



**Metro**

Los Angeles County  
Metropolitan Transportation Authority

One Gateway Plaza  
Los Angeles, CA 90012-2952

213.922.2000 Tel  
metro.net

**April 9, 2020**

**TO: BOARD OF DIRECTORS**

**THROUGH: PHILLIP WASHINGTON** *PAW*  
**CHIEF EXECUTIVE OFFICER**

**FROM: DEBRA AVILA** *DA*  
**CHIEF VENDOR CONTRACT MANAGEMENT OFFICER**

**SUBJECT: DETERMINATION OF AN IMMEDIATE REMEDIAL MEASURE  
FOR A650 METRO RED LINE VEHICLE – FRICTION  
BRAKE SYSTEM**

**ISSUE**

Receive and File report notifying the Board that the Chief Executive Officer has authorized and executed: 1) a Contract Option for overhaul services of the A650 Red Line Vehicle Hydraulic Pneumatic Tread (HPT) Brake Actuators (\$998,400); and 2) authorized and execute a Contract Modification to add overhaul services for D-4-S Air Compressor Assembly units (\$723,892) under the existing A650 Friction Brake Overhaul Contract, Contract No. MA6274900, in the total amount of \$1,722,292. This action was taken pursuant to California statute Public Utilities Code (PUC) Section 130235 for Immediate Remedial Measures.

**BACKGROUND**

Due to the cancellation of the March 2020 Metro Board of Directors Meeting, and to COVID-19 pandemic, staff employed an expedited approval and contract award action for equipment repairs in accordance with California statute PUC 130235 for Immediate Remedial Measures. The A650 friction brake system, being a critical safety system, this immediate remedial action was necessary and essential to mitigate any potential risks of injury to the public-at-large and property.

Metro Board Report (#2020-0104), dated March 19, 2020 attached, recommended authorizing the CEO, 1) to execute a Contract Option to overhaul the A650 Red Line Vehicle HPT Brake Actuators, and 2) to augment the quantity of overhaul services performed on the D-4-S Air Compressor Assembly units. The HPT overhauls are a Contract Option to the existing brake overhaul Contract approved by the Board in January 2017. The HPT overhaul services is now required to be performed concurrent with the previously exercised Option for D-4-S Air Compressors. Moreover, the overhaul services for the D-4-S Air Compressors was only partially performed on the A650 fleet. Subsequently staff determined that the D-4-S Air Compressor overhaul services should be performed on the entire fleet.





## Board Report

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File #: 2020-0104, File Type: Contract

Agenda Number: 16.

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**OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE  
MARCH 19, 2020**

**SUBJECT: A650 FLEET FRICTION BRAKE SYSTEM**

**ACTIONS: APPROVE CONTRACT MODIFICATION**

**RECOMMENDATIONS**

AUTHORIZE the CEO to:

- A. EXECUTE Modification No. 5 to exercise Option No. 2 to Contract No. MA6274900 with Wabtec Passenger Transit (Wabtec) for overhaul of Hydraulic Pneumatic Tread (HPT) Brake Actuator for a not-to-exceed amount of \$998,400 increasing the Contract Total not-to-exceed value from \$1,859,000 to \$2,857,400; and,
  
- B. APPROVE Contract Modification No. 5 to add overhaul services for D-4-S Air Compressor Assembly Units to Wabtec's Contract No. MA6274900 for a not-to-exceed amount \$723,892. The total contract not-to-exceed amount is increased from \$2,857,400 to \$3,581,292.

**ISSUE**

The D-4-S Air Compressor Assembly is an essential subsystem component that must be included in the overall A650 Friction Brake System Overhaul concurrent with the HPT Brake Actuator. The Air Compressor and HPT Actuator 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.

The A650 Subway Fleet Air Compressor and HPT Brake Actuator Assemblies are components within the Friction Brake System. These overhauls were not included in the original contract awarded to Wabtec in January 2017 but are requested now to accomplish a thorough Friction Brake System overhaul to achieve equipment reliability and performance in accordance with regulatory standards.

**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 and HPT Brake Actuator. D-4-S Air Compressor Unit Assemblies was a part of the original Request for Proposal and evaluated by Metro staff. However, Option 1 was excluded from the Board Report

January 2017.

