power for approximately 3 to 4 months while the bridge is replaced and reconnected. Relocating the 400 hz in advance will avoid airlines having to run their engines or operate diesel generators to maintain 400 hz supply at the other 7 gates while the gate C9 bridge is replaced. This relocation work must be completed by June 30, 2021, to prevent overlap with the PLB bridge replacement project.

FINANCIAL IMPLICATIONS

There is no additional funding being requested in this memo. Previously authorized funding will be transferred from CIP #C800793 to CIP #C800724.

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Perform work as separate major works contract at an estimated cost of \$700,000 to \$1,000,000

Pros:

- (1) Direct cost of work will be based on competitive bids.
- (2) Minimal (overnight) 400Hz power outages to all supplied Concourse C gates.

Cons:

- (1) The cost of a separate major works contract would exceed the cost of a change order. Performing this work as a separate major works contract would result in additional administrative costs to prepare and issue bid documents and manage the contract. For projects of this size, these costs typically range from 33% to 50% of direct construction costs (\$200,000 to \$300,000 additional).
- (2) A separate major works contract would result in delays to the replacement of the C9 PLB and would impact Alaska Airline Operations by delaying return of the C9 PLB to service. The time required to complete design (currently at 60%), procure a contractor and complete this work under a separate contract is estimated to be a minimum of 9 months, which would result in a completion date of August 2021 at the earliest.
- (3) Additional risks to both projects due to concurrent work. A separate contract would result in two contractors in the same area; this would result in a significant amount of coordination, with a potential to incur schedule delays and increased cost to the Concourse C New Power Center project.
- (4) Increases risks to Concourse C New Power Center projects cost and schedule.

This is not the recommended alternative.

Alternative 2 – Perform 400Hz relocation work utilizing small works contracts and Port crews at an estimated cost of \$550,000 to \$650,000.

Pro:

- (1) Provides the Port more flexibility in gate management.

Con:

- (1) Cost of work would exceed small works authority (\$300K) resulting in additional soft cost to segregate the work into multiple disciplines (Civil/Mech/Elect.) and manage additional contracts.
- (2) Requires shutdown of 400 hz gate service to 8 gates for the duration of PLB replacement. (3-4 months) Airplanes at these gates would not be able to plug into electrical power. The Port would need to provide temporary/portable generators run on fossil fuel to supply 400hz power at eight (8) gates while the existing system is being relocated.

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- (3) Increases risks to Concourse C New Power Center projects cost and schedule (similar to Alternative 1).

This is not the recommended alternative.

Alternative 3 Perform work as a change order to Concourse C New Power Center at an estimated cost of up to \$600,000.

Pros:

- (1) Overall cost, schedule and operational risks to the Port is reduced compared to Alternatives 1 and 2.
- (2) Eliminates the 6-9-month procurement time for major works contract.
- (3) Maintains the agreed upon gate closure schedule with Operations and Airlines.
- (4) Eliminates the staff and designer cost to prepare bid documents to procure this work separate as a major construction or small works contracts.
- (5) Scope can be completed without long shutdown of the existing 400Hz electrical power system.

Cons:

- (1) This work would not be competitively bid, resulting in potentially higher direct construction cost.

This is the recommended alternative.

ATTACHMENTS TO THIS REQUEST

None

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

PLB Program:

March 2, 2020 – The Commission approved advertising and executing two additional major works contracts.

September 3, 2019 – The Commission approved \$3,000,000 budget increase for the design and construction of PLBs at Gates C15, C9, D11, C11, C18, S6, D4 and the fixed walkways at C9, D11, C18, and D4.

February 27, 2018 -The Commission approved \$7,700,000 for the design, construction, and purchase of PLBs at Gates C15, C9, D11, C11, C18, S6, D4, and the fixed walkways at C9, D11, C18, and D4.

February 28, 2017 -The Commission approved \$2,300,000 for the design, construction, and purchase of PLBs at Gates S11 and B10 and the fixed walkway at S11.

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Concourse C Power Center:

April 16, 2020 – The Commission authorized \$8,525,000 to advertise and award of a major works contractor for the construction of the Concourse C New Power Center.

September 22, 2015 – The Commission authorized \$1,900,000 to execute a design contract, prepare design and construction bid documents, and authorized the use of Port crews for preliminary work in support of this project.