

**Board Report**

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**File #:** 2020-0620, **File Type:** Informational Report**Agenda Number:**

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**CONSTRUCTION COMMITTEE  
OCTOBER 15, 2020****SUBJECT: OFFICE OF THE INSPECTOR GENERAL CHANGE ORDER CONSTRUCTION SPOT CHECKS****ACTION: RECEIVE AND FILE****RECOMMENDATION**

RECEIVE AND FILE Office of the Inspector General Change Order Construction Spot Check Report for the period June 1 to August 31, 2020.

**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 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 five change orders in this report were selected from the October 2020 Program Management Major Project Status Report covering June 1 to August 31, 2020. The information for the Spot Checks was collected from the Program Management Information System (PMIS) which is the department's database system. Also, TEAM meetings and telephonic interviews were conducted with Metro Program Management, Project Control, and Procurement staff from each project office.

We found that all five of the change orders in this report were negotiated and executed more expeditiously than would have occurred pursuant to the former Board approval process, and all five were approved faster with the new delegation of authority. In addition all five change orders were negotiated at lower cost than the contractors' proposed price. This quarter's Spot Checks of change orders found the delegation of authority has resulted in:

- A negotiated amount that was less than the contractors' proposed price for the work to be done,
- Enabled the contractor to immediately order parts and materials, reducing delay,
- Contractor and was able to continue working without stoppages related to these change

- orders, and
- Zero construction delay costs were incurred for these changes.

Each Spot Check summarizes the following areas:

- Description of the change order,
- Change order detail,
- Scope of Work,
- Budget,
- Schedule: Time to execute the change order, and
- Recommendations if any.

Metro's Program Control department will provide responses to the recommendations in this report of OIG Spot Checks within 30 days after this Board report. Included with this report is a separate spreadsheet of recommendations and the status of responses concerning former OIG Spot Check recommendations.

## **DISCUSSION**

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

#### **A. Spot Check #1 - Crenshaw/LAX Transit Corridor Project**

This OIG Spot Check report concerns the Crenshaw/LAX Transit Corridor Project (Contract C0988 MOD-00485) Case 5 Bedding Required by Los Angeles Bureau of Engineering (LABOE).

#### **Change Order Detail**

See Attachment A Spot Check #1 chart.

#### **Summary #1**

**Scope of Work** - This change order is for an additional requirement by Los Angeles Bureau of Engineering (LABOE) to increase supporting material for City owned sewers and storm drain utility pipes along the at-grade sections of the Crenshaw project and at the underground stations in lieu of the Metro rail standard amount and type of material.

The contract does not list the exact supporting material to be used, but it does reference Metro standard drawing US-014 "Backfill Operations" and states "type A", which provides limited supporting materials underneath the utility pipe. The materials required by LABOE is full concrete encasement placed under, around and over the top of the pipe which extends 5-inches minimum above the top of pipe. The City LABOE references a source for their standards, the Green book - Standard Specifications for Public Works Construction.

Prior to the award of this contract, bidders asked Metro whether this LABOE higher standard of supporting materials would be required. Metro's responses states that it would not be required and to use the Metro standard detail (this reference is found in pre-bid Q&A numbers 271 & 272).

Even though the request is made by LABOE, the Metro project management team decided not to pursue a betterment claim against the City for requiring this higher support standard as it was known to Metro prior to the contract award. The City has the responsibility to determine how the city's

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utilities should be protected and therefore no betterment notification form was filed. The contractor is to provide all material, equipment, and labor to complete this modification.

**Budget** - The cost for this modification is \$687,500. The contractor's proposal was \$740,664. The independent cost estimate (ICE) was \$494,125. The award amount was \$53,164 (7.2%) less than the contractor's proposal. The negotiated amount was \$193,375 (39.1%) over the ICE. Staff has stated that funds for this change are within the approved Life-of-Project budget.

**Schedule** - The new CEO Delegation of Authority method was utilized for this modification. The agreed upon scope of work occurred on June 1, 2020. The modification was executed on July 10, 2020, and process was completed in 29 work-days. If the modification had gone to the August Board (July was a dark month with no meetings) for approval the process would have been 63 work-days later than under the CEO Delegated Authority method.

**Recommendation** - Since the 'Green book' states the support and materials for sewer and storm drain pipe are to be encased in concrete, the OIG recommends that the LA Metro rail standard drawing US-014, be updated to reflect the required City standard and Metro may negotiate with the LABOE to adopt a different standard for specific projects as warranted.

We further recommend, as discussed in previous reports, that Metro study the large discrepancies between the Metro ICE and the award amounts to determine if there is a method by which those discrepancies can be narrowed. This recommendation applies to many of the Spot Checks reviewed in this Report, and is based also on a Metro audit completed by the Management Audit Services Department that noted significant discrepancies in these amounts to be a frequent occurrence.