Contract No. MA6274900 was approved by the Board in January 2017, awarding Wabtec, the Original Equipment Manufacturer (OEM), overhaul of the Friction Brake Systems base services including the HPT Brake Actuators, option 2, was not exercised at contract award due to RFS Management decision to perform these overhauls on as-needed basis. The Air Compressor overhaul was not included in the original contract as the Rail Fleet Staff decided to perform a "partial" overhaul replacing limited parts as a cost savings measure; however, this approach was with marginal success with downgraded performance and reliability. This overhaul will include upgraded components e.g. pistons and air dryer equipment.

### **DISCUSSION**

The A650 Subway Fleet consists of 102 rail cars (51 married pairs) in its 24<sup>th</sup> 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. Wear and tear of these component 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.

Rail Fleet Services (RFS) Engineering developed equipment overhaul specification(s) for all systems included in the Component Overhaul Program based upon the OEM recommendations and with 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 and HPT Actuator Assembly overhaul will be accomplished in parallel with the ongoing Friction Brake Equipment overhaul thereby ensuring the overhauls are performed in accordance with regulatory standards, within defined schedule while following Metro's Corporate Safety policy and procedures.

### **FINANCIAL IMPACT**

The total contract amount is \$3,581,292. Funding of \$100,000 for this procurement is included in the FY20 budget in cost center 3942, Rail Fleet Services Maintenance Red Line, under Capital Project number 206045, Red Line Vehicle Component Overhauls, line item 50441, Parts - Revenue Vehicle.

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This procurement is part of the on-going Red Line Vehicle preventive maintenance program.

Since this is a multi-year contract, the cost center Manager, Project Manager, and Sr. Executive Officer 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 Prop A 35% Rail. Using this funding source maximizes the project funding allocations allowed by approved provisions and guidelines...Implementation\_of\_Strategic\_Plan\_Goals

**IMPLEMENTATION OF STRATEGIC PLAN GOALS**

Approval of this recommendation supports the following Metro Strategic Plan Goal 2) Deliver outstanding trip experience for all users of the transportation system.

**ALTERNATIVES CONSIDERED**

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

**NEXT STEPS**

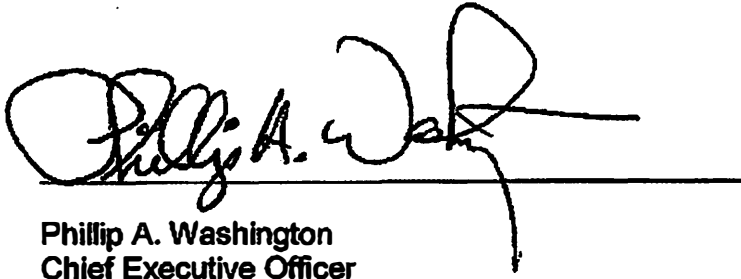
Overhaul the Friction Brake Systems including Air Compressor Assembly and HPT Thread Brake Units in accordance with Rail Fleet Services' maintenance schedule requirements. If approved, the project is scheduled to commence in May 2020.

**ATTACHMENTS**

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

Prepared by: Bob Spadafora, Sr. Executive Officer, Rail Fleet Services  
(213) 922-3144  
Richard M. Lozano, Sr. Director, Rail Vehicle Maintenance,  
(323) 224-4042

Reviewed by: James T. Gallagher, Chief Operations Officer, (213) 418-3108  
Debra Avila, Chief Vendor/Contract Management Officer,  
(213) 418-3051



Phillip A. Washington  
Chief Executive Officer

## PROCUREMENT SUMMARY

## A650 FRICTION BRAKE OVERHAUL/CONTRACT NO. MA6274900

1.	<b>Contract Number:</b> MA6274900		
2.	<b>Contractor:</b> Wabtec Passenger Transit		
3.	Mod. Work Description: To provide continued overhaul services for the A650 friction brake to include the HPTs (Option) and to add the D-4-S Air Compressor components		
4.	Contract Work Description: Provide overhaul services		
5.	The following data is current as of: 2/13/20		
6.	<b>Contract Completion Status</b>		<b>Financial Status</b>
	<b>Contract Awarded:</b>	01/19/17	<b>Contract Award Amount:</b> \$1,859,000.00
	<b>Notice to Proceed (NTP):</b>	02/10/17	<b>Total of Modifications Approved:</b> .00
	<b>Original Complete Date:</b>	02/10/22	<b>Pending Modifications (including this action):</b> \$1,722,292.00
	<b>Current Est. Complete Date:</b>	02/10/22	<b>Current Contract Value (with this action):</b> \$3,581,292.00
7.	<b>Contract Administrator:</b> Jean Davis		<b>Telephone Number:</b> 213/922-1041
8.	<b>Project Manager:</b> Richard Lozano		<b>Telephone Number:</b> 323/224-4042

