

**Los Angeles County  
Metropolitan Transportation Authority  
Office of the Inspector General**

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**2023 OIG CONSTRUCTION  
BEST PRACTICES REPORT**

(Follow Up to the 2016 OIG Construction Best Practices Report)

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**OIG Case Number: 2021-0046**  
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**September 13, 2023**





Los Angeles County  
Metropolitan Transportation Authority

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**DATE:** July 24, 2023  
**TO:** LA Metro Board of Directors  
**FROM:** Karen Gorman, Inspector General   
**SUBJECT:** 2023 OIG Construction Best Practices Report (Follow Up to 2016 OIG Report)

The Office of the Inspector General (OIG) has completed its 2023 Construction Best Practices report (2023 OIG Report). It is a follow up on the 2016 Construction Best Practices study we issued (2016 OIG Report). Our objective was to determine what recommendations from that 2016 OIG Report have been implemented. This report describes the status of those recommendations for the Chief Executive Office and the LA Metro Board.

The OIG’s specific objectives were to determine whether:

- New or revised policies and procedures were developed to implement the recommendations in the 2016 OIG Report.
- New or revised practices were established to implement the 109 recommendations of 2016 OIG Report and whether those practices meet the intent of the 2016 OIG Report.
- Any gaps that remain in Metro’s policies, procedures, and practices, and identify opportunities for enhancements to current policies, procedures, and practices; and action could be taken in the future to address those recommendations that are still pending.

To complete this report the OIG interviewed staff and gathered data across many departments contributing to project delivery success including those departments shown in the table below.

DEPARTMENTS CRITICAL TO PROJECT DELIVERY	
Internal to Program Management	External to Program Management
Program Management - Construction	Office of the Chief Executive Office
Program Management - Project Controls	Countywide Planning & Development
Program Management - Risk	Vendor/Contract Management
Program Management - Quality	Office of Management & Budget
Engineering & Construction - Mega Projects	Communications
Engineering & Construction – Capital Improvements	Safety
Third Party Administration	Enterprise Transit Asset Management

The results of the report are heavily based on the input we received from the Metro staff and data they provided, and we thank them for that information and cooperation.

## Conclusions and Recommendations

We were impressed to find that action has been taken to some extent on 96 out of the 109 recommendations in the 2016 OIG Report, though some of those actions are still a work-in-progress and not entirely completed.

We were able to make 46 recommendations in this 2023 OIG Report [a table of those recommendations are in an appendix beginning on page A16] for further construction related policies and procedures enhancements including the following areas:

- Project planning and scope definition
- Project management
- Project delivery
- Utility relocation
- Staffing
- Change management
- Community involvement
- Partnering
- Procurement
- Oversight

The 2016 OIG Report can be accessed through this link:

[http://libraryarchives.metro.net/DB\\_Attachments/160303\\_LACMTA\\_Best\\_Practices\\_Study\\_Report.pdf](http://libraryarchives.metro.net/DB_Attachments/160303_LACMTA_Best_Practices_Study_Report.pdf)

## **EXECUTIVE SUMMARY**

In 2016, the Office of Inspector General (OIG) published its Capital Project Construction Management Best Practices Study (“2016 BP Study”) to identify best practices for improving Metro’s management and oversight of major construction projects. The resulting report made 109 recommendations for enhancements in the following areas:

- Project planning and scope definition
- Project management
- Project delivery
- Utility relocation
- Staffing
- Change management
- Community involvement
- Partnering
- Procurement
- Oversight

Metro’s Program Management Group (“PMG”) was the primary focus of the review, and responsible for responding to the 2016 BP Study. After reviewing the 2016 BP Study, PMG executive management stated, “We generally agree with most of the findings and recommendations in the report. Overall, the report provides a comprehensive set of recommendations that we plan to use as a catalyst for positive changes in the program management processes and approaches in the future.” Implementation of the recommended best practices has taken time, and to some extent, those efforts are ongoing.

Six years later, the OIG began conducting a follow up review to determine the current status of implementing the 109 recommendations in the 2016 BP Study. The 2023 follow up review found that actions have been taken or initiated to implement 96 (88%) of the 109 recommendations, and 13 (12%) recommendations have not been implemented or need further improvement. New or revised policies and procedures were implemented for 32 of the 109 recommendations and new or revised practices were initiated for 66 recommendations.

For reporting purposes, we distributed the 109 recommendations across five topic clusters of construction management areas. For each cluster, the review identified the following high points “Strengths” and areas that need improvement “Vulnerabilities.”

### **Cluster A: PRE-PROCUREMENT PROJECT DEVELOPMENT**

- **Strengths**: Metro has developed comprehensive procedures including detailed checklists to guide both the project delivery selection process and general readiness as a project moves toward procurement. Metro is expanding its use of alternative methods of project delivery which will assist in assessing and mitigating project risks.
- **Vulnerabilities**: Third party project stakeholders – public and private utility owners and permitting authorities – continue to create risks, delay, and cost increases to the extent they lack resources or the collaborative drive to assist Metro. PMG is not using risk management tools and deep project management planning on lower cost, less complex projects.

## Cluster B: POST-PROCUREMENT PROJECT MANAGEMENT

- **Strengths:** Metro has implemented a streamlined Change Order process and implemented Delegation of Authority that have saved time and money. A quarterly audit by the OIG's office assists Metro's Board in overseeing that the streamlined Change Order process operates as intended.
- **Vulnerabilities:** Construction contractors' alleged claims for delay remain challenging to resolve for merit of the claims and the amount warranted for claims in a timely and transparent manner, often resulting in large end-of-project claims needing resolution. Partnering may not be getting used effectively as a tool for resolution across all claim types. The Lessons Learned program is not being used by all PMG related departments nor used for all projects. Also, PMG has not established a process for evaluating the contractor's performance in a way that is useful for future procurements. The Federal Transportation Administration (FTA) offers a template that will be separately reviewed for a future scorecard program.

## Cluster C: PROJECT MANAGEMENT SUPPORT

- **Strengths:** Administrative Controls and the Program Management Information Systems ("PMIS") conform with the 2016 recommendations and are functioning well. There are strong document controls in place, and policies and procedures are adequate. PMIS effectively collects, tracks, and handles data and status reporting.
- **Vulnerabilities:** A "gap" exists in working with the public early in the project planning process. PMG should advocate for improved public involvement at the earliest opportunity to maximize good public relations. Metro's full-time employees to consultant's ratio across project and program management is currently at a 30/70 ratio, in favor of consultants. The Metro Board has requested Metro to improve to a 50/50 ratio.

## Cluster D: STRATEGIC PROGRAM OVERSIGHT

- **Strengths:** Some of the recommendations made in the 2016 BP Study are addressed by Metro's implementation of a cross-departmental team of experts, referred to as the Early Intervention Team ("EIT"). This team uses a problem-solving approach through the procurement process to mitigate challenges related to scope, cost, schedule, project delivery method, third parties and market conditions (e.g., the pandemic, supply chain, and inflation).
- **Vulnerabilities:** Separation of duties between Countywide Planning & Development ("CP&D") and PMG during the project planning phase continues to threaten Metro's successful delivery of capital projects. The long-established silos between these departments without unified program guidance affects project planning, budget, and procedures and will remain a weakness until the EIT and/or the Project Charter approach has proven to mitigate this threat.

### Cluster E: RELOCATED GROUPS

- **Strengths:** The Highways group relocated to the CP&D Department and can now work more closely with Caltrans in the planning phase of projects. The Enterprise Transit Asset Management (ETAM) program is moving forward in the development phase of the maturity path now that ETAM has relocated to Risk, Safety and Asset Management.
- **Vulnerabilities:** The relocation of the Highways group to CP&D has created some obstacles in reporting the status of projects. CP&D does not have the same type of regular quarterly Board reporting responsibilities as PMG. ETAM needs maintenance and warranty information to be folded into the Construction phase for tracking new assets, and the contractor needs to collect and report information to be added to Metro's ETAM database. ETAM also needs State of Good Repair information to be integrated into the review of capital budgets to avoid the situation where new projects are proposed and implemented, without consideration of older, inter-dependent transit facilities.



Crenshaw project – K Line - Elevated concrete fixed rail  
above Imperial Highway and below 105 Freeway

### Acronym Table

ACRONYM	DEFINITION
<b>AUR</b>	Advanced Utility Relocation
<b>BPS</b>	Capital Project Construction Management's Best Practices Study (OIG Report 2016)
<b>CEO</b>	Chief Executive Officer
<b>CIP</b>	Capital Improvement Project
<b>COLA</b>	City of Los Angeles
<b>CP&amp;D</b>	Countywide Planning and Development
<b>CPUC</b>	California Public Utilities Commission
<b>CSSM</b>	Construction Safety and Security Manual
<b>DB</b>	Design-Build
<b>DBB</b>	Design-Bid-Build
<b>EIT</b>	Early Intervention Team
<b>ETAM</b>	Enterprise Transit Asset Management
<b>FTA</b>	Federal Transportation Agency
<b>GPR</b>	Ground Penetrating Radar
<b>HR</b>	Human Resources
<b>IPMO</b>	Integrated Project Management Office
<b>IPP</b>	Individual Performance Plan
<b>KPI</b>	Key Performance Indicator
<b>LACMTA</b>	Los Angeles County Metropolitan Transportation Authority
<b>LADWP</b>	Los Angeles Department of Water and Power
<b>LLPP</b>	Lessons Learned Program Plan
<b>LOP</b>	Life of Project (Budget)
<b>MASD</b>	Management Audit Services Department
<b>MRDC</b>	Metro Rail Design Criteria
<b>OIG</b>	Office of the Inspector General
<b>OMB</b>	Office of Management and Budget
<b>PM</b>	Project Manager
<b>PMBOK</b>	Project Management Book of Knowledge
<b>PMG</b>	Program Management Group
<b>PMI</b>	Project Management Institute
<b>PMIS</b>	Program Management Information System
<b>PMO</b>	Program Management Office
<b>PMP</b>	Project Management Plan
<b>QMO</b>	Quality Management Oversight
<b>TPA</b>	Third Party Administration
<b>V/CM</b>	Vendor/Contract Management
<b>WP</b>	White Paper

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## CHAPTER 1: INTRODUCTION

### Looking Back

In 2015, with the approval of Measure R funds (2008, half-cent sales tax) and anticipated Measure M funds (2016, approved another half-cent sales tax) Metro was moving forward to implement Los Angeles County's ambitious transit improvement program. To optimize Metro's performance on behalf of the public, the Office of Inspector General (OIG) engaged an expert consultant team to perform a review to identify possible enhancements that might be made to Metro's construction management program for project delivery. The objectives of this review were to identify (1) effective, efficient, safe, and proactive approaches in managing staff, schedules, costs, and stakeholder relationships, and (2) state of the art technology, planning, data collection, and status reporting related to capital project management and delivery. The consultant proposed to reach these objectives by comparing current practices within Metro to relevant practices implemented by Metro's peer agencies. Metro's Program Management Group ("PMG") was the primary focus of the review of policies and procedures, staff interviews, and surveys.

The OIG's 2016 Capital Project Construction Management Best Practices Study ("2016 BP Study") resulted in over 100 findings leading to 109 recommendations to enhance existing practices.<sup>1</sup> The 2016 BP Study report included (1) findings and recommendations, (2) documentation supporting the findings, and (3) comparable agency benchmarks, which contributed to the recommendations.

Pursuant to typical OIG protocol, Metro Management was asked to provide a response to the 109 Recommendations. Metro's responses were added to the 2016 BP Study report, which was presented to Metro's Board. Out of the 109 recommendations, Metro agreed with 99 as either a beneficial enhancement or in accord with existing policies or practices. Ten of the 109 recommendations were declined as not a perceived enhancement or something that could be addressed in another way.

### Subsequent Actions

Shortly after the 2016 BP Study, PMG commenced developing new policies and procedures and revising key existing policies and procedures, partly by using consultant experts. PMG also acted to make internal organizational changes, including building up departments and changing reporting relationships. Also, collaborative enhancements were implemented between PMG and other Metro departments particularly Countywide Planning & Development. PMG with the CEO's Office developed the 2016 Metro Program Management Plan as an organization-wide initiative for ensuring capital delivery best practices.<sup>2</sup>

Metro's Management Audit Services Department ("MASD") verified management's actions to implement the recommendations in 2017-2018. The OIG iteratively worked with MASD and followed up with PMG to update the status of recommendations to "close out" recommendations that were implemented.

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<sup>1</sup> The entire 2016 BP Study can be accessed at the following link: [16-AUD-01 Final Report LACMTA Best Practices Study - 02.29.16](#). The first 100-pages encompass the most critical information.

<sup>2</sup> Metro's 2016 Metro Program Management Plan is no longer available on Metro's website. Please contact the OIG for a copy.

## Review Objectives

The overall objective of this review was to follow up on the implementation of recommendations made in the 2016 BP Study and report the status to the Chief Executive Office and Board. Specific objectives were to determine whether:

- New or revised policies and procedures were developed to implement the recommendations in the 2016 BP Study.
- New or revised practices were established to implement the recommendations in the 2016 BP Study and if those practices meet the intent of the 2016 BP Study.
- Any gaps remain in Metro's policies, procedures and practices, and identify opportunities for further enhancements to current policies, procedures, and practices.



Crenshaw project – K Line - Elevated rail above Aviation Blvd. and W. Century Blvd.

## **CHAPTER 2: METHODOLOGY**

### **Introduction to Methodology**

The OIG’s method for evaluating Metro’s implementation of the recommendations in the 2016 Construction Best Practices Study consisted of reviewing policies and procedures and interviewing Metro staff. We reviewed the universe of policies and procedures relied upon by Program Management Group (“PMG”) or other Metro groups and identified which new and revised policies and procedures were responsive to the 2016 findings and recommendations. We also interviewed Metro staff to (1) confirm implementation of policies and procedures, and (2) learn of new or enhanced practices inspired by the 2016 BP Study not evident from a review of the formal policies and procedures.

The OIG identified departments both internal and external to PMG that contribute to project delivery success. External groups can vary as to the criticality of impact on construction management practices. Countywide Planning & Development (“CP&D”) and Vendor/Contract Management (“V/CM”) have extensive impact on PMG; others, such as Office of Management and Budget and Human Resources, play support roles. For this 2023 Follow Up Review, we gathered data across many departments contributing to project delivery success, interacted directly with these departments shown in Table 1 below (the 2016 BP Study interacted indirectly with some departments).

<b>DEPARTMENTS CRITICAL TO PROJECT DELIVERY</b>	
<b>Internal to Program Management</b>	<b>External to Program Management</b>
Program Management - Construction	Office of the CEO
Program Management - Project Controls	Countywide Planning & Development
Program Management - Risk	Vendor/Contract Management
Program Management - Quality	Office of Management & Budget
Engineering & Construction - Mega Projects	Communications
Engineering & Construction – Capital Improvement	Safety
Third Party Administration	Enterprise Transit Asset Management

Table 1 – Internal Program Management groups and external Metro departments that support project delivery.

### **Data Collection Method**

To accomplish the review, the OIG gathered and reviewed policies, procedures, and manuals newly developed or revised since the 2016 BP Study and interviewed Metro personnel.

### **Relevant Policies, Procedures, and Manuals**

The OIG collected current applicable policies, procedures and manuals relied upon by PMG and other departments that support Metro’s capital delivery program. A table of the policies, procedures, bulletins, white papers, and manuals reviewed by the OIG is in Appendix 1.

Materials created or revised after the 2016 BP Study received more attention than those pre-dating that study. All new and revised materials (since 2016) are generally acknowledged to reflect Metro’s enterprise-wide best practices efforts, whether or not acknowledged as “inspired by” the 2016 BP Study. The OIG ascribed a status to all materials based on date created or

revised. For pre-2016 materials, the OIG notes in progress efforts to revise the materials. Refer to Table 2.

POST - 2016 MATERIALS	PRE-2016 MATERIALS
Established post-2016, New	Established pre-2016, Revision in Progress
Established pre-2016, Revised post-2016	Established pre-2016, Needs Improvement

Table 2 – Policies, procedures and manuals – Categorized.

### Metro Staff Interviews

Recognizing that new and revised policies require implementation to be effective, the OIG conducted interviews to query about practices. Since the 2016 recommendations do not strictly correspond to PMG or departments external to PMG, the OIG sorted recommendations by departmental subject matter. Then, the OIG reached out to the lead for each group/department to schedule interviews; interviewees were allowed to invite subject matter experts within their group to participate in the interview.

In advance of each interview, interviewees were provided with a link to the 2016 BP Study report, the recommendations pertaining to their functional area, and proposed interview questions. The OIG’s questions were designed to gather information on the status of implementation of the relevant recommendations and invite feedback on the perceived status of current capital project delivery “best practices.”

Using this approach, the OIG engaged in 15 separate Teams interviews. Twenty-four Metro employees participated either in an interview or corresponded by email for follow up information (see Appendices 2 and 3).

### Evaluation Method

Each of the 109 recommendations was evaluated using the data gathered on policies and procedures, practices, and staff feedback. The OIG also identified what construction management processes are working well versus those processes that may benefit from further enhancement.

For data evaluation, the OIG developed a three-level hierarchy to rank Metro’s implementation of each recommendation. The ranking process was designed to accommodate nuance. Complex recommendations do not necessarily lend themselves to black and white determinations of implementation. The ranking levels are:

- **Established:** Data shows that the recommendation for the best practice is adopted and functioning.
- **Evolving:** Data indicates efforts have been commenced to implement the intent of the best practice but a substantially complete solution is still “in progress” with iterative improvements.
- **Needs Improvement:** Data indicates that the recommended best practice whether “agreed” or “rejected” by Metro in 2016 continues to need effort, is worthy of consideration or in need of re-evaluation and some action.

See Appendix 4 for a summary of the ranking of the implementation for the 109 recommendations in the 2016 BP Study report, and Appendix 5 for a table of the 2016 recommendations and management responses.

**Category Areas**

The OIG connected the 109 recommendations in the 2016 report to 22 functional category areas that are assigned to the five clusters topics A through E shown in Table 3 below.

<b>CATEGORY AREAS</b>	<b>2016 Recommendation Numbers</b>
<b>A. PRE-PROCUREMENT PROJECT DEVELOPMENT</b>	
Delivery Method Selection & Criteria	5,15,57,68
General Readiness	1,2,3,4,6,16,37,38,39
Utilities & Third Parties	58,79,80,81,82,83,84,85,86,87,88,89
City Approvals	35,36,40,90
Life of Project Budget	8,55,56,107,108
Risk Management	9,32,33,34
Project Management Plan	41,42,43,45,47,48
<b>B. POST-PROCUREMENT PROJECT MANAGEMENT</b>	
Contract Administration	17,18,19,20,21,22,23,24, 25,26,29,30,64
Board Matters	44,73,74,75,76,77,78
Enforcement & Compliance	28
Partnering	10,11,12,13,14
Quality Management	91,104
Lessons Learned	51
Safety	66,67
<b>C. PROJECT MANAGEMENT SUPPORT</b>	
Public Involvement	71,72,95
PMIS	27,31,96,106,109
Administrative Controls	61,69,70
Staffing and Training	46,59,65,97,98,99,100, 101,102,103,105
Project Management KPIs	62,63
<b>D. STRATEGIC PROGRAM OVERSIGHT</b>	
Metro-wide Program Oversight	49,50,52,92,93,94
<b>E. RELOCATED GROUPS</b>	
Highways	53,54,60
Asset Management	7

Table 3 – Category Areas and 2016 Recommendation Numbers.

