



## Board Report

File #: 2017-0845, File Type: Contract

Agenda Number: 23.

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### SYSTEM SAFETY, SECURITY AND OPERATIONS COMMITTEE FEBRUARY 15, 2018

**SUBJECT: METRO GREEN LINE FIBER OPTIC CABLE  
FOR EMERGENCY TRIP SYSTEM**

**ACTION: AWARD CONTRACT**

#### **RECOMMENDATION**

AUTHORIZE the Chief Executive Officer to award Contract No. OP45636000 to JM Fiber Optics, Inc. to furnish and install fiber optic cable for the emergency trip system along the Metro Green Line (MGL) right-of-way, for a total amount of \$2,767,890, effective March 2018 through February 2020; subject to resolution of protest(s), if any.

#### **ISSUE**

The MGL Emergency Trip System (ETS) is equipped with obsolete analog telephone wires that are over 20 years old and have been in use since the start of MGL service in 1995. Portions of the ETS telephone wires are corroded and have begun to fail. They require replacement as they have reached the end of their useful life.

#### **DISCUSSION**

In case of an emergency, emergency trip switches are used for de-energization of traction power on the Overhead Catenary Systems (OCS) lines of the section where the emergency is occurring. The MGL ETS electrical cables have become unreliable due to their aging and excessive corrosion of the wire connections. This has caused MGL rail service interruption due to false tripping of the ETS and requires dispatched response by Wayside Maintenance Traction Power personnel for inspection/repair of wire circuits and reset of traction power feeder breakers. Further, existing ETS analog wires that are corroded are in violation of Los Angeles City Fire Code Regulations.

The scope of the work includes replacing the entire 24 gauge telephone wires with fiber optic cable along the entire right of way at connection points between passenger stations, traction power substations, and train control and communication rooms. The ETS fiber optic cable will also be integrated with recently upgraded digital Programmable Logic Controllers (PLC) for improved maintenance and enhanced ETS status indications. Fiber optic cable provides reliability given its sturdiness and does not degrade due to moisture or temperature fluctuations like the analog copper wires do.

## **DETERMINATION OF SAFETY IMPACT**

Approval of the recommendation will have a positive impact on safety as the work scope will move forward to ensure compliance with Los Angeles City Fire Code Regulations. Further, maintaining the rail system in a State of Good Repair is essential to providing a safe and reliable service to riders who ride the Metro Rail system daily.

## **FINANCIAL IMPACT**

Funding for the contract amount of \$2,767,890 will come from Capital Project (CP) 205055 - Metro Green Line Emergency Trip System. The Board approved a Life-of-Project (LOP) budget of \$5,500,000 in April 2014. Funding of \$199,996 is included in the FY18 budget in cost center 3960 Transit Systems Engineering, project 205055, account 53102 - acquisition of equipment.

Since this is a multi-year contract, the Project Manager for CP 205055 will ensure that the balance of funds is budgeted in future fiscal years.

### **Impact to Budget**

The source of funds for this procurement will come from TDA Article 4 funds that are eligible for Rail Capital Projects. Use of this funding source will maximize allowable funding allocation given funding provisions.

## **ALTERNATIVES CONSIDERED**

The Board may choose not to award Contract No. OP45636000. This is not recommended by Metro staff because without proceeding to replace the ETS corroded analog wire with fiber optic cable, Metro will be in violation of Los Angeles City Fire Code Regulations. Further, additional false tripping nuisances will cause delays in MGL service as train movements will need to stop until repairs are completed. Not performing or postponing these replacements is not recommended as these rail infrastructure components are safety sensitive; and if not properly maintained, will impact service reliability, passenger safety and comfort. Additionally, unscheduled maintenance repair costs on a per component basis will result in higher operating costs versus reduced costs when performing work as scheduled.

## **NEXT STEPS**

Upon Board approval, staff will execute Contract No. OP45636000 to JM Fiber Optics, Inc. to furnish and install fiber optic cables for the MGL ETS.

## **ATTACHMENTS**

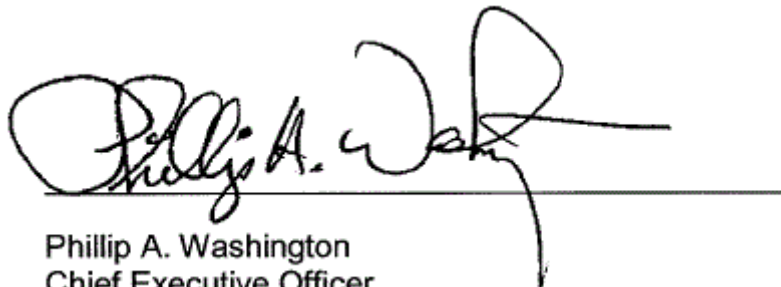
Attachment A - Procurement Summary

Attachment B - DEOD Summary

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