



Board Report

File #: 2024-0642, File Type: Contract

Agenda Number: 34.

**OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE
OCTOBER 24, 2024**

SUBJECT: METRO B AND D LINES AUDIO FREQUENCY TRACK CIRCUIT AND INTERLOCKING RELAY LOGIC REPLACEMENT

ACTION: APPROVE RECOMMENDATION

RECOMMENDATION

AUTHORIZE the Chief Executive Officer to:

- A. AWARD a firm fixed price Contract No. AE117449000 to B & C Transit, Inc. for the Metro B and D Lines Audio Frequency Track Circuit and Interlocking Relay Logic Replacement Project in the amount of \$59,858,500, effective November 1, 2024, subject to resolution of any properly submitted protest(s), if any; and
- B. INCREASE the Life of Project (LOP) Budget for the Metro B and D Lines Audio Frequency Track Circuit and Interlocking Relay Logic Replacement Project by \$20,000,000 from \$50,100,000 to \$70,100,000.

ISSUE

The Metro Railway Train Control system uses track circuit modules and relay logic (electromechanically operated vital and non-vital relay switches) to manage the safe movement of trains. The current train protection system on the B (formerly Red) and D (formerly Purple) Lines has continuously operated since revenue service began in 1993. These track circuit modules and relay logic (non-vital and vital relays) are now reaching the end of their useful life and require replacement. They are no longer supported by the Original Equipment Manufacturer (OEM), are not readily available in the industry, and potential replacement relays are not cost-effective due to the difficulty of installation. Approval of a contract award and an increase in the LOP budget are needed to proceed with the replacement and modernization work.

BACKGROUND

The track circuit modules and relay logic (non-vital and vital relays) associated with the train control system are reaching the end of their useful life. The OEM no longer supports the relays, and their scarce availability creates a challenge for the Maintenance of Way (MOW) workforces to keep them operational and in good repair. Additionally, new technology in the marketplace would make maintenance of the train control system more manageable by providing diagnostic tools that help

MOW workforces troubleshoot and diagnose potential failures, which reduce unplanned downtime and improve system reliability.

In May 2022, the Board approved the Metro B and D Lines Audio Frequency Track Circuit and Interlocking Relay Logic Replacement Project with an LOP budget of \$50,100,000 as part of the adopted FY23 annual budget. This initial LOP budget was based on the engineering estimate for replacing the Metro B and D Lines Audio Frequency Track Circuit and Interlocking Relay Logic. Subsequently, the cost increase in the design, procurement, and installation of the train control equipment industry and inflation contributed significantly to the requested increase in LOP.

DISCUSSION

All train control equipment rooms have many track circuit modules and relay logic (non-vital and vital relays). Vital relays are essential to Metro's Railway Train Control system, which manages critical safety functions. They ensure the safe operation of trains by controlling signals and track switches at interlockings (track sections). They are designed to halt train movements when a train enters a section already occupied by another train. These relays are crucial in preventing collisions and are designed to mitigate unsafe conditions even when failing. Non-vital relays manage other essential functions such as requesting routes, providing status indications, and sending alarms to the Rail Operations Control (ROC) Center.

The project work under Contract No. AE117449000 will replace the current track circuit modules, relay logic (vital and non-vital relays), and associated wiring with microprocessor-based train control equipment. The microprocessor-based train control system will be installed at sixteen (16) Train Control and Communication Room (TCCR) locations along the mainline. To minimize the impact on rail service, the project work will be performed within one TCCR at station locations at a time. A \$70,100,000 LOP budget need has been determined based on the necessary project scope and the negotiated amount for Contract No. AE117449000. See Attachment A for the expenditure plan of capital project 205674.

The replacement of the train control relays is part of the Capital Improvement Program (CIP), which aims to renew transit infrastructure assets. Metro is committed to maintaining transit infrastructure assets that are in good repair.

DETERMINATION OF SAFETY IMPACT

Non-vital and vital train control relays directly impact the safety of train movements and are critical infrastructure assets that work to prevent train collisions and other safety hazards. In accordance with Metro's Transit Asset Management Plan requirements, both non-vital and vital train control relays must be replaced in a timely manner when they begin reaching the end of their useful life to comply with safety and reliability standards, alongside meeting California Public Utilities Commission (CPUC) and Federal Transit Administration (FTA) regulations.

