

**Board Report**

File #: 2022-0303, **File Type:** Contract**Agenda Number:** 6.

**OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE
JUNE 16, 2022****SUBJECT: A650 HEAVY RAIL VEHICLE FLEET FRICTION BRAKE OVERHAUL****ACTION: APPROVE RECOMMENDATION****RECOMMENDATION**

AUTHORIZE the Chief Executive Officer to execute Modification No. 9 to Contract No. MA6274900, Indefinite Delivery/Indefinite Quantity (IDIQ) contract with Wabtec Passenger Transit (Wabtec) for A650 Heavy Rail Fleet Friction Brake Overhaul to extend the Period of Performance through June 30, 2024, and increase the Not-to-Exceed Total Contract Price by \$531,631.00 from \$3,727,827.00 to \$4,259,458.00.

ISSUE

The A650 Air Compressor Assembly is a component within the Friction Brake System. The Air Compressor Unit Assembly overhauls are required to be accomplished in parallel with the ongoing A650 Friction Brake Equipment overhaul services, thereby ensuring the overhauls are performed in accordance with regulatory standards.

Due to nationwide pandemic requiring shelter-in place mandate beginning in 2020, the A650 heavy rail fleet friction brake overhaul program experienced a production slowdown whereas both Wabtec (Contractor) and Rail Fleet Services experienced personnel shortages causing a delay to the schedule. The slowdown in production for nearly two (2) years necessitates a Contract period of performance extension to complete this friction brake overhaul cycle.

In parallel, upon inspection and testing the Air Compressor Unit, the Contractor notified staff that the Air Compressor Unit motors failed fitness testing and were determined to be unrepairable as it was discovered the replacement parts became obsolete, requiring the purchase of new motors.

The purchase of new motors is not included in the original contract awarded to Wabtec in 2017, thus requesting this contract modification will allow for continuation of overhaul services and for the purchase of ASU motors required for a thorough and complete overhaul of the A650 Friction Brake System. Furthermore, this approval of this item will achieve equipment safety, reliability and performance standards in accordance with regulatory requirements and OEM specifications. This approach will result in the least impact to the schedule and Metro resources in an effort to complete the project effectively.

BACKGROUND

Contract No. MA6274900 was approved by the Board in January 2017, awarding Wabtec, the Original Equipment Manufacturer (OEM), the A650 Friction Brake Systems overhaul base services contract. In March 2020, the Board approved adding overhaul services of the D-4-S Air Compressor Assembly Unit, as this is an essential subsystem component of the Friction Brake Systems and was required to be accomplished in parallel with the A650 Friction Brake overhaul services.

The Breda A650 Subway Option-Buy fleet consists of 51 married-pair vehicles and is currently in the 24th year of revenue service operations. This fleet is presently undergoing a Component Overhaul Program, overhauling five (5) major systems including: friction brake, traction motor, gearbox coupler, and LVPS equipment. The average per car mileage is 1.6 million miles and has an accumulated fleet mileage of 100 million miles with consistent reliability and safety records.

DISCUSSION

The A650 Subway Fleet consists of 102 rail cars (51 married pairs) in its 24th year of revenue service operations with over 1.5 million miles per rail car. The Friction Brake overhaul is scheduled on a four-year overhaul cycle to ensure the fleet remains in a constant State of Good Repair (SGR) while safeguarding passenger safety and service reliability.

The Friction Brake System Overhaul consists of tear down, inspection, and replacement of safety sensitive components e.g. brake calipers, actuators, brake valves, transducers, numerous valves, relays, including Air Compressor and HPT Tread Brake Actuators. The wear and tear of these components are predictable therefore necessitating periodic overhauls accomplished by the OEM with specialized equipment and mechanic certifications to ensure equipment reliably.

The Friction Brake Overhaul is (1 of 8) vehicle systems within the Component Overhaul Program managed and performed by Rail Fleet Services staff. Other vehicle systems undergoing overhaul include coupler, low voltage power supply, gearbox, traction motor, and semi-permanent coupler.

The friction brake system consists of numerous subcomponents, including tread brakes, brake shoes, brake valves, electronic controls, and Air Supply Unit (air compressor). The Original Equipment Manufacturer OEM recommends overhaul every 5 years; this is the 4th cycle overhaul. The Friction Brake Overhaul is critical in keeping the heavy rail fleet safe and reliable in conjunction with the State of Good Repair (SGR) mandates.