## **Recommendations**

During the review, we identified areas where policies, procedures, or practices could be improved and made recommendations to adopted for capital project delivery best practices to be accomplished. The recommendations are at the end of each Category area in Chapter 3 and are also summarized in Chapter 5. Additionally, a Table of 2023 Recommendations / Responses for Metro Senior Management to respond is at Appendix 6.



Crenshaw project - Elevated double crossover rail above Aviation Blvd. and below 105 freeway

## **CHAPTER 3: RESULTS OF REVIEW**

### **A. PRE-PROCUREMENT PROJECT DEVELOPMENT**

#### **CATEGORY #1: Delivery Method and Selection**

This category includes 4 Recommendations (Numbers 5, 15, 57, and 68) made in the 2016 BP Study report.

##### **A. Background**

Design-Bid-Build (“DBB”), considered the “traditional” project delivery method, was historically used by public agencies based on statutory competitive bid requirements.<sup>3</sup> California’s Legislature has acted to authorize flexibility using the Design-Build (“DB”) delivery approach as an alternative the DBB method. The DB delivery method has evolved to include variations based on timing of involvement of the contractor, risk-shifting approaches, and financing. Delivery method decisions must be made in the Planning Phase through collaborative analyses by PMG with the Planning group. DBB is seldom used by Metro for complex projects. The 2016 BP report referenced only the generic “design-build” alternative.

##### **B. Evaluation of Implementation Actions**

Our review found that Metro’s best practices in the area of project delivery method and selection criteria have been strengthened by PMG’s efforts to develop and deploy comprehensive checklists and procedures that allow for orderly delivery method selection. Moreover, Metro’s efforts toward implementing alternative project delivery methods presents ongoing opportunities to avoid the pitfalls of the tradition design-build model. Our evaluation ranked all four recommendations as “Evolving” as discussed below:

Recommendations 5 and 57 – Consider project delivery methodology on a project-by-project basis, and assess the most efficient method of project delivery: PMG has developed Procedure PM01/Project Delivery Selection to guide the process for delivery method selection. In interviews with staff, it was learned that the procedure will soon be supplemented by checklists for the Progressive-Design-Build methodology, a method being added based on lessons learned after use of the original Design-Build approach.

Recommendation 15 – Carefully evaluate design-build on a case-by-case basis: In interviews, PMG staff stated that since 2016 a robust process of analysis has been implemented, and lessons are being learned and considered in the development of further alternative methods for project delivery.

Recommendation 68 – Develop and implement a detailed decision-making process on the selection of a project delivery method: The OIG confirmed in interviews with PMG staff that Procedure PM01/Project Delivery Selection was developed and implemented in response to the 2016 BP Study. In interviews, the OIG has learned that the development and implementation of Procedure PM01/Project Delivery Selection was insufficient to control the impacts of utility-related design complexities and/or scope changes. PMG reports that its procedures will undergo continuous review and iterative improvements based on lessons learned.

**OIG Comments** – In interviews, PMG staff acknowledged that no delivery method is risk-free, and there will be a learning curve for implementation of each new delivery method. Staff

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<sup>3</sup> Owners prepare plan and specifications to 100% level prior to procuring a construction contractor, and the contract is awarded to the responsive and responsible contractor on a lowest bid basis.



indicated that extensive efforts are being made to take lessons learned into account, and consultant expertise is available to assist Metro in analyzing and leveraging the benefits of alternative delivery methods. PM01/Project Delivery Selection policy is being updated to ensure a rigorous review of the trade-offs for each delivery method.

**C. 2023 Recommendation**

The OIG recommends:

- 1.1 PMG should continue to timely update policies and procedures to include the range of alternative delivery methods currently used by Metro.

## **CATEGORY #2: General Readiness**

This Category includes 9 Recommendations (Numbers 1, 2, 3, 4, 6, 16, 37, 38, and 39) made in the 2016 BP Study report.

### **A. Background**

The 2016 BP Study identifies “general readiness” as a core capital project objective to ensure that a project is ready in terms of staff, Memorandum of Understanding (MOU), project plans and procedures, oversight plans, and established schedules that identify consequences for schedule delays, (BPS, p. 9.) Optimum project readiness is established in the Planning Phase and involves mutual responsibilities of PMG and Metro’s Planning Group (Countywide Planning & Development). PMG commences the initial general readiness review when project management responsibility transitions from the Planning Group to PMG. This hand-over typically occurs at the conclusion of the environmental compliance process and/or preliminary engineering.

### **B. Evaluation of Implementation Actions**

Our review found that most of the recommendations in this Category have been adopted or alternative steps taken to implement the intent of the recommendation. However, improvements are needed for several of the recommendations. Our evaluation ranked the 9 recommendations in this Category as “Established” (4), “Evolving” (3), and “Needs Improvement” (2) as discussed below:

#### **1. Established**

Recommendations 1, 2, and 16 – Adopt FTA oversight procedures and checklists including use of a formal stage-gate process: PMG’s development and implementation of the PC14 REV 2 - Readiness Review Procedure demonstrates full compliance with these recommendations.

Recommendation 37 – Develop and implement executive-level partnering (Caltrans): In interviews with Highways staff, it was determined that Metro staff meets regularly with Caltrans to ensure cooperation and transparency between the parties.

#### **2. Evolving**

Recommendation 3 – Allow two years to identify and relocate utilities: In 2016, PMG did not agree with this recommendation and stated that it would unduly delay engineering and other preliminary activities that can occur concurrently with utility relocation. PMG also stated that the time allocated in the project schedule for utilities to be relocated does need to be a major focus in the development of project schedules and will continue to be emphasized. However, limiting when engineering can start appears arbitrary and could significantly delay projects. Many engineering activities can proceed while concurrently addressing necessary utility relocations. Third Party Administration staff confirmed that utility relocation activities are not currently planned or scheduled to be completed before other project delivery activities.

Recommendations 38 and 39 – Engage with utility companies in the Planning Phase and establish quarterly: PMG stated that Project Managers (“PM”) are engaged in the project planning phase earlier and are also involved with utility companies earlier. In interviews with Third Party Administration (“TPA”) staff it was learned that TPA typically engages at 30% of the design stage and sometimes as early as 15% – which is very beneficial for achieving general

readiness. PMG agreed to the recommendation and stated they will evaluate whether quarterly meetings is the right interval.

### 3. Needs Improvement

**Recommendation 4** – Implement strategies to support third parties, such as providing financial assistance to utility companies and government entities in order to obtain the necessary resources to effectively support project delivery: The 2016 BP Study described that challenges associated with third parties may require innovative solutions including financial assistance or lobbied-for changes to controlling law. In interviews with TPA staff, the OIG learned that Metro has made internal efforts to mitigate third-party challenges through earlier planning efforts, but there is no evidence of Metro offering or providing resource support external to Metro. It is unclear whether these potential mitigations are financially, legally, or politically untenable.

**Recommendation 6** – Use gateway process, stakeholder engagement program, and FTA oversight procedures to effectively support project delivery: The OIG confirmed in interviews that PMG Procedure PC14/Project Readiness was developed and implemented in response to the 2016 BP Study. However, the development of PC14 with its checklists has not sufficiently mitigated the types of risk that can derail a project. Third party issues and project unknowns cannot be completely controlled, but there are other challenges that may be avoidable. Under *Category #20 appearing later in this report, Metro-wide Program Oversight*, the OIG describes in-process enhancements to Metro’s strategic program oversight that may further mitigate project readiness risks.

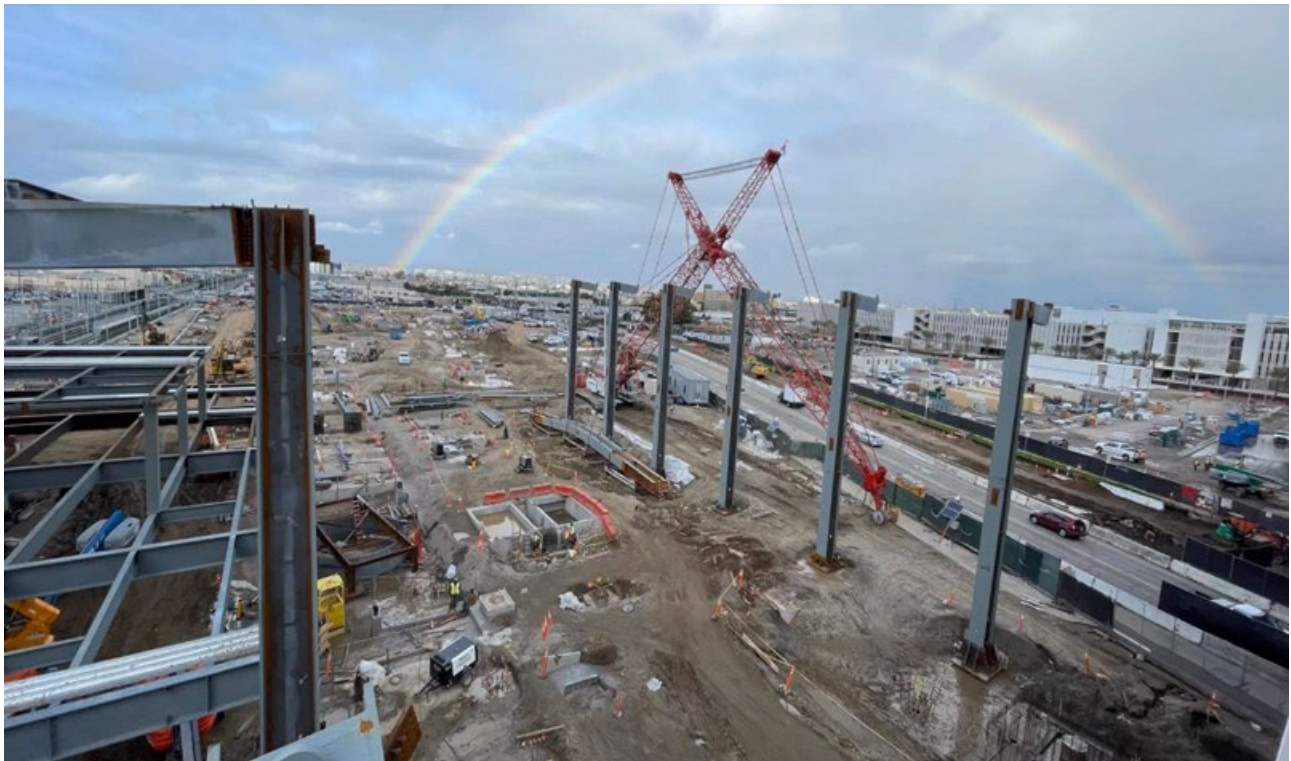
**OIG Comments** – PMG has done an excellent job developing and implementing a readiness review process in response to the 2016 OIG report. In 2022, PMG requested support from Metro’s Board of Directors for a project “Early Intervention Team” (“EIT”). The EIT consists of Metro’s finest and the best staff from planning, program management, operations, government relations, budget, and procurement to undertake best practice investigations. The EIT is a constructive development that has been significantly enhancing and ensuring that projects proceed with “true readiness” as demonstrated by controlled scope, budget, and schedule. Staff told us this has been fully embraced and implemented into the PGM culture.

Collaborative decisions made by PMG and Planning to involve PMG staff, in particular Engineering and Construction, Third Party Administration, and Risk Management earlier in the Planning Phase are positive steps that ensure information-sharing and provide the potential for proactive measures with respect to utilities and engagement with third parties. Moreover, no matter how proactive Metro may be from an organizational perspective, Metro will not be successful if third parties – whether private utility companies or public entities – fail to act timely because they lack staff and/or funding to prioritize the identification and relocation of utilities or facilities; or if they are backlogged in permit review or just don’t make Metro’s requests a priority.

### C. 2023 Recommendation

- 2.1 Metro should investigate strategic initiatives to beneficially support third parties cooperative and timely assistance toward timely and cost-efficient project delivery.
- 2.2 Third party utility relocation issues continue to be one of the larger reasons for change orders and project delays. The OIG recommends the PMG partner with the Early Intervention Team (“EIT”) to revisit the PMG’s 2016 rejection of Recommendation Nos. 3 and 6 and apply a lessons learned approach to investigating the feasibility of initiating

utility relocation work much earlier in the pre-construction management process to remove unnecessary risk and enhance mitigation by planning and scheduling of relocation completion prior to other project delivery activities, without any intention of limiting or mandating when Engineering can begin. If the progressive design build approach or other alternative delivery approach will minimize utility impacts in the same manner as separate contracts for advanced utility relocation, the PMG's response should be updated.



Airport Metro Connector project – steel structure - aerial of project site along Aviation Blvd.

### **Category #3: Utilities and Third Parties**

This Category includes 12 Recommendations (Numbers 58, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, and 89) made in the 2016 BP Study report.

#### **A. Background**

The 2016 BP Study identifies the utility relocation process as presenting significant risk to Metro capital projects cost and schedule, which is the case for most urban developers: “The ability to effectively and efficiently identify, analyze and relocate public and private utilities (gas, electric, sewer, water, communication, etc.) within or ahead of capital construction for both transit and highway projects is one of the most critical elements to Capital Program deployment and individual project success.”<sup>4</sup> (BPS, p. 73, emphasis added.)

Best practices for detection and handling of utility lines, obtaining permits and approvals, and interaction with third parties are the focus of the 12 recommendations in this area.

#### **B. Evaluation of implementation Actions**

Our review found that action has been taken or is in progress to implement recommendations; however, enforcement of utility requirements and penalties for non-compliance is still a problem area that needs improvement. Our evaluation ranked the 12 recommendations in this Category as “Established” (10), “Evolving” (1), and “Needs Improvement” (1) as discussed below:

##### **1. Established**

Recommendations 80, 87, 88, and 89 – Innovate Metro’s utility relocation processes through increased staffing, re-engineering, technology assessment, and process improvement: All of these recommendations have been implemented. We found that additional Metro staffing level was approved in the FY 2018 budget process. Also, following the BP Study, the Third-Party Administration (“TPA”) group relocated to report directly to the Chief Executive of Program Management. This made TPA a higher priority with more focused attention and support by management across capital programs. In addition, TPA was embedded earlier in the planning process. Metro now starts its efforts for identifying and responding to potential utility issues at 15% to 30% of the design stage, in order to identify any conflicts earlier and start “potholing” and investigating existing underground utilities issues with more robust technology.

Recommendations 58, 79, 83, and 86 – Use of advanced utility relocation (“AUR”) contracts to support highway projects; continue to expand the best practices of having a dedicated third-party coordination group; complete as much utility work in advance of the construction contract; and apply for FTA funding for AUR contracts: PMG agreed and implemented these recommendations. Metro frequently uses FTA funds for advance utility relocations as part of the overall cost of a project. Also, Program Management assesses the use of AUR contracts to support highway projects on a case-by-case basis.

Recommendations 82 and 85 – Communicate utility risk to contractors and allow more time and contingency for utility identification and relocation: PMG agreed and implemented the recommendations. PMG staff described that the move toward non-traditional project delivery methods were being viewed as an opportunity to control risk. For instance, the Progressive

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<sup>4</sup> The 2016 BP Study cites a Purdue University cost savings study from 2000 that concludes every \$1.00 spent on subsurface utility identification will realize \$4.62 in avoided costs for scope changes, additional excavation, redesign delays, change orders, etc. (BPS, p. 73.)

Design Build delivery method allows for phased potholing and investigation prior to or contemporaneous with design. In this case, the contractor would not be fully bound to a set price.

In general, TPA participates in the delivery method selection process to improve the chances of a successful hand-off of a project from utility work phase to construction. The goal is for utility “pre-work” to be completed prior to the construction contractor coming on board. This can only happen with comprehensive readiness review efforts described in PC14, and success depends on accurate advanced utility work, which is only as accurate as investigative efforts.

Metro is making progress on increasing planned time for utility relocation with advanced discussions and planning involving TPA at 15% to 30% of design work to identify conflicts earlier. Early engagement at 15% is starting between TPA, utilities, and Metro groups, but this must occur on a continual basis. If TPA does not become engaged early in the planning phase, it can create problems later in the project. New policies and procedures are being developed and will build on standardizing investigations and actions based on type of project. Utility location continues to be a primary source of change order claims, so no amount of attention to this topic can be too much.

## 2. Evolving

**Recommendation 81** – Increase utility identification by doing more exploratory work during early phases of project delivery (planning, preliminary engineering): Since 2016, TPA has been involved much earlier in the planning process, including contributing to the project delivery selection process. With the Planning department leading the efforts, both TPA and PMG are now more embedded in the planning process than in previous years. Regular meetings are occurring monthly and weekly on the mega-projects based on project phase and complexity. The former separation is now minimized between Program Management and TPA, and both groups encourage information sharing and “a warm hand-off” from advanced utility relocation to the construction phase.

Third Party Administration stated that Metro has traditionally relied upon Ground Penetrating Radar (GPR) for identification of utilities which has not been that accurate. In Spring of 2022, a more advanced GPR with eight additional sensors was scheduled for demonstration to Metro. It was described as scanning to depths of 30 feet below an asphalt street. At the time of this report, Metro has not yet procured that technology.

## 3. Needs Improvement

**Recommendation 84** – Enforce utility investigations requirements and penalties for non-compliance: PMG staff stated going forward, PMs and Third-Party Administration will assess and if needed, advise V/CM to enforce non-compliance penalties. The OIG has learned that this is an area that needs improvement. Metro has tried many ways to enforce making a contractor or a third-party act, unfortunately it is not that simple to enforce a penalty – perhaps contract language could be clarified. Another approach may be to incentivize compliance and invest in technologies that mitigate conflicts and obstacles.

**OIG Comments** – The OIG learned that Metro’s adoption of alternative project delivery methods was driven in part by the impacts arising from the dual issues of utility identification and relocation, and the difficulty of working through third-party collaboration. By phasing the work, with the progressive design build approach, Metro should begin to mitigate the cost and

schedule impacts that arise from differing site conditions and potential utility and design conflicts.

The earlier involvement of Third-Party Administration and Risk Management in the Planning phase will provide opportunities for Metro to identify proactive measures to mitigate utility impacts and to implement alternative project delivery methods.

### **C. 2023 Recommendation**

The OIG recommends:

- 3.1** Utility investigations, work, and relocations performed by Metro's contractors or others pose cost and schedule risks for Metro projects, including potential issues with reviews, approvals, and oversight by the third-party utility owners. The construction contract may specify timelines and/or sequences for utility-related work. To avoid cost and schedule impacts caused by third parties or contractor(s), Metro should utilize legal counsel's assistance to mitigate the risks related to utility investigations, work, and relocations. Metro should enhance its procedures and relationships to enable self-permitting. Transparency, documentation, and trust are key to Metro achieving self-permitting.



Concrete trucks on Wilshire Blvd awaiting delivery to Rodeo station for concrete slab

## **CATEGORY #4: City Approvals**

This Category includes 4 Recommendations (Numbers 35, 36, 40, and 90) made in the 2016 BP Study report.

### **A. Background**

The 2016 BP Study found numerous coordination, collaboration, and communication issues with the City of Los Angeles (“COLA”) regarding capital projects. Challenges exist with respect to responsiveness to Metro requests, old, expired, and outdated Master Cooperative Agreements and Memorandums of Understanding, and inconsistencies in approvals and collaboration toward shared goals. The three main issues related to COLA’s Bureau of Engineering’s Special Permitting Process are (1) lack of staffing resources, (2) differing design standards, and (3) requests for Betterments. These issues continually impact review and approval of designs submitted by Metro’s consultants and contractors.

