

**Board Report**

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**File #:** 2021-0097, **File Type:** Contract**Agenda Number:** 25.

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**OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE  
APRIL 15, 2021****SUBJECT: SCADA AS NEEDED TASK ORDER SUPPORT SERVICES****ACTION: AWARD CONTRACT****RECOMMENDATION**

AUTHORIZE:

- A. The Chief Executive Officer to award a sole-source, task order based, firm-fixed unit rate Contract No. OP177320000PS57993 to ARINC Incorporated, a Delaware corporation and wholly owned subsidiary of Raytheon Technologies, a Delaware corporation, for on-call engineering support services in support of Metro's Supervisory Control and Data Acquisition (SCADA) systems, in a not-to-exceed amount of \$40,000,000 for a ten-year period of performance effective July 1, 2021.
- B. The Chief Executive Officer to execute task orders for an aggregate amount not-to-exceed \$40,000,000.

**ISSUE**

This sole source task-order based contract will ensure timely completion of improvements for the Rail Operations Center (ROC) and avoid any interruption to the critical needs of Metro rail operations. Recent acceleration in the Regional Connector project delivery dates require that the new task-order based contract be in place by July 1, 2021. SCADA engineering services for other upcoming transit expansion capital projects, such as Division 20 Portal Widening Turnback and Purple Line Extension Section 1, also need to begin as soon as possible to meet the project schedules. The existing contract OP39603035 is set to expire on December 31, 2021.

**BACKGROUND**

The existing contract OP39603035 was authorized by the Board in November 2013, after a competitive procurement, for equipment and services for the replacement of the obsolete Red Line SCADA System. ARINC was chosen as the most technically qualified proposer offering the lowest price. Six modifications have been issued to accommodate new rail extensions since then, including those most recently to support both the Regional Connector and the Crenshaw line.

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The existing contract includes a 10% DBE participation goal. ARINC has accomplished a 10% participation to date.

## **DISCUSSION**

Metro Rail Transportation and Wayside Systems Maintenance relies heavily on the SCADA system to provide supervisory and control functions that are essential for the safe, reliable, and efficient operation of the Metro rail lines. SCADA is the data pipeline and system management tool for the entire rail system. These functions include centralized control and monitoring of train movement, traction and auxiliary power, fire detection and suppression, gas detection, emergency tunnel and ancillary ventilation, elevators, escalators, radio, emergency telephone, next train arrival times, Transit Passenger Information System (TPIS) and intrusion detection.

A task-order based contract is the best fit to address the sorts of major project-based modifications and expansions to the SCADA system in a cost-effective and timely manner. It is anticipated there will be significant need to modify and enhance the current SCADA system for better train arrival predictions.

The sole source procurement of the SCADA engineering services on an as-needed task-order basis is recommended for the following reasons:

1. Maintain a single unified SCADA platform for the existing and new Lines. Dispatchers and maintenance personnel at the ROC will require training on only one system. Other functions such as next train arrival times and the Transit Passenger Information Systems will require integration with only one system.
2. Replacement of the existing SCADA software by another vendor product is not financially and technical feasible to fit the current Measure M transit expansion program schedules.
3. Modifications of SCADA functions must be performed under strict configuration and quality control procedures. Only ARINC possesses the software revision control history and automated regression test suite that can ensure the quality and correctness of changes.

The existing transit expansion capital projects currently under construction that the SCADA system will be required to support are:

- Regional Connector
- Division 20 Portal Widening Turnback
- Purple Line Extension Section 1
- Purple Line Extension Section 2
- Purple Line Extension Section 3
- Foothill 2B Extension

Each of these items requires the development of SCADA screens and interfaces, addition of tens of thousands of indications and controls, and complex algorithms involving logic, controls, and train

tracking.

The services will address anticipated critical support which includes, but will not be limited to:

1. Continued support of existing SCADA systems including compliance with State of Good Repair (SOGR) standards, maintenance and troubleshooting, on-site support, and software updates.
2. The need to implement and integrate a SCADA system to support upcoming transit expansion capital projects such as Regional Connector, Division 20 Portal Widening Turnback, Purple Line Extension Section 1, Purple Line Extension Section 2, Purple Line Extension Section 3, and the Foothill 2B Extension.
3. The need to introduce enhancements to the existing SCADA systems to include features such as, mobile access, reporting , train prediction , and 100 percent train tracking.

### **DETERMINATION OF SAFETY IMPACT**

State of Good Repair (SOGR) items and regular maintenance impact safety by continuing to maintain our rail lines and pre-emptively fix items that would cause issues. Continuing to use ARINC Incorporated as Metro's SCADA support and maintenance vendor will ensure that all rail lines have a compatible interface and reduce training requirements of operations staff. This will also minimize the load of maintaining unique line specific knowledge, task loading and context switching. Approval of these items would greatly enhance the safety and reliability of the Rail SCADA system by adding the ability to thoroughly analyze incident playbacks, reporting, and improve system availability.

### **FINANCIAL IMPACT**

Funding will be provided from funding sources in the appropriate major transit expansion capital projects as task orders become necessary.

For FY22, funding is included in the capital project budget under the prospective projects such as Regional Connector, Division 20 Portal Widening Turnback, Purple Line Extension Section 1, Purple Line Extension Section 2, Purple Line Extension Section 3, and Foothill 2B Extension.

Since this is a multi-year contract, the Project Manager will ensure that the balance of funds is budgeted for future fiscal years.

#### **Impact to Budget**

The source of funds will be dependent on the specific major transit expansion capital projects. Use of all related funding will maximize allowable funding allocations given approved funding provisions.

Ongoing State of Good Repair (SGR) maintenance and system upgrades will be funded using a combination of Federal, State, and Local funding sources that are eligible for Rail capital including Federal CMAQ, RTIP, STIP, Measure M and Measure R 35% Using these funding sources maximizes the allowable project funding designations given approved provisions and guidelines.

## **IMPLEMENTATION OF STRATEGIC PLAN GOALS**

Approval of this recommendation supports the following Metro Strategic Plan Goals:

- 1: Provide high-quality mobility options that enable people to spend less time traveling.
- 2: Deliver outstanding trip experiences for all users of the transportation system.
- 5: Provide responsive, accountable, and trustworthy governance within the Metro organization.

## **ALTERNATIVES CONSIDERED**

The Board may choose to not approve this request and direct staff to hold an open procurement. This alternative is not recommended. An open solicitation may result in a delayed delivery of a new and different SCADA system that will be incompatible with the existing system. This presents training and maintenance difficulties that will negatively affect the overall safe, effective and efficient operation of Metro's rail system.

Award to a new contractor will also present significant schedule and cost risk to imminent projects such as Regional Connector, Division 20 Portal Widening Turnback, Purple Line Extension Section 1, Purple Line Extension Section 2, Purple Line Extension Section 3, and Foothill 2B Extension.

Another alternative is to implement a new SCADA system in-house. This alternative is also not recommended. Metro has neither the staffing, nor the skill set necessary to execute a project of this magnitude. Furthermore, time is of the essence. Only an experienced contractor offering a proven and mature SCADA system can complete the project within the requirements of our existing project schedule.

## **NEXT STEPS**

Upon Board approval, staff will execute Contract No. OP177320000PS57993 with ARINC Incorporated to provide Supervisory Control and Data Acquisition (SCADA) systems engineering support services. Specific task orders will be issued to start working on projects.

## **ATTACHMENTS**

Attachment A - Procurement Summary  
Attachment B - DEOD Summary

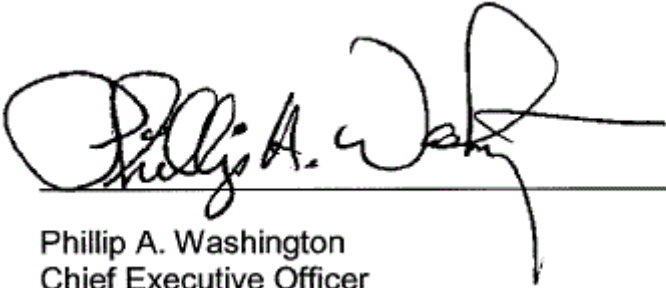
Prepared by:

Errol Taylor, Senior Executive Officer, Maintenance and Engineering, (213) 922-3227  
Leticia Solis, Deputy Executive Officer, Wayside Systems, (213) 613-2115  
David Chu, Director, Wayside Systems (SCADA), (213) 418-3042  
Derek Jurykovsky, Sr. Engineer, Wayside Systems (SCADA), (323) 563-5209

Reviewed by:

James T. Gallagher, Chief Operations Officer, (213) 418-3108

Debra Avila, Chief Vendor/Contract Management Officer, (213) 418-3051



Phillip A. Washington  
Chief Executive Officer