



## Board Report

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Agenda Number: 17.

### CONSTRUCTION COMMITTEE JULY 20, 2023

**SUBJECT: OFFICE OF THE INSPECTOR GENERAL CONSTRUCTION CHANGE ORDER SPOT CHECKS**

**ACTION: RECEIVE AND FILE**

#### **RECOMMENDATION**

RECEIVE AND FILE Office of the Inspector General Construction Change Order Spot Check Report for the period March 1 to May 31, 2023.

#### **ISSUE**

On January 25, 2018, the Metro Board directed the Office of the Inspector General (“OIG”) to conduct random spot checks on change orders for the construction projects listed in the Quarterly Program Management report to ensure that the CEO Delegation of Authority to approve Construction Change Orders Policy is performing in the manner desired by the Board of Directors.

#### **BACKGROUND**

The OIG’s Construction Change Order Spot Check Program (“Spot Checks”) focuses on approved change orders and modifications that exceed \$500,000. The four change orders in this report were selected from the Program Management Quarterly Major Project Status, Legistar 2023-0410. The OIG gathers the data, reviews all the change orders over \$500,000 and selects change orders from the major projects. The information for the Spot Checks was collected from the Program Management Information System (PMIS) which is the department’s database system. Also, virtual meetings and telephonic interviews were conducted with Metro Program Management, Project Control, and Procurement staff from each involved project office.

For each Spot Check, we summarize:

- Description of the change order,
- Change order detail,
- Scope of Work,
- Budget,
- Schedule (Time to execute the change order),
- Safety, and
- Recommendations and Lessons Learned.

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Metro's Program Control department has provided informal responses to this report before its issuance and are asked to provide written responses to the recommendations in this OIG Spot Check Report after this Report is issued. Included with this Report is a spreadsheet on the status of responses concerning former OIG Spot Check Report recommendations (Attachment B).

## **DISCUSSION**

### **Spot Checks Performed in this Quarter**

#### **Spot Check #1 - Airport Metro Connector Transit Station/96th Street Station**

This OIG Spot Check report concerns the Airport Metro Connector Project (Contract C1197 MOD 0015) Bulletin 28 - Onsite DWP and Bus Charging

#### **Change Order Detail**

See Attachment A Spot Check #1 table.

#### **Summary #1**

**Scope** - This change order is to adjust the Airport Metro Connector (AMC) main yard for power (Yard 1) and add a second power yard (Yard 2) with electrical and communication vaults, pull boxes, duct banks, and four (4) additional bus charging stations.

This change was requested by Metro Bus Operations to comply with the Metro 100% zero-emissions bus fleet by 2030 objective. The Bus Operations department requested more stations to increase the total to seven (7) charging units. The electrical capacity at Yard 1 only supports three charging stations. To accommodate the planned increase in electric buses, Yard 2 will have the capacity to support not only the four additional chargers but future charging units. The Contractor will be compensated for the labor, equipment and materials to perform both the design changes and the construction under this change order modifying the contract.

**Budget** - This change order was negotiated as MOD 0015 for the amount of \$3,029,448. The Contractor's proposal was \$3,458,833 and the ICE was \$2,771,166. The negotiated price is \$429,385 (12.4%) lower than the Contractor's proposal. The ICE is \$258,282 (9.3%) lower than the negotiated amount. Staff stated that funds for this change order are within the Life-of-Project budget.

**Schedule** - The CEO Delegation of Authority process was utilized for this change order. The Contractor and Metro agreed on the Scope of Work on January 3, 2023. The modification was awarded on March 16, 2023 and was completed in 52 workdays. Under the prior Board approval method for change orders, assuming a March Board meeting date, it would have taken a total of 57 workdays to complete the transaction.

**Safety** - The Airport Metro Connector Transit Station/96th Street Station Project has 309,015 project hours through April 2023 with a Recordable Injury Rate of 2.8 (the Bureau of Labor Statistics the National Average is 2.4) and a Days Away Rate (DART) of 0.64 (the Bureau of Labor Statistics National Average is 1.5).

**Recommendation/Lessons Learned** - The OIG recommends Metro review all construction plans for satisfaction of the zero-emissions bus fleet objective to add as appropriate electric charging capability.

## **Spot Check #2 - Purple Line Extension Section 1 Transit Project**

This OIG Spot Check report concerns the Purple Line Extension Section 1 (Contract C1045 / CO-0028), Expedite Cutterhead Removal at Trail Track

### **Change Order Detail**

See Attachment A Spot Check #2 table.

### **Summary #2**

**Scope** - This change order is to expedite the removal of the Section 1 tunnel boring machines cutterheads. The cutterhead is the front piece of the tunnel boring machine that rips through the earth to make a tunnel. The Section 1 cutterheads were located at the end of the track at the Wilshire/La Cienega Station which is also the eastern end of the Section 2 tunnel.