Under the Project Management Book of Knowledge (“PMBOK”), third parties such as COLA are deemed “stakeholders” to Metro’s projects. Best practices for effective stakeholder management includes treating stakeholders as partners, with clearly defined roles and responsibilities on each project. There must be continuous involvement, ongoing communication, and transparency on issues. (See BPS, p. 46.)

### **B. Evaluation of Implementation Actions**

Our evaluation ranked the recommendations status in this Category as 3 “Evolving”, and one recommendation status as “Needs Improvement” as discussed below:

#### **1. Evolving**

Recommendation 35 – Develop and implement strategic executive-level partnering between Metro and COLA resulting in agreed goals and objectives: Metro has implemented this recommendation. Former Mayor Garcetti’s “Partnership Letter” dated January 6, 2017, to General Managers, Directors and Commissioners across relevant City departments and bureaus set forth guidelines for “Accountability and Responsible Delivery of Transportation Infrastructure.” The objective of the letter was to foster and continue a strong partnership between the City and Metro to support project delivery. The directive was issued but sometimes the spirit of it has been challenging when staff of each party have different viewpoints.

Recommendations 36 and 40 – Execute a new Master Cooperative Agreement based on results of both executive and management level partnering: The Master Cooperative Agreement (MCA) is currently being negotiated between the Metro and COLA and is about 90% complete. Metro took the lead on drafting the document to move the MCA forward but has had to be patient to bring COLA to understand Metro’s perspective and the long-term value of Metro’s approach. COLA, LA Department of Water and Power (LADWP) and Edison needs to trust Metro to do the right and fair thing in accordance with any agreement we enter, but Metro needs to earn that trust. In addition, the MCA with LADWP is in negotiations. Also, Southern California Edison is “at the table” but resisting an MCA, preferring instead to negotiate terms and conditions separately for each project.

#### **2. Needs Improvement**

Recommendation 90 – Establish a Legislative/Legal Improvement Team: In its response, PMG rejected this recommendation as “not necessary for utility relocation.” The OIG will include a



recommendation for the Early Intervention Team to revisit this recommendation to consider whether legislative action is appropriate given circumstances that have occurred since 2016 involving litigation and also legislative actions encouraging streamlined housing development (which may spur need for accelerated transit planning).

Detailed information in January 2023 OIG report (Legistar 2022-0704) on CEQA Streamlining and Attachment A “Impact Sciences CEQA Streamlining Report and Recommendations” publicly located on the LA Metro website. [2022-0704 - OFFICE OF INSPECTOR GENERAL CEQA STREAMLINING REPORT - Metro Board](https://boardagendas.metro.net/board-report/2022-0704/) <https://boardagendas.metro.net/board-report/2022-0704/>

**OIG Comments** – Metro staff cannot be successful in confronting and overcoming third-party issues and obtaining timely permits without a multi-pronged approach. Metro currently funds COLA’s public works staff to review and issue permits for construction drawings, but the inconsistencies in staff review and additional staff requests has slowed approval of plans. Political demands have also resulted in betterment requirements. With respect to “partnering,” former Mayor Garcetti’s 2017 Letter titled, “Partnership with City of Los Angeles,” is considered a model for establishing protocols for streamlined permit review. Continuous active partnering may be necessary if the “paper promise” is not reflected in parties’ practices.

The OIG understands that an updated Master Cooperative Agreement between Metro and COLA is being negotiated and is close to a final agreement. In this regard, there are multiple areas where a good agreement could be a win, and COLA for Metro when a formal procedure is in place. Opportunities exist for the City to have more trust in Metro as Metro negotiates to being self-certifiable in areas where Metro and its contractors have significant experience, e.g., underground tunneling, underground monitoring, and excavations for underground stations.

PMG rejected Recommendation No. 90, as “not necessary for utility relocation,” for establishing a Legislative/Legal Improvement Team to assess and evaluate existing legislation and legal requirements for the utility relocation process. We suggest a review occur if topics are identified in consultation with outside counsel to develop a plan where the California Legislature can act to impose some common sense “rules of engagement” between public and private entities sharing the public right of way. A relevant example is the recent steps taken by the legislature to codify the USA/Dig Alert procedures for “safe excavations” previously overseen solely by associations of utilities groups.<sup>5</sup>

### **C. 2023 Recommendations**

The OIG recommends:

- 4.1** Metro should complete a new and improved Master Cooperative Agreement between City of Los Angeles and LA Metro.
- 4.2** Metro should conduct a Legislative/Legal Improvement review to determine if there are any legislative adjustments that would improve work or construction related requirements for transit projects and assist in better resourcing third party stakeholders impacted by (and benefitting from) Metro capital projects.

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<sup>5</sup> [DigAlert.org - California Law \(2017\)](https://www.digalert.org/)

## **CATEGORY #5: Life of Project Budget**

This category includes 5 Recommendations (Numbers 8, 55, 56, 107, and 108) made in the 2016 BP Study report.

### **A. Background**

The 2016 BP Study describes that Life of Project (“LOP”) budgets are developed to “control and monitor execution of the project scope of work.” Understanding and controlling the factors that significantly increase the risk of cost changes to a project during project development was a critical issue in the 2016 BP Study. Project lifecycle costs may change as details are developed throughout the life of a project; for that reason, the 2016 BP Study found that: “Setting and strictly holding to an LOP Budget at the beginning of project development and not reassessing the budget at the project delivery stage is not an effective process.” (BPS, p. 27.)

### **B. Evaluation of Implementation Actions**

We found that the actions have been taken or are in process to implement the 2016 recommendations. Our evaluation ranked 3 of the recommendations in this Category as “Established” (3) and two as “Evolving” as discussed below:

#### **1. Established**

Recommendations 55 and 56 – Establish Independent Cost Estimate and Contingency Review and establish a detailed Work Breakdown Structure for scheduling and budgeting: The OIG found that PMG developed and implemented policies and procedures that addressed these recommendations (e.g., PSC Tasks #3 & #6, Readiness Procedure & Risk Management).

Recommendation 108 – Reassess and implement revised executive-level reporting requirements: The OIG found that PMG has developed and implemented policies and procedures, including use of the Program Management Information System (“PMIS”) tools, which is further discussed in Category #16, PMIS. The Deputy Chief Executive Officer reports satisfaction with the level of data transparency and method of reporting.

#### **2. Evolving**

Recommendation 107 – Incorporate the entire capital program into PMIS and Metro's reporting system: In response to the recommendation, PMG stated that they will (1) evaluate the resources needed to expand use of PMIS for all capital projects, including Highways and Regional Rail projects, and (2) determine whether to use PMIS for a project depending on its size and complexity.

Recommendations 8 – Develop and implement an LOP budget with phased reassessments: In response to the recommendation, Metro stated that they will implement a two-step LOP budget (Phase 1 design; Phase 2 construction) for design-bid-build projects. As part of the new Annual Program Evaluation process, the LOP budget for each project will be evaluated on an annual basis.

Recent concerns have been raised by a repeating pattern of projects returning to the Board of Directors for significant budget increases. The OIG interviewed a representative of the Office of Management and Budget (OMB) about the LOP budget process and learned that OMB “fully supported” the OIG’s 2016 recommendation to implement the two-step LOP budget process. Current practices, however, have been identified as lacking reliability. We were told the initial estimate is “too rough” and impacts the Board of Director’s confidence in the process as insufficiently transparent. For that reason, Metro’s Board is asking for more information as the

two-step process is “no longer working.” OMB realized after a few years of practice that Metro has gaps in the reporting and tracking process. Utilizing a “lessons learned” rubric, it is proposed procedures be revised to add an intermediate budget review/approval step between construction cost control and the budgetary process.

**OIG Comments** – Because development of the LOP budget can be both an “art” and a “science,” long-term integrity depends on a number of circumstances outside the control of Metro employees. Recent circumstances stemming from the global pandemic have inflated prices and product demands. Pandemic inflation has greatly contributed to undermining the reliability of an LOP budget. Metro is experiencing multiple projects that have to go back to the Board and request more funds. Ultimately the continual request to increase the LOP budget will affect the “big money pot” of having other planned projects be delayed multiple years or not reaching development.

### **C. Recommendations**

The OIG recommends:

- 5.1** Metro should focus on quickly adapting its budgeting practices for all new construction projects given the changing circumstances and trends of increased prices.
- 5.2** Metro should evaluate, assess, and document emerging financial conditions before requesting a budget change, and include an analysis in the Board request for LOP funding increases.
- 5.3** Based on statements included in Board Report No. 2023-0106, Attachment A, the OIG understands that EIT Project Review Process will include multiple “intervention points” for review of the Life of Project Budget. The OIG recommends the development and implementation of detailed procedures describing the process for LOP Budget development across the project life cycle. Requests to increase the LOP make after the procurement phase should include a “lessons learned” justification for the increase.

## **CATEGORY #6: Risk Management**

This category includes 4 Recommendation (Numbers 9, 32, 33, and 34) made in the 2016 BP Study report.

### **A. Background**

The purpose of a Risk Management Program in capital projects delivery is to identify and assess potential events that may impact a project’s budget and/or schedule and the probability and potential magnitude of each event. Strategic decisions to mitigate the risk of events or their impact can be made in response to the assessment. It is a best practice that risk management plans be developed during the planning phase and updated throughout the project lifecycle.

The 2016 BP Study found that Metro generally needed to embrace a culture of risk management throughout the project lifecycle. In particular, the 2016 recommendations focused on enhancing risk analysis during the project planning phase. (BPS, p. 28.)

### **B. Evaluation of Implementation Actions**

PMG in conjunction with Countywide Planning and Development has implemented integrated risk management processes beginning at the planning phase, which are carried forward by PMG across the project lifecycle. However, the program is not universally applied to all projects

of varying sizes and complexity. Our evaluation ranked the recommendations in this Category as one “Established”, one “Evolving”, and two “Needs Improvement” as discussed below:

### 1. Established

Recommendation 34 – Hide contingency amounts: PMG rejected this recommendation because public funds awarded from the FTA must be published (FTA’s Oversight Procedure 40b – Risk and Contingency Review). The OIG agrees that FTA requires transparency related to budgets and contingency values, which obstructs the ability to implement this recommendation. Also, PMG does not treat the contingency funds as “available” to the contractor, and while it is suspected that the contractor does not want to leave funds available untapped, there is no evidence the contractor submits claims based on the contingency.

### 2. Evolving

Recommendation 9 – Incorporate risk management into the culture of the organization from project conception through closeout: Metro stated that a more formal risk management program needs to be developed. In response to the 2016 BP Study’s recommendation, PMG hired a full-time Risk Manager. As a first priority, PC07/Risk Management was developed to encourage project managers to forecast and trend project risks at project inception and as a tool for efficiently analyzing and controlling actual risk during project execution. In an interview, Program Management staff stated that it would be appropriate for more transparency on contingency decisions following a risk management review. Also, cost integrity would benefit from re-review of estimates including risk contingency through a stage-gate process. In regard to whether Risk Management should be applied to smaller projects, it was stated that the value to be derived from enhanced project controls oversight may not be fully understood by Capital Improvement Program (CIP) Project Managers. There is the view that the cost of additional measures overshadows limited benefits. One interviewee indicated that a considerable benefit arises from running non-complex, lower cost projects in a “light touch fashion.”

### 3. Needs Improvement

Recommendations 32 and 33 – Revise risk and contingency procedures for all projects and enforce procedures using risk to set contingencies for all projects: PMG has developed and implemented policies and procedures critical to sound Risk Management practices, e.g., policies PC07 REV 9 - Risk Management Program Plan and PC12 REV 2 – Transit Project Contingency. However, currently, Risk Management efforts are only applied to “mega” capital projects. The 2016 BP Study recommended universal application of risk management principles as essential to building a risk management culture at Metro. For less complex, low-cost CIP projects, the risk review process can be simpler. Moreover, newer project managers handling simpler projects will be better prepared for analyzing and managing the risks of bigger projects if introduced to risk management best practices at the earliest opportunity.

**OIG Comments** – At this time, Metro may be treating risk management as a “luxury program.” Some view the costs associated with a comprehensive risk management program as outweighing the benefits. One interviewee indicated that a considerable benefit arises from running non-complex, lower cost projects in a “light touch fashion.” PMG should consider reviewing this current approach and utilize risk management oversight across all projects of varying sizes and complexity. While not connected to a 2016 recommendation, it is additionally suggested that it might be beneficial for Risk Management staff to participate in lessons learned discussions to encourage bi-directional sharing of risk-related information.

**C. 2023 Recommendations**

The OIG recommends:

- 6.1** PMG should determine whether risk management plans (whether full or “light” plans for smaller projects) – including mitigation plans for risk findings adjusted by PMG management – should be developed for all projects regardless of size, complexity, or use of federal funding.
- 6.2** PMG should strive to establish a progressively robust risk management culture that ensures controlled and mitigated risk throughout the entire project lifecycle.
- 6.3** PMG should determine if it is beneficial for Risk Management staff to participate in lessons learned discussions to encourage bi-directional sharing of risk-related information. This will ensure knowledge will be transferred, built upon and not be lost, as mature employees retire from Metro.

## **CATEGORY #7: Project Management Plan**

This category includes 6 Recommendations (Numbers 41, 42, 43, 45, 47, and 48) made in the 2016 BP Study report.

### **A. Background**

The 2016 BP Study describes Metro as a “composite organization,” meaning it combines “a strong matrix organization, with functional departments and a Project/Program Management department, with a projectized organization for major projects, with team members under dual assignment to the functional departments, but also assigned with key team members co-located at the project site.” (BPS, p. 50.) Recommendations under this area relate to project teams being guided toward project success through the comprehensive road map in the Project Management Plan (“PMP”), ideally developed and implemented in accordance with the Project Management Book of Knowledge (“PMBOK”)

PMBOK is a globally accepted industry standard for all project management processes. A project management professional (PMP) certification, utilizing ISO 9001 standards, is a globally recognized project management certificate that identifies the person has the ability to lead a project in any industry.

### **B. Evaluation of Implementation Actions**

We found that Metro has taken actions to implement the recommendations. However, Project Management Plans are not enforced by Metro for application for all capital projects. A PMP is useful for managing a project because it provides the roadmap needed to instill confidence across all roles on the project team and decreases roadblocks to decision-making. Our evaluation ranked the recommendations in this Category as four “Established”, one “Evolving”, and one “Needs Improvement” as discussed below:

#### **1: Established**

Recommendation 41 – Develop and implement strategic plan for project team management: PMG in 2016 stated that they disagree with the need for a strategic PMO, however a strategic plan as part of a Program Management Department's Program Management Plan will be investigated. PMG has addressed this recommendation in the Program Management Plan.

Recommendation 42 – Implement an Integrated Project Management Office (“IPMO”) environment for all projects: PMG stated that they will establish an IPMO for a project depending on its size and complexity. In practice, PMG implements an IPMO for mega-projects during the construction phase but does not universally do so for smaller CIP projects under \$100 million. Now it has agreed to stand up an IPMO for projects as needed.

Recommendation 45 – Reduce the number of internal project team meetings to occurring regularly and as needed but not excessively and when not needed: PMG unreservedly agreed with less meetings generally and is looking into more virtual meetings. The use of virtual meetings will be scheduled on a case-by-case basis and is dependent on the capability of remote conferencing with field staff from Gateway.

Recommendation 48 – Assign a Project Manager (“PM”) at project initiation and empower the PM with the authority for project decision making and control responsibilities throughout the entire project lifecycle: PMG agreed that the PM should be involved throughout the project lifecycle and empowered with decision making authority upon the completion of planning. Also, during the planning phase, responsibilities should be shared with the Planning Department. In

this regard, a new Senior Executive Officer, Project Management was approved in the FY 2018 budget to lead the interface with the Planning Department beginning with environmental/planning phases of new Measure R and M transit projects.

## 2: Evolving

**Recommendation 47** – Adopt Project Management Institute (“PMI”) as the organizational standard for project management: PMG agreed to research PMI standards and employ as appropriate. Metro uses various tools and guidance to deliver projects and is not restricted to only PMI standards. In this regard, PMG will research PMBOK and other standards to determine how to effectively incorporate the recommendation.

## 3: Needs Improvement

**Recommendation 43** – Require all projects to utilize a Project Management Plan (“PMP”). PMG agreed with the recommendation for larger projects. PC04 – Program Management Plan establishes that all capital projects with a total cost in excess of \$100 million shall have a PMP. However, a PMP is not required for projects less than \$100 million. From interviews with the PMG staff, the OIG understands that a preference exists for running smaller CIP projects with a lighter touch. Along with no PMP, this also typically means there will be no Risk Management Plan and minimal use of PMIs.

**OIG Comments** – Differentiating construction management practices between mega projects and smaller CIP projects is a policy decision by PMG. Doing so without a formal policy or procedure suggests that the differentiated approach continues out of habit, not thorough analysis or fact-supported decision making. Without a PMP, there is less transparency as to performance metrics and successful completion of the administrative aspects of a project. Additionally, for newer Project Managers, differentiating practices for smaller projects may diminish training and development opportunities needed to step up to more complex projects.

## C. 2023 Recommendation

The OIG recommends:

- 7.1 Revisit the 2016 Recommendation requiring all projects regardless of size or complexity to develop and use a PMP which will standardize practices related to change management, quality, risk, and develop and use a PMIs.



Tunnel Boring Machine break through at Purple Line Extension Section 1

## B POST-PROCUREMENT PROJECT MANAGEMENT

### **CATEGORY #8: Contract Administration**

This Category includes 13 Recommendation (Numbers 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 29, 30, and 64) made in the 2016 BP Study report.

#### **A. Background**

Best practices related to “contract administration” emerge once Metro acts to procure and engage a contractor to implement the project plans under the selected delivery method. The 2016 BP Study describes that effective and efficient contract administration is foundational to project delivery success – with a primary focus on clearly stated and enforceable change management terms and conditions.

Contract General Conditions must unambiguously describe the contractor’s reasonable obligations for timely submission of substantiated requests for cost, scope, and/or schedule adjustments. Equally important, the owner’s representative, who may be Metro’s Project Manager, Construction Manager, or a Contract Administrator, must be timely and professional in handling change requests. Consistent and timely responses to the contractor’s submissions are essential. In short, the 2016 BP Study conveys that successful contract administration involves both parties understanding and acting to fulfill mutual contractual obligations. Challenges arise when either or both parties fail to act timely with documented support. Disputes and adversarial relations are likely to develop from delayed resolution, leading to more complex and higher cost and schedule impact claims.

The 2016 BP Study’s recommendations guide Metro to be organizationally proactive in streamlining merited change orders, and to act timely to resolve all resolvable disputes.

#### **B. Evaluation of Implementation Actions**

Our evaluation ranked the 13 recommendations in this Category as nine “Established”, one “Evolving”, and three “Needs Improvement” as discussed below:

##### **1: Established**

Recommendations 20, 21, 22, 23, 24, 25, 26 and 30 – Expand and empower Metro’s Contract Administration processes with a strong change control group that firmly and consistently enforces both contractor’s contract and Metro timeline: Our review of policies and procedures and interviews with staff confirmed Metro’s implementation of these recommendations through the collaborative efforts of the PMG and Vendor/Contract Management. Metro has the advantage of having construction procurement staff with over 20 years’ experience at Metro that makes this collaboration easy to do.