**A. Procurement Background**

This Board Action is to approve Contract Modification No. 5 issued in support of A650 Friction Brake System overhaul for the following items:

- To exercise Contract Option 2 for the overhaul of Hydraulic Pneumatic Tread (HPT) Brake Actuators for a Not-To-Exceed amount of \$998,400.
- To approve a modification to overhaul D-4-S Air Compressor Assemblies, in the Not-To-Exceed amount of \$723,892.

This Contract Modification No. 5 will be processed in accordance with Metro's Acquisition Policy and the contract type is an Indefinite Delivery, Indefinite Quantity (IDIQ).

On January 19, 2017, the Board awarded Contract No. MA6274900 to Wabtec Passenger Transit to overhaul the A650 Friction Brake Systems in the amount of \$1,859,000 and Option for the HPT Brake Actuator overhaul in the amount of \$998,400 for a total Not-To-Exceed Contract amount of \$2,857,400. The period of performance is for 60 months, February 10, 2017 to February 10, 2022.

**B. Price/Cost Analysis**

The recommended price for the HPT Actuator overhaul is based on an Option price within the existing Contract. The Option price of \$998,400 was determined to be fair and reasonable based on cost analysis at time of award in February 2017. To validate the price reasonableness of the Option price staff performed a market survey, price analysis, Independent Cost Estimate (ICE) and technical analysis. Based on that analysis staff has determined that the Option price is fair and reasonable.

The recommended modification price of \$723,892 for overhaul of the D-4-S Air Compressor Assemblies has been determined to be fair and reasonable based on cost analysis, technical analysis and comparison to the Independent Cost Estimate (ICE).

<b>Item</b>	<b>Proposal Amount</b>	<b>Metro ICE</b>	<b>Negotiated Amount</b>
HPT Actuator Overhaul; Exercise Option 2	\$998,400.00	\$998,400.00	NA
D-4-S Air Compressor Assemblies; Contract Modification No. 5	\$723,892.00	\$724,000.00	NA



DEOD SUMMARY

A650 FRICTION BRAKE OVERHAUL/CONTRACT NO. MA6274900

**A. Small Business Participation**

Wabtec Passenger Transit made a 5% Small Business Enterprise (SBE) commitment. The project is 29% complete and Wabtec is currently exceeding their commitment with 14.97% SBE participation.

<b>SMALL BUSINESS COMMITMENT</b>	<b>5%SBE</b>	<b>SMALL BUSINESS PARTICIPATION</b>	<b>14.97% SBE</b>
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	<b>SBE Subcontractor</b>	<b>% SBE Commitment</b>	<b>% Current Participation</b>
1.	Altech Services	5%	14.97%
	<b>Total Commitment</b>		<b>14.97%</b>

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

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

**C. Prevailing Wage Applicability**

Prevailing wage is not applicable to this contract.

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

Project Labor Agreement/Construction Careers Policy is not applicable to this contract.

## CONTRACT MODIFICATION/CHANGE ORDER LOG

## A650 FRICTION BRAKE OVERHAUL/CONTRACT NO. MA6274900

Mod. No.	Description	Status (approved or pending)	Date	\$ Amount
1	No Cost Administrative Change	Approved	12/23/19	\$0
2	Authorized Long-Lead Material under the existing Total Contract Value \$1,859,000 for D-4-S Air Compressor Assembly Unit Overhauls	Approved	01/09/20	\$0
3	Authorized Long-Lead Material under the existing Total Contract Value for HPT Thread Assembly Unit Overhauls	Approved	01/09/20	\$0
4	Claim Settlement	Approved	02/06/20	\$0
5	Exercise Option 2 – HPT Brake Actuator (832 units)	Pending	Open	\$998,400.00
5	Approve Modification – D-4-S Air Compressor Assembly units	Pending	Open	\$723,892.00
	<b>Modification Total:</b>			<b>\$1,722,292.00</b>
	<b>Original Contract Value:</b>		01/19/17	<b>\$1,859,000.00</b>
	<b>Revised Total Contract Value:</b>			<b>\$3,581,292.00</b>