

**Board Report**

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**File #:** 2019-0112, **File Type:** Contract**Agenda Number:** 17.

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**OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE  
MAY 16, 2019****SUBJECT: METRO GREEN LINE (MGL) TRACK CIRCUITS AND TRAIN-TO-WAYSIDE  
COMMUNICATION (TWC) UPGRADE - MODIFICATION NO. 2 FOR TRAIN  
CONTROL SIMULATOR LAB****ACTION: APPROVE CONTRACT MODIFICATION****RECOMMENDATION**

AUTHORIZE the Chief Executive Officer to execute Modification No. 2 to Contract No. OP43306000 with Ansaldo STS USA, Inc. (Ansaldo STS) in the amount of \$996,221, increasing the total contract value from \$18,691,449 to \$19,687,670, for the fabrication of a train control simulator lab.

**ISSUE**

The Metro Green Line (MGL) is presently upgrading the track circuits and TWC which provide train detection and transmit cab signals to maintain safe train speed and safe train separation. The system components require an extensive knowledge of electronics and software to properly maintain the train control system. The simulator lab will be used for providing maintenance troubleshooting and training Wayside personnel to identify and test for train control system failures that affect train movements.

**BACKGROUND**

In February 2018, the Metro Board authorized the single source award of Contract No. OP43306000 to Ansaldo STS USA, Inc., in the amount of \$18,655,967, for the upgrade of the MGL track circuits and TWC equipment.

In July 2018, Metro executed Modification No. 1, under the contract modification authority (CMA), in the amount of \$35,482, increasing the contract value from \$18,655,967 to \$18,691,449. Modification No. 1 acquired train operations simulation services from Ansaldo STS to evaluate the MGL and Crenshaw Line train speeds, headway times, and turnback for the realignment of both main tracks at the future Airport Metro Connector Station Central Platform and the temporary shoofly which will be in service during construction of the station.

Approval of Modification No. 2 increases the contract value by \$996,221 from \$18,691,449 to \$19,687,670, and will allow for the fabrication of a train control simulator lab to be used for the MGL

and Crenshaw Line.

## **DISCUSSION**

Metro Maintenance and Engineering has been implementing a phased program of upgrading the legacy MGL train control system that has been operational since the start of service in 1995. The first phase of work (replacement of obsolete vital control processors) has been completed. The current phase is to replace obsolete track circuits and TWC equipment. Upon completion of the project, the MGL train control system will be upgraded to the same equipment and configuration as the new Crenshaw Line.

The train control simulator lab will be essential for maintaining the train control system and reducing train service interruption times when railway signal faults occur. The simulator lab will include a shop test set for wayside electronic equipment that allows for onsite troubleshooting and testing of track circuit functionality to identify faulty circuits. Presently, Metro Wayside workforces do not have this capability and must send components back to the Original Equipment Manufacturer (OEM) to diagnose, test, and confirm faulty components as the root cause.

The simulator lab will also be used for training Metro Wayside workforces. It will replicate a subset of the MGL and Crenshaw Line train control equipment and include learning software that will allow trainees to observe and understand all the vital and non-vital functions and operation of the actual train control system.

## **DETERMINATION OF SAFETY IMPACT**

Approval of the recommendation will have a positive impact on safety and Metro's compliance with the OEM's factory replacement standard and specifications. Further, maintaining the rail system in a State of Good Repair (SGR) is essential to providing safe and reliable service to customers.

## **FINANCIAL IMPACT**

Funding for the modification amount of \$922,221 will come from Capital Project (CP) 205107 - Metro Green Line Train Control Track Circuits and TWC Replacement. The Board approved a Life-of-Project (LOP) budget of \$28,851,200 in September 2016. Funding of \$544,579 is included in the FY19 budget in cost center 3960 Transit Systems Engineering, project 205107, account 53102 - acquisition of equipment.

Since this is a multi-year contract, the Project Manager for CP 205107 will ensure that the balance of project funds is budgeted in future fiscal years.