FINANCIAL IMPACT

This action will increase the LOP budget for capital project 205674-B and D Lines Train Control Non-Vital and Vital Relay Replacement, adjusting it from \$50,100,000 to \$70,100,000. Funding of

\$4,656,029 is included in the FY25 budget.

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

Impact to Budget

The current source of funds for this action is Measure R 2%. This funding is eligible for Capital Projects. Using this funding source maximizes the project funding allocation intent allowed by approved provisions and guidelines.

EQUITY PLATFORM

Metro is committed to maintaining transit assets in marginalized communities, ensuring reliable and equitable transportation options for Metro riders, especially EFCs. The equity benefits of this action modernize transit infrastructure assets on the B (formerly Red) and D (formerly Purple) Lines that directly provide service in many Equity Focus Communities (EFCs) as well as low-income riders, who are the primary users of the Metro transit system.

The B & D Lines serve numerous communities with a high EFC concentration, including Westlake/MacArthur Park, Koreatown, East Hollywood, and North Hollywood. They also serve as a key transfer connection to other Metro rail lines and multiple bus lines for workers, students, and residents in these EFCs.

The Diversity and Economic Opportunity Department (DEOD) set goals of 7% for Small Business Enterprise (SBE) and 3% for Disabled Veteran Business Enterprise (DVBE) participation in this solicitation. B & C Transit, Inc. fulfilled these requirements by committing to a 7% SBE and 3% DVBE participation.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

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

- 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 award Contract No. AE117449000 and not increase the LOP budget for project 205674. Staff does not recommend this because the current Audio Frequency Track Circuit and Interlocking Relay Logic along the B and D Lines are nearing the end of their useful life. They are safety-sensitive, and choosing not to perform or postpone replacement will impact service reliability if the relays become non-operational, halting train movements and disrupting railway service. Functioning non-vital and vital relays are required for train operations. Additionally, unscheduled maintenance repair costs per component will result in higher operating costs versus

reduced costs when performing work as scheduled.

NEXT STEPS

Upon Board approval of the recommendations, staff will increase the authorized LOP budget and execute Contract No. AE117449000 with B & C Transit, Inc. for the Metro B and D Lines Audio Frequency Track Circuit and Interlocking Relay Logic Replacement Project.

ATTACHMENTS

Attachment A - Capital Project 205674 Funding and Expenditure Plan

Attachment B - Procurement Summary

Attachment C - DEOD Summary

Prepared by:

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Stephanie N. Wiggins
Chief Executive Officer

**Capital Project 205674 Funding and Expenditure Plan
B / D Lines Audio Frequency Track Circuit and Interlocking Relay Logic Replacement**

Use of Funds	ITD	FY25	FY26	FY27	FY28	Total
Contract No. AE117449000 B and D Lines Audio Frequency Track Circuit and Interlocking Relay Logic Replacement		\$ 5,000,000	\$ 18,000,000	\$ 18,000,000	\$ 18,858,500	\$ 59,858,500
Metro Workforces		\$ 900,000	\$ 900,000	\$ 900,000	\$ 955,650	\$ 3,655,650
Agency Costs (Design Support During Construction, Construction Management, Project Management, Procurement, Labor Compliance)	\$ 50,144	\$ 99,856	\$ 150,000	\$ 150,000	\$ 150,000	\$ 600,000
Contingency 10%					\$ 5,985,850	\$ 5,985,850

Total Project Costs \$ 50,144 \$ 5,999,856 \$ 19,050,000 \$ 19,050,000 \$ 25,950,000 \$ 70,100,000

Source of Funds	ITD	FY25	FY26	FY27	FY28	Total
Local : Measure M 2% - Active Transportation	\$ 50,144	\$ 5,999,856	\$ 19,050,000	\$ 19,050,000	\$ 25,950,000	\$ 70,100,000

Total Project Funding \$ 50,144 \$ 5,999,856 \$ 19,050,000 \$ 19,050,000 \$ 25,950,000 \$ 70,100,000

Note: Future funding sources will be pursued as opportunities become available.

