

**Board Report**

File #: 2016-0516, **File Type:** Contract

Agenda Number: 25.

**SYSTEM SAFETY, SECURITY AND OPERATIONS COMMITTEE
SEPTEMBER 15, 2016**

SUBJECT: CRENSHAW/LAX LIGHT RAIL SCADA INTEGRATION

ACTION: APPROVE CONTRACT MODIFICATION

RECOMMENDATION

AUTHORIZE the Chief Executive Officer (CEO) to:

- A. EXECUTE Contract Modification No. 4 to Contract No. OP39603035 with **ARINC Control and Information Systems (ARINC), to upgrade and expand the existing Supervisory Control and Data Acquisition (SCADA) System on the Metro Green Line (MGL) to include and integrate the new Crenshaw/LAX Light Rail Line** for a period of 28 months for the amount-not-to-exceed \$4,994,515 increasing the total contract value from \$10,556,513 to \$15,551,028, inclusive of contract options.
- B. PURCHASE additional coverage on the existing \$15,000,000 supplemental project insurance for 10 years after contract award in excess of ARINC limited liability in an amount not-to-exceed \$450,000 inclusive of premium and fees. This action increases the total coverage cost from \$999,000 to \$1,449,000.

ISSUE

Contract No. OP39603035 was approved by the Board in November 2013 and was awarded to ARINC on January 15, 2014 for the replacement of the obsolete Red Line SCADA System. ARINC was chosen as the most technically qualified firm with the lowest price. Modification No.1 was executed July 14, 2014 to include integration of the Foothill and EXPO-II light rail expansion projects. Modification No. 3 was executed June 19, 2015 to include modifications and deletions necessary to comply with updated Metro Information Technology Hardware and Security standards and to purchase an additional project specific professional liability insurance associated with the increased contract scope.

Approval of this action will expand the existing SCADA system to include the new Crenshaw Light Rail territory, migration of existing Green Line train control for a unified SCADA platform, and add additional insurance coverage for this expanded scope.

Supplemental project specific professional liability insurance policy covers exposure resulting from

Metro's contractual obligation to limit the contractor's professional liability to the value of the contract. Approval of this action will add additional coverage for Crenshaw and Green Line light rail integration activities.

DISCUSSION

Metro Rail Operations and Wayside Maintenance rely exclusively on the SCADA system to provide supervisory and control functions essential for the safe, reliable and efficient operation of the Metro rail lines. These functions include centralized control and/or monitoring of train movement, traction and auxiliary power, fire detection and suppression, gas detection, emergency tunnel and ancillary ventilation, elevators and escalators, radio, emergency telephone, Transit Passenger Information System (TPIS) and intrusion.

Modification and expansion of the existing system to include the new Crenshaw light rail territory is proposed as a means to provide a unified SCADA platform for centralized supervision and control. A unified platform has the following benefits over procurement of a new and separate system:

- Dispatchers and maintenance personnel at the Rail Operations Control Center require training of only one system.
- Disaster recovery and Emergency Backup Control Center implementation requires synchronization and backup of only one system.
- External business systems such as Nextbus, Variable Message Signs, Material Maintenance Manager (M3) system, etc. require integration of only one system.
- System maintainers will be able to provide better overall reliability and reduced mean-time-to-repair of one system than could be provided for multiple different systems.

The new Crenshaw/LAX Line is intended to operate seamlessly with the existing Metro Green Line (MGL). Modification and expansion of the existing ARINC SCADA system must also include migration of MGL Centralized Automatic Train Control (ATC) functions. The existing MGL ATC system was delivered in 1995 by Ansaldo STS (formally Union Switch and Signal Inc.) under Contract No. H1100 and is now obsolete and no longer supported by the vendor.

Future contracts with ARINC are anticipated to further expand the SCADA system to seamlessly integrate the Regional Connector and Purple Line extensions currently under construction.

DETERMINATION OF SAFETY IMPACT

SCADA provides enhanced safety by providing an efficient and effective means of centralized supervision and control of system that directly affects safe operations. This includes fire/gas detection, emergency ventilation, and traction power. Approval of this item would further enhance safety by providing a unified SCADA system for all rail lines. Dispatchers will not be burdened with achieving and maintaining competencies for multiple user interfaces.

FINANCIAL IMPACT

Work will be performed within the existing SCADA Upgrade and Crenshaw/LAX Light Rail project LOPs.

The total amount required for Recommendation A and B in FY17 is \$3,600,000. An amount of \$2,700,000 is included in the FY17 budget: Project 205038, Heavy Rail Subway SCADA System Replacement; Cost Center 3960, Rail Transit Engineering; Account 53102, Acquisition of Equipment. An amount of \$900,000 is included in Project 865512, Crenshaw/LAX Transit Corridor; Cost Center 8510, Construction Contracts/Procurement; Account 53102.

Since this is a multi-year project, the Project Manager and Senior Executive Officer, Rail Maintenance and Engineering, are responsible for budgeting in future years.

Impact to Budget

This system upgrade and expansion is funded using a combination of Federal, State, and Local funding sources that are eligible for Rail capital including Federal CMAQ, RIP, STIP and Measure R 35% cash and/or bonds. Use of these funds maximizes Metro's funding based on availability.

ALTERNATIVES CONSIDERED

The Board may choose to require an open solicitation and not authorize the subject single-source contract modification. This alternative is not recommended. An open solicitation may result in delivery of a new and different SCADA system. This presents training and maintenance difficulties that negatively affect the overall safe, effective and efficient operation. Award to a new contractor will also present significant schedule and cost risks to the Crenshaw project.

Metro could decide not to purchase additional supplemental insurance if the Board determines that additional exposure related to the inability to collect damages for ARINC professional negligence for their integration activities is an acceptable risk. This alternative is not recommended by Metro Risk Management.

NEXT STEPS


Upon approval by the Board, staff will execute Contract Modification No. 4 to Contract No. OP39603035 with ARINC to ensure the delivery of an expanded SCADA system to support an on-time opening of the Crenshaw/LAX Light Rail line.

ATTACHMENTS

- A. Procurement Summary
- B. Contract Modification/Change Order Log
- C. DEOD Summary

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Phillip A. Washington
Chief Executive Officer

PROCUREMENT SUMMARY

CRENSHAW/LAX LIGHT RAIL SCADA INTEGRATION / OP39603035

1.	Contract Number: OP39603035		
2.	Contractor: ARINC Control and Information Systems (ARINC)		
3.	Mod. Work Description: Metro Green Line / Crenshaw Line/LAX Light Rail SCADA Integration		
4.	Contract Work Description: Expand the Metro SCADA system to integrate Metro Green Line automatic train control and new Crenshaw Line for unified supervision and control.		
5.	The following data is current as of:		
6.	Contract Completion Status		Financial Status
	Contract Awarded:	1/15/14	Contract Award Amount: \$6,178,383
	Notice to Proceed (NTP):	1/3/14	Total of Modifications Approved: \$4,378,130
	Original Complete Date:	1/3/21	Pending Modifications (including this action): \$4,994,515
	Current Est. Complete Date:	1/3/21	Current Contract Value (with this action): \$15,551,028
7.	Contract Administrator: James Nolan		Telephone Number: 213-922-7312
8.	Project Manager: Chuck Weissman		Telephone Number: 323-563-5232

A. Procurement Background

This Board Action is to approve Contract Modification No. 4 issued in support of expanding and upgrading the existing Supervisory Control and Data Acquisition (SCADA) System to include the new Crenshaw/LAX Light Rail Line and operate seamlessly with the Metro Green Line (MGL).

This Contract Modification is processed in accordance with Metro's Acquisition Policy and the contract type is a firm fixed price.

Contract No. OP39603035 was approved by the Board in November 2013 and was awarded to ARINC on January 15, 2014, for the replacement of the obsolete Metro Red Line Supervisory Control and Data Acquisition (SCADA) System. ARINC was chosen as the most technically qualified firm with the lowest price. Modification No. 1 was executed July 14, 2014, to include integration of the Foothill and EXPO-II light rail expansion projects. Modification No. 2, executed November 14, 2014, was an administrative action which did not change contract value. Modification No. 3 was executed June 19, 2015, to include modifications and deletions necessary to comply

with updated Metro Information Technology Hardware and Security standards and to purchase an additional project specific professional liability insurance associated with the increased contract scope.

(Refer to Attachment B – Contract Modification/Change Order Log)

B. Cost/Price Analysis

The recommended price has been determined to be fair and reasonable based upon MAS audit findings, cost analysis, technical evaluation, fact finding, and negotiations. The ICE was based on ARINC's rates, fees and overhead prior to the firm being bought by Rockwell. As a result of being acquired by Rockwell, ARINC's rates, overhead and G&A increased. Therefore, the negotiated amount is higher than ICE.

Proposal Amount	Metro ICE	Negotiated Amount
\$5,177,397	\$4,168,914	\$4,994,515

CONTRACT MODIFICATION/CHANGE ORDER LOG

CRENSHAW/LAX LIGHT RAIL SCADA INTEGRATION/OP39603035

Mod. No.	Description	Status (approved or pending)	Date	\$ Amount
1	Integration of Foothill and EXPO II Light Rail Expansion	Approved	07/14/14	\$2,914,575
2	Administrative Change Only	Approved	11/14/14	\$0.00
3	Additions and Deletions to SCADA Tech Spec	Approved	06/19/15	\$1,463,555
4	Metro Green Line/Crenshaw Line/LAX Light Rail SCADA Integration	Pending	TBD	\$4,994,515
	Modification Total:			\$9,372,645
	Original Contract:			\$6,178,383
	Total:			\$15,551,028

DEOD SUMMARY

CRENSHAW/LAX LIGHT RAIL SCADA INTEGRATION/OP39603035

A. Small Business Participation

ARINC made a 12.64% Small Business Enterprise (SBE) commitment. The project is 76% complete. Current SBE participation is 11.55%, a shortfall of 1.09%. ARINC confirmed that its original SBE commitment was based on the delegation of hardware procurement logics and system factory testing. Metro’s Project Manager confirmed that subsequent modifications to the contract, such as the integration of Foothill and EXPO Phase II, have not added significant hardware procurement value, thus posing challenges to meeting the original commitment.

ARINC is developing its SBE subcontractor, Anysolv Technologies, to perform work on proprietary software. Also on Modification No. 4, ARINC will engage the SBE in software configuration and development. ARINC is expected to meet its overall commitment upon completion of the project.

Small Business Commitment	12.64% SBE	Small Business Participation	11.55% SBE
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	SBE Subcontractors	% SBE Committed	Current SBE Participation¹
1.	Anysolv Technologies	12.64%	11.55%
	Total	12.64%	11.55%

¹Current Participation = Total Actual amount Paid-to-Date to SBE firms ÷ Total Actual Amount Paid-to-date to Prime.

B. Living Wage and Service Contract Worker Retention Policy Applicability

The Living Wage and Service Contract Worker Retention Policy is not applicable to this contract.

C. Prevailing Wage Applicability

Prevailing wage is not applicable to this contract.

D. Project Labor Agreement/Construction Careers Policy

Project Labor Agreement/Construction Careers Policy is not applicable to this contract.