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

This OIG Spot Check report concerns the Purple Line Extension Section 1 Transit Project (Contract C1045 MOD-00111), Fairfax Paleo Zone Modified Limits

### **Change Order Detail**

See Attachment A Spot Check #2 chart.

### **Summary #2**

**Scope of Work** - This change order is to extend the limits of excavation downward at the Fairfax station. The reason for this change is this paleo geological zone is larger than what was anticipated in the contract.

During the excavation of the Fairfax station the Metro paleontologist precisely identified the paleo geological zone to be deeper than what was specified in the Geotechnical Baseline Report (GBR) of the original contract documents. Digging in this expanded zone was restricted to removal of 6-inches at a time to protect the potential artifacts and less likely to destroy fossils. This extra tedious excavation resulted in removal of approximately 50,000 cubic yards of dirt as compared to the original 19,000 cubic yards as stated in the GBR contract documents.

**Budget** -The cost for this modification is \$4,917,392. The contractor's proposal was \$9,518,316. The ICE was \$ 3,631,303. The award amount of \$4,600,924 was 48.3% less than the contractor's

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proposal. The negotiated amount of \$1,286,089 was 35.4% over the ICE. Staff has stated that funds for this change are within the approved Life-of-Project budget.

**Schedule** - The CEO Delegation of Authority process was utilized for this modification. The agreed upon scope of work occurred on April 10, 2020. The modification was executed on June 2, 2020, and process was completed in 38 work-days. Under the prior Board approval method for change orders, assuming a June Board meeting date, it would have taken 55 work-days to complete the process.

**Recommendation** - The OIG recommends future GBR's include a more comprehensive underground site assessment to determine a better approximation of the marine and paleo geological layers. In this instance, a robust underground assessment would have avoided the costly change order. However, the additional excavation costs would have been included in the higher base bid value.

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

This OIG Spot Check report concerns the Purple Line Extension Section 2 Transit Project (Contract C1120 MOD-0080), Demobilization and Remobilization due to COBH Moratorium

#### **Change Order Detail**

See Attachment A Spot Check #3 chart.

#### **Summary #3**

**Scope of Work** - This change order compensates the contractor's cost to demobilize and remobilize within the City of Beverly Hills (COBH) for the new holiday moratorium.

COBH required the contractor to clear and restore their streets during the holiday season from Thanksgiving through New Year's Day. They required that all equipment, barriers, traffic control signs, lighting, signals, and pavement striping be removed from Wilshire Blvd. and to restore the streets to their original state. This holiday moratorium is not part of the municipal code, but it is a requirement of the Memorandum of Agreement (MOA) between Metro and COBH, which was not agreed upon nor incorporated into the Contract C1120 at the time of award. The request for proposal for the Contract was based on the requirements of the draft final MOA for Section 1 of the Purple Line Extension, which did not include a holiday moratorium from Thanksgiving through New Year's Day.

This new holiday moratorium imposes additional restrictions and costs on the contractor beyond the original Contract by prohibiting work in the public right of way during the moratorium. While it prohibits construction work above ground in the city streets, the moratorium does not stop work in the staging yards or under the deck.

Metro plans to request an exemption from this year's moratorium (2020/2021 holiday season), following the steps outlined in the MOA. The direct costs associated with demobilizing and remobilizing traffic control should be less than last year's cost because there are fewer traffic control devices on this section of the street, and the work is primarily underground. It is important for the exemption to be approved, for the truck loading zones associated with the section of street where excavation will be occurring.

**Budget** -This modification was negotiated and the award amount is \$1,698,253. The contractor's proposal was \$1,854,510 and the ICE was \$924,038. The award amount was \$156,257 (8.4%), under the contractor's proposal. The negotiated amount was \$774,215 (83.8%) over the ICE. Staff has stated that funds for this change are within the approved Life-of-Project budget

**Schedule** - The project procurement group confirmed that negotiations for MOD-0080 did take more internal and contractor discussion/document review than some of the other change actions. Additionally they stated that, "The additional effort ensured we were properly valuing a contract change." The new CEO Delegation of Authority process was utilized for this modification. The agreed upon scope of work occurred on January 31, 2020, but the negotiations to an agreed cost did not occur until June 10, 2020. The modification was executed on June 19, 2020, and was completed in 9 work-days. Under the prior Board approval method for change orders, assuming an August Board meeting date (July was a dark month for the board), it would have taken 56 work-days to complete the process.

**Recommendation** - The MOA between Metro and COBH imposes additional restrictions on Metro and adds costly change orders to the original contract.

The OIG recommends Metro adopts a standardized MOA for use in negotiations with all jurisdictions within Los Angeles County and utilizes this agreement for every construction project going forward in each respective jurisdiction and that budget estimates for projects should be revised as necessary to take into consideration MOAs entered into.