PROCUREMENT SUMMARY

METRO B AND D LINES AUDIO FREQUENCY TRACK CIRCUIT AND INTERLOCKING RELAY LOGIC REPLACEMENT/AE117449000

1.	Contract Number: AE117449000	
2.	Recommended Vendor: B & C TRANSIT, INC.	
3.	Type of Procurement (check one): <input type="checkbox"/> IFB <input type="checkbox"/> RFP <input checked="" type="checkbox"/> RFP-A&E <input type="checkbox"/> Non-Competitive <input type="checkbox"/> Modification <input type="checkbox"/> Task Order	
4.	Procurement Dates:	
	A. Issued: March 1, 2024	
	B. Advertised/Publicized: March 1, 2024	
	C. Pre-Proposal Conference: March 12, 2024	
	D. Proposals Due: April 18, 2024	
	E. Pre-Qualification Completed: July 11, 2024	
	F. Conflict of Interest Form Submitted to Ethics: April 18, 2024	
	G. Protest Period End Date: October 29, 2024	
5.	Solicitations Picked up/Downloaded: 16	Proposals Received: 1
6.	Contract Administrator: Ernesto N. De Guzman	Telephone Number: (213) 922-7267
7.	Project Manager: Aderemi Omotayo	Telephone Number: (213) 922-3243

A. Procurement Background

This Board Action is to approve award of Contract No. AE117449000 to B & C Transit, Inc. issued in support of the Metro B and D Lines Audio Frequency Track Circuit and Interlocking Relay Logic Replacement project. Board approval of contract awards is subject to resolution of any properly submitted protest(s), if any.

On March 1, 2024, Request for Proposal (RFP) No. AE117449 was released as a competitive procurement, in accordance with Metro’s Acquisition Policy and the contract type is firm fixed price. The Diversity & Economic Opportunity Department recommended a Small Business Enterprise (SBE) goal of 7% and a Disabled Veteran Business Enterprise (DVBE) goal of 3%.

Four amendments were issued during the solicitation phase of this RFP:

- Amendment No. 1, issued on March 11, 2024, revised Section LOI-01 Notice and Invitation, to include the 7% SBE goal and 3% DVBE goal.
- Amendment No. 2, issued on March 18, 2024, updated the scope of services to add event recorder(s) per location as recommended by the American Railway Engineering and Maintenance-of-Way Association (AREMA), and clarified the insurance requirements for professional services.
- Amendment No. 3, issued on March 19, 2024, added Section LOI – 16 SBE/DVBE PROGRAM to the solicitation.

- Amendment No. 4, issued on March 27, 2024, revised the Proposal due date to April 18, 2024.

A total of sixteen (16) firms downloaded the RFP and were included in the planholder's list. A virtual pre-proposal conference was held on March 12, 2024, and was attended by nine participants representing three firms. Sixty-four questions were received for this RFP and responses were provided prior to the proposal due date.

One proposal was received by the due date of April 18, 2024 from B & C Transit, Inc.

Since only one proposal was received, staff conducted a market survey of the planholders to determine why no other proposals were submitted. Responses were received from four firms and they included the following reasons:

- the scope of services not being within their area of expertise
- product would be incompatible with Metro system
- RFP downloaded for information purposes only

The market survey revealed that the decisions not to propose were based on individual business considerations. Therefore, the solicitation can be awarded as a competitive award.

B. Evaluation of Proposal

A Proposal Evaluation Team (PET) consisting of staff from the Wayside Systems Engineering and Maintenance, and the Facilities Contracted Maintenance Services departments was convened and conducted a comprehensive technical evaluation of the proposal received.

The proposal was evaluated based on the following criteria:

Minimum Qualification Requirements: This is a pass/fail criteria. To be responsive to the RFP minimum qualification requirements, the proposer must meet the following:

1. Proposer shall be a train control equipment manufacturer or train control systems integrator with at least five (5) years of experience in the design, installation, assembling, manufacturing, testing, and integrating a train control system on an active transit system.
2. Proposer must have an active California State Contractor License(s) in the appropriate field(s) for the performance of the work.

The proposer met the minimum qualification requirements and was evaluated based on the following weighted evaluation criteria:

- | | |
|---|-----|
| • Experience and Qualifications of the Team | 35% |
| • Experience and Qualifications of the Proposed Key Personnel | 20% |
| • Effectiveness of Management Plan | 10% |
| • Work Plan/Project Approach | 35% |

The evaluation criteria are appropriate and consistent with criteria developed for other, similar Architecture and Engineering (A&E) procurements. Several factors were considered when developing these weights, giving the greatest importance to the experience and qualifications of the team and the work plan/project approach.

This is an A&E, qualifications-based procurement; therefore, price cannot be used as an evaluation factor pursuant to state and federal law.

