



**Board Report**

**File #:** 2024-0186, **File Type:** Contract

**Agenda Number:** 21.

**OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE  
MAY 16, 2024**

**SUBJECT: P3010 LIGHT RAIL VEHICLE COMPONENT OVERHAUL OF TRUCK SYSTEMS  
(POWER AND NON-POWER AXLE) ASSEMBLIES**

**ACTION: APPROVE RECOMMENDATION**

**RECOMMENDATION**

CONSIDER:

- A. AMENDING the Life of Project Budget for the P3010 Fleet Component Overhaul project by \$14,542,000 for a total of \$50,532,000; and
- B. AUTHORIZING the Chief Executive Officer to award a firm fixed price Contract No. MA101250000 to ORX Railway Corporation for transporting, inspecting, overhauling, and testing a total of 257 P3010 fleet truck systems assemblies including 88 individual gear unit spares for a firm fixed price amount of \$39,551,971.00, for a period of 49 months after the issuance of Notice to Proceed, subject to the resolution of any properly submitted protest(s), if any.

**ISSUE**

The Original Equipment Manufacturer (OEM) identified and established a component overhaul schedule for all vehicle systems occurring at the 600,000-mile interval to sustain passenger comfort and safety while ensuring the equipment operates within the designed reliability and longevity targets.

The P3010 rail car fleet manufacturer, along with its sub-suppliers, identified component level overhauls to vehicle systems, including friction brakes, propulsion, doors, the truck assembly including traction motor and gearbox, auxiliary power supply, coupler, master controller, pantograph, and heating ventilation/air conditioning equipment. Therefore, the P3010 overhaul program will require Board authorization for nine separate vendors and new component contracts to complete the project over a 5-year period. On February 22, 2024, the Board approved the 2<sup>nd</sup> overhaul project consisting of Battery Kit replacements.

**BACKGROUND**

The P3010 LRV fleet was originally placed in revenue service between 2016 - 2023 to support the opening of the previously named Expo Line and the Gold Line extensions, as well as the replacement of the P865/P2020 legacy Light Rail Vehicle (LRV) fleets that were decommissioned between 2017 - 2021. Today, the P3010 LRV operates on all of Metro's light rail lines, including A (Blue), C (Green), E (Expo), and K (Crenshaw) lines. The P3010 LRV fleet consists of 235 rail cars operating with consistent performance, reliability, and safety with an accumulated fleet mileage of 77,855,821 miles.

## **DISCUSSION**

The Component Level Overhaul program consists primarily of repairing and replacing identified equipment that will be overhauled several times during the vehicle's life. This is the first of several overhaul cycles necessary to meet the vehicles' 30-year design life. Rail Fleet Services' (RFS) mechanical staff will perform the removal, testing, and reinstallation of the equipment overhauled by OEM contractors, as the Rail Fleet Service shops do not have the necessary expertise, tools, equipment, and space to perform the actual component overhauls. The contractors are required to meet the Federal Transit Administration (FTA), Association of American Railroad (AAR), California Public Utilities Commission (CPUC), and Metro's Corporate Safety Standards.

Metro's Transit Vehicle Engineering (TVE) Department and Rail Fleet Services staff performed a technical review of the OEM 600,000 overhaul recommendations and concurred with each future overhaul project as described in the Heavy Repair Manuals. TVE also developed the Statement of Work and specifications for the contractor to follow.

The Component Level Overhaul program is mileage based on the current rollout and headway requirements. These overhauls will occur every five years throughout the vehicle's service life. The Component Level Overhaul is unlike the Mid-life Overhaul program, which typically involves an overhaul contractor and/or equipment replacement to the major systems while addressing obsolete parts and performance issues/upgrades. The Mid-life rehabilitation occurs at the vehicle's Mid-life, typically 15 years, and is scheduled to occur beginning in the calendar year 2031.

The original LOP of \$36M was established in 2021. Due to industry inflationary pressures the cost of materials and labor have significantly increased necessitating additional funding added to the original LOP in the amount of \$15.5M to cover these costs. The new LOP is \$50.5M to cover Metro's labor costs including a five year lookahead that coincides with the 600,000 mile component overhaul interval.