The contract for Section 1 does not state a specific milestone date to start the removal of the cutterheads nor how long the removal should take but the Project Manager from Purple Line Extension Section 1 determined by accelerating the start date and speeding up the pace to remove the cutterheads it would avoid major impacts to both Purple Line Extension Section 1 and Section 2 projects.

The removal of the Section 1 cutterheads during or after Section 2 tunnel boring machines arrival at the same connecting point would cause construction issues, safety concerns, and potential ventilation complications between the two projects. By requesting the removal of the cutterheads earlier than planned and having the contractor work extra shifts to accelerate the removal these issues and complications between projects were minimized if not eliminated. This change order mitigated cost and schedule impacts to both Purple Line projects. This work was completed during September to December 2022.

**Budget** - This change order was negotiated as unilateral Change Order 0028 for the amount of \$2,713,967. The Contractor's proposal was \$3,554,535 and the ICE was \$2,892,729. The negotiated price is \$840,568 (23.6%) lower than the Contractor's proposal. The ICE is higher than the negotiated amount by \$178,762 (6.2%). Staff stated that funds for this change order are within the Life-of-Project budget.

**Schedule** - The CEO Delegation of Authority process was utilized for this change order. The Contractor and Metro agreed on the Scope of Work on March 27, 2023. The modification was awarded on April 18, 2023 and was completed in 16 workdays. Under the prior Board approval method for change orders, assuming a May Board meeting date, it would have taken a total of 43 workdays to complete the transaction.

**Safety** - The Purple Line Extension Section 1 Project has 8,515,618 project hours through April 2023 with a Recordable Injury Rate of 0.96 (the Bureau of Labor Statistics the National Average is 2.4) and a Days Away Rate (DART) of 0.07 (the Bureau of Labor Statistics National Average is 1.5).

**Recommendation/Lessons Learned** - The lessons learned from this change order is to add to the initial Contract details on the tunnel boring machine interplay between the two projects and the cutterhead removal and scheduling.

### **Spot Check #3 - Purple Line Extension Section 2 Transit Project**

This OIG Spot Check report concerns the Purple Line Extension Section 2 (Contract C1120 MOD 0179), Provisions for WRS North (Secondary) Entrance - Construction (Wilshire Rodeo Station, Northwest corner of station.)

### **Change Order Detail**

See Attachment A Spot Check #3 table.

### **Summary #3**

**Scope** - Metro, in coordination with City of Beverly Hills is planning for a future secondary entrance at the Wilshire / Rodeo Station. This change order is to construct the portion of the second entrance within the Wilshire Rodeo Station up to and including a new knockout panel.

On November 10, 2020, the Beverly Hills City Council approved the Settlement Agreement with Metro for the construction of a secondary entrance on the northwest corner of the intersection of Beverly Drive and Wilshire Boulevard. The City of Beverly Hills will construct the street level entrance and below ground structure. Metro will construct elements inside the station box and a new knockout panel in the north wall to facilitate the City's connection to the station.

This change order incorporates multiple items to facilitate the future connection to the Beverly Hills secondary entrance. Included in this change order is the cantilevered walkway which will extend from the concourse to the knockout panel. Other items include: architecture finishes, the emergency ventilation system, gas and cold smoke extraction, fire hose cabinets, floor drains, fire sprinklers, maintenance outlet receptacles, light fixtures, and other electrical and communication provisions at the new knockout panel. All elements have been designed in compliance with the Metro Rail Design Criteria. The Wilshire / Rodeo station construction is underway.

**Budget** - This change order was negotiated as a modification for the amount of \$6,489,588. The Contractor's proposal was \$7,197,324 and the ICE was \$6,059,856. The negotiated price is \$707,736 (9.8%) lower than the Contractor's proposal. The ICE is \$429,732 (7.1%) lower than the negotiated amount. Staff stated that funds for this change order are within the Life-of-Project budget.

**Schedule** - The CEO Delegation of Authority process was utilized for this change order. The Contractor and Metro agreed on the Scope of Work on March 10, 2023. The modification was awarded on April 25, 2023 and was completed in 21 workdays. Under the prior Board approval method for change orders, assuming a May Board meeting date, it would have taken a total of 54 workdays to complete the transaction.

**Safety** - The Purple Line Extension Section 2 Project has 3,292,473 project hours through April 2023 with a Recordable Injury Rate of 2.92 (the Bureau of Labor Statistics the National Average is 2.4) and a Days Away Rate (DART) of 0.67 (the Bureau of Labor Statistics National Average is 1.5).

**Recommendation/Lessons Learned** - The OIG recommends continual monitoring of the City of Beverly Hill design plans as they near construction as to avoid any construction impacts, safety concerns and complications at the knockout panel.

### **Spot Check #4 - Purple Line Extension Section 3 Transit Project**

This OIG Spot Check report concerns the Purple Line Extension Section 3 (Tunnels Contract C1151, MOD 0024), Claim-04 Gravel Seam Impact BR Tunnel Rings 399 to 486

### **Change Order Detail**

See Attachment A Spot Check #4 table.

### **Summary #4**

**Scope** - This change order is to compensate the contractor for additional maintenance to the tunnel boring machine and labor hours because of the differing site conditions encountered.

The Geotechnical Baseline Report stated the soil layers consisted of gravels of a certain size and volume. However, the tunnel boring machine traversed through larger sized gravel materials in greater volumes. This change in soil type caused a reduction in the speed of the tunnel boring machine and Metro also observed slowing of the tunnel boring machine accompanied by the Contractor's additional efforts to replace cutterhead tools worn by these conditions. The Contractor filed a claim for differing site conditions in August 2022 because of soil layers that the tunnel boring machine was encountering and requested coverage of additional labor hours. Merit was determined in February 2023 and the contractor was awarded an amount in March 2023.

**Budget** - This change order was negotiated as a modification for the amount of \$959,123. The Contractor's proposal was \$959,123 and the ICE was \$937,441. The award equaled the Contractor's proposal. The ICE was determined to be within 2.3% (\$21,682) of the Contractor's request. The team found the contractor's request was fair and therefore awarded the amount. Staff stated that funds for this change order are within the Life-of-Project budget.

**Schedule** - The CEO Delegation of Authority process was utilized for this change order. The Contractor and Metro agreed on the Scope of Work on February 3, 2023. The modification was awarded on March 9, 2023 and was completed in 25 workdays. Under the prior Board approval method for change orders, assuming an April Board meeting date, it would have taken a total of 59 workdays to complete the transaction.

**Safety** - The Purple Line Extension Section 3 Project has 2,614,618 project hours through April 2023 with a Recordable Injury Rate of 1.45 (the Bureau of Labor Statistics the National Average is 2.4) and a Days Away Rate (DART) of 0.38 (the Bureau of Labor Statistics National Average is 1.5).

**Recommendation/Lessons Learned** - The OIG recommends more geotechnical exploration in the development of the Geotechnical Baseline Report as to better identify the correct soil characteristics.

### **FINANCIAL IMPACT**

This report itself has no impact on the Agency, the OIG is only summarizing the changes herein as requested by the Board of Directors.

For all of the construction change orders reviewed, Metro states the funds are within the approved budget and will utilize the contingency funds to cover the costs from the Life of Project budget.

Spot Check #1)	\$3,029,448	Airport Metro Connector Transit Station
Spot Check #2)	\$2,713,967	Purple Line Extension Section 1 Project
Spot Check #3)	\$6,489,588	Purple Line Extension Section 2 Project
Spot Check #4)	\$959,123	Purple Line Extension Section 3 Project

## **EQUITY PLATFORM**

In the opinion of the OIG, we considered whether these change orders presented any equity related issues on their face. The OIG did not receive any data concerning community impacts. There is a low-income equity-based community near the Veteran's Hospital on Wilshire Blvd. The completion of Extension 3 will benefit millions of men and women Veteran's by transporting them to and from Metro Station at the VA Hospital. The addition of bus charging stations for Metro electrical bus fleet will benefit all of Los Angeles county and surrounding cities as the smog begins to clear the skies and Angelenos will breathe easier. The OIG observed no obvious disparate impacts created by these change orders on small businesses, low-income persons, or by the performance of the work in a manner that impacted a disadvantaged community beyond what is typical and usual when conducting any construction.

## **IMPLEMENTATION OF STRATEGIC PLAN GOALS**

The Office of Inspector General reviews large change orders over a calendar quarter and makes recommendations as appropriate to support Metro's Strategic Plan Goal #5: Provide responsive, accountable, and trustworthy governance within the Metro organization and CEO goals to exercise fiscal discipline to ensure financial stability. The OIG mission includes reviewing expenditures for fraud, waste, and abuse in Metro programs, operations, and resources. For each selected change order reviewed, the OIG evaluates whether there are red flags of fraud, waste, or abuse taking place. We report the details of the significant change orders and make recommendations consistent with the OIG's Construction Best Practices report dated February 29, 2016, more particularly focusing on lessons learned, improving efficiencies, and prudent spending.

## **NEXT STEPS**

The OIG shall provide every quarter, an ongoing spreadsheet of recommendations to Program Control and Program Management. Program Control and Program Management agrees to respond to the recommendations of the OIG within 30 days. The OIG continues to meet periodically to discuss reports, recommendations, and the status of implementation of the recommendations with Project Management, and receive updates. The list of OIG recommendations and Metro management responses is an attachment to this OIG report (Attachment B).

## **ATTACHMENTS**

Attachment A - Change Order Details for Spot Checks in this report  
Attachment B - OIG Recommendations and Responses Tracking Sheet

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