During the period of May 9, 2024 to May 23, 2024, the PET independently evaluated and scored the technical proposal and determined that the proposal met the requirements of the scope of services.

A summary of the PET scores is provided below:

1	Firm	Average Score	Factor Weight	Weighted Average Score	Rank
2	B & C Transit, Inc.				
3	Experience and Qualifications of the Team	93.34	35.00%	32.67	
4	Experience and Qualifications of the Proposed Key Personnel	96.70	20.00%	19.34	
5	Effectiveness of Management Plan	92.70	10.00%	9.27	
6	Work Plan/Project Approach	80.66	35.00%	28.23	
7	Total		100.00%	89.51	1

C. Cost Analysis

The recommended price has been determined to be fair and reasonable based upon an Independent Cost Estimate (ICE), technical analysis, cost analysis, fact finding, and negotiations. Staff successfully negotiated savings of \$9,104,000 as a result of the contractor re-engineering some tasks.

Proposal Amount	Metro ICE	Recommended Amount
\$68,962,500	\$50,650,000	\$59,858,500

The variance between the ICE and the recommended amount is due to a 15% rise in the cost of materials since the ICE was developed and the sales tax not being included as part of the ICE.

D. Background on Recommended Contractor

B & C Transit, Inc., founded in 1999, is a transit engineering firm based in Oakland, California, and is a wholly owned subsidiary of Alstom Signaling, Inc. They focus on automated train control design, technical engineering, system installations, field testing, networked and stand-alone control, office monitoring systems, station communications,

and design-build engineering. B & C Transit, Inc. has previously satisfactorily performed work for Metro as a prime contractor and subcontractor.

DEOD SUMMARY

**METRO B AND D LINES AUDIO FREQUENCY TRACK CIRCUIT AND
INTERLOCKING RELAY LOGIC REPLACEMENT/AE117449000**

A. Small Business Participation

The Diversity and Economic Opportunity Department (DEOD) established a 7% Small Business Enterprise (SBE) and 3% Disabled Veteran Business Enterprise (DVBE) goal for this solicitation. B & C Transit, Inc. met the goal by making a 7% SBE and 3% DVBE commitment.

Small Business Goal	7% SBE 3% DVBE	Small Business Commitment	7% SBE 3% DVBE
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	SBE Subcontractors	% Committed
1.	KPA Constructors, Inc.	7.00%
	Total SBE Commitment	7.00%

	DVBE Subcontractors	% Committed
1.	Professional Telecommunications Services, Inc.	3.00%
	Total DVBE Commitment	3.00%

B. Local Small Business Preference Program (LSBE)

The LSBE Preference Program does not apply to Architecture and Engineering procurements. Pursuant to state and federal law, price cannot be used as an evaluation factor.

C. Prevailing Wage Applicability

Prevailing Wage requirements are applicable to this contract. DEOD will monitor contractors' compliance with the State of California Department of Industrial Relations (DIR), California Labor Code, and, if federally funded, the U S Department of Labor (DOL) Davis Bacon and Related Acts (DBRA).

D. Living Wage Service Contract Worker Retention Policy Applicability

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

E. Project Labor Agreement/Construction Careers Policy

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

METRO B AND D LINES AUDIO FREQUENCY TRACK CIRCUIT AND INTERLOCKING RELAY LOGIC REPLACEMENT PROJECT

OCTOBER 24, 2024



RECOMMENDATION



AUTHORIZE the Chief Executive Officer to:

- A. AWARD a firm fixed price Contract No. AE117449000 to B & C Transit, Inc. for the Metro B and D Lines Audio Frequency Track Circuit and Interlocking Relay Logic Replacement Project in the amount of \$59,858,500, effective November 1, 2024, subject to resolution of any properly submitted protest(s), if any; and
- B. INCREASE the Life of Project (LOP) Budget for the Metro B and D Lines Audio Frequency Track Circuit and Interlocking Relay Logic Replacement Project by \$20,000,000 from \$50,100,000 to \$70,100,000.

ISSUE & DISCUSSION



ISSUE

- The B and D Lines track models and relay logic are now reaching the end of their useful life and require replacement. They are also no longer supported by the OEM.

DISCUSSION

- This project replaces existing equipment with a microprocessor-based train control system.

RECOMMENDED AWARDEE

- B & C Transit

NUMBER OF PROPOSALS RECEIVED

- One

DEOD COMMITMENT

- SBE 7%/DVBE 3% commitment percentages met



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