### **Impact to Budget**

The source of funds for this procurement will come from Metro's share of Transportation Development Act (TDA) Article 4 as well as future Federal, State and local funding sources that are eligible for Rail Capital Projects. These funding sources will maximize the use of funds for these activities.

## **IMPLEMENTATION OF STRATEGIC PLAN GOALS**

Approval of this recommendation supports the following Metro Strategic Plan Goal 1: Provide responsive, accountable, and trustworthy governance within the Metro organization. This project will help maintain safety, service and reliability standards in an effort to provide a world-class transportation system that enhances quality of life for all who live, work, and play within LA County.

## **ALTERNATIVES CONSIDERED**

The Board may choose not to authorize Modification No. 2, but this is not recommended because the train control simulator lab provides vital onsite maintenance troubleshooting of faults with the train control system and helps reduce the interruption time in MGL service as train movements come to a stop until component failures are identified and repairs are completed.

## **NEXT STEPS**

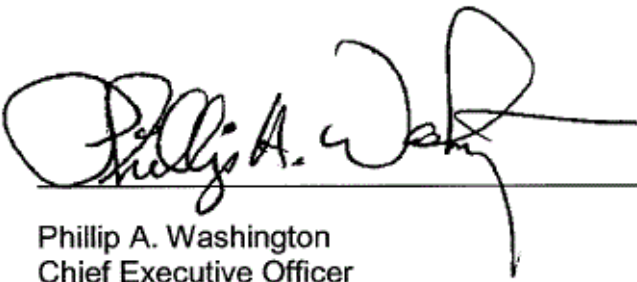
Upon approval of this recommendation, staff will execute Modification No. 2 to Contract No. OP43306000 with Ansaldo STS USA, Inc. to fabricate, deliver and provide factory training for the train control simulator lab.

## **ATTACHMENTS**

- Attachment A - Procurement Summary
- Attachment B - Contract Modification/Change Order Log
- Attachment C - Expenditure Plan
- Attachment D - DEOD Summary

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Phillip A. Washington  
Chief Executive Officer

## PROCUREMENT SUMMARY

## MGL Track Circuits &amp; Train-to-Wayside Communication Upgrade/OP43306000

1.	<b>Contract Number:</b> OP43306000		
2.	<b>Contractor:</b> Ansaldo STS USA, Inc.		
3.	<b>Mod. Work Description:</b> Train Control Simulator Lab		
4.	<b>Contract Work Description:</b> Upgrade of MGL's Track Circuits		
5.	<b>The following data is current as of:</b> April 10, 2019		
6.	<b>Contract Completion Status</b>		<b>Financial Status</b>
	<b>Contract Awarded:</b>	March 1, 2018	<b>Contract Award Amount:</b> \$18,655,967
	<b>Notice to Proceed (NTP):</b>	N/A	<b>Total of Modifications Approved:</b> \$35,482
	<b>Original Complete Date:</b>	February 28, 2023	<b>Pending Modifications (including this action):</b> \$996,221
	<b>Current Est. Complete Date:</b>	February 28, 2023	<b>Current Contract Value (with this action):</b> \$19,687,670
7.	<b>Contract Administrator:</b> Victor Zepeda		<b>Telephone Number:</b> (213) 922-1458
8.	<b>Project Manager:</b> Adremi Omotayo		<b>Telephone Number:</b> (213) 922-3243

**A. Procurement Background**

This Board Action is to approve Contract Modification No. 2 issued for the design and development of a simulator that will be used to train Metro personnel on the upgrade of the track circuit system on the Green Line, which will also be compatible with the Crenshaw Line.

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

In February 2018, the Board authorized the single source award of Contract No. OP43306000 to Ansaldo STS USA, Inc., in the amount of \$18,655,967, for the upgrade of the MGL track circuits and TWC equipment. In July 2018, Modification No. 1 was approved in the amount of \$35,482, which increased the contract value from \$18,655,987 to \$18,691,449. The period of performance remains unchanged from March 2018 to February 2023 (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 a cost analysis, ICE, technical analysis, and negotiation.

