



# **Contract for Light Rail Traction Power Substation Batteries and Battery Chargers**

Board Meeting  
Operations Item

August 27, 2024

Shawn Crighton  
Assistant Vice President, Maintenance of Way



# Recommendation

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- Approval of a resolution authorizing the President & Chief Executive Officer or her designee to award an eight-month contract to Saft America, Inc., dba Alcad Standby Batteries, for the purchase and installation of new batteries and battery chargers for DART's Traction Power Substation on the northern sections of the Red and Blue Lines [Contract No. C-2082882-01], for a total authorized amount not to exceed \$699,695.

# Background

- A reliable railroad traction power network is comprised of the traction power substation (TPSS) and the overhead catenary system which powers the pantograph of the light rail vehicle.
- The control batteries power all components within a TPSS.
- There are 21 TPSS locations on the northern Red and Blue Lines where the control battery systems are degrading, and we are experiencing a reduction in capacity to control protective relays and the D/C breaker function.
- The life expectancy for the batteries is 15-20 years. The battery systems in these TPSS locations are 25 years old.
- Currently, these battery systems require three times more frequent maintenance and upkeep.

# Business Purpose

- Failure of these battery systems will result in a loss of power to the overhead catenary system adjacent to the TPSS, leading to a shutdown of power to the LRV.
- New batteries and chargers will increase rail system reliability and performance by ensuring a more stable power supply for the control systems, thus reducing the risk of unexpected failures.
- Additionally, newer battery and charger technologies offer better features, such as faster charging times, improved energy efficiency, and enhanced safety features.

# Contractor Requirements

- The contractor must provide back-up power during the replacement process. They will commission a replacement battery charging system, including batteries, chargers, and related equipment, and provide installation services.
- Also, the contractor must provide training to DART Traction Electrification Systems (TES) personnel on the new battery charging system.

# Locations

1. Viaduct TPSS	12. Manderville TPSS
2. Arena TPSS	13. Miles TPSS
3. Tower 17 TPSS	14. Whiterock TPSS
4. Forest TPSS	15. Jupiter TPSS
5. Centennial TPSS	16. Garland TPSS
6. Campbell TPSS	17. Garland TPSS
7. Plano Pkwy TPSS	18. Bronze TPSS
8. 18 <sup>th</sup> Place TPSS	19. Plano Rd. TPSS
9. Glenville TPSS	20. McCree TPSS
10. Arapaho TPSS	21. Abrams TPSS
11. Restland TPSS	

# Current Battery Charging System



# Requested Action

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