## **DETERMINATION OF SAFETY IMPACT**

Passenger safety is of the utmost importance to Metro. Therefore, it is critical for staff to meet maintenance and overhaul cycles as defined by the OEM while maintaining compliance with state and federal regulations as well as Metro's internal safety standards, policies, and procedures.

## **FINANCIAL IMPACT**

Funding in the amount of \$5,320,000 for the Truck Systems Overhaul is included in the FY24 budget under approved Capital Project (CP) 214009. - P3010 Fleet Component Overhaul. Assuming approval of the LOP increase of \$14,542,000, bringing the LOP up to \$50,532,000, this action is within the project LOP.

Since this is a multi-year project, the cost center Senior Executive Officer, Component Overhaul Superintendent, and the Division Director will ensure that the balance of funds is budgeted in future years.

#### Impact to Budget

The current source of funds for this action is Proposition A (35%), which is eligible for Metro Rail Operations. Given approved guidelines and provisions, this funding source maximizes the allowable project application.

### **EQUITY PLATFORM**

This action will ensure that Metro's P3010 LRV fleet is able to provide vital transportation services throughout the City and County of Los Angeles via A, C, E, and K lines, including many Equity Focus Communities where disparities within the region can exist between residents' access to jobs, housing, education, health, and safety. The P3010 fleet operates on all light rail lines directly impacting EFCs, such as neighborhoods in East and South Los Angeles, Long Beach, Compton, Watts, Crenshaw, and Inglewood, among others. Rail transportation provides an essential lifeline for travelers with limited transportation options, and the Metro light rail maintenance programs ensure the proper State of Good Repair to the P3010 light rail fleet to provide transportation for those that primarily rely on transit.

The Diversity and Economic Opportunity Department (DEOD) established an overall 2% Disadvantaged Business Enterprise (DBE) goal. ORX Railway Corporation exceeded the goal by making a 2.53% DBE commitment.

### **IMPLEMENTATION OF STRATEGIC PLAN GOALS**

Approval of the P3010 Truck Systems Overhaul supports Strategic Goal 1: Provide high-quality mobility options that enable people to spend less time traveling. The procurement of rail batteries precedes the forthcoming eight overhaul projects. This overhaul program ensures sustained fleet reliability, including safe, accessible, and affordable transportation for Metro's light rail system riders.

The recommendation supports Metro Strategic Plan Goal 5) Provide Responsive, Accountable, and Trustworthy governance within the Metro organization. Contract Modification Authority and Contract extension safeguard overhaul production continuance while reliably meeting passenger safety and fleet needs.

### **ALTERNATIVES CONSIDERED**

The P3010 fleet is Metro's newest and most reliable light rail fleet with sustained availability and reliability. Execution of this overhaul regenerates equipment performance with a positive impact on passenger safety. An alternative is to defer the OEM-recommended overhaul program. However, this is not recommended as the fleet will suffer over time and will create decreased availability/reliability with a high risk of equipment breakdowns as well as negative impacts to on-time performance and customer service.

Approval of this item is needed since the truck systems overhaul will be performed concurrently with friction brakes, propulsion, doors, coupler, master controller, auxiliary power supply, pantograph, and heating ventilation and air conditioning component overhaul work.

### **NEXT STEPS**

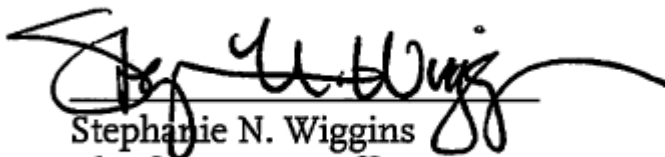
Upon approval from the Board, staff will execute Contract No. MA101250000 for the P3010 Power Truck Systems overhaul. Staff will return to the Board for approval of future contract awards inclusive of propulsion, doors, coupler, master controller, auxiliary power supply, pantograph, and heating ventilation and air conditioning overhauls.

### **ATTACHMENTS**

Attachment A - Procurement Summary  
Attachment B - DEOD Summary

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