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

This OIG Spot Check report concerns the Purple Line Extension Section 3 Transit Project (Tunnels Contract C1151 MOD-0004.1), Increase Ground Water Treatment Plant Capacity at Tail Track Exit Shaft

#### **Change Order Detail**

See Attachment A Spot Check #4 chart.

#### **Summary #4**

**Scope of Work** - This change order requires the contractor to provide and install three additional wells and a second water treatment system for treatment of PCE (Perchloroethylene and Tetrachloroethylene) and copper, and dewater up to 1,000 gallons per minute. The contract calls for one onsite water treatment system to extract trace metals (copper) and PCE's, and process 330 gallons per minute of dewatering from the tail track excavation shaft.

The contractor performed several water tests which indicated a larger volume of groundwater and higher traces of copper levels and PCEs than expected that must be reduced to an amount required by the National Pollutant Discharge Elimination System (NPDES) permit

From these tests it was determined that the onsite water treatment system needs to be larger and more sophisticated to reduce the associated contaminants to below that required by the NPDES

permit.

**Budget** -This modification was negotiated and the award amount is \$1,087,504. The contractor's proposal was \$1,411,157 and the ICE was \$867,390. The award amount was \$323,653 (22.9%), under the contractor's proposal. The negotiated amount was \$220,114 (25.4%) over the ICE. Staff has stated that funds for this change are within the approved Life-of-Project budget.

**Schedule** - The CEO delegation of authority process was utilized for this modification. The agreed upon scope of work occurred on June 14, 2020. The modification was awarded on June 30, 2020, and was completed in 12 work-days. Under the prior Board approval method for change orders, assuming an August Board meeting date (July was a dark month), it would have taken an additional 53 work-days to complete the work.

**Recommendation** - It is the OIG's understanding that water pump tests and water quality tests were performed, but they were performed at the original location, the Army Reserve site, which is no longer the correct shaft location. Now the site is at the Veterans Administration property. A change in location can greatly affect both the levels and quality of the groundwater, thus increasing the revised dewatering process.

It is critical that the Real Estate Department be included at the earliest possible time in negotiating the property requirements for a project. Having to change location plans after a contract award can have significant scheduling and expense consequences.

### **Spot Check #5 - Purple Line Extension Section 3 Transit Project**

This OIG Spot Check report concerns the Purple Line Extension Section 3 Transit Project (Tunnels Contract C1151 MOD-0005), Addition of Sepulveda Staging Area to Compensate VA Site Reduction

#### **Change Order Detail**

See Attachment A Spot Check #5 chart.

#### **Summary #5**

**Scope of Work** - Under a previous modification the tail track exit shaft parcel was moved from the Army Reserve property to the adjacent Veterans Affairs (VA) property. However, the VA property is smaller and the shared access road with the VA has reduced the contractor's construction staging area by 1.1 acres.

This change order is payment for the contractor to find and secure a property lease, not exceeding 2 acres in size, for the construction staging area for the contractor and subcontractors operations related to the work on the C1151 Tunnel Contract. The property must be located near the tail track exit shaft at the VA property. The lease will terminate at the project substantial completion.

The contractor has located a staging area property to lease along Sepulveda Blvd (north of the VA site) which has been proposed as the preferred location.

**Budget** -This modification was negotiated and the award amount is \$2,612,951. The contractor's

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proposal was \$2,908,321 and the ICE was \$1,634,911. The award amount was \$295,370 (10.2%) under the contractor's proposal. The negotiated amount was \$978,040 (59.8%) over the ICE. Staff has stated that funds for this change are within the approved Life-of-Project budget.

**Schedule** - The new delegation process was utilized for this modification. The agreed upon scope of work occurred on June 29, 2020. The modification was awarded on July 31, 2020, and was completed in 24 work-days. Under the prior Board approval method for change orders, assuming an August Board meeting date, it would have taken an additional 43 work-days to complete the work.

**Recommendation** - The Purple Line Extension 3 was a 'next decade project' and was accelerated to be completed in the next 5 years with many project processes that had to be compressed to meet the schedule. We also understand that the real estate acquisition process is contingent on the funding being in place.

The real estate acquisition process and all other real estate arrangements must be negotiated as early as possible and negotiate those property rights strategically to ensure we have our real estate needs met at the earliest and least expensive manner possible.

## **FINANCIAL IMPACT**

Report will have no Financial Impact to the agency.

### **Impact to Budget**

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

- Spot Check #1) \$687,500 Crenshaw/LAX Transit Corridor Project
- Spot Check #2) \$4,917,392 Purple Line Extension Section 1
- Spot Check #3) \$1,698,253 Purple Line Extension Section 2
- Spot Check #4) \$1,087,504 Purple Line Extension Section 3
- Spot Check #5) \$2,612,951 Purple Line Extension Section 3

## **IMPLEMENTATION OF STRATEGIC PLAN GOALS**

The recommendations that the Office of Inspector General has put forward 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 program, 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.