Rail Fleet Services (RFS) Engineering developed equipment overhaul specification(s) for all systems included in the Component Overhaul Program based on OEM recommendations and RFS maintenance experience. The OEM contractor will perform overhaul services in accordance with a defined schedule within Metro's technical specifications requirements.

DETERMINATION OF SAFETY IMPACT

Safety is of the utmost importance to Metro and, therefore, it is imperative to maintain the A650 fleet

without deferred maintenance and in a constant SGR. The Air Compressor will be accomplished in parallel with the ongoing Friction Brake equipment overhaul thereby ensuring the overhauls are performed in accordance with regulatory standards within a defined schedule while following Metro's Corporate Safety policy and procedures.

The friction brake equipment is a vital system that stops the railcar during high-speed emergency stops and provides final braking at passenger stations. In the event of friction brake equipment failure, the rail car will not stop within the prescribed braking rate and distance with potential catastrophic results to those involved.

FINANCIAL IMPACT

Funding of \$531,631.00 is included in the Cost Center 3942, Project 300044 Account 50441. The delivery of the Air Supply Unit motors is planned for 1st quarter FY23.

Impact to Budget

Funding for this operating/rehabilitation effort includes operating eligible sources like Fares, Prop A 35, Measure M, and STA. Using these funding sources maximizes the project funding allocations allowed by approved provisions and guidelines.

EQUITY PLATFORM

This is an existing overhaul service support contract needed to ensure continuity and proper project closeout of the A650 Friction Brake Overhaul Services contract and does not have any impacts on the previously approved LOP. Approval of the two recommendations ensures successful completion of the A650 overhaul project and will provide safe, accessible and affordable transportation for all riders of Metro's heavy rail system. Based on the 2019 Customer Survey, the Red and Purple heavy rail lines serve the following ridership:

- 27.7% below the poverty line
- 56.4% have no car available
- Rider Ethnicity: Latino 38.9%; Black 13.1%; White 25.8%; Asian/Pacific Islander 15.2%; Other 6.5%

In addition, areas include: Union Station to Downtown LA, Koreatown (Wilshire/Western), Hollywood, Universal City, and North Hollywood. Approval of this Board item will ensure non-interruptions on SGR overhaul services that support the ongoing A650 Friction Brake Overhaul project and allow for successful delivery of safety systems to Metro's existing heavy rail vehicle lines currently serving majority Equity Focus Communities who rely on public transportation.

Wabtec Passenger Transit made a 5% Small Business Enterprise (SBE) commitment. Based on payments reported the project is 51% complete and the current SBE participation is 14.71%, exceeding the SBE commitment by 9.71%

IMPLEMENTATION OF STRATEGIC PLAN GOALS

The recommendation supports Metro Strategic Plan Goal 5) Provide Responsive, Accountable, and Trustworthy governance within the Metro organization. Approval of this item will help safeguard overhaul production continuance while reliably meeting passenger safety and fleet.

ALTERNATIVES CONSIDERED

Deferral of this overhaul work is not recommended as these Friction Brake Systems are integral components of the vehicle braking systems that could result in equipment failures, service delays, and risk to passenger safety if not properly maintained.

Due to OEM inability to repair or overhaul the Air Supply Unit equipment resulting from parts obsolescence, it is necessary to procure new motors keeping the friction brake equipment in service for an additional 15 years. Due to the significance of the friction brake equipment there are no alternatives to be considered.

NEXT STEPS

Upon Board approval, the friction brake equipment overhaul program will continue and the contractor will replace obsolete compressor motors with new motors.

ATTACHMENTS

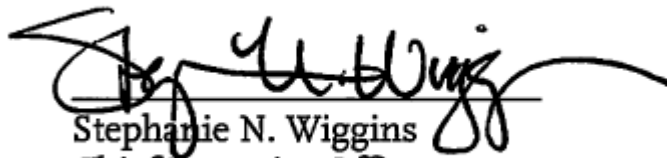
- Attachment A - Procurement Summary
- Attachment B - Modification Log
- Attachment C - DEOD Summary

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