Recommendation 18 – Establish timeline for Metro responses to project changes: Policies and procedures have been updated establishing timelines for Metro’s responsive actions and time to process on project claims and changes.

##### **2: Evolving**

Recommendation 17 – Address project delays as they occur: PMG agreed and stated that delays are worked on as they occur. In interviews, management commented that both Metro and contractors may defer resolving schedule impacts. Both causation and impact may be



disputed, and resolution may require considerable scheduler resources. PMG staff indicated discussions are occurring for aggregating schedule issues into quarterly reviews for “global” resolutions.

### 3: Needs Improvement

Recommendation 19 – Establish a contractor’s daily overhead rate: PMG agreed to the recommendation and stated that they will need concurrence from Vendor/Contract Management. PMG also stated that Metro’s Contract General Conditions may include a contractor’s bid “daily overhead rate,” but the inclusion of this risk mitigation tool does not necessarily result in expedient resolution of schedule disputes.<sup>6</sup>

Recommendation 29 – Clarify timelines for contractor claims and Metro responses: PMG’s response to the recommendation stated that change to contract language pertaining to the contractor’s timelines is not desirable or necessary. PMG staff stated Metro has not experienced any major complaints (schedulers & contractors) to the current timeline specifications. However, it appears that Metro’s General Conditions were modified to extend timelines for the contractor to submit support for delay claims. Also, when preparing OIG Quarterly Construction Change Spot Check reports we have observed an instance where a contractor’s claim was processed years after the occurrence.

Recommendation 64 – Establish an enforcement and compliance mechanism into the contractor performance evaluation. In its response, PMG supported use of the Quality Management program for providing contractor feedback on performance issues. PMG communicated that a formal performance appraisal process might not be “the right approach.” The OIG learned that PMG’s focus on fostering positive relationships with contractors to get a job done may conflict with a concurrent duty to engage with the contractor in frank evaluations of performance during the performing period. A process for debaring poor quality contractors exists for contractors that Metro believes merit disqualification (which is almost impossible to use for large contractors because it introduces many years of costly litigation) – but there are no guidelines for having conversations about “satisfactory versus unsatisfactory” performance. For this reason, there is little current policies, procedures, or practices to gather information on current performance to identify “responsive and responsible bidders” for use in future projects.

**OIG Comments** – Informal tracking of rejected Request for Changes (outside the PMIS) may lack transparency and contribute to claims being revived by the contractor at the end of a project. This practice, if occurring, is an obstacle to Metro and the contractor confronting their differences in findings on the facts and conclusions of merit at the earliest possible time. Thus, there is no finality, in part, because of missed opportunities to use partnering and the dispute resolution process to reach finality early.

Metro might also benefit from considering if its contractor evaluation/assessment program (typically performed at the end of the project) is consistently used and is as robust as it could be to evaluate contractors’ historical performance to assess and track for purposes of future source selection. A database could be made available for tracking this information and to provide Metro an opportunity to maintain key performance information and to learn from other

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<sup>6</sup> A contractor seeking compensation for delay will request a daily rate based on incurred overhead costs (from being on the job longer than expected). That daily rate can be the product of a current audit or can be a value established at the time of bid. The 2016 BP Study advocates for use of the bid process to establish a Daily Overhead Rate. A Daily Rate may not foreclose a contractor from seeking amounts above and beyond the Daily Rate but that doesn’t demolish all benefits of using a risk management tool.

projects. The OIG will be making a further separate proposal for a vendor scorecard program for best practices in procurement.

Approved schedules are necessary for tracking performance of the work and establishing the start/stop events for alleged delays. Metro should ensure its General Conditions set forth enforceable terms for baseline and updated schedules. Partnering should be used to resolve schedule disputes and trigger the contractor's obligation to submit a claim. Partnering training will be further mentioned at the end of the report along with other training.

### **C. 2023 Recommendations**

The OIG recommends:

- 8.1** PMG should revisit Recommendation Number 29 and review current General Conditions requirements for contractors to submit time impact analysis ("TIA"), and the conditions when to impose a "waiver" on untimely and improper claims that are not properly presented by the contractor. Metro should review its contract language regarding the requirements for TIAs and the conditions for imposing waivers, as well as opportunities to add contractual language emphasizing the contractor's duty to timely submit support for impact damages and to mitigate alleged harm.
- 8.2** PMG should revisit Recommendation Number 64 regarding:
  - (a) Developing a formal robust Ongoing Performance Assessment Program for consultants and contractors that is used yearly during and at the end of the term of the contract to ensure satisfactory and compliant performance.
  - (b) Developing and utilize a Past Performance Assessment for contractors and consultants that allows Metro to consider the contractor's overall contract compliance in future solicitations including an opportunity for contractors to respond to assessments.
  - (c) Updating Metro's General Conditions to inform consultants and contractors of performance assessment actions.
  - (d) With regard to contractor claims for damages for delays, PMG and V/CM to work together to review, and expand when proper, the use of construction contracts to include a "bid" daily rate for damages that will be used to reimburse substantiated delay damages. The OIG encourages all construction contracts to include a "bid" daily rate for damages that will be used to reimburse substantiated delay damages.

## **CATEGORY #9: Board Matters**

This Category includes 7 Recommendation (Numbers 44, 73, 74, 75, 76, 77, and 78) made in the 2016 BP Study report.

### **A. Background**

The 2016 BP Study identifies Board Delegation as giving authority to the CEO/General Manager for significant project changes, in order to avoid delays in construction while the Board of Directors remain available for decision-making at the policy level. Post-2016 enhancements made in response to the 2016 BP Study were key to the overall success of strengthening PMG's and Vendor/Contract Management's ("V/CM") joint contract administration practices.

Section 130630 of the California Public Utilities Code states that "the board provides counsel and direction to management and shall not be involved in the day-to-day affairs of [Metro]." A key finding in the 2016 BP Study was that "...almost unanimously interviewees consider the Board of Directors oversight, approval, and reporting requirements for capital projects a significant part of the project management and could be improved." (BPS, p. 69.)

### **B. Evaluation of Implementation Actions**

Our evaluation ranked all of the 7 recommendations in this Category as "Established." We found that Metro has taken actions to implement all 7 of the following recommendations:

Recommendation 44 – Establish a governance model with delegated authority.

Recommendation 73 – Improve adherence to Metro rule (Public Utility Code, section 130630).

Recommendation 74 – Assess increasing Board meeting frequency.

Recommendation 75 – Delegate more authority to Chief Executive Officer (CEO).

Recommendation 76 – Reassess Board review and approval process.

Recommendation 77 – The Board of Directors should recognize and support a need for process improvement.

Recommendation 78 – Develop and implement a Board education series.

### **Board Delegation of Authority**

Recommendation 75, delegate more authority to the CEO, is the recommendation that has had the most significant impact. In response to this recommendation, Metro's Board of Directors approved a program to delegate authority to the Metro CEO to execute certain lower value project change agreements. To ensure transparency and protection of public funds, the Board directed the Inspector General to audit change orders executed under the Delegation Authority. As an ongoing program, the OIG has issued quarterly Spot Check reports that included recommendations for improving the program. The Delegation Authority is working well and has reduced the long lead times to get a board item on the Board agenda saving both costs and construction time.

- In a follow up 2018 Board report (Legistar 2017-0827 and 2017-0924), PMG stated that in one year alone, the new delegation of authority generated cost savings on three

mega-projects ranging from \$22.5 to \$30 million. The savings were generated by reducing the time to execute change orders, thus avoiding project schedule delays. We have not seen any data from staff to actually prove this estimate, so we remain skeptical of this number.

- The OIG’s Spot Checks of construction change orders, over the past 5 years (2018-2023) across six projects, found that 2,075 workdays have been saved in executing change orders under the Delegation Authority versus the prior method, as shown in the adjacent table.

PROJECT NAME	TOTAL WORK DAYS SAVED	YEARS SAVED
Crenshaw/Lax	336	1.3
Regional Connector	420	1.6
Purple Line Section 1	629	2.4
Purple Line Section 2	397	1.5
Purple Line Section 3	248	1.0
Division 20	45	0.2
<b>TOTAL SAVINGS</b>	<b>2,075</b>	<b>8.0</b>

**OIG Comments** – Metro’s actions taken since publication of the 2016 BP Study have greatly improved the efficiency with which PMG and V/CM are able to process construction change orders. Capital projects have benefited from the delegation of authority that created greater efficiency.

**C. Recommendation**

The OIG recommends:

- 9.1 Metro should continue the current practice and level of utilizing the delegated authority that has proven to speed up the change approval process with sufficient oversight and quality. The OIG will continue to monitor the change orders.
- 9.2 We recommend that Metro’s Management Audit Services Department do periodic audits during projects of use of funds for change orders in compliance with Metro Standards which will breed responsibility.

**CATEGORY #10: Enforcement and Compliance**

This Category includes one Recommendation (Number 28) made in the 2016 BP Study report.

**A. Background**

The 2016 BP Study identifies a critical need for Metro to clarify and strengthen contractual requirements to facilitate timely claim resolution and to impose waivers where the contractor unreasonably delays submitting change requests. To do so, Metro “needs to make a strong public announcement to contractors, consultants, and staff to avoid any argument by contractors that Metro has waived its right to enforce its contract language by past failures to enforce it.” (BPS, p. 38.)

**B. Evaluation of Implementation Actions**

Our evaluation ranked Recommendation 28 as “Needs Improvement.” The recommendation states – enhance compliance and enforce Metro’s contractual rights related to timely and supported submittal of contractor claims. In response to the recommendation, PMG affirmed its support for a “tough but fair” posture with contractors but noted that they would need to collaborate with Vendor/Contract Management to ensure both groups were united in approach. PMG’s follow up comment in 2017, stated, “Going forward, Metro will enforce contractor compliance pursuant to the contract, and if needed, implement financial disincentives.”

Procedure CF14/Change Control, Construction/Procurement Contracts, pre-dates the 2016 BP Study and establishes PMG’s procedures for changes to construction, procurement, installation, or specialty contracts awarded for construction of Metro facilities and systems. The Procedure provides the standards and requirements for contract change control including process steps and documentation, but it is incomplete – missing the delegation of authority approved by Metro’s Board of Directors.

Interviews – Staff interviews indicated that for merited change requests, Project Managers working with Contract Administrators efficiently work through scope and quantum issues and issue a unilateral change if the contractor does not agree to Metro’s proposed resolution. Challenges arise when the contractor submits a Request for Change (“Req. Change”) that lacks (1) merit on its face, and/or (2) sufficient evidentiary support. Delay claims are particularly susceptible to a lack of diligence by contractors. Project Managers view delay claims as difficult to resolve efficiently and having less opportunity for unilateral action by Metro. Due to this complexity, mutual inaction by contractor and Metro may result in complex schedule/delay claims lingering until the end of a project (a common outcome at peer agencies surveyed in the 2016 BP Study).

Metro staff indicated that they lack contractual leverage to force the contractor to timely submit Req. Changes or to pursue “next step” claims if the Req. Change is rejected by Metro. Staff believe this to be true whether the rejection is based on an evidence-based merit analysis or the rejection is based on the contractor’s failure to submit substantiation in the form of detailed costs and/or a required Time Impact Analysis.

One interviewee noted that Project Managers may not have a firm practice of tracking Req. Changes in the PMIS system if rejected on merit or for lack of evidence. This can be problematic because eventually, the contractor may revive the claim, which can greatly impact a budget contingency levels for delayed or neglected claims that appear late in the project. The partial solution to that is transparently tracking all Req. Changes and correspondence.

**OIG Comments** – Metro’s General Conditions should be reviewed for “best practices” as compared to peer agencies with demonstrated success in encouraging contractors to comply with its contractually prescribed change management processes. It is asserted that Metro may lack leverage based on the contract imposing no hard timeline to submit and actively resolve these types of claims, and based on recent California law establishing timelines and processes for an agency’s response to contractor’s claims that may not be subject to waiver.

Metro increases its risk of cost or schedule impacts arising from failing to act timely and completely in response to the contractor’s Requests for Change. To the extent the contractor delays in submitting requests or evidence in support of requests, Metro should respond quickly and document its response of rejection.

Where the contractor has alluded to potential cost or schedule claims but does not act aggressively to respond to those claims, Metro may want to consider going on the “offense.” “Noes” to merit could be handled with the same diligence and speed as Metro’s “Yeses.” The reason for a proactive response is because once delay claims start to be asserted, the contractor’s monthly schedule update will lose integrity, and the contractor may leverage “multifactorial” causation to make non-compensable delays appear compensable. Metro is encouraged to prepare a record of justification supporting denials of merit. This evidence can then be used to “force” a response from the contractor and to compel use of partnering and/or the dispute resolution process for a timely and comprehensive discussion of the facts.

### **C. 2023 Recommendations**

The OIG recommends:

- 10.1** PMG and V/CM should collaborate in the review of current General Conditions establishing timelines and required actions for initial change matters and also for resolution of disputed matters.
- 10.2** PMG should revise CF14/Change Control to describe internal processes regarding the 2018 CEO Delegation of Authority and best practices for using partnering, claims procedures and the Dispute Resolution Board to reach finality on contested change matters.
- 10.3** PMG should consider tracking the Project Manager’s performance in meeting responsive timelines for all change items (merited or not), to confirm compliance with the General Terms and Conditions and PMG’s policies and procedures.
- 10.4** Contract should specify time limits for submission of claims and enforce these time limits where legally permissible. Vendors will request time limits for Metro’s response to their claims so Metro will need to be prepared to respond to that.

## **CATEGORY #11: Partnering**

This Category includes 5 Recommendation (Numbers 10, 11, 12, 13, and 14) made in the 2016 BP Study report.

### **A. Background**

The 2016 BP Study identifies partnering as an important tool for fostering project success, and recommends enhancements intended to make partnering part of Metro's "fabric of doing business."<sup>7</sup> (BPS, p. 30.) Partnering with contractors and other third parties during the construction phase is discussed in Special Provision 30, Partnering, in the construction contract.

### **B. Evaluation of Implementation Actions**

Our evaluation ranked all 5 recommendations in this Category as "Evolving" as discussed below:

**Recommendation 10** – Make partnering mandatory across all projects: At this time, partnering is mandatory for mega-projects, but may not be implemented for other smaller CIP projects. Contracts for mega-projects typically include General Conditions describing "partnering." The 2016 recommendations related to partnering concerned enhancements to guide its broader and successful use. The use of partnering was advocated for not only Metro and the construction contractor including key subcontractors but also Metro and any third-party stakeholders, such as utilities and cities.

**Recommendations 11, 12, and 14** – Establish partnering procedural standards; use multi-tiered partnering; and agree upon a plan during partnering meetings and act consistently with plans. The OIG's review found that a partnering program exists at Metro that incorporates these recommendations. In interviews, some Metro staff described partnering as helpful for "team building" which contributes to problem-solving, but others we interviewed found partnering with contractors to be unproductive. Partnering has been successful when used by trained, skilled project managers. Unfortunately, some Metro staff and contractor staff may have become discouraged when attempts at partnering were not successful. Partnering was not typically understood to apply to relationship building with third party stakeholders, such as utilities owners or cities.

**Recommendation 13** – Train staff and contractors prior to partnering sessions. Metro's response stated that prior to partnering sessions, all participants, including facilitators, are informed and made aware of the rules, intent, purpose, and objectives of the partnering sessions.

**OIG Comments** – For a "Partnering Positive" culture to be created, staff must be fully trained in the process and guidelines developed for successful partnering. Escalation ladders must be in place and efficiently accessed so participants do not view partnering efforts as a waste of time. One benefit to partnering is that the process will lead to the discovery of new or different facts than those initially understood by the participants. For that reason, participants in partnering

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<sup>7</sup> "Partnering" in the construction industry "is intended to assist project teams with setting goals, resolving disputes and improving project outcomes . . . by developing mutually agreed upon project and partnership success goals and by monitoring the achievement of these goals for the duration of the project. The construction partnering team will also develop an agreed upon process for resolving disputes should they arise, called a dispute resolution ladder." ([Construction partnering - Wikipedia](#), footnotes removed.)

must be willing to revisit initial determinations and engage in iterative risk analyses that may change a decision or approach to resolution.

Using partnering in lieu of a Dispute Resolution Board saves time and costs. Even if partnering is not successful, the efforts will not be wasted if the parties develop a better understanding of a dispute. The OIG acknowledges that for some alternative project delivery methods, typical “partnering” may be replaced by a jointly developed project charter. Instead of partnering facilitators, there may be “coaches” that will be utilized to assist Metro, the designer, and the contractor to work together. This new era of engagement will bring opportunities to learn and improve upon older methods.

### **C. 2023 Recommendations**

The OIG recommends:

- 11.1** For effective partnering, Metro should develop effective internal processes for vetting issues appropriate for the partnering process and developing an evaluation of the facts and issues.
- 11.2** Metro should implement a “Partnering Positive” culture supported by Executive Management, in order to minimize the need to use Dispute Resolution Board hearings or to litigate a dispute.



## CATEGORY #12: Quality Management

This Category includes 2 Recommendations (Numbers 91 and 104) made in the 2016 BP Study report.

### A. Background

The 2016 BP Study recommendations related to Quality Management discuss “quality” from two perspectives. First, internally as to Metro’s oversight of its own practices; and second, the “quality assurance” aspects of Metro’s oversight of consultants’ and contractors’ own contractual quality control responsibilities. The 2016 Recommendations propelled Metro to pursue and establish a much-improved Quality Management Oversight Program.

### B. Evaluation Implementation Actions

The PMG has acted to implement a comprehensive Quality Management Oversight program that has been used to complement Metro’s best practices Risk Management Program. Our evaluation ranked Recommendation 104 as “Established” and Recommendation 91 as “Evolving.”

#### 1: **Established**

Recommendation 104 – Assess the risk of Quality Management within the Engineering and Construction division: PMG agreed with this recommendation, and following the 2016 review, a decision was made to move Quality Management from under Engineering and Construction to directly under the Chief Executive Officer of PMG, which gives higher level attention and focus to quality issues. Also, PMG had the Quality Manager from Denver RTD spend some time at Metro, and he made a number of pertinent observations, which will be evaluated.

#### 2: **Evolving**

Recommendation 91 – Develop and update policies and procedures organization-wide, especially for capital project delivery and project management; and institute Quality Assurance into all policies and procedures: PMG has developed and implemented policies and procedures that include sound quality management practices. In 2021, Metro commenced roll-out of its new Metro’s Quality Management Oversight (“QMO”) program making it applicable in “beta mode” to new mega-projects (older projects are “grandfathered in” the previous Quality program). Quality Management describes that iterative improvements are being made to the policies and procedures and the complimentary technology. In addition, Metro staff explained that Quality Management hired a consultant to develop and implement the Quality Management Oversight system. This new system will provide oversight and verification of project documents, develop workflow capabilities, and capture and track lessons learned across the construction projects.

**OIG Comments** – In conjunction with the development and implementation of a comprehensive QMO program, the Quality group almost tripled in size. The investment in this effort has been substantial and offers a high return on investment. Prioritizing the Quality group with staff (consultants) and implementing a tracking mechanism for documents, workflow, and lessons learned will enhance Metro’s performance with current and future construction projects.

### C. 2023 Recommendation

The OIG recommends:

- 12.1** PMG should review whether best practices require expanding the scope of the quality program to include all projects, regardless of size or complexity, to participate in the enhanced Quality Management Program, including the Lessons Learned program.

## **CATEGORY #13: Lessons Learned**

This Category includes Recommendation Number 51 made in the 2016 BP Study report.

