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INTERNAL AUDIT REPORT
Operational Audit – Capital
South Satellite Infrastructure Upgrade Project

February 2019 – March 2022
Issue Date: November 22, 2022
Report No. 2022-15

South Satellite Infrastructure Upgrade Project

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South Satellite Infrastructure Upgrade Project
Executive Summary

Internal Audit (IA) completed an audit of the South Satellite Infrastructure Upgrade Project (SSIUP) for the period February 2019 through May 2022. The audit was performed to assure the quality of the Port of Seattle’s (Port) monitoring of the SSIUP, to assess if it was meeting project management standards, and to determine if change orders were allowable, properly approved, and reasonable.

We selected this project based on the number of designer error and omission change orders (COs), and the removal of critical milestones as reflected in the original contract. Our sample for testing included the largest dollar value change orders, ones that changed the scope of the project, and those that were the result of errors and omissions.

The SSIUP is approximately 45 years old and was in need of complete renovation. The SSIUP serves a mix of domestic and international carriers and will continue to be a critical terminal asset for Seattle-Tacoma International airport. The final construction estimate, performed by Port Aviation Project Management (AVPM), totaled \$32.98 million. In February 2019, the Port received two bids for the project. The lowest bidder, James W. Fowler Co. (JWF), was awarded the contract in the amount of \$28.36 million.

The project delivery method was a design-bid-build with a lumpsum contract. The total construction cost as of September 28, 2022, was \$31.09 million, which included approximately \$2.73 million in COs. The contract required that JWF substantially complete the work no later than 1,000 days following the contract execution date, which would have been November 28, 2021.

The actual substantial completion and physical completion were achieved on December 22, 2021, and March 13, 2022, respectively. Construction Management (CM) provided a time impact

analysis submitted by JWF for the delay of 24 days to achieve substantial completion. As of September 2022, a change order for the approved days has not yet been issued. Port CM is currently reviewing the contractor's support for some of the Force Account change orders, to assure accurate payment to the contractor. They anticipate the final closeout of the project by December 2022.

In general, Port management's monitoring aligned with the Port's policies and procedures. We would like to extend our appreciation to the SSIUP Project team and staff at JWF, for their assistance and timely responses to our requests.

We identified an opportunity where internal controls can be enhanced or developed. This opportunity is listed below and discussed in more detail, beginning on page six of this report. (Low) We identified opportunities for Port management to strengthen controls over reconciliation of Not to Exceed (NTE) COs. Additionally, we identified instances where SOPs were not followed. Management has made corrections based on recommendations from prior audits, and these should be reflected in future projects.

Glenn Fernandes, CPA
Director, Internal Audit

Responsible Management Team
Janice Zahn, Interim Chief Engineer and Director, Engineering Services

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South Satellite Infrastructure Upgrade Project Background

The South Satellite Infrastructure Upgrade Project (SSIUP) improved the effectiveness and reliability, and increased the capacity of the Heating, Ventilation, and Air Conditioning (HVAC) system, which has seen dramatic passenger growth since its construction in 1970's, and expansion in 1982. The scope of the work included replacement and upgrades to the existing original air handler and HVAC system on the concourse level. Additionally, the Project updated the ceiling, lights, fire sprinkler system, and carpet among other things.

In June 2018, the Port provided the Commission with an estimated construction cost of \$37.1 million which was amended to \$32.98 million for the construction cost in January 2019. The project was advertised on November 14, 2018, and the Port received two bids in February 2019. Both bids received were below the engineer's construction cost estimate with James W Fowler Co. (JWF), being the lowest responsible bidder, was awarded the contract in the amount of \$28.36 million.

The project delivery method was a design-bid-build with a lumpsum contract. The construction contract total as of September 28, 2022, was \$31.1 million, which includes approximately \$2.7 million in COs. The contract required that the contractor substantially complete the work no later than 1000 days following the contract execution date, which would have been November 28, 2021. During the course of the project, there were an additional 24 days, that extended the substantial completion date to December 22, 2021, the contractor provided a time impact analysis in January 2022 which was accepted by the Port for the delay; however, as of the date of this report, a CO has not been issued. Once approved, JWF will have met both the substantial and physical completion deadlines.

Schedule (Per September 28, 2022 Trend Log)
Original Contract Completion Date 11/28/2021
Approved Time Extension (Calendar Days) 0*
Revised Contract Completion 12/22/2021
Budget (Per September 28, 2022 Trend Log)
Original Contract Sum \$28,360,000
Executed COs and Potential Risk \$2,912,098
Projected Contract Amount \$31,272,098
Original Contingency \$4,767,000
Less: Executed COs and Potential Risk \$(2,912,098)
Remaining Contingency \$1,845,902
* CO for approved days pending issuance.

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South Satellite Infrastructure Upgrade Project
Audit Scope and Methodology

We conducted the engagement in accordance with Generally Accepted Government Auditing Standards and the International Standards for the Professional Practice of Internal Auditing. Those standards require that we plan and conduct an engagement to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our engagement objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our engagement objectives.

In some cases, we used a judgmental method to determine the samples selected for our audit test work. In those cases, the result of the work is not representative of the population of a whole, as we did not select a statistical based random sample.

The period audited was February 2019 through May 2022 and included the following procedures:

Change Orders

- Obtained an understanding of the Port's change order review process, including creation, negotiation, and approval.
- Verified approvals were obtained by required personnel.
- Confirmed that approved change order amounts tied to the Change Order Log.
- Reviewed compliance with contract requirements.
- Reviewed supporting documentation and claim submissions, specifically errors/omissions, scope changes, overtime, and COVID-19 expenses.

Critical Milestones

- Obtained an understanding of the Port's monitoring process.
- Obtained an understanding of why critical milestones one, two, and three were removed.
- Assessed the reasonableness of justification provided to removing milestones.
- Confirmed there was no scope reduction due to removal of milestones.
- Obtained the substantial completion date and letters of forbearance.
- Reconciled the dates of actual substantial completion to the expected dates.
- Assessed the reasonableness of excused/extended days approved through COs.
- Assessed whether the contractor was liable for liquidated damages.

Project Close-Out

- Reviewed close-out Standard Operating Procedures and contractual requirements.
- Obtained a copy of the substantial completion certificate.
- Obtained a copy of the physical completion certificate.
- Confirmed that the final punch-list items had been completed.
- Confirmed if "As-Builts" drawings were submitted.
- Obtained an understanding of when the Resident Engineer (RE) memo will be issued.

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South Satellite Infrastructure Upgrade Project
Schedule of Findings and Recommendations

1) Rating: Low

We identified opportunities for Port management to strengthen controls over reconciliation of Not to Exceed (NTE) COs. Additionally, we identified instances where SOPs were not followed. Management has made corrections based on recommendations from prior audits, and these should be reflected in future projects.

Standard Operating Procedure (SOP) 40.01, "Change Management", requires NTE – Force Account COs to be reconciled. Tracking under Force Account is required for all reconciliation change orders unless a negotiated lump sum can be agreed on with the Contractor. SOP 40.04 defines Force Accounting (FA) as a process that ensures an organized, identifiable, verifiable, and accountable method of compensating the contractor for costs and expenses, including labor, material, and equipment expended by the contractor and tracked daily. The SOP requires the Resident Engineer (RE) to review the daily force account documentation signed off by the inspectors and immediately correct any issues so that the remaining FA work is tracked properly. Additionally, inspectors are required to attach the signed force account sheets to their inspector daily reports (IDR).

We selected ten COs for review, based on those that we considered to be high risk. Examples include designer error and omissions, large dollar amounts, force accounts, and COVID related expenses. Two of the COs that we reviewed were approved on a lumpsum basis. Those two COs were properly supported, reviewed, and approved without exception. The remaining eight COs that we reviewed were not to exceed (NTE) COs tracked on a FA basis. We noted instances where FA sheets were not attached with the IDRs, the COs had not yet been reconciled, and required signatures were missing from the daily FA sheets. The RE confirmed that there were instances when the inspector did not provide FA sheets and the RE's review was based on the contractor's copy of the FA sheets.

We discussed these exceptions with the CM, who indicated that they were mindful of the gaps as similar findings had been detailed in past audit reports and they noted the reconciliation process would allow for any validation issues to be addressed. The review period of this audit is comparable to the projects we have already audited where we experienced similar issues, and CM has been training their team and conveyed that these issues have been addressed going forward.

Additionally, the final reconciliation for several of the NTE COs we examined was still pending. Payments were approved by the RE after reviewing the FA sheets that the contractor had provided in order to meet prompt pay requirements, however, it would be a good practice to reconcile COs as soon as possible because it will help in reducing risks associated with getting money back from the contractor and finding sufficient supporting documentation. For some of these COs, work was completed two years earlier.

The following table details the NTE COs that have not yet been reconciled.

CO Purpose Authorized Amount Paid Work Completed Observations
Amount to Date

20 Penthouse air handling \$150,000 \$150,000 November 2021 FA support submitted by unit contractor in June 2022

21 COVID-19 Safety Costs \$187,000 \$187,000 June 2020 FA support submitted by contractor in May 2022

26 COVID-19 Safety Costs \$25,000 \$19,476 June 2020 See footnote*

39 COVID-19 Safety Costs \$173,000 \$137,171 December 2021 See footnote*

56 Install new mechanical, \$290,000 \$96,419 November 2021 FA support submitted by electrical, and plumbing contractor in January 2022

* For Change order 26 and 39, Construction Management has requested and is waiting on the Contractor to provide supporting documentation.

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South Satellite Infrastructure Upgrade Project

Recommendations:

- Management should update the current SOPs to require more timely reconciliation of "Not to Exceed" Change Orders. The SOPs should specify a reasonable timeframe.

Management Response/Action Plan:

Engineering – Construction Management agrees the reconciliation of "Not to Exceed" Change Orders should be done as soon as practicable, but we need to further investigate if there is specific, reasonable timeframe we can commit to based on project needs and staffing resources. Expediting the reconciliation process to complete this work within a specific timeframe will require budget planning to determine if adding staffing to projects to perform this expedited function is feasible in comparison to any potential risks for this continuing to be done under our current process. We are not aware of any negative impacts on any projects related to our current process which allows us to meet prompt pay requirements while work is being performed and to reconcile these items before the final payment to the Contractor is issued.

At a minimum, we will add language to SOP 40.01 Change Management to indicate this reconciliation process should be performed 'as soon as practicable'.

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Appendix A: Risk Ratings

Findings identified during the audit are assigned a risk rating, as outlined in the table below. Only one of the criteria needs to be met for a finding to be rated High, Medium, or Low. Findings rated Low will be evaluated and may or may not be reflected in the final report.

Financial Internal Commission/
Rating Compliance Public

Stewardship Controls Management

High probability

Non-compliance

Missing or not for external audit Requires

with Laws, Port

High Significant followed issues and / or immediate

Policies,

negative public attention

Contracts

perception

Moderate

Partial

Partial controls probability for

compliance with

external audit Requires

Medium Moderate Laws, Port

Not functioning issues and / or attention

Policies

effectively negative public

Contracts

perception

Low probability

Functioning as Mostly complies Does not

for external audit

intended but with Laws, Port require

Low Minimal issues and/or

could be Policies, immediate

negative public

enhanced Contracts attention

perception

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