



## Board Report

File #: 2023-0748, File Type: Budget

Agenda Number: 19.

### OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE FEBRUARY 15, 2024

**SUBJECT: FIRE ALARM AND SUPPRESSION SYSTEM PROJECT**

**ACTION: APPROVE RECOMMENDATION**

#### **RECOMMENDATION**

ESTABLISH a Life of Project (LOP) Budget of \$19,000,000 for the Metro B, D, A Lines, and Division 20 Fire Alarm and Suppression System Project.

#### **ISSUE**

In September 2020, the Board approved \$3,000,000 for engineering analysis and requirements definition for a Metro B and D (formerly Red and Purple) Line Fire Alarm Control Panel Replacement System. These funds were needed to assess the existing fire alarm system and develop design and construction specifications. At that time, the estimated cost of replacing the system was not able to be determined. The fire alarm and suppression system in the B and D Lines is intricate and complex to replace as it interfaces with other systems, such as the Supervisory Control and Data Acquisition (SCADA) system. In addition, the project scope of work was expanded to include the fire alarm systems for Division 20 and the Metro A Line Memorial Park-associated tunnel section. After the design and construction specifications were completed, the procurement was initiated as an Invitation for Bid (IFB) No.C1223 to obtain pricing information and award a contract. A LOP needs to be established to award the contract and move forward with this replacement. This LOP is inclusive of the previously approved engineering costs.

#### **BACKGROUND**

The fire alarm control and suppression system play a critical role in ensuring the safety of passengers, employees, and the railway infrastructure. This system is designed to detect and respond to fire incidents promptly. When a fire alarm is triggered, the control system communicates with the Rail Operation Control Center (ROCC) through a connection to the Supervisory Control and Data Acquisition (SCADA) network. This communication involves transmitting real-time data and alerts to the ROCC, providing detailed information about the location and nature of the fire. Once the information reaches the ROCC, the situation can be assessed swiftly, and notification sent to emergency responders. This seamless communication between the fire alarm control system and the ROCC is essential for maintaining the safety and operational integrity of the Metro railway system. The fire alarm control and suppression system are also mandated by local, state, and federal

fire life safety regulations and codes.

## **DISCUSSION**

The project scope of work entails the replacement of the fire alarm control and suppression systems along Segment 1 (from Union Station to Westlake MacArthur Park) on the Metro B and D Lines, Division 20, and the A Line Memorial Park tunnel section. In addition, the scope of work includes the replacement of the Halon fire suppression systems with NOVEC 1230 systems in the train control and communication (TC&C) rooms at those stations and in three rooms at Division 20.

The fire alarm and suppression systems on the B and D Lines as well as Division 20 are close to reaching the end of their useful lives. The system's components, hardware, and software are original equipment that has been in continuous service since the opening of the B and D Lines in 1993. The system will require replacement to renew its useful life as the Original Equipment Manufacturer (OEM) no longer supports the system. However, after-market compatible parts are available, but supply is limited. Wayside workforces often depend on the services of specialized fire alarm firms to acquire and install after-market compatible parts to keep the existing system operational.

The fire alarm control system on the A Line Memorial Park tunnel section has been damaged by rainwater seepage and corrosion in the tunnel environment. The fire alarm system is rendered inoperable, and a temporary Fire Watch order has been in place. The Memorial Park fire alarm system will be scheduled to be among the first items replaced to restore functionality.

Replacement of these fire alarm control and suppression systems is part of the Capital Improvement Program (CIP) to renew transit infrastructure assets. Metro is committed to maintaining transit infrastructure assets in a state of good repair.

A \$19,000,000 need has been estimated based on the necessary project scope and the bid pricing received. This is related to construction costs based on bids received as well as an increase in the scope of work to include Division 20 and Metro A Line Memorial Park. The expenditure plan for the project is shown in Attachment A.

## **DETERMINATION OF SAFETY IMPACT**

Approval of the recommendation will have a positive impact on safety as the project work scope will move forward to ensure compliance with the current local, State of California, and Federal Fire Life Safety regulations and codes including Los Angeles Fire Department Regulation 4. Maintaining the rail system in a state of good repair and compliance with current fire life safety regulations and codes is essential to providing a safe environment for our patrons and employees.

## **FINANCIAL IMPACT**

This action will establish a \$19,000,000 LOP budget for capital project 205116 - MRL Fire Alarm and Suppression System, given the completion of the IFB No. C1223 procurement process. Annual funding required for this project is included in the FY24 budget.

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

### Impact to Budget

The current source of funds for this action is Measure M State of Good Repair 2%. This funding source is eligible for capital projects, not eligible for bus and rail operations.

### EQUITY PLATFORM

The benefits of this action are to ensure that transit infrastructure and the safety of the customers and riders are improved countywide, including assets that provide transit service in Equity Focus Communities (EFCs).

The EFCs served include Downtown L.A., Koreatown, Westlake, Hollywood, Universal City, and North Hollywood.

### IMPLEMENTATION OF STRATEGIC PLAN GOALS

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

Goal # 1 Provide high-quality mobility options that enable people to spend less time traveling.

Goal # 2 Deliver outstanding trip experiences for all users of the transportation system.

Goal # 3 Enhance communities and lives through mobility and access to opportunity.

### ALTERNATIVES CONSIDERED

The Board may choose not to adopt the LOP budget. This is not recommended by staff because the existing fire alarm control and fire suppression systems at the identified locations are reaching the end of their useful lives. They are safety sensitive and choosing not to perform or postpone these replacements may impact service reliability and safety. 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

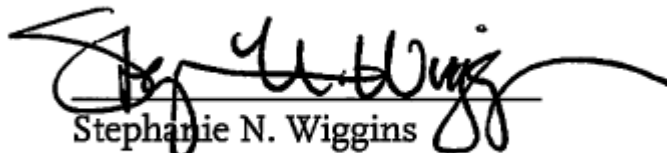
Upon Board approval of the requested LOP, the CEO may approve the low bid contract award, pursuant to California Public Utilities Code 130051.9(c). The contract will be executed, and Operations - Infrastructure Maintenance and Engineering will proceed forward with the project scope.

### ATTACHMENTS

Attachment A - Project 205116 Expenditure Plan

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Chief Executive Officer

**CP 205116 Expenditure Plan**  
**Metro B, D, Division 20, and A Line Memorial Park Tunnel Section Fire Alarm and Suppression System**

<b>Use of Funds</b>	<b>ITD</b>	<b>FY24</b>	<b>FY25</b>	<b>FY26</b>	<b>FY27</b>	<b>FY28</b>	<b>Total</b>
IFB No C1223 Metro B, D, Division 20 and A Line Memorial Park Tunnel Fire Alarm Control and Suppression System Replacement	\$ -	\$ 500,000	\$ 3,500,000	\$ 3,500,000	\$ 3,500,000	\$ 1,081,133	\$ 12,081,133
Contract No. PS46172000 Engineering Design Work and Construction Specifications	\$ 799,102	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 799,102
Metro Wayside and Facilities Maintenance Labor	\$ -	\$ -	\$ 995,700	\$ 1,021,350	\$ 1,039,200	\$ 267,500	\$ 3,323,750
Agency Costs (Design Support During Construction, Project Management, Procurement, Labor Compliance)	\$ 96,015	\$ 100,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 100,000	\$ 1,796,015
Contingency 8%							\$ 1,000,000

**Yearly Cash Flow Forecast \$ 895,117 \$ 600,000 \$ 4,995,700 \$ 5,021,350 \$ 5,039,200 \$ 1,448,633 \$ 19,000,000**