### **A. Background**

The 2016 BP Study identifies a need for “lessons learned” to be programmatically captured organization-wide at Metro. FTA’s Oversight Procedure 26 – Lessons Learned describes the process for capturing and disseminating information related to project challenges that can be used to avoid or minimize cost impacts on future projects.<sup>8</sup>

Lessons learned on capital projects may be identified across all project phases and across all departments that participate directly and indirectly in the project. Lessons learned only have value if systematically captured and analyzed with recommendations for improvement and are accessible to the departments and staff that can use the information. Without such a program, valuable lessons are simply lost and are not captured for continuous improvement. (BPS, p. 58.)

### **B. Evaluation Implementation Actions**

Our evaluation ranked Recommendation 51 as “Evolving.” This recommendation states – establish a formal, organization-wide Lessons Learned Program.

We found that PMG has developed a lessons learned process to gather facts related to past incidences and investigating unanticipated or unwelcome outcomes. Also, Quality Management has developed the technology for tracking and disseminating this information. A fundamental “best practice” for any public entity is to learn and improve over time, based on prior efforts. Accordingly, Metro is encouraged to develop a culture that embraces lessons learned.

Our review also found that PMG revised and supplemented its existing lessons learned procedures, and the Quality group under PMG is in the process of implementing a detailed Lessons Learned program.

LL2 REV 0 - Lessons Learned Program Plan (“LLPP”) outlines the framework for establishing a program to foster continuous institutional learning and process improvements in a timely, comprehensive, and user-friendly manner. The LLPP provides guidance on how lessons learned documentation is to be prepared; establishes the basis for implementation of an easily accessible database for lessons learned reference and sharing; and establishes a process for advancing select best practices derived from lessons learned into formal policies or procedures.

In interviews with PMG staff, there is support for the concept of lessons learned but no indication that Metro has established an agency-wide culture where a formal lessons learned process is a priority. The OIG views any hesitancy across Metro or implement and actively participate in a Lessons Learned program as a potential issue.

**OIG Comments** – A Lessons Learned Program should be structured to allow capturing useful lessons continuously throughout the life of a project, with a formal lessons learned meeting at the close of each phase of the project (Planning, Preliminary Engineering, Design, and Construction) for all types of project delivery methods (design/build, design/bid/build, etc.). In addition, lessons learned should be captured in all elements of a project (structural, utility, traffic, geotechnical, etc.) and in all knowledge areas of project management (scope, schedule,

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<sup>8</sup> [Oversight Procedure 26 – Lessons Learned \(dot.gov\)](#)

cost, quality, risk, etc.). Metro should evaluate and incorporate, as deemed necessary, the best practices above into a Lessons Learned program.

**C. 2023 Recommendation**

The OIG recommends,

- 13.1** PMG should develop a program and culture that reports lessons learned from internal and external management (across all groups) to those participating in capital projects and methods to ensure regular review and revision of policies and procedures to ensure cross-department utilization of all lessons learned to advance and build on the Metro Program Management and improve each project as it planned, designed, developed, and constructed.

## **CATEGORY #14: Safety**

This Category includes 2 Recommendations (Numbers 66 and 67) made in the 2016 BP Study report.

### **A. Background**

The 2016 BP Study recognizes Metro's excellence in the area of safety. The report stated: "Reviews, interviews, project workshops and survey responses clearly indicate that safety is the number one priority of Metro, and the organization has established itself as a leader in safety management." The study notes that for capital projects, "safety is considered in all phases of the project lifecycle, from the development of design standards, to purchasing, fabrication, and construction." (BPS, p. 64.) The OIG views the 2016 BP Study as informative of Metro's safety best practices during project construction. The Study did not cover safety issues related to planning and design in any depth.

### **B. Evaluation of Implementation Actions**

On a project-by-project basis, Metro demonstrates that safety is a priority, and there is no doubt safety is paramount to the organization. Metro would benefit from more broadly communicating its positive safety record as it relates to capital projects.

Our evaluation ranked the implementation of one of the recommendations in this Category as "Established" and the other recommendation as "Needs Improvement" as discussed below:

#### **1: Established**

Recommendation 67 – Incorporate safety considerations into the updating of design criteria, standards and specifications: The Safety group confirmed that Metro Rail Design Criteria (MRDC) includes robust safety requirements for contractors and consultants, e.g., Fire/Life/Safety and CPUC compliance. Staff describes MRDC elements as subject to continuous review to incorporate lessons learned after a project goes into operation. One recent example is the updated criteria for the maximum gap between the emergency walkway and train on a curve. Moreover, Metro's design criteria and standards are subject to continuous review and update.

#### **2: Needs Improvement**

Recommendation 66 – Consider installing a safety "ticker" in the Metro lobby, to communicate the importance of safety to stakeholders and the organization to applaud the success of the safety program: PMG deferred this recommendation to the Safety group. The Safety group rejected the recommendation to install a "safety ticker" in the Metro Gateway lobby at the time as impractical and duplicative to other safety reporting. The OIG views this specific recommendation as reasonably rejected. However, the OIG recommends consideration of other approaches to herald contractors with excellent safety practices, as reflected in low reported injuries. Perhaps reporting this data on project websites for public attention or posting statistics monthly as part of Metro's Daily Brief could help build a more transparent "safety culture" at Metro. Reporting safety promotes continuous safety consciousness and reinforces a safety culture in Metro.

Policies and Procedures – Metro's Safety group regularly reviews and revises its Construction Safety and Security Manual ("CSSM") and has done so since 2016. The CSSM is used to guide oversight of the contractor's mandatory safety program. The OIG found that the strong safety oversight practices, mentioned in the 2016 BP Study, continue through 2023 even if they fall

short of the safety culture that was set in place in the early 2000's by the Dupont Corporation to establish a program through training and discussion of safety in everyday meetings and activities.

Practices – Safety practices include reporting events that result in safety “near misses” and injuries. On a monthly basis, the contractor must collect and report its safety statistics. Additionally, the contractor’s safety practices must comport with local, state, and federal laws.

**OIG Comments** – The Safety group perhaps missed the point of the original recommendation of a “Safety Ticker” in the lobby. Yes, everyone on a project will feel pride knowing safety is a priority, but to ensure a contractor treats safety as a paramount priority – a broad audience will benefit all individuals potentially impacted by lax safety practices. Recent publicity regarding a safety stand-down on one of Metro’s projects showed the value of publicity. The better approach is for trending concerns to be transparently reported for immediate and meaningful response.

### **C. 2023 Recommendations**

The OIG recommends:

**14.1** The Safety Group should revisit Recommendation Number 66 to determine whether there may be opportunities to broadly communicate safety statistics across capital projects to reflect Metro’s Safety culture and to further incentivizes contractor best practices. Sharing statistics monthly or quarterly in the same manner COVID-19 information was shared may be appropriate.

**14.2** The Safety group should update their outdated pre-2016 construction safety-related procedures and review for conformity with current industry best practice standards.<sup>4</sup>

- (a) PMG should verify that all projects have the updated construction safety policy.
- (b) V/CM should include updated construction safety policy in future contracts.

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<sup>4</sup> The Safety group has notified the OIG that it has recently acted to revise its outdated policies and procedures. The recommendation remains to encourage regular review and update of policies and procedures across Metro.



## C. PROJECT MANAGEMENT SUPPORT

### **CATEGORY #15: Public Involvement**

This Category includes 3 Recommendations (Numbers 71, 72, and 95) made in the 2016 BP Study report.

#### **A. Background**

The 2016 BP Study describes public/community involvement as “the process to identify, plan, manage and control...Effective engage stakeholders in project decisions and execution...Community involvement issues can involve all areas and elements of the project, from alignment and alternatives issues in the Planning phase to systems and aesthetic concerns during design and construction.” (BPS, p. 68.)

#### **B. Evaluation of Implementation Actions**

Our evaluation ranked the implementation of one of the three recommendations in this Category as “Established” and the other two recommendations as “Evolving” as discussed below:

##### **1: Established**

Recommendation 95 – Establish a Capital Project Delivery website: Metro has developed and implemented a website for the public to get information on all mega capital projects. PMG will assess the potential enhancements to the website.

##### **2: Evolving**

Recommendation 71 – Develop a strategic Public Involvement Action Plan at an executive level: In response to this recommendation, PMG agreed with the concept that “Community Relations is vital to a successful project” and believes that “this is happening but needs to be emphasized.” The OIG’s 2023 review confirmed that public involvement during the construction phase is fully established. The “evolving” ranking was applied because enhanced practices for public involvement during the planning phase would benefit Metro’s Equity Objectives. In interviews, staff described community involvement at the planning/design stage as less than optimal, especially in contrast to best practices in place during the construction phase. Staff viewed minimal or late public outreach practices during the planning phase as the cause of increased public resistance (or general lack of support) at later phases. During the pandemic it became clear that the public embraces virtual outreach and engagement, so this method should be frequently utilized for this purpose occurring through other departments input regardless of whether it is called an informal committee.

Recommendation 72 – Establish a process improvement committee to develop recommendations (surrounding community involvement): PMG’s response rejected this recommendation stating, “Do not believe another committee is needed.” The OIG treats PMG’s response as “evolving” because it appears that the timing and use of the Communications team is a shared responsibility with Countywide Planning and Development. Data collected by the OIG indicates that efforts are in progress to enhance practices that serve Metro’s Equity Objectives.

Interviewees indicated that over-committed staffing resources may lead to Public Outreach shifting to a regional approach rather than staff assigned to specific projects. This approach was described as potentially degrading outreach opportunities with a likely decrease in the

quality of engagement with communities targeted for improved outcomes based on Metro's Equity Platform.

Prior to the pandemic, community outreach often involved in-person public meetings combined with other media. The pandemic emergency introduced remote meetings using Zoom, Lifesize, and Teams. Opportunities for virtual engagement may be leveraged for less costly and expanded outreach to more fully engage the public early on and throughout the development process. A supportive public may decrease project costs overall and reach more people.

**OIG Comments** – When the Communications group has sub-optimal involvement in the planning phase of the project, there may be a greater threat of public resistance and lack of or oppositional participation at community meetings. Another item of concern is that the design-build delivery method reduces time for community involvement which increases project risk to Metro and contractors are not held accountable when there is a schedule slip or cost increase. Finally, Metro's Equity Platform is threatened within a community when there is a decrease in the quality of engagement with the public. An emerging challenge appears to be optimizing community input earlier in a manner that considers the impacts of the chosen delivery method.

### **C. Recommendation**

The OIG recommends:

- 15.1** PMG should consult with Countywide Planning and Development to re-visit the 2016 recommendations to ensure current public outreach practices timing, and methods meet best practice goals by addressing earlier community involvement in the planning phase, implementing a quality and equal platform for all communities, and increasing funding for public outreach efforts.



**CATEGORY #16: Program Management Information System (“PMIS”)**

This Category includes 5 Recommendations (Numbers 27, 31, 96, 109, and 109) made in the 2016 BP Study report.

**A. Background**

The 2016 BP Study advocates universal use of Metro’s Program Management Information System (“PMIS”) as a best practice for transparent and efficient access to the status of each project and the overall program of capital project delivery. PMIS is a shorthand reference to a suite of software products supporting different functions across management of capital projects, e.g., Primavera P6 Planning/Scheduling; Project Status and Risk Management Issue; Oracle Unifier; SharePoint; and ECOSys Enterprise Project Controls.

**B. Evaluation of Implementation Actions**

We found that Metro appears to have a mature deployment of PMIS which supports transparency and accessing executive-level reporting on project and program status. However, there may be opportunities to broaden or enhance PMIS resources.

Our evaluation ranked the implementation of all 5 recommendations in this Category as “Established” as discussed below:

Recommendations 27, 31, and 106 – Use PMIS and the PMIS control management database on all projects: In responding to the 2016 BP Study, PMG agreed and stated: (1) a consistent reporting mechanism is needed and research is needed to determine whether this is PMIS or something else; (2) PMG will evaluate the use of PMIS to document negotiations; and (3) Metro will evaluate the resources needed to expand use of PMIS for all capital projects, including Highway and Regional Rail projects.

Interviews with staff disclosed that the suite of PMIS technology products currently available has vastly improved since 2016, and that resources have been made available for training, maintenance, and satisfactory “Help Desk” type assistance. Staff stated that additional customization of Oracle Unifier could enhance its functionality and cost-benefit reviews were currently in process.

Staff maintains that Oracle Unifier need not be used on smaller, less complex projects, and Excel offers sufficient functionality for tracking budgets, Metro/contractor correspondence, and change matters on smaller projects. The cost of licenses, training and oversight – combined with less enthusiasm for use on smaller projects – results in less than universal PMIS use. Reports produced by Unifier do not include smaller projects so are not comprehensive presentations of all Metro capital projects and therefore provide less information for management decision making and most importantly, less transparency.

Recommendations 96 and 109 – Improve end-user documentation for PMIS and develop additional training on the use of PMIS: PMG agreed and stated PMIS module-specific training is available and accessible to all users in SharePoint.

Interviews indicate that Metro and consultant staff are provided with the resources and training needed to use current PMIS tools. PMG staff reported that in 2015 at the time of the BP Study, there was one temporary employee with limited availability to assist on use of CM14. Now there is a full-time Metro employee in place along with a fully matured support ticket system and a manual and videos to ensure timely and knowledgeable assistance across all technology platforms. Both Project Teams and construction contractors are provided training in PMIS and have access to the support ticket system.

**OIG Comments** – The OIG’s take away from its review of policies and procedures, and interviews is PMG has made great strides to develop and implement useful information technology by hiring and training staff. We note that additional resources to customize Oracle Unifier and other systems may offer a high return on investment. Finally, to the extent smaller projects operate outside the PMIS umbrella, Metro may be missing an opportunity to implement optimal controls across all projects. Excel spreadsheets continue to have a place in data tracking, but they can be unreliable and do not promote transparency as to the status of a project.

### **C. 2023 Recommendations**

The OIG recommends:

- 16.1** PMG should revisit whether all projects should use PMIS regardless of size or complexity.
- 16.2** PMG should review whether there are resources available for Oracle Unifier information reporting enhancements, for example an “Alert Report” triggered by looming (or passed) response deadlines.

## **CATEGORY #17: Administrative Control**

This Category includes 3 Recommendations (Numbers 61, 69, and 70) made in the 2016 BP Study report.

### **A. Background**

Category #8 (Contract Administration) covers the topic of administrating/monitoring the contract from an “overarching” perspective, while similar sounding this Category (Administrative Control) pertains to utilizing the Project Management Body of Knowledge (PMBOK) methodology for control of documents including plans and specifications. The 2016 findings identified a need for enhanced schedule reviews throughout the project lifecycle and consistent oversight over project close-out.

### **B. Evaluation of Implementation Actions**

PMG staff indicated that pre-2016 policies and procedures for administrative controls continue as effective guidance. Currently, these procedures are under review for potential enhancements. Also, Metro has strong close-out practices for field-related matters.

Our evaluation ranked the implementation all of 3 recommendations in this Category as “Established” as discussed below:

**Recommendation 61** – Improve the configuration management and document control processes: PMG staff indicated that current processes are adequate. PMG reports that it is in the process of reviewing administrative controls to identify opportunities for enhancements and ensure best practices. In interviews, no staff indicated problems with configuration management or document control.

**Recommendation 69** – Establish a scheduling section within project controls: PMG stated that while not a separate section within Program Control, there are scheduling resources available which perform the recommended roles and responsibilities. In this regard, PMG has ready access to scheduling experts for its mega-projects provided by program management consultant contracts.

**Recommendation 70** – Establish close-out compliance mechanisms: PMG stated that close-out procedures were already in place prior to the OIG audit. PMG staff indicated that project close-out compliance is not problematic. Field close-out compliance mechanisms, which can include oversight by the California Public Utilities Commission, are universally understood and diligently followed to turn a completed project over to Operations.

**OIG Comments** – Handling of documents and controlling where they are located within PMIS is extremely important through the lifecycle of a construction project. At project close out, it is mandatory to verify that documentation comply with applicable Metro, local, state and federal standards. If effective administrative controls are not in place, it would be impossible to confirm at close out if required documents were received. If this should occur, the contractor and Metro could incur fines, and there is potential for lawsuits.

### **C. 2023 Recommendation**

The OIG has no recommendation regarding Administrative Control.

**CATEGORY #18: Staffing and Training**

This Category includes 11 Recommendations (Numbers 46, 59, 65, 97, 98, 99, 100, 101, 102, 103, and 105) made in the 2016 BP Study report.

**A. Background**

The 2016 BP Study identifies utilization of proficient human resources – trained and practiced in application of sound project management principles and processes – as critical to the success of Metro’s capital projects program. “Soft skills” such as effective team communication are just as important as the “hard skills” to implement project delivery policies and procedures consistently and judiciously. (BPS, p. 55, 87.) Developing and retaining in-house talent rather than over-reliance on consultants is also highlighted as a best practice.

**B. Evaluation of Implementation Actions**

In response to the 2016 BP Study, PMG has taken actions to implement the recommendations in this Category by developing formal policies and procedures for staffing and training. Our evaluation ranked the implementation of 8 the 11 recommendations in this Category as “Established,” 2 recommendations as “Evolving” and 1 recommendation as “Needs Improvement” as discussed below:

**Established**

Recommendations 59, 98, 99 and 100 – Provide staff training in project management; expand participation of the Project Manager (PM) Academy; further develop the PM curriculum; and develop formal curriculum for all staff levels. In response to the 2016 recommendations PMG:

- Implemented the Project Management Leadership Institute, which provides training in project management. In addition to highway technical skills, specific off-site training provided include Project Management Institute training/certification, construction management and construction related legal training, and Information/Technology Systems related training.
- Stated that Program Management will continue to support Talent Development in the assessment of agency wide needs and enhance the PM curriculum as appropriate.
- Agreed that development of communications and interpersonal skills should be a key component of any training program and will work with Talent Management to enhance the PM curriculum.

In June 2017, a program support consultant prepared a “Training Needs White Paper” in response to recommendations made in the 2016 BP Study. The White Paper presents a training plan for PMG to augment and consolidate existing training platforms at Metro including the Project Management Academy and the Project Management Leadership Institute. The key objective was to develop “a refreshed curriculum that focuses on practical job application” by drawing from nationwide transportation capital program management practices and institutional knowledge at Metro.

Recommendations 97 and 103 – Staff augmentation contracts managed by individual functional departments and develop a strategic plan for the use of consultants: PMG reported that consultant personnel are managed by the Project Manager to whose project they are assigned as extension of staff. PMG agreed to the need to strategically define and describe the use of consultants in the Program Management Department. PMG addressed this matter in the Program Management Plan.

Regarding staff sufficiency and expertise, PMG staff described having difficulty filling open full-time employees (“FTE”) positions due to market competition. The worker shortage makes it necessary to continue to rely on consultant staff. PMG executive staff stated that it would be an organizational advantage to be able to tap into Metro’s or other transit’s agencies retired expertise to supplement Metro’s work force with former Metro or experienced experts seeking part-time or variable employment. It appears, however, that former employees are less motivated to return to work directly for Metro because consultants may offer a more robust compensation package than Metro and then charge Metro these higher rates.

These situations may be contributing to the difficulties of improving the current ratio of FTEs to consultants. Moreover, current recruitment practices may be impacting Metro’s ability to build a “deep bench” of technical and management experts who can build and carry forward institutional knowledge. Management states that it is undertaking a study on use of consultants. A study of that sort would provide comprehensive up-to-date information that can be used to improve Metro’s staff capacity planning.

Recommendation 101 – Establish training programs and tie to HR development goals: The recommendation has been implemented as part of the Project Management Leadership Institute training program.

Recommendation 105 – Consider development of a step pay system: PMG agreed and stated that implementing the recommendation will require coordination with OMB and HR. PMG staff stated that the hiring and salary process can be a challenge in finding and keeping good people.

## **Evolving**

Recommendation 46 – Establish soft skills training and development for all project team members: PMG agreed with the recommendation and stated that they need to do an assessment of department training needs tailored to the functions of the Program Management Department. In addition, the Project Management Leadership Institute has been established to train project team members.

Recommendation 102 – Develop and implement a detailed staffing analysis process for all departments: PMG agreed and stated the process for requesting and budgeting for staff is challenging and will require coordination with the OMB department. PMG addressed this matter in the PSC Task #3, Readiness Review Checklist.

## **Needs Improvement**

Recommendation 65 – Assess whether additional safety training is needed: PMG deferred this recommendation to Metro’s safety department. Based on our discussion of this matter with Metro safety staff, it appears that the current level of safety training is adequate. However, in interviews, the OIG learned that the Safety group and PMG do not track safety certifications or training. It is recommended that a tracking system is established for persons in positions that require certifications or licenses and confirm staff keeps certifications and licenses in good standing.

Safety staff stated that in addition to specific contract safety and security requirements, Metro conducts Construction Safety Orientation for newly hired employees whose job responsibilities require them to enter into on-going construction worksite/zones. Also, Metro employees and site visitors are required to participate in orientations of safety procedures related to personal

protective equipment and specific underground self-rescuer training prior to visiting underground/tunnel environments.

The Corporate Safety department has assessed the need for the training topics that need to be covered for Metro employees based on the tasks they perform and has identified which training topics pertain to each discipline. Based on this assessment, the department offers all regulatory-required training to Metro employees based on their job-specific duties. This training is conducted routinely by two dedicated safety trainers supplemented by other subject-matter experts.

Metro's contractors are required contractually to have an Injury Illness Prevention Program and the law mandates that contractors provide specific safety training for their employees. The responsibility to provide all necessary task-specific training rests solely with the contractors who construct capital projects.

**OIG Comments** – PMG's efforts to build, train, and retain a top capital projects delivery team should rest on a comprehensively developed training/leadership program. While it is clear that Project Managers are encouraged to attend offered training and to independently pursue training and certifications that will enhance their career at Metro, what is lacking is (1) an identifiable program of development and (2) a perceived ladder for accessing long-term opportunities. Moreover, morale suffers when it appears that consultant employees – paid by Metro – appear to have more opportunities and better compensation.

For ongoing capital projects delivery success, Metro will need to obtain skilled construction management professionals at all levels of experience. Metro is encouraged to commit to helping less experienced staff develop the skills and experience required for long-term success at Metro.

### **C. 2023 Recommendations**

The OIG recommends:

- 18.1** Metro should develop and implement an agency-wide initiative for attracting and retaining construction management professionals as full-time employees and consider increasing the ration of employees to consultants.
- 18.2** Metro should develop and implement a program for inviting experts to work for Metro on an as-needed basis to mentor and train new Metro staff.
- 18.3** PMG should revisit the, "2017 Training Needs White Paper" prepared in response to the 2016 BP Study to determine additional training needs.

**CATEGORY #19: Project Management Key Performance Indicators (“KPIs”)**

This Category includes 2 Recommendations (Numbers 62 and 63) made in the 2016 BP Study report.

**A. Background**

The 2016 BP Study identifies Project Manager performance through talent development and tracking of key performance indicators as an important capital project objective. Building high performing project talent involves (1) executives who want to help staff succeed, (2) high performance staff who pursue education, experience and credentials on their own, (3) a support structure to nurture talent, and (4) an organization that values project management. Performance metrics based on a project’s schedule/cost variance, change requests to project scope, resource utilization, quality, and customer/stakeholder satisfaction are recommended to be included in a Project Manager’s performance assessment. (BPS, p. 63.)

**B. Evaluation of Implementation Actions**

PMG has implemented the recommendations. Our evaluation ranked the implementation status of the 2 recommendations in this Category as “Established” as discussed below:

Recommendation 62 – Develop a Project Manager Performance Plan: PMG agreed and stated Metro’s Individual Performance Plan (“IPP”) is in place. As part of the IPP, at the beginning of each performance year, Project Managers are given goals, strategic direction, and deliverables for the evaluation period.

For purposes of hiring or promoting employees, the PMG has developed a series of Job Specifications to cover the roles needed for the delivery of capital projects, including Project Managers. Each Job Specification includes a Job Summary and describes (1) duties and responsibilities, (2) essential knowledge, skills and abilities, and (3) the minimum qualifications for the position, such as education, experience and certifications, licenses, and special requirements.

Recommendation 63 – Establish performance metrics into Project Managers’ performance assessments: PMG agreed. Performance metrics are in each Project Manager’s Individual Performance Plan (“IPP”). In interviews with the OIG, PMG Executive Management stated that evaluations of Project Manager performance occur as part of the annual performance review process. During the review process, Project Managers are provided feedback on overall and specific performance based on the duties of their position. As part of this performance review, Project Managers are encouraged to discuss desired training or promotional pathways, and together the Project Manager and management identify opportunities for growth and development.

**OIG Comments** – The 2016 BP Study referenced a Project Management Institute 2013 White Paper (“WP”), “Building High Performance Project Talent,”<sup>9</sup> which is on the internet that PMG may want to re-visit. This WP states that “truly great” project-driven organizations “stand out because of their people” and it is “the portfolio of talent that makes or breaks an organization.” This WP discusses the need for “next generation” skills and describes the need to maximize three complementary skillsets: (1) technical project management, (2) strategic and business management, and (3) leadership.

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<sup>9</sup> [building-high-performing-project-talent.pdf \(pmi.org\)](https://www.pmi.org/building-high-performing-project-talent.pdf)

To attract and retain the best and brightest project management professionals, an organization should establish initiatives that include:

- Defined career paths and skills requirements.
- Identification and grooming of top performers by senior management.
- Regular assessment reviews.
- Alignment between strategic goals, project portfolios, and staff.
- Stretch assignments that give young project leaders opportunities to extend their skills, knowledge, and network.
- Mentoring and coaching.

Metro has an opportunity to develop a program based on best practices for developing project management talent. This program should reflect Metro's core values and align with the PMG's mission and include leadership training.

### **C. 2023 Recommendations**

The OIG recommends:

- 19.1** PMG should develop formal policies and procedures that describe Project Manager roles and responsibilities that will be evaluated, encouraged, and strengthened.
- 19.2** PMG should ensure that the Project Manager Performance Plan identifies and develops future leaders and encourages broad expertise across the entirety of the capital project construction management skillsets.



Airport Metro Connector project adjacent to Division 16 rail yard and maintenance facility



## D. STRATEGIC PROGRAM OVERSIGHT

### CATEGORY #20: Metro-Wide Program Oversight

This Category includes 6 Recommendations (Numbers 49, 50, 52, 92, 93, and 94) made in the 2016 BP Study report.

#### A. Background

The 2016 BP Study identifies two core best practices for capital projects program oversight: (1) adoption of Project Management Body of Knowledge (PMBOK) principles across participating groups, and (2) establishment of a Strategic Program Management Office (“PMO”). These best practices serve to guide and oversee the entire project lifecycle, from planning, procurement, construction, testing/startup, and hand-over to Operations.

The 2016 BP Study identified PMBOK principles as beneficial to the process of conception, development, and construction of capital projects. “Project Management is not just a process, but a philosophy. It is a critical and fundamental element of an organization. . . [that] should be established across all areas of an organization. In addition, the project management process and methodology cover the entire project lifecycle utilizing process groups, knowledge areas, policies and procedures, and tools and techniques to effectively manage and deliver capital projects.” (BPS, p. 56.)

In regard to a Strategic PMO, the 2016 BP Study found that “organizational review, communication, and coordination issues exist between departments during project delivery. Peer agencies engaging in best practices have recommended unified control over projects starting at project initiation and continuing through the planning and implementation phases.” (BPS, p. 56.) The separation of duties between PMG and Countywide Planning and Development during the Planning phase was identified by the 2016 BP Study as a “threat” to Metro’s successful delivery of capital projects. Also, Metro’s spotty (or absent) use of PMBOK principles was viewed as contributing to gaps in collaboration. Planning is a key role that needs to occur prior to commencement of construction and have control of the project while planning is occurring, however PMG needs to participate and give input to Planning during this phase.

#### B. Evaluation of Implementation Actions

Metro/PMG implemented the recommendations, or in one case, initiated alternative steps in lieu of establishing a Strategic PMO. Our evaluation ranked the implementation status of 2 of the 6 recommendations in this Category as “Established” and the other 4 recommendations as “Evolving” as discussed below:

##### 1. **Established**

Recommendation 92 – Establish project metrics for compliance to policies and procedures: This recommendation is addressed under PSC Task #3, Project Readiness Procedure. The OIG found that policies and procedures, and universal and consistent use of existing PMIS tools are in place for verifying compliance to policies and procedures.

Recommendation 93 – Establish a Knowledge Management System to maintain and access all policies and procedures: PMG agreed that policies and procedures need to be more widely disseminated and is using SharePoint. Also, PMG has established a system for developing and tracking its operative policies and procedures. The 2016 BP Study advocates for use of PMBOK principles to guide consistency in procedures, processes, and approaches. PMG and other relevant departments have established policies and procedures that guide this effort.

## 2. Evolving

**Recommendation 49** – Implement an organization-wide project management initiative: PMG supports the structure of having a field office for projects. In 2023, as in 2016, PMG disagrees with a field office being overseen by a Strategic PMO at Gateway. The OIG continues to advocate for interdepartmental collaboration to continue at least through procurement and to be considered for the entire project life cycle.

**Recommendations 50 and 52** – Establish a Strategic PMO, and assign ownership of capital project delivery to the Strategic PMO: PMG disagreed with the need for a separate strategic PMO, and stated that the Program Management Department, with support from other groups, can achieve the objectives of a Strategic PMO. Metro is currently undertaking a “quasi” organization-wide approach to project management and is trending toward greater strategic oversight. At this point, it appears that Metro is meeting the intent of the recommendations related to a Strategic PMO, while avoiding making the process centralized in one office that decision-making bottlenecks occur. It is fair to describe the agency’s evolution as now better able to work together without barriers for the good of the Agency.

The primary purpose of the Strategic PMO is to ensure cross-functional cooperation. PMG’s actions in 2022 to advocate for an organization-wide approach for successful capital project delivery is a positive trend and aligns with the 2016 BP Study recommendation.

In 2022, a “leap forward” in Metro-wide organizational oversight occurred with the initiation of an Early Intervention Team (“EIT”). The EIT consists of staff from the PMG, Planning, Budget, V/CM, Operations and other departments to join as one entity to anticipate and resolve issues occurring on projects. There appears to be broad support for the EIT, and the perspective that the EIT offers an alternative approach to achieving the benefits of collaborative decision-making with less of the detriments of a unified Strategic PMO. The OIG is optimistic that lessons learned since 2016 will drive a constructive alternative to the recommended Strategic PMO.

**Recommendation 94** – All departments should own their policies and procedures, and Strategic PMO should ensure consistency, compliance, and integration: PMG agreed and stated each department owns responsibility of its policies/procedures and is accountable for compliance with policies and procedures. But PMG disagreed for the need of a strategic PMO. In interviews, the OIG learned that individual departments develop comprehensive policies and procedures that PMG tracks for collaboration, but there is no Metro-wide oversight body that reviews separate groups policies and procedures to ensure overarching soundness.

**OIG Comments** – In interviews with PMG staff, the OIG learned that there is some difference of opinion on the value of a Strategic PMO approach, suggesting that now may be a good time to revisit any cost-benefit analysis on this issue. In 2022 interviews, the (former) Chief Program Management Officer described that in 2016 – and currently, they had reasonable concerns that the model of a Strategic PMO would interfere with PMG’s ability to be nimble in its response to project challenges. Specifically, decision-making could become slow and lead to political or bureaucratic bottlenecks.

### C. **2023 Recommendations**

The OIG recommends:

- 20.1** Metro and PMG should revisit the 2016 recommendation advocating for the adoption of PMBOK principles and processes, especially in light of the Early Intervention Team (EIT) initiative.

- 20.2** The EIT is essentially a pre-construction initiative but the interdepartmental collaboration may be helpful post-award to provide coordination and support for problem solving. The interdepartmental team may be reconstituted for a revised mission that supports the field office.



Airport Metro Connector and Los Angeles Airport Automated People Mover construction site

## E. RELOCATED GROUPS

### **CATEGORY # 21: Highways**

This Category includes 3 Recommendations (Numbers 53, 54, and 60) made in the 2016 BP Study report.

#### **A. Background**

The 2016 BP Study stated that “while Metro is primarily a transit improvement authority, a significant portion of the capital program is dedicated to highway improvements (carpool lanes, freeway interchanges, gap closures, etc.)” (BPS, p. 60.) Generally, the study commented that highway projects may not receive the same “organizational commitment” appearing secondary to Metro’s transit projects but noted: “Highway improvements are one of the critical elements to the overall success of the Los Angeles County infrastructure, and it is essential that highway project delivery be effectively staffed, resourced, and managed.” (BPS, p. 60.)

In 2015, Metro had 180 open projects under the Highway group. Fifteen were “direct projects” where Metro hired a consultant to manage the project; another 15 were projects where Metro engaged Caltrans to manage the project; and the remaining 150 projects were “funding only” projects where Metro acted as an oversight role while cities and counties were directly responsible for carrying out the project.

For the 180 projects, issues included: (1) limited transparency to the Board on highway projects; (2) lack of policies and procedures for project management tailored to highway projects; (3) less resource/support commitment from external departments; (4) lack of in-house expertise on highway design and construction; (5) deficient training opportunities for the niche area; (6) challenging coordination issues with Caltrans; (7) missed design-build delivery opportunities; (8) less-than ideal scheduling function; and (9) need for robust quality management oversight.

#### **B. Evaluation of Implementation Actions**

We found that the recommendations have been implemented. Our evaluation ranked the implementation status of all 3 recommendations in this Category as “Established” as discussed below:

Recommendation 53 – Incorporate the IPMO structure into highway projects: This recommendation has been implemented. Highways staff reported that the Highways group is primarily involved during the planning phase of a capital project. Upon completion of final design, a project that will be implemented by Metro is handed over to Project Management. Highways group Project Managers stay engaged and support the construction Project Manager based on their continuing obligation to oversee funding.

Recommendation 54 – Improve the highway reporting process: For projects where Metro is both the funder and implementer, Metro’s Project Development Team reports monthly to Caltrans on the status of projects. Caltrans reports to Metro where Caltrans is the implementer. Prior to the Highways group moving to Planning, Highways would report information on budget and status to Program Management’s executive team to include information in regular reporting to the Board. The lead for Planning would like Caltrans to report directly to the Board on all projects involving Caltrans (which was done in the past). However, Caltrans is not eager to do this as it prefers to avoid public forums.

In 2021, the Highways group was relocated from PMG to Countywide Planning and Development. This move was made to better support California policies moving away from the widening of freeways to focus on maintaining existing highways while enhancing alternative modes of transportation. Highways staff describes the move to Planning as a “double-edged sword” for reporting. On one hand, it is helpful to have outside visibility under the large umbrella of the capital projects of Program Management. On the other hand, highway projects can be politically sensitive, and exposure during the planning phase can do more harm than the good.

Recommendation 60 – Develop a Quality Plan for highway projects: A Quality Plan for Highways has been developed. The Highways group does not use Quality or Program Management lessons learned program; it uses its own internal program.

**OIG Comments** – Metro is moving toward less direct management of Highways construction projects in lieu of Caltrans taking the lead to deliver the project. For that reason, the impetus behind the 2016 recommendations – to align Highways project practices more strongly with PMG’s approach to non-highways projects, may no longer be relevant. Current efforts are being made to closely work with Caltrans for regular reporting. Best practices oversight of Caltrans should be subject to lessons learned and continuous improvement. Of course, if Caltrans manages and constructs a project, Metro will not have that detailed information input into our PMIs system for analysis.

### **C. 2023 Recommendation**

The OIG recommends:

- 21.1** Since the Highways group has been relocated to the Planning department, PMG should collaborate with Countywide Planning and Development to ensure that Metro’s Board is receiving complete information on highway capital projects.

## **CATEGORY #22: Asset Management**

This Category contains Recommendation Number 7 made in the 2016 BP Study report.

### **A. Background**

The 2016 BP Study identifies the State of Good Repair and Life Cycle Costs and Asset Management programs as needing general improvement and the need to align the program with PMG’s singular focus on capital project delivery. (BPS, p. 27.) The study indicates that projects-oriented teams and programs supporting State of Good Repair/Asset Management goals are in competition for limited agency funding. Operation and maintenance costs of an asset might not be adequately assessed for project funding and development consideration. (BPS, p. 27.)

### **B. Evaluation of Implementation Actions**

The recommendation has been implemented. Our evaluation ranked the implementation status of the recommendation as “Established.”

Recommendation 7 – Establish a Life Cycle Asset Management Program: Metro agreed with the recommendation and stated that recently the Enterprise Transit Asset Management (“ETAM”) program has been relocated to Risk, Safety and Asset Management and policies are being developed consistent with MAP-21 requirements.

The OIG learned in interviews that the ETAM program is “on the maturity path,” thereby establishing compliance with the 2016 BP Study recommendation. ETAM’s current ideas for best practices improvement from a Metro-wide perspective were provided, as follows: (1) broader ETAM participation in Metro’s budget development for capital programs to ensure State of Good Repair data has constructive impact; and (2) more robust support from PMG and Vendor/Contract Management for the contractor’s scope of work including information gathering and tracking requirements of the ETAM program. Moreover, it is more efficient for construction contractors to collect and provide asset identification/serial numbers, maintenance schedules, and warranty information as part of their duties. This minimizes additional post-project expenditures following project close-out and turnover to Operations.

**OIG Comments** – When contractors go through the close out period on a construction contract, they are supposed to provide identification, serial numbers, and warranty information as part of the contractual requirements. When a contractor fails to properly identify asset identification and serial numbers, Metro has to expend additional resources after close-out of the project.

Now that ETAM has relocated to Risk, Safety and Asset Management, cross-departmental coordination between PMG and ETAM is important to consider budget priorities for capital improvements, including Metro’s State of Good Repair Asset management program.

### **C. 2023 Recommendations**

The OIG recommends,

- 22.1** V/CM should include in the contractor’s scope of work collecting and reporting asset serial numbers, warranty, and maintenance information.
- 22.2** Metro and OMB should plan and budget for State of Good Repair information in the event it is not part of the construction scope of work.



Purple Line Extension Section 1 tunnel and scaffolding framework

## CHAPTER 4: CONCLUSION

Our follow up review found that Metro has taken or initiated actions to implemented 96 (88%) of the 109 recommendations in the 2016 BP Study report. New or revised policies and procedures were implemented for 32 of the 109 recommendations and new or revised practices were initiated for 66 recommendations. Based on data collected during the review, the status of the 109 recommendations are as follows:

Rankings - 109 Recommendations	Rank Count	Percentage of Total
<b>Established</b>	65	60%
<b>Evolving</b>	31	28%
<b>Implemented (Subtotal)</b>	96	88%
<b>Needs Improvement</b>	13	12%

- **Established:** Data shows that the recommendation for the best practice is adopted/well-functioning (65 recommendations).
- **Evolving:** Data supports the efforts to implement the intent of the best practice “in progress” with iterative improvements (31 recommendations).
- **Needs Improvement:** Data indicates that the recommended best practice whether “agreed” or “rejected” by Metro in 2016 continues to be worthy of consideration or in need of re-evaluation by PMG/Metro (13 recommendations).