Our goal is to provide rational, trustworthy information to the Board and support the efforts of Metro

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management to constantly improve and refine its efforts for the benefit of the public. The Office of the Inspector General will continue reporting to the Board the results of Construction Change Order Spot Checks selected from the Program Management Major Project Status Quarterly Report.

### **NEXT STEPS**

The OIG shall provide every quarter, an on-going spread sheet of recommendations to Program Control. 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 recommendations, with Project Management and receive updates. The list of OIG recommendations and Metro management responses, is an attachment to this OIG report.

### **ATTACHMENTS**


Attachment A - Charts for Spot Checks

Attachment B - Tracking Sheet of OIG Recommendations and Responses

Attachment C - Power Point for October 2020 Construction Spot Checks

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Karen Gorman  
Inspector General



**Spot Check #1 – Crenshaw/LAX Transit Corridor Project - Contract C0988****Change Order Detail**

<u>Description of Modification MOD-00485</u> Case 5 Bedding Required by LABOE	
<u>Change Order Dates:</u>	
Scope of Work approved	June 01, 2020
Modification Executed	July 10, 2020
<u>Elapsed Time for Executing Change Order:</u>	
Using new delegated process	29 work days
Estimate using former Board approval process Agenda for the August Board (July dark)	63 work days
<u>Cost of Change Order:</u>	
Metro independent cost estimate (ICE)	\$494,125
Contractor's proposed cost	\$740,664
Negotiated amount	\$687,500
Percentage of negotiated amount over ICE	39.1%
Amount negotiated less than the Contractor's proposal	\$53,164

**Spot Check #2 - Purple Line Extension Section 1 Transit Project - Contract C1045****Change Order Detail**

<u>Description of Modification MOD-00111</u> Fairfax Paleo Zone Modified Limits	
<u>Change Order Dates:</u>	
Scope of Work approved	April 10, 2020
Modification Executed	June 02, 2020
<u>Elapsed Time for Executing Change Order:</u>	
Using new delegated process	38 work days
Estimate using former Board approval process Agenda for the June Board	55 work days
<u>Cost of Change Order:</u>	
Metro independent cost estimate (ICE)	\$3,631,303
Contractor's proposed cost	\$9,518,316
Negotiated amount	\$4,917,392
Percentage of negotiated amount over ICE	35.4%
Amount negotiated under Contractor's proposal	\$4,600,924

**Spot Check #3 - Purple Line Extension Section 2 Transit Project - Contract C1120****Change Order Detail**

<u>Description of Modification MOD-0080</u> Demobilization and Remobilization due to COBH Moratorium	
<u>Change Order Dates:</u>	
Scope of Work approved	January 31, 2020
Cost agreed upon	June 10, 2020
Modification Executed	June 19, 2020
<u>Elapsed Time for Executing Change Order:</u>	
Using new delegated process	9 work days
Estimate using former Board approval process Agenda for the August Board (July dark)	56 work days
<u>Cost of Change Order:</u>	
Metro independent cost estimate (ICE)	\$924,038
Contractor's proposed cost	\$1,854,510
Negotiated amount	\$1,698,253
Percentage of negotiated amount over ICE	83.8%
Amount negotiated under Contractor's proposal	\$156,257

**Spot Check# 4 - Purple Line Section 3 Transit Project – Tunnels Contract C1151****Change Order Detail**

<u>Description of Modification - MOD-0004.1</u> Increase Ground Water Treatment Plant Capacity at Tail Track Exit Shaft	
<u>Change Order Dates:</u>	
Scope of Work approved	June 14, 2020
Modification Executed	June 30, 2020
<u>Elapsed Time for Executing Change Order:</u>	
Using new delegated process	12 work days
Estimate using former Board approval process Agenda for the August Board (July dark)	53 work days
<u>Cost of Modification:</u>	
Metro independent cost estimate (ICE)	\$867,390
Contractor's proposed cost	\$1,411,157
Negotiated amount	\$1,087,504
Percentage of negotiated amount over ICE	25.4%
Amount negotiated under the Contractor's proposal	\$323,653

**Spot Check# 5 - Purple Line Section 3 Transit Project – Tunnels Contract C1151****Change Order Detail**

<u>Description of Modification - MOD-0005</u>	
Addition of Sepulveda Staging Area to Compensate VA Site Reduction	
<u>Change Order Dates:</u>	
Scope of Work approved	June 29, 2020
Modification Executed	July 31, 2020
<u>Elapsed Time for Executing Change Order:</u>	
Using new delegated process	24 work days
Estimate using former Board approval process Agenda for the August Board	43 work days
<u>Cost of Modification:</u>	
Metro independent cost estimate (ICE)	\$1,634,911
Contractor's proposed cost	\$2,908,321
Negotiated amount	\$2,612,951
Percentage of negotiated amount over ICE	59.8%
Amount negotiated under the Contractor's proposal	\$295,370

