



**COMMISSION
AGENDA MEMORANDUM**

Item No. 4h

ACTION ITEM

Date of Meeting December 13, 2016

DATE: November 15, 2016
TO: Ted Fick, Chief Executive Officer
FROM: Stuart Mathews, Director, Aviation Maintenance
SUBJECT: Siemens DDC Service Contract

Amount of this request: \$3,600,000

ACTION REQUESTED

Request Commission authorization for the Chief Executive Officer to execute a service agreement between Siemens Building Technologies USA and Seattle-Tacoma International Airport for the Airport's Direct Digital Control System for the next three years with options for two, 1-year extensions. Total dollar value for the 5-year term is estimated at \$3.6 million.

EXECUTIVE SUMMARY

This procurement will allow the Port staff to continue to appropriately operate and maintain the Airport's Direct Digital Control (DDC) System. This service contract will aid Port staff in maintaining the airport's mechanical systems and provide appropriate operating conditions throughout the facility. The system controls and monitors most airport terminal mechanical systems such as heating and cooling, air flow and vibration set-points, and is considered critical to monitoring the airport infrastructure.

The Siemens DDC system is a proprietary system with proprietary software updates, tools and training provided only to Siemens technicians. As such, a CPO-5 Policy Waiver has been generated and routed to allow the Port to enter into a contract with Siemens without competing the service contract. Through the Central Procurement Office, contract negotiations will take place with Siemens to develop the detailed contract pricing and scope.

JUSTIFICATION

The objective of this request is to allow the Aviation Maintenance Department to continue to maintain the Siemens Direct Digital Control System in an effective manner, ensuring the Airport continues to operate effectively.

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DETAILS

- The system monitors multiple functions throughout the airport via a variety of existing infrastructure and components such as fans, pumps, temperature sensors in the terminal and air flow monitors.
- Examples of important systems monitored, controlled and maintained utilizing the DDC system include the Central Mechanical Plant, which provides nearly all heating and cooling for the facility, the Pre-conditioned Air Plant, providing heating and cooling to aircraft, smoke control systems as part of our fire suppression system, and the domestic and fire suppression water system for the Airport.
- The recommended option places us at a price point comparable with other Siemens supported airports on a cost per monitoring point basis.
- Current Service Agreement ends on 12-31-16.
- Two new major installations with DDC systems, which greatly increase the size, will be coming on-line; IAF and NorthStar.

Scope of Work

There are multiple elements that collectively make up the scope of work of this service agreement. Those elements are summarized in the bullet points below:

- This agreement will provide services to optimize the system control software, ensuring that the Heating, Ventilation and Cooling (HVAC) Control System is operating properly. The service will minimize any software problems that would negatively impact system performance. This service will also ensure reliable and optimized communication throughout the Port's HVAC Control System's Building Level Network (BLN) of field panels.
- Automation controls can drift out of calibration with changes in mechanical component performance characteristics, building use, and climatic conditions. This service will extend equipment life, reduce energy consumption, and reduce the risk of costly and disruptive breakdowns through appropriate system component calibration.
- This service agreement will provide the Port with new features and enhancements that will improve building operations and take advantage of the latest software version updates, while extending the life of the system investment. This service will provide the Port with software and documentation updates to the existing system as they become available (approximately annually) throughout the life of the contract.
- The Port will receive protection for the HVAC Control System's databases of business information from unforeseen catastrophic events (lightning strike, electrical power surge, hard drive or controller failure, flood, physical damage, etc.). This service will provide quarterly database back-ups.

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- As a portion of this service, the contractor will provide unlimited system and software troubleshooting and diagnostics via remote and direct phone support. The contractor will provide on-site service during normal business hours.

Schedule

New service contract can be implemented once approved. The current agreement ends December 31, 2016.

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Three different variations of the new service contract are proposed below.

Alternative 1 – Renew the service contract at its current level of service for 1-year with a price escalation due to inflation. Service levels for 2017 to be the same as 2016, except with current rates.

Cost Implications: Estimated \$427,000 for 2017-Expense Cost. (\$4.27 cost per point x 100,000 points incorporating 3% escalation)

Pros:

- This is will allow us to have some service support in 2017, while providing a 12 month timeframe to negotiate a service contract for future years with improved pricing.
- This option does not commit the Port to a long-term contract.

Cons:

- A one year contract will require the immediate start of another procurement process in 2017 for future years, consuming staff time.
- This alternative does not allow us to adjust the service level for the increased system size and complexity that has developed over the past five years.
- There is no opportunity to leverage the value of a multiple year contract with the vendor to improve the level of service.

This is not the recommended alternative.

Alternative 2 – Procure a service contract for a duration of three years.

Cost Implications: Estimated \$1.95 Million Expense Cost for the 3-year service contract duration.

Pros:

- This alternative allows us to adjust our service level to the level recommended by the manufacturer for a system of this size and complexity.
- Increasing system service support will reduce the risk of a system failure that could negatively impact operations of the airport.

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- This option places us within 8% of comparable airports based on cost on a per point basis.

Cons:

- This alternative commits the Port to an average annual expense of \$651,000 for the next 3 years, which is higher than our current level of service. This will require an increase in our expense budget from the current level.
- The contract will be expiring just before major new facilities will be coming on line, requiring the negotiations of a new contract while the facilities are still being built. The exact impact of the new facilities on the overall system may not be fully developed. This may make negotiating a new contract service level difficult.

This is not the recommended alternative.

Alternative 3 – Procure an initial 3-Year Service Contract with options for two, 1-year extensions.

Cost Implications: \$3.6 Million Expense Cost for the 5-year service contract duration.

Pros:

- This alternative provides a higher level of service from our current level, to better support the larger and more complex system.
- Increasing system service support will reduce the risk of a system failure that could negatively impact operations of the airport.
- The renewal year options provide flexibility for both the vendor and the Port at a point in the contract when new facilities will be brought on line. This alternative will provide an avenue to address system changes as a result of those facilities.
- This method will allow staff and CPO to negotiate scope and costs in outlying years, as the facility and business conditions may change. Annual costs would be approved as part of the regular expense budgeting process.
- The goal of the preferred alternative will be to operate at a level closer to current contract in the first year of the 3-5 year contract, while we negotiate the price and level of service in time to budget appropriately in 2018 and 2019.

Cons:

- This alternative will result in a higher annual expense than other alternatives considered.

This is the recommended alternative.

FINANCIAL IMPLICATIONS

The costs of this service agreement are accounted for as operating expenses.

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Annual Budget Status and Source of Funds

Contract payments are included as a specific line item in the Aviation Maintenance expense budget. The funding source is the Airport Development Fund. Funding for future years will be included in future Aviation Maintenance annual expense budgets as a specific line item. The annual impact on passenger airline cost per enplanement is approximately \$0.01 - \$0.02.

ADDITIONAL BACKGROUND

The Siemens Direct Digital Controls (DDC) system was originally procured through a competitive bidding process dating back to the 1980's. At that time, Siemens was the low bidder on the original Concourse A expansion. Siemens was also the low bidder on the 1991 Concourse B, C, and D Upgrade project. Both of these projects were "open" bids with no competition waiver requirements.

In 2008, Siemens was the low bidder on the Rental Car Facility Project, designed as a stand-alone DDC system that was "open" bid with no competition waiver requirements. Also in 2010, Siemens was the successful low bidder for the PC Air system that was "open" bid with no competition waiver requirements. Between and after these major projects, the DDC system has been expanded in a "Sole Source" capacity.

During the current contract period, the number of points being monitored has grown over 25% and the number of field panels has grown over 60%, while costs have remained constant. For reference, a point is defined as any item in the system that can be monitored or controlled by the system. Examples of points include thermostat temperatures in a localized space or a damper position on a terminal box in an office ceiling. Field panels contain the control units that operate the control devices in the field, and communicate with the main control system. As such, these points and field panels must be properly maintained to ensure the efficient operation of the system. As the system has grown in size, complexity, and criticality, so has staff's need for support due to the growth in volume of our passengers.

This execution of a new 5-year contract will incorporate an option to cancel the contract at the completion of any year of the contract with 60 days written notice.

ATTACHMENTS TO THIS REQUEST

None

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

December 6, 2011 - The Commission authorized a five year service agreement with Siemens Building Technologies USA for system maintenance.