Significant observations noted during the review are summarized below.

### **Cluster A: Pre-Procurement Project Development**

Cluster A Includes the 2016 BP Study’s “planning phase” recommendations along with a subset of that study’s “overarching” recommendations that are particularly significant to the early stages project development.

Delivery Method and Selection: The implementation status of the recommendations for this area is “Evolving” for all recommendations. We found that PM01/Project Delivery Selection has been established and provides comprehensive procedures to guide the selection of a project delivery methodology. However, PMG learned over time that PM01 needs to be expanded to include guidance on the Progressive Design Build method. That supplementation is currently in process. Such effort is an excellent example of “lessons learned” being applied to project delivery selection process.

In accordance with the PC14/Readiness Review Procedure, the earliest readiness reviews by PMG commence before selection of the delivery method (while CP&D is still the lead department). At this point, PMG brings its expertise forward to participate in development of design and construction plans, schedules, estimates, and risk assessments. Once environmental planning and clearances are in place, PMG undertakes readiness steps related to requests for federal funding, and generally continues to act in partnership with CP&D pending transfer of responsibility to PMG.

General Readiness: The OIG found that most of the recommendations in this area were implemented as reflected by the predominant “Established” and “Evolving” rankings. However, some gaps were identified in policies, procedures, and practices. PMG has acted to mitigate organizational challenges that were undermining its best efforts at controlling scope, budget, and schedule. The OIG did rank three recommendations as “Needs Improvement” under



General Readiness related to (1) time period to identify and relocate utilities, (2) use of strategies to support third parties, and (3) use of the gateway process, stakeholder engagement program, and FTA oversight procedures to effectively support project delivery.

Utilities & Third Parties and City Approvals: The OIG determined that the recommendations in these areas were mostly implemented. Enhancements to Metro's best practices are (1) Third Party Administration ("TPA") being moved under the Chief Program Management Officer that will provide greater attention for utilities and city approval issues, and (2) TPA being engaged earlier as an expert on utility and permitting issues (while CP&D is still the lead). Also, the Master Cooperative Agreement between Metro and the City of Los Angeles is currently being negotiated and is about 90% complete. However, the OIG ranked two recommendations as "Needs Improvement" that involve (1) enforcing utility requirements and penalties for noncompliance, and (2) establishing a Legislative/Legal Improvement Team.

Issues involving utilities and the acts and/or omissions of third parties present the greatest risk to Metro's scope, budget, and schedule. If private or public utilities are refusing to engage in fair and reasonable negotiations on an issue, it may be appropriate to legislate cost-sharing or other reasonable risk-shifting measures.

Risk Management and Project Management Plan: The OIG found that recommendations in these areas were mostly implemented but ranked three recommendations as "Needs Improvement" — (1) revising risk and contingency procedures for all projects, (2) enforcing procedures using risk to set contingencies for all projects, and (3) requiring all projects to utilize a Project Management Plan ("PMP"). We found that PMG does not apply the practices related to risk management and the PMP to less costly and/or less complex projects. The OIG identified no basis for the distinction of applying practices to larger projects but not smaller projects other than anecdotal information regarding preferences within PMG. If having a tiered system of policies and procedures across different types of projects is sound policy, it is advisable to formalize that policy in writing. If this is the case, it should be possible for exceptions to the tiering approach to be approved based on written justification. The OIG supports a nimble/agile approach to project management but is less enthusiastic if an approach seems arbitrarily or merely based on entrenched practice.

## **Cluster B: Post-Procurement Project Management**

Cluster B includes category areas involving functions after Metro procured the designer and/or contractor. The OIG identified robust actions were initiated to implement the 2016 recommendations.

Contract Administration: The OIG determined that the recommendations were mostly implemented. However, we ranked three recommendations as "Needs Improvement" that involved (1) clarifying timelines for contractor claims and Metro responses; (2) establishing enforcement and compliance mechanism into contractor performance evaluation; and (3) establishing a contractor's daily overhead rate.

There appears to be "gaps" in best practices needed to ensure that the contractor provides timely notice of alleged delay claims and documentary support in the form of a compliant time impact analyses. Some staff believe that a contractor gains significant advantage in creating ambiguity across its schedule, especially if delay causation becomes a mix of compensable and non-compensable delays. Staff also stated that Project Managers are resistant to push for

resolution of schedule issues because they are complex and costly. In some instances, this may lead to Metro paying for delays that the contractor encounters at a later date.

Delay in resolution of disputes generally works against Metro's interests. Not acting if the contractor fails to support Requests for Change creates outsized risks for exceeding the budget. It also increases the risk of animosity interfering with collaborative working relationships. Partnering is one path for resolving disputes; and if the contractor fails to act to resolve a claim, Metro can independently invoke the Dispute Resolution procedures included in Metro's General Conditions of the contract.

There is also a need to review whether the Daily Overhead Rate helps or hinders Metro's resolution of delay claims. In interviews with staff, the OIG received general feedback that the resolution of delays claims could be improved – and that improvements were being reviewed, such as using a quarterly scheduled reconciliation process.

**Board Matters:** Metro implemented all of the recommendations in this category area. One notable action was PMG, in conjunction with the CEO's office and Vendor/Contract Management ("V/CM"), developing delegation policies and procedures approved by Metro's Board that removed the Board's involvement, review, and approval of lower value contracts and change orders. The delegation resulted in enhanced efficiencies that have been extrapolated to real savings in time and budget in some cases. Enforcement of timely submission of procurement claims documentation is critical to ensure the success of this delegation does not deteriorate the administration of the claims. To ensure adequate controls and continued oversight by Metro's Board at the "macro level," the OIG instituted a quarterly Change Order Spot Check audit. These delegation efforts are viewed by many as an unqualified success.

**Partnering:** The OIG found that the status of implementation of the recommendations in this area is "Evolving." We did not identify any formal policies or procedures addressing partnering outside Metro's contract General Conditions. It appears that there are tools in place for partnering to be constructive, but there may be a lack of will to pursue the promise of constructive partnering. To clarify, partnering is useful if it (1) brings parties together to discuss complex or disputed issues prior to the hardening of positions, (2) uses partnering as a forum for discussion of a mutually beneficial resolution, and (3) results in implementing mutually agreements and resolutions. The partnering process should be started at the lowest level of the escalation ladder; Metro management at the higher levels ideally assist those at the lowest levels to formulate reasonable approaches to problem resolution. The partnering process is least successful where the contractor learns they will get a better result "up the ladder" – making it all the more important that issues get thoroughly reviewed at the lowest level with supported resolutions.

**Lessons Learned:** The OIG ranked the implementation of the recommendation in this Category area as "Evolving." We found that although all the departments under PMG have an awareness of the Lessons Learned program, not all of them expressed deep interest in using the process. It may be that the benefits of robust use of Quality's Lessons Learned program needs to be sold as a net good. Lessons learned are typically generated in response to challenges, and there may be reluctance to document challenges that occurred during a project. Also, it may be appropriate to treat some lessons learned confidentially.

**Safety:** The 2016 BP Study unambiguously described safety as an area of strength for PMG and Metro. However, a key recommendation was rejected by the PMG, and the OIG ranked the recommendation as "Needs Improvement." PMG is entitled to reject as a matter of policy, the

recommendation to “herald” the good news of solid safety compliance by Metro and contractors when that occurs. However, the OIG is not convinced with the stated reason (installing a “safety ticker” in the Metro Gateway lobby as impractical and duplicative to other safety reporting as just are methods of publicity to spur a safety culture). The publication of safety statistics on the job site is inadequate to bring positive attention to top safety performers. It also may be impeding constructive attention for the less than stellar performers on safety. The OIG believes that PMG should consider a publicized method for encouraging contractor best practices for safety. The OIG suggests steps such as a quarterly report on Metro’s Daily Briefing email and/or a published Board Report focusing on safety performance across projects and safety celebrations or reviews periodically at the project site with contractor and Metro employees.

### **Cluster C: Project Management Support**

Cluster C includes the 2016 BP Study’s recommendations related to administrative and program management functions and processes that support capital project management and delivery. This cluster includes Public Involvement, which could have significant impacts on project cost and timelines. Also included are personnel areas related to practices on staffing and training top Project Management talent.

Administrative Controls and Program Management Information System (“PMIS”): All of the 2016 recommendations in these two Category areas have been implemented, and all of the recommendations were ranked as “Established.”

Interviews with staff disclosed that the suite of PMIS technology products currently available has vastly improved since 2016, and that adequate resources have been made available for training, maintenance, and satisfactory “Help Desk” type assistance. Metro’s Board and Executive Management have access to comprehensive and useful information at the touch of a button on a dashboard.

We found that PMIS is an effective application that supports transparency and accessing executive-level reporting on project and program status. However, currently PMIS is maximized only for the most complex mega projects. To the extent smaller projects operate outside the PMIS umbrella, Metro may be missing an opportunity to implement optimal controls across all projects. Also, there is an indication that contract change-related trends may not be timely tracked, in the hope the contractor drops a rejected issue.

Public Involvement: We found that that the 2016 recommendations have been implemented. PMG and the Communications team have collaborated on a Capital Project Delivery website, and the Communications group is well-integrated into the construction management process during the construction phase. Best practices are to engage the public early and often of construction plans and potential impacts. However, in some cases, there is a “gap” that exists in working with the public early in the project planning process. Constructive outreach at this time can go far to impress upon the public that Metro takes seriously its values of equity and inclusion. Also, early involvement helps stimulate public support which pays dividends in the event of challenges to the environmental review; it may also help build public resilience to the inevitable construction impacts. A project lacking substantial community support may have to be modified. Moreover, the budget and project schedule could suffer if the public commences active resistance to a project. The pandemic conditions resulted in more public willing to engage virtually on matters, so this is an area Metro can expand into to satisfy early public engagement.

Staffing and Training: The OIG found that the 2016 recommendations in this area have been implemented and ranked the recommendations with a mix of “Established” and “Evolving.” PMG has initiated efforts to expand participation of the PM Academy and other training opportunities. The Claims training modules developed by a consultant are very detailed and reflect a diligent effort to enhance the expertise of Metro’s Project Managers. PMG Executive Management describes that the annual performance review cycle is robustly used for each Project Manager to plan additional training and develop steps toward improved skills and enlarged leadership opportunities.

Metro has not been successful in moving the needle on the lopsided ratio of Metro FTEs to consultants across project and program management. Currently, the ratio is 30/70 in favor of consultants with a goal of a 70/30 ratio in favor of Metro – but even 50/50 mix would offer improvement. The lack of a step-pay system at Metro and the rate of pay offered to Metro’s contract employees may be interfering with progress in improving the Metro FTEs to consultant’s ratio. PMG is not responsible for these challenges because they are organizational issues not capable of resolution solely by PMG. For maximizing current Project Management talent, PMG is aware of the need for continued training and career building. Luring back retired talent in flexible but mutually beneficial contractual arrangements could build a Metro bench that adds mentoring capabilities and staffing flexibility without resorting to consultant contracts. There are some legal barriers to hiring retirees as consultants within the first one to three years after they leave that warranted, but compromise solutions are still achievable.

#### **Cluster D: Strategic Program Oversight**

Cluster D includes the 2016 BP Study’s recommendations pertaining to the need for a centralized Strategic Program Management Office (“PMO”). The authors of the 2016 study viewed the separation of duties between Countywide Planning & Development (“CP&D”) and PMG during the project planning phase as a threat to Metro’s successful delivery of capital projects. The 2016 authors also recommended implementing principles from the Project Management Book of Knowledge (“PMBOK”) for consistency of practices as related and necessary best practices.

Metro-wide Program Oversight: This is an “overarching” area, which affects practices across all project management areas. Key 2016 recommendations were: (1) establish a Strategic PMO that oversees the entirety of the capital projects; (2) establish an Integrated Project Management Office (“IPMO”), and (3) implement PMBOK principles as a set of unifying processes.

The PMG agreed to continue use of the IPMO approach for project management, but the recommendation related to establishing a Strategic PMO was rejected. As for PMBOK, the recommendation only indirectly referenced PMBOK principles; PMG never rejected those principles but did not commit to implement PMBOK as a construction management “north star,” either. The OIG views PMBOK as particularly necessary where the Strategic PMO approach is adopted; but PMBOK is still useful in its absence.

During interviews and through regular observation of matters brought by PMG to Metro’s Board, the OIG learned of PMG’s efforts to mitigate some budget and schedule challenges brought to light during its Fiscal Year 2023 Program Management Annual Program Evaluation. Over the course of 2022, and with the Metro Board’s support, Metro has acted to implement a cross-departmental team of experts, now referred to as the Early Intervention Team (“EIT”). This team uses a problem-solving approach to mitigate challenges to project delivery related to

market conditions (associated with the pandemic, supply chain and inflation), project delivery methods, scope issues, and unforeseen conditions.

One key outcome of the EIT is the development of a revised (Proposed) Project Charter for Alternative Delivery (“Proposed Charter”) – which is currently in a “Confidential/Deliberative Draft” status. The Proposed Charter describes an organization-wide approach to decision-making and proactive problem-solving in a method that arguably meets – in an alternative fashion – the intent of the 2016 recommendation for a Strategic PMO. This alternative approach appears to be a constructive response to lessons learned based on events transpiring since 2016 and accelerated by the pandemic.

The long-established case of CP&D and PMG operating from separate silos from each other, without unified program guidance, affects the budget and policies and procedures and will remain a potential weakness until the EIT and/or Project Charter approach addressing unified participation and roles. Also, it may not be ideal for PMG to “tier” projects of less cost/complexity from the Metro-wide Program Oversight policies currently being developed. If so, it is recommended that the basis and justification for “tiering” be formalized in a written policy.

#### Cluster E: Relocated Groups

The Cluster E consists of two unrelated functional areas external to PMG. Both Highways and the Enterprise Transit Asset Management (“ETAM”) groups were moved out of PMG. Highways moved to Countywide Planning and Development, and ETAM and the State of Good Repair program relocated to Risk, Safety and Asset Management.

Our review ranked the implementation of all the recommendations in these Category areas as “Established.”

Highways: In 2021, the Highways group was relocated from PMG to CP&D Development and can now work more closely with Caltrans in the planning phase of projects. During interviews, it was commented that the relocation of this group has created some obstacles to reporting the status of projects because CP&D does not have the same type of regular quarterly Board reporting responsibilities as PMG.

Metro is moving toward less direct management of Highways construction projects in lieu of Caltrans taking the lead to deliver the project. For that reason, the impetus behind the 2016 recommendations – to align Highways project practices more strongly with PMG’s approach to non-highways projects, may no longer be relevant. Current efforts are being made to closely work with Caltrans for regular reporting.

Enterprise Transit Asset Management: Since the 2016 BP Study, the recommended Asset Management Plan was completed and approved, and the ETAM program is moving forward “in the development phase of the maturity path.”

During interviews, it was discussed that ETAM could be more efficient if preliminary steps for tracking new assets, maintenance, and warranty information was folded into the construction phase. The contractor is in an optimal position to collect and report information that needs to be added to Metro’s ETAM database. The same is true for Metro supplied materials and equipment. Finally, ETAM recommends that State of Good Repair information be integrated into the review of capital budgets to avoid the situation where new projects are proposed and

implemented without consideration of older, inter-dependent transit facilities and in-house facilities capital improvement projects.



Crenshaw project – K Line – elevated tracks

## **CHAPTER 5: RECOMMENDATIONS**

### **2023 Recommendations by Cluster and Category**

During evaluation of PMG's actions to implement 2016 BP Study recommendations, the OIG identified vulnerable areas that need improvement. Accordingly, the OIG identified 36 new recommendations, which are listed below:

#### **CLUSTER A. PRE-PROCUREMENT PROJECT DEVELOPMENT**

##### **Category #1 - Delivery Method and Selection**

- 1.1 PMG should continue to timely update policies and procedures to include the range of alternative delivery methods currently used by Metro.

##### **Category #2 - General Readiness**

- 2.1 Metro should investigate strategic initiatives to beneficially support third parties cooperative and timely assistance toward timely and cost-efficient project delivery
- 2.2 Third party utility relocation issues continue to be one of the larger reasons for change orders and project delays. The OIG recommends the PMG partner with the Early Intervention Team ("EIT") to revisit the PMG's 2016 rejection of Recommendation Nos. 3 and 6 and apply a lessons learned approach to investigating the feasibility of initiating utility relocation work much earlier in the pre-construction management process to remove unnecessary risk and enhance mitigation by planning and scheduling of relocation completion prior to other project delivery activities, without any intention of limiting or mandating when Engineering can begin. If the progressive design build approach or other alternative delivery approach will minimize utility impacts in the same manner as separate contracts for advanced utility relocation, the PMG's response should be updated.

##### **Category #3 - Utilities and Third Parties**

- 3.1 Utility investigations, work, and relocations performed by Metro's contractors or others pose cost and schedule risks for Metro projects, including potential issues with reviews, approvals, and oversight by the third-party utility owners. The construction contract may specify timelines and/or sequences for utility-related work. To avoid cost and schedule impacts caused by third parties or contractor(s), Metro should utilize legal counsel's assistance to mitigate the risks related to utility investigations, work, and relocations. Metro should enhance its procedures and relationships to enable self-permitting. Transparency, documentation, and trust are key to Metro achieving self-permitting.

##### **Category #4 - City Approvals**

- 4.1 Metro should complete a new and improved Master Cooperative Agreement between City of Los Angeles and LA Metro.
- 4.2 Metro should conduct a Legislative/Legal Improvement review to determine if there are any legislative adjustments that would improve work or construction related requirements for transit projects and assist in better resourcing third party stakeholders impacted by (and benefitting from) Metro capital projects.

##### **Category #5 - Life of Project Budget**

- 5.1 Metro should focus on quickly adapting its budgeting practices for all new construction projects given the changing circumstances and trends of increased prices.
- 5.2 Metro should evaluate, assess, and document emerging financial conditions before requesting a budget change, and include an analysis in the Board request for LOP funding increases.
- 5.3 Based on statements included in Board Report No. 2023-0106, Attachment A, the OIG understands that EIT Project Review Process will include multiple “intervention points” for review of the Life of Project Budget. The OIG recommends the development and implementation of detailed procedures describing the process for LOP Budget development across the project life cycle. Requests to increase the LOP make after the procurement phase should include a “lessons learned” justification for the increase.

#### **Category #6 - Risk Management**

- 6.1 PMG should determine whether risk management plans (whether full or “light” plans for smaller projects” – including mitigation plans for risk findings adjusted by PMG management – should be developed for all projects regardless of size, complexity, or use of federal funding.
- 6.2 PMG should strive to establish a progressively robust risk management culture that ensures controlled and mitigated risk throughout the entire project lifecycle.
- 6.3 PMG should determine if it is beneficial for Risk Management staff to participate in lessons learned discussions to encourage bi-directional sharing of risk-related information. This will ensure knowledge will be transferred, built upon and not be lost, as mature employees retire from Metro.