## ATTACHMENT B (October 2020)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
October 2020 #1 Contract C0988 MOD-00485 Crenshaw/LAX Transit Corridor Project Case 5 Bedding Required by LABOE	<p>Since the 'Green book' states the support and materials for sewer and storm drain pipe are to be encased in concrete, the OIG recommends that the LA Metro rail standard drawing US-014, be updated to reflect the required City standard and Metro may negotiate with the LABOE to adopt a different standard for specific projects as warranted.</p> <p>We further recommend, as discussed in previous reports, that Metro study the large discrepancies between the Metro ICE and the award amounts to determine if there is a method by which those discrepancies can be narrowed. This recommendation applies to many of the Spot Checks reviewed in this Report, and is based also on a Metro audit completed by the Management Audit Services Department that noted significant discrepancies in these amounts to be a frequent occurrence.</p>		
October 2020 #2 Contract C1045 MOD-00111 Purple Line Extension Sect. 1 Fairfax Paleo Zone Modified Limits	The OIG recommends future GBR's include a more comprehensive underground site assessment to determine a better approximation of the marine and paleo geological layers. In this instance, a robust underground assessment would have avoided the costly change order. However, the additional excavation costs would have been included in the higher base bid value.		
October 2020 #3 Contract C1120 MOD-00080 Purple Line Extension Sect. 2 Demobilization and Remobilization due to COBH Moratorium	<p>The MOA between Metro and COBH imposes additional restrictions on Metro and adds costly change orders to the original contract.</p> <p>The OIG recommends Metro adopts a standardized MOA for use in negotiations with all jurisdictions within Los Angeles County and utilizes this agreement for every construction project going forward in each respective jurisdiction and that budget estimates for projects should be revised as necessary to take into consideration MOAs entered into.</p>		
October 2020 #4 Contract C1151 MOD-00073 Purple Line Extension Sect. 3 Increase Ground Water Treatment Plant Capacity at Tail Track Exit Shaft	<p>It is the OIG's understanding that water pump tests and water quality tests were performed, but they were performed at the original location, the Army Reserve site, which is no longer the correct shaft location. Now the site is at the Veterans Administration property. A change in location can greatly affect both the levels and quality of the groundwater, thus increasing the revised dewatering process.</p> <p>It is critical that the Real Estate Department be included at the earliest possible time in negotiating the property requirements for a project. Having to change location plans after a contract award can have significant scheduling and expense consequences.</p>		

## ATTACHMENT B (October 2020)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
October 2020 #5 Contract C1151 MOD-00073 Purple Line Extension Sect. 3 Addition of Sepulveda Staging Area to Compensate VA Site Reduction	<p>The Purple Line Extension 3 was a 'next decade project' and was accelerated to be completed in the next 5 years with many project processes that had to be compressed to meet the schedule. We also understand that the real estate acquisition process is contingent on the funding being in place.</p> <p>The real estate acquisition process and all other real estate arrangements must be negotiated as early as possible and negotiate those property rights strategically to ensure we have our real estate needs met at the earliest and least expensive manner possible.</p>		

## ATTACHMENT B (August 2020)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
August 2020 #1 Contract C1045 MOD-00095 Purple Line Extension Sect. 1 Transit Project: Phase 5 Golder EOR Mitigation Plan Implementation	<p>The OIG is in agreement with applying extra safety precautions that the Metro project office has put forward. Where conditions are relatively unique to the tunneling industry, more prescriptive specifications for means and methods in these zones is warranted.</p> <p>Since the Contractor, Golder Gas, performed the entire mitigation plan including removal and mitigation, the OIG recommends that LA Metro ensure that Golder Gas is held contractually, jointly, and severally liability for any future incident involving gas in the area where the soil vapor extraction wells and the monitoring wells are installed and abandoned. This is the common practice in environmental cases where a "consulting expert" is hired to monitor and mitigate a hazardous substance issue.</p>	The Section 1 Project will review the indemnification text issued to Golder that was required by STS in order for Golder to proceed with the work. This indemnification will determine what Golder's future obligations are.	
August 2020 #2 Contract C1045 MOD-00106 Purple Line Extension Sect. 1 Center Muck Shaft at La Brea (ECI-03)	The OIG recognizes that this type of shaft at the La Brea station can serve a legitimate purpose and that the OIG recommends that use of such methods should be considered and contemplated in future project specifications and a reserve for same should be made when the savings in time, expense, and safety outweigh the cost of such a shaft.	OIG comment received will be included in the lessons learned.	
August 2020 #3 Contract C1045 MOD-00107 Purple Line Extension Sect. 1 Center Muck Shaft at La Brea (ECI-03)	The OIG is concerned that a bid of 40% over an ICE, when you are in a noncompetitive circumstance, may not be a good faith offer or bad communication on specifications. Such behaviors can have the effect of damaging a relationship during an early phase of construction and create distrust that can harm project collaboration in the future. We appreciate a contractor's willingness to proceed on work even without a commitment from Metro in some cases for the payment for that work, but recommend the contractor exercise greater care in formulating its proposals and that Metro be clear and fair but diligent and firm in its ICE calculations and negotiations stance.	OIG comment received. Contractor will be reminded to have appropriate personell attend the fact finding and provide timely complete CSP in order to resolve issues in a collaborative manner.	