<b>Proposal Amount</b>	<b>Metro ICE</b>	<b>Negotiated Amount</b>
\$1,205,171	\$1,274,864	\$996,221

## CONTRACT MODIFICATION/CHANGE ORDER LOG

## MGL Track Circuits &amp; Train-to-Wayside Communication Upgrade/OP43306000

<b>Mod. No.</b>	<b>Description</b>	<b>Status (approved or pending)</b>	<b>Date</b>	<b>\$ Amount</b>
1	Train Operations Simulation Services	Approved	7/27/18	\$35,482
2	Simulator Lab	Pending	Pending	\$996,221
	<b>Modification Total:</b>			<b>\$1,031,703</b>
	<b>Original Contract:</b>			<b>\$18,655,967</b>
	<b>Total:</b>			<b>\$19,687,670</b>

Project 205107 Expenditure Plan

Metro Green Line Train Control Track Circuits and TWC Replacement

Non-Labor Item	Past ITD	Current FY 2019	Future FY 2020	Future FY 2021	Future FY 2022	Contingency FY 2023	Total
OP43306001 - Track Circuits and TWC Upgrade (Ansaldo STS USA)	\$ 932,798	\$ 500,000	\$ 4,000,000	\$ 7,000,000	\$ 6,223,169		\$ 18,655,967
OP43306001 - Modification No. 2 - Train Control Simulator Lab (Ansaldo STS USA)			\$ 996,221				\$ 996,221
PS32017000 - Solicitation Audit of RFP No. OP43306001 Track Circuits and TWC Upgrade Contract Award (BCA Watson Rice LLP)	\$ 12,690						\$ 12,690
PS54830-MOW-TO9 - Train Control Engineering Support Services (Gannett Fleming)		\$ 281,149	\$ 281,148	\$ 250,000	\$ 200,000		\$ 1,012,297
PS54830-MOW-TO4 - Project Scheduling Services (Gannett Fleming)		\$ 18,000	\$ 8,000	\$ 8,000	\$ 8,000		\$ 42,000
Project Management Support Services		\$ 126,746	\$ 126,745	\$ 125,000	\$ 125,000		\$ 503,491
Project Contingency						\$ 1,206,934	\$ 1,206,934
	\$ 945,488	\$ 925,895	\$ 5,412,114	\$ 7,383,000	\$ 6,556,169	\$ 1,206,934	\$ 22,429,600
<b>Metro Labor</b>	\$ 7,215	\$ 42,560	\$ 2,332,130	\$ 2,401,595	\$ 1,638,100		\$ 6,421,600
<b>Yearly Cash Flow Forecast</b>	\$ 952,703	\$ 968,455	\$ 7,744,244	\$ 9,784,595	\$ 8,194,269	\$ 1,206,934	\$ 28,851,200

DEOD SUMMARY

**METRO GREEN LINE (MGL) TRACK CIRCUITS AND TRAIN-TO-WAYSIDE  
COMMUNICATION (TWC) UPGRADE / CONTRACT NUMBER OP-4330-6000**

**A. Small Business Participation**

The Diversity and Economic Opportunity Department (DEOD) did not establish a Small Business Enterprise/Disabled Veteran Business Enterprise (SBE/DVBE) goal for this non-competitive, sole-source procurement. It was determined that the AF-900 First Generation Track Circuits and Train-to-Wayside (TWC) Modems are proprietary equipment. As such, there are no apparent subcontracting opportunities. Ansaldo will be providing the services with its own workforce.

**B. Living Wage and Service Contract Worker Retention Policy Applicability**

The Living Wage and Service Contract Worker Retention Policy (LW/SCWRP) is not applicable to this modification.

**C. Prevailing Wage Applicability**

Prevailing wage is not applicable to this modification.

**D. Project Labor Agreement/Construction Careers Policy**

Project Labor Agreement/Construction Careers Policy is not applicable to this Contract. Project Labor Agreement/Construction Careers Policy is applicable only to construction contracts that have a construction contract value in excess of \$2.5 million.