#### **Category #7 - Project Management Plan**

- 7.1 Revisit the 2016 Recommendation requiring all projects regardless of size or complexity to develop and use a PMP which will standardize practices related to change management, quality, risk, and develop and use a PMIs.

### **CLUSTER B. POST-PROCUREMENT PROJECT MANAGEMENT**

#### **Category #8 - Contract Administration**

- 8.1 PMG should revisit Recommendation Number 29 and review current General Conditions requirements for contractors to submit time impact analysis (“TIA”), and the conditions when to impose a “waiver” on untimely and improper claims that are not properly presented by the contractor. Metro should review its contract language regarding the requirements for TIAs and the conditions for imposing waivers, as well as opportunities to add contractual language emphasizing the contractor’s duty to timely submit support for impact damages and to mitigate alleged harm.
- 8.2 PMG should revisit Recommendation Number 64 regarding:
  - (a) Developing a formal robust Ongoing Performance Assessment Program for consultants and contractors that is used yearly during and at the end of the term of the contract to ensure satisfactory and compliant performance.
  - (b) Developing and utilize a Past Performance Assessment for consultants and contractors that allows Metro to consider the contractor’s overall contract compliance in future solicitations including an opportunity for contractors to respond to assessments.



- (c) For delay damages based on a daily rate, PMG and V/CM to work together to expand the daily rate to include (a) the types of cost impacts to cover multiple scenarios for delay and (b) the circumstances under which delay damages will be paid based on the daily rate. The OIG encourages all construction contracts to include a “bid” daily rate for damages that will be used to reimburse substantiated delay damages. Contracts omitting a bid daily rate should include a “ceiling” that will be applied post-award for any daily rate proposed by the contractor. (c) The contractor needs to be informed that proposed daily rates that were not included as a bid daily rate will be subject to audit.
- (d) With regard to contractor claims for damages for delays, PMG and V/CM to work together to review, and expand when proper, the use of construction contracts to include a “bid” daily rate for damages that will be used to reimburse substantiated delay damages. The OIG encourages all construction contracts to include a “bid” daily rate for damages that will be used to reimburse substantiated delay damages.

### **Category #9 - Board Matters**

- 9.1 Metro should continue the current practice and level of utilizing the delegated authority that has proven to speed up the change approval process with sufficient oversight and quality. The OIG will continue to monitor the change orders.
- 9.2 We recommend that Metro’s Management Audit Services Department do periodic audits during projects of use of funds for change orders in compliance with Metro Standards which will breed responsibility.

### **Category #10 - Enforcement and Compliance**

- 10.1 PMG and V/CM should collaborate in the review of current General Conditions establishing timelines and required actions for initial change matters and also for resolution of disputed matters.
- 10.2 PMG should revise CF14/Change Control to describe the internal processes regarding the 2018 CEO delegations of authority and best practices for using partnering, claims procedures and the Dispute Resolution Board to reach finality on contested change matters.
- 10.3 PMG should consider tracking the Project Manager’s performance in meeting responsive timelines for all change items (merited or not), to confirm compliance with the General Terms and Conditions and PMG’s policies and procedures.
- 10.4 Contractors should specify time limits for submission of claims and enforce these time limits where legally permissible. Vendors will request time limits for Metro’s response to their claims so Metro will need to be prepared to respond to that.

### **Category #11 – Partnering**

- 11.1 For effective partnering, Metro should develop effective internal processes for vetting issues appropriate for the partnering process and developing an evaluation of the facts and issues.
- 11.2 Metro should implement a “Partnering Positive” culture supported by Executive Management, in order to minimize the need to use Dispute Resolution Board hearings or to litigate a disputed issue.

### **Category #12 - Quality Management**

- 12.1** PMG should review whether best practices require expanding the scope of the quality program to include all projects, regardless of size or complexity, to participate in the enhanced Quality Management Program, including the Lessons Learned program.

### **Category #13 - Lessons Learned**

- 13.1** PMG should develop a program and culture that reports lessons learned from internal and external management (across all groups) to those participating in capital projects and methods to ensure regular review and revision of policies and procedures to ensure cross-department utilization of all lessons learned to advance and build on the Metro Program Management and improve each project as it planned, designed, developed and constructed.

### **Category #14 – Safety**

- 14.1** The Safety Group should revisit Recommendation Number 66 to determine whether there may be opportunities to broadly communicate safety statistics across capital projects to reflect Metro’s Safety culture and to further incentivizes contractor best practices. Sharing statistics monthly or quarterly in the same manner COVID-19 information was shared may be appropriate.
- 14.2** The Safety group along with the PMG should review the PMG’s pre-2016 safety-related procedures for conformity to current industry best practice standards.
- (a) PMG should verify that all projects have the updated construction safety policy.
- (b) V/CM should include updated construction safety policy in future contracts.

## **CLUSTER C. PROJECT MANAGEMENT SUPPORT**

### **Category #15 - Public Involvement**

- 15.1** PMG should consult with Countywide Planning and Development to re-visit the 2016 recommendations to ensure current public outreach practices timing, and methods meet best practice goals by addressing earlier community involvement in the planning phase, implementing a quality and equal platform for all communities, and increasing funding for public outreach efforts.

### **Category #16 - Program Management Information System (“PMIS”)**

- 16.1** PMG should revisit whether all projects should use PMIS regardless of size or complexity.
- 16.2** PMG should review whether there are resources available for Oracle Unifier information reporting enhancements, for example an “Alert Report” triggered by looming (or passed) response deadlines.

### **Category #17 - Administrative Control**

- 17.0** The OIG has *no recommendations* toward Administrative Control.

### **Category #18 – Staffing and Training**

- 18.1 Metro should develop and implement an agency-wide initiative for attracting and retaining construction management professionals as full-time employees and consider increasing the ration of employees to consultants.
- 18.2 Metro should develop and implement a program for inviting experts to work for Metro on an as-needed basis to mentor and train new Metro staff.
- 18.3 PMG should revisit the, “2017 Training Needs White Paper” prepared in response to the 2016 BP Study to determine additional training needs.

### **Category #19 - Project Management Key Performance Indicators (“KPIs”)**

- 19.1 PMG should develop policies and procedures that describe Project Manager roles and responsibilities that will be evaluated, encouraged, and strengthened.
- 19.2 PMG should ensure that the Project Manager Performance Plan identifies and develops future leaders and encourages broad expertise across the entirety of the capital project construction management skillsets.

## **CLUSTER D. STRATEGIC PROGRAM OVERSIGHT**

### **Category #20 - Metro-Wide Program Oversight**

- 20.1 Metro and PMG should revisit the 2016 recommendation advocating for the adoption of PMBOK principles and processes, especially in light of the Early Intervention Team (EIT) initiative.
- 20.2 The EIT is essentially a pre-construction initiative but the interdepartmental collaboration may be helpful post-award to provide coordination and support for problem solving. The interdepartmental team may be reconstituted for a revised mission that supports the field office.

## **CLUSTER E. RELOCATED GROUPS**

### **Category #21 – Highway**

- 21.1 Since the relocation of the Highways group to the Planning department, the PMG should collaborate with Countywide Planning and Development to ensure that Metro’s Board is receiving complete information on highway capital projects.

### **Category #22 - Asset Management**

- 22.1 V/CM should include the contractor’s scope of work should include collecting and reporting asset serial numbers, warranty, and maintenance information.
- 22.2 Metro and OMB should plan and budget for State of Good Repair information in the event it is not part of the construction scope of work.



**CHAPTER 6: Appendices**

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## List of Policies and Procedures

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Policies and Procedures

4/14/2023

New After 2016

ESTABLISHED POST-2016, NEW			
Title	Version Date	Source	Description
2016 Metro Program Management Plan	10/19/2016	CEO	Manual
Construction Safety and Security Manual (CSSM - Rev. 5.0)	01/01/2022	PM/Safety	Manual
Quality Management Oversight Plan & Procedures	01/30/2021	PM/Quality	Manual
Quality Management Policy Manual (In Progress)	04/26/2022	PM/Quality	Manual
Training Needs "White Paper"	6/13/2017	PM/ProgMgt	Manual
"2021 Metro Best Practices Report" May 2021	05/01/2021	CEO	Policy
Compliance Bulletin 18-03/CO Streamlining/2018 Delegation Matrix	7/03/2018	Board/CEO	Policy
Early Intervention Project Team - 2022-0361 Board Report	6/23/2022	CEO	Policy
OIG's Spot Check Program - Change Orders Over \$500k	02/01/2018	OIG	Policy
Partnership with City of Los Angeles (Mayor Garcetti Letter June 2017)	01/06/2017	Board	Policy
Past/Planned Training Matrix	9/30/2022	PM/ProgMgt	Policy
EST01 Rev 0 - Cost Estimating	6/28/2017	PM/ProgControl	Procedure
LL2 Rev 0 - Lessons Learned	9/11/2017	PM/ProgMgt	Procedure
PC14 REV 2 - Readiness Review	11/25/2019	PM/ProgControl	Procedure
PC16 Rev 0 - Cost Contingency Drawdown	12/1/2021	PM/ProgControl	Procedure
PM01 Rev 3 - Project Delivery Selection	10/30/2020	PM/ProjMgmt	Procedure
PM02 Rev 0 - Request for Proposal (RFP) Development	8/8/2020	PM/ProjMgmt	Procedure

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Policies and Procedures

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Revised After 2016

ESTABLISHED PRE-2016, REVISED POST-2016			
Title	Version Date	Source	Description
Acquisition Policy & Procedure Manual - "ACQ-1"	07/16/2010	VCM	Manual
Acquisition Procedures Manual - "ACQ-2"	07/01/2021	VCM	Manual
Title VI Plan & Public Participation Plans (DRAFT 2022)	06/17/2022	Public Outreach	Policy
Enterprise Transit Asset Management - State of Good Repair	1/1/2015	Safety/Risk	Policy
Master Cooperative Agreement with City of Los Angeles (Revision Pending)	11/07/2022	PM/ThirdParty	Policy
Metro's Contract - General Conditions	Ongoing	VCM	Policy
PC00 REV5- Definitions	5/10/2017	PM/ProgControl	Procedure
PC01 REV 7 -Work Breakdown Schedule (WBS)	5/10/2017	PM/ProgControl	Procedure
PC02 REV 8 - Budget	12/22/2021	PM/ProgControl	Procedure
PC03 REV 4 -Cost Estimating	5/10/2017	PM/ProgControl	Procedure
PC04 REV 6 - Project Management Plan	5/10/2017	PM/ProgControl	Procedure
PC05 REV 9 - Cost Reporting Forecasting	12/1/2021	PM/ProgControl	Procedure
PC06 REV 7 - Performance Measure Earned Value	5/10/2017	PM/ProgControl	Procedure
PC07 REV 9- Risk Mgmt	2/2/2028	PM/ProgControl	Procedure
PC08 REV 6 - Cash Flow	5/10/2017	PM/ProgControl	Procedure
PC09 REV 9 - Schedule Control	12/31/2021	PM/ProgControl	Procedure
PC10 REV 7 - Physical Progress Monitoring	5/10/2017	PM/ProgControl	Procedure
PC11 REV 6 - Capital Program Controls	5/10/2017	PM/ProgControl	Procedure
PC12 REV 2 - Contingency	5/10/2017	PM/ProgControl	Procedure
PC13 REV 1 - Program Management Information System (PMIS)	5/10/2017	PM/ProgControl	Procedure

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Revision in Progress

ESTABLISHED PRIOR TO 2016, REVISION IN PROGRESS			
Title	Version Date	Source	Description
CF01 REV 2 - Config Mgmt Plan	8/29/2011	PM/ConfigMgmt	Procedure
CF02 REV 2 - Document Control	8/28/2011	PM/ConfigMgmt	Procedure
CF03 REV 4 - Doc Control formatting	8/29/2011	PM/ConfigMgmt	Procedure
CF04 REV 4 - Doc Control Submittals	8/29/2011	PM/ConfigMgmt	Procedure
CF05 REV 2 - Doc Control As Builts	8/29/2011	PM/ConfigMgmt	Procedure
CF06 REV 2 - Doc Control Close Out	8/29/2011	PM/ConfigMgmt	Procedure
CF07 REV 3 - Procedures Revision Controls	7/22/2011	PM/ConfigMgmt	Procedure
CF08 REV 3 - Baseline Docs Controls	8/29/2011	PM/ConfigMgmt	Procedure
CF09 REV 2 - Design Changes Doc Controls	8/29/2011	PM/ConfigMgmt	Procedure
CF10 REV 4 -Change Control AE	7/21/2005	PM/ConfigMgmt	Procedure
CF12 REV 3 - Subj Codes Doc Controls	8/29/2011	PM/ConfigMgmt	Procedure
CF13 REV 4 -Correspondence Doc Controls	8/29/2011	PM/ConfigMgmt	Procedure
CF14 REV 4 -Change Control Constr Proc	4/7/2015	PM/ConfigMgmt	Procedure
CF15 REV 5 - Ops Config Change	1/21/2021	PM/ConfigMgmt	Procedure
CF16 REV 1 - Electronic Archiving	8/29/2011	PM/ConfigMgmt	Procedure
CF17 REV 0 - Betterment Change Requests	1/28/2013	PM/ConfigMgmt	Procedure
QMP01 REV 2 - Prep/Revision to QualMgt Procedures	1/3/2012	PM/Quality	Procedure
QMP02 REV 4 - Audits	4/21/2014	PM/Quality	Procedure
QMP03 REV 3 - Surveillance	1/31/2012	PM/Quality	Procedure
QMP04 REV 2 - Quality Action Request	1/31/2012	PM/Quality	Procedure
QMP05 REV 2 - Corrective Action Request	1/31/2012	PM/Quality	Procedure
QMP06 REV 3 - Suspension of Work Notice	1/31/2012	PM/Quality	Procedure
QMP07 REV5- Control of Nonconforming Items	7/30/2014	PM/Quality	Procedure
QMP08 REV 3 - Submittal Review	1/31/2012	PM/Quality	Procedure
QMP10 REV 2 - Quality Records	1/31/2012	PM/Quality	Procedure
QMP11 REV 3 -Training and Certification	1/31/2012	PM/Quality	Procedure
QMP12 REV 4 - Quality Assurance Programs	1/31/2012	PM/Quality	Procedure
QMPM01 REV 2 - Organization	11/29/2011	PM/Quality	Procedure
QMPM02 REV 2 - Quality Management Program	11/29/2011	PM/Quality	Procedure
QMPM03 REV 3 - Design Control	11/29/2011	PM/Quality	Procedure
QMPM04 REV 2 - Procurement Control	11/29/2011	PM/Quality	Procedure
QMPM05 REV 2 - Construction-Installation Control	11/29/2011	PM/Quality	Procedure
QMPM06 REV 2 - Instructions, Procedures, and Drawings	11/29/2011	PM/Quality	Procedure
QMPM07 REV 2 - Document Control	11/29/2011	PM/Quality	Procedure
QMPM08 REV 2 - Control of Equipment, Materials, and Services	11/29/2011	PM/Quality	Procedure
QMPM09 REV 2 - Control of Special Processes and Job Control Testing	11/29/2011	PM/Quality	Procedure
QMPM10 REV 2 - Inspection and Test	11/29/2011	PM/Quality	Procedure
QMPM11 REV 2 - Control of Measuring and Test Equipment	11/29/2011	PM/Quality	Procedure
QMPM12 REV 3 - Control of Nonconforming Items	3/26/2014	PM/Quality	Procedure
QMPM13 REV - Quality Records	11/29/2011	PM/Quality	Procedure
QMPM14 REV 3 -Audits and Surveillances	3/26/2014	PM/Quality	Procedure
QMPM15 REV 2 - Corrective Action	11/29/2011	PM/Quality	Procedure
QMPM16 REV 2 - Stop Work	11/29/2011	PM/Quality	Procedure
QMPM17 REV 2 - Definitions	11/29/2011	PM/Quality	Procedure
THD1 REV 3 -Third Party Coordination	9/8/2011	PM/ThirdParty	Procedure
THD2 REV 4 - Third Party Agreements	9/8/2011	PM/ThirdParty	Procedure
THD3 REV 4 - Third Party Work Orders	9/8/2011	PM/ThirdParty	Procedure
THD4 REV 4 - Third Party Req for Permits	9/8/2011	PM/ThirdParty	Procedure
THD5 REV 4 - Third Party City LA Permits	9/8/2011	PM/ThirdParty	Procedure
THD6 REV 2 - Third Party RR CPUC Coord	9/8/2011	PM/ThirdParty	Procedure



2023 BP Review

Policies and Procedures

4/14/2023

Needs Improvement

ESTABLISHED PRIOR TO 2016, NEEDS IMPROVEMENT			
Title	Version Date	Source	Description
CM1 REV 1 - Utility Reloc Coordination	6/8/2011	PM/ConstructionMgmt	Procedure
CM17 REV 4 - Cert Compl Third Party Agency Util	10/19/2011	PM/ConstructionMgmt	Procedure
CM19 REV 5 - Progress Pymts	7/22/2011	PM/ConstructionMgmt	Procedure
CM20 REV 3 - System Integration Testing	5/31/2011	PM/ConstructionMgmt	Procedure
CM23 REV 3 - Care Custody Control Facilities	6/1/2011	PM/ConstructionMgmt	Procedure
CM24 REV 3 - Pre Post Construction Surveys	10/19/2011	PM/ConstructionMgmt	Procedure
CM3 REV 4 - Constructability Reviews	5/31/2011	PM/ConstructionMgmt	Procedure
CM4 REV 4 - Licenses Permits Approvals	10/19/2011	PM/ConstructionMgmt	Procedure
CM7 REV 4 - Traffic Control	10/19/2011	PM/ConstructionMgmt	Procedure
CM8 REV 3 - Environmental Monitoring	10/10/2011	PM/ConstructionMgmt	Procedure
CU02 REV 1 - Prof Services Invoice Approval	7/14/2005	PM/ConstProjMgmt	Procedure
DSGN00 REV 2 - Engineering Policies Proc	7/29/2011	PM/TransitProjDelivery	Procedure
DSGN01 D-B REV 2 - Scope Def Review Acc DB	9/8/2011	PM/TransitProjDelivery	Procedure
DSGN01 D-B-B REV 2 - Design Review Acc DBB	10/10/2011	PM/TransitProjDelivery	Procedure
DSGN02 REV 2 - Design Baseline Changes	8/30/2011	PM/TransitProjDelivery	Procedure
DSGN03 REV 2 - Third Party Des Review Coord	8/30/2011	PM/TransitProjDelivery	Procedure
DSGN04 REV 2 - Peer Review	8/30/2011	PM/TransitProjDelivery	Procedure
DSGN05 REV 2 - Value Engineering	8/30/2011	PM/TransitProjDelivery	Procedure
DSGN07 REV 2 - Eng Consultants Progress Audit	9/1/2011	PM/TransitProjDelivery	Procedure
DSGN08 REV 2 - Eng Design Suspension_Cancel	9/1/2011	PM/TransitProjDelivery	Procedure
ENG01 REV 3 - Design Review Accept	9/26/2011	PM/TransitProjDelivery	Procedure
LL1 Rev 0 - Lessons Learned	11/16/2005	PM/ProgMgt	Procedure
Resident Engineer Manual	09/11/2012	PM/ConstructionMgmt	Manual
SM01 REV 1 - Safety Mgmt PPE	8/17/2011	PM/Safety	Procedure
SM02 REV 1 - Safety Mgmt Red Tag	8/17/2011	PM/Safety	Procedure
SM03 REV 