## ATTACHMENT B (August 2020)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
<p>August 2020 #4 Contract C1120 MOD-00073 Purple Line Extension Sect. 2 Century City Constellation Station Track work Extension</p>	<p>1. The OIG is concerned that a bid is almost 3 times over the ICE, when you are in a noncompetitive circumstance, may not be a good faith offer or bad communication on specifications. Such behaviors can have the effect of damaging a relationship during an early phase of construction and create distrust that can harm project collaboration in the future. We appreciate a contractor's willingness to proceed on work even without a commitment from Metro in some cases for the payment for that work, but recommend the contractor exercise greater care in formulating its proposals and that Metro be clear and fair but diligent and firm in its ICE calculations and negotiations stance.</p> <p>LA Metro is having to absorb the cost of track extension change orders that arose due to errors and omissions on the part of the engineering consultant WSP. The OIG was informed that WSP miscalculated the braking distance in the initial project definition drawings that were supplied to the construction contractor. Metro will have to cover this expense with the contractor, but should look to the design engineering firm for reimbursement to Metro of the costs it would not have had to otherwise incur less amounts saved or mitigations.</p> <p>2. The OIG additionally recommends that Metro review the current Metro Rail Design Criteria (MRDC) compared to the newly released FRA track design standards for accommodating a train entering a stub-end to determine if any modification or update to our MRDC is warranted.</p>	<p>1. If a Cost and Schedule Proposal (CSP) is significantly higher than the Independent Cost Estimate (ICE), Metro's Contract Administrator and the Project Team engages in further meetings with the Contractor to clarify scope in order to determine the source of the discrepancies between the two estimates. These meetings are professional in nature, and often result in favorable resolution on a price that is somewhere between the ICE and the revised CSP. This process ultimately leads to the execution of mutually agreed upon Contract Modifications, and avoids costly disputes related to Changed Work.</p> <p>Related to the cost of the change, if WSP had calculated the braking distance correctly, the Contractor's proposal price would have included the cost for the trackwork that was recently added by Contract Modification. As a result, the awarded contract value would have been slightly higher, and the project contingency slightly lower at Notice to Proceed. The only additional cost that this error by WSP may have created is a theoretical premium for paying for added trackwork in a non-competitive environment, which would be difficult to prove. It should be noted that the difference between the executed Contract Modification price and the ICE was about 17%, or \$171,000. As a result, it is likely that it would be difficult for Metro to determine if it paid a non-competitive premium. That said, the recommendation will be discussed with senior executive management in VCM and Program Management to determine if any action against WSP will take place.</p> <p>2. This recommendation will be referred to Metro Engineering for consideration.</p>	

ATTACHMENT B (April 2020)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
April 2020 #1 C0980 MOD-00161 Regional Connector - Procure Medium Attenuation Fasteners in Lieu of Standard Direct Fixation Rail Fasteners for the 2nd & Broadway Crossover	<p>Regional Connector project is very unique because of all the existing historical buildings above the construction. Noise pollution has become a major concern for urban transit dwellers and authorities. The rule of thumb is a 10decibel technical increase in noise is heard by the human ear as "doubled" in loudness. When constructing underground for tunnels and stations the Environmental Impact Report must remember to always mitigate sound and vibration to protect the potentially impacted fragile surface buildings.</p> <p>The OIG recommends this scenario be written into the Lessons Learned file for future similar situations when constructing under historic or special case existing buildings.</p>	<p>The Regional Connector Project has extensive vibration mitigation elements included in the design where the operating guidway passes nearby sensitive receptors including recording studios, music venues and hotels. The project also requires that noise and vibration monitoring be performed during construction near sensitive facilities.</p> <p>The lesson learned and responded to in the referenced Contract Modification, is that information gathered during construction monitoring should be used to adjust the designed mitigations where field conditions indicate they are necessary.</p>	Completed with issuance of subject contract modification. Equipment to be installed 3rd quarter 2020
April 2020 #2 C1045 MOD-00098 Purple Line Sect. 1 Additional Air Scrubbers at Fairfax Station	<p>The OIG recommends further questioning to Southern California AQMD to determine why on a previous Metro construction contract (at the same location) they set the emission limit at 50 parts per billion, and the published standards are set at an emission limit of 30 parts per billion. On this contract the limits are set at 15 parts per billion. The inconsistency of the emissions limit should be taken under consideration and request in writing from AQMD why the standard emission limit could not be applied to this permit.</p> <p>The OIG further recommends in future construction pre-bid meetings, disclose to all potential contractors that the AQMD permit values necessary for the technical specification, "Temporary Construction Ventilation for Scrubber Units" has varied in the recent past and to verify the amount with an AQMD representative. If possible a commitment needs to be obtained from AQMD by the contractor at the time of submission of a bid amount, that the standard is firm for a defined period.</p>	<p>The emissions limit for equipment was set at the time the Contractor submitted the specific ventilation plan to SCAQMD for permit.</p> <p>The SCAQMD does not have a set standard for hydrogen sulfide, but the states standard is 30 parts per billion. SCAQMD develops their requirements based on specific site conditions. Our EIR states Metro and its contractors will set and maintain work equipment and standards to meet SCAQMD standards.</p> <p>A letter will be sent to SCAQMD for clarification on how SCAQMD can consistently apply emissions regulations for hydrogen sulfide for Metro's future projects.</p>	
April 2020 #3 C1120 MOD-00064 Purple Line Sect. 2 Geotechnical Instrumentation Installation and Monitoring AT&T and Beverly Hills High School	The OIG recommends that the independent estimator visit the field location concerning where the work for this change order will occur. The construction manager should walk the estimator through the scope of the changes for which they are developing a cost estimate. The independent estimate was a 126.7% lower than the negotiated price. Where such significant discrepancies in price estimates exist, either the estimator for Metro, or the estimator for the contractor needs to re-evaluate the scope of the change order.	Agreed. Moving forward the estimating group will endeavor to work even more closely with available subject matter experts to assure a thorough understanding of scope and of the engineering and construction processes involved.	
April 2020 #4 C1151 MOD-00001 Purple Line Sect. 3 Revise the Tail Track Exit Shaft Location from US Army Reserv to Veterans Affairs Property	<p>If the Army Reserve location had been negotiated prior to the contract award, these amounts might have been included in the original bid, although the price then and now might have been the same for this different location.</p> <p>The OIG recommends Real estate arrangements should be negotiated as early as possible.</p>	Metro agrees with the OIG's comment regarding the price of the change. The cost would roughly be the same whether it was negotiated prior to contract award or after award. We agree that real estate arrangements (agreements) should be negotiated as early as possible. The project initiated contact with the property owner for the Exit Shaft property acquisition after the project was identified to be accelerated from the original 2035 Revenue Service Date. Metro did engage in talks with the VA early in the Project but obtaining VA approval to access their property has not been without a few challenges that Metro was able to overcome.	



## ATTACHMENT B (January 2020)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
Jan 2020 / #1 C0988-MOD-00437 Crenshaw/LAX UG1 (H2S) Ventilation Fans - Construction	none		
January 2020 #2 C0980 MOD-00154 Regional Connector - Acoustical Treatments for Areas Not on Finish Schedule	none		
January 2020 #3 C1045 MOD-00089 Purple Line Sect. 1 Development and On Site Validation of the Selected Gas Mitigation Option for M13	<p>While the soil at every site is unique, it is possible to create a standard for testing soils for gasses. There is no current rule or technical specification within Metro criteria for extraction of CH<sub>4</sub> or H<sub>2</sub>S from the soil.</p> <p>The OIG recommends after the final report is submitted by the contractor, that a technical specification for testing be developed and written into the MDRC to use in the future.</p>	<p>PLE1 Final M13 Mitigation Report will be forwarded to Metro Geotechnical Department for their review and further processing.</p>	
January 2020 #4 C1045 MOD-00090 Purple Line Sect. 1 Oil Well Investigation In Lieu of TBM Probe Ahead	<p>The implementation of the drilling and magnetometer survey from Section 1 has been incorporated into Purple Line Extension Section 2 and 3 contracts.</p> <p>The OIG recommends that the procedures implemented for locating tanks, pipes and other abandoned waste be added to the Lessons Learned database.</p> <p>The OIG further recommends that Metro evaluates whether to pursue recovery for waste removal costs under CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act, also known as Superfund. Passed in 1980). The OIG recommends that Metro's Engineering Program Management provide information on this matter to Metro's Legal department to assist in making this determination and potentially pursuing this recovery.</p>	<p>PLE1 implemented methodologies for locating known tanks, pipes and other abandoned waste will be added to the Lessons Learned database. PLE1 notes that the hazardous waste removal is relatively small/negligible compared with the overall volume of soil removed. After reviewing the potential ROI on pursuing legal actions against any potential responsible parties for cost recovery the current determination based on the available data is that it is not worth the effort and cost at this time. However, <b>it was decided that Metro County Counsel would provide a preliminary review on the issue and it would be revisited in the future.</b></p>	

# Office Of Inspector General Construction Change Order Spot Check Report

Presented By  
**Karen Gorman**  
Inspector General

# Spot Check Costs

File #  
2020-0620

## Summary of Selected Change Order Costs

Four OIG spot checks of Change Orders / Modifications reported

### **1 Change Order for Crenshaw/LAX Transit Corridor**

❖ Case 5 Bedding Required by LABOE = \$687,500

### **2 Change Order Purple Line Section 1**

❖ Fairfax Paleo Zone Modified Limits = \$4,917,392

### **3 Change Order for Purple Line Section 2**

❖ Demobilization and Remobilization due to COBH Moratorium = \$1,698,253

### **4 Change Order for Purple Line Section 3**

❖ Increase Ground Water Treatment Plant Capacity at Tail Track Exit Shaft = \$1,087,504

### **5 Change Order for Purple Line Section 3**

❖ Addition of Sepulveda Staging Area to Compensate VA Site Reduction = \$2,612,951

October 2020

Construction Committee

Los Angeles County Metropolitan Transportation Authority



# Spot Check Schedule Comparison

File #  
2020-0620

Schedule Comparison: new delegated process vs. former Board approval process

PROJECT	Title of Change Order	Time Saved Executed date to Board Mtg.	NEW Delegated Process final SOW to Executed date	Former Board Approval Process
CRENSHAW / LAX TRANSIT CORRIDOR	Case 5 Bedding Required by LABOE	34	29	63
WESTSIDE PURPLE LINE SECT 1	Fairfax Paleo Zone Modified Limits	17	38	55
WESTSIDE PURPLE LINE SECT 2	Demobilization and Remobilization Due to COBH Moratorium	47	9	56
WESTSIDE PURPLE LINE SECT 3	Increase Ground Water Treatment Plant Capacity at Tail Track Exit Shaft	41	12	53
WESTSIDE PURPLE LINE SECT 3	Addition of Sepulveda Staging Area to Compensate VA Site Reduction	19	24	43

# Spot Check Recommendations

File #  
2020-0620

#1  
October 2020  
Contract C0988  
MOD-00485  
Crenshaw/LAX  
Transit Corridor  
Project Case 5  
Bedding Required by  
LABOE

Since the 'Green book' states the support and materials for sewer and storm drain pipe are to be encased in concrete, the OIG recommends that the LA Metro rail standard drawing US-014, be updated to reflect the required City standard and Metro may negotiate with the LABOE to adopt a different standard for specific projects as warranted.

We further recommend, as discussed in previous reports, that Metro study the large discrepancies between the Metro ICE and the award amounts to determine if there is a method by which those discrepancies can be narrowed. This recommendation applies to many of the Spot Checks reviewed in this Report, and is based also on a Metro audit completed by the Management Audit Services Department that noted significant discrepancies in these amounts to be a frequent occurrence.

#2  
October 2020  
Contract C1045  
MOD-00111 Purple  
Line Extension Sect.  
1 Fairfax Paleo Zone  
Modified Limits

The OIG recommends future GBR's include a more comprehensive underground site assessment to determine a better approximation of the marine and paleo geological layers. In this instance, a robust underground assessment would have avoided the costly change order. However, the additional excavation costs would have been included in the higher base bid value.

October 2020

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# Spot Check Recommendations

File #  
2020-0620

#3  
October 2020  
Contract C1120  
MOD-00080 Purple  
Line Extension  
Sect. 2  
Demobilization and  
Remobilization due  
to COBH  
Moratorium

The MOA between Metro and COBH imposes additional restrictions on Metro and adds costly change orders to the original contract.

The OIG recommends Metro adopts a standardized MOA for use in negotiations with all jurisdictions within Los Angeles County and utilizes this agreement for every construction project going forward in each respective jurisdiction and that budget estimates for projects should be revised as necessary to take into consideration MOAs entered into.

#4  
October 2020  
Contract C1151  
MOD-00073 Purple  
Line Extension  
Sect. 3 Increase  
Ground Water  
Treatment Plant  
Capacity at Tail  
Track Exit Shaft

It is the OIG's understanding that water pump tests and water quality tests were performed, but they were performed at the original location, the Army Reserve site, which is no longer the correct shaft location. Now the site is at the Veterans Administration property. A change in location can greatly affect both the levels and quality of the groundwater, thus increasing the revised dewatering process.

It is critical that the Real Estate Department be included at the earliest possible time in negotiating the property requirements for a project. Having to change location plans after a contract award can have significant scheduling and expense consequences.

**October 2020**

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# Spot Check Recommendations

File #  
2020-0620

#5  
October 2020  
Contract C1151  
MOD-00073 Purple  
Line Extension  
Sect. 3  
Addition of  
Sepulveda Staging  
Area to  
Compensate VA  
Site Reduction

The Purple Line Extension 3 was a 'next decade project' and was accelerated to be completed in the next 5 years with many project processes that had to be compressed to meet the schedule. We also understand that the real estate acquisition process is contingent on the funding being in place.

The real estate acquisition process and all other real estate arrangements must be negotiated as early as possible and negotiate those property rights strategically to ensure we have our real estate needs met at the earliest and least expensive manner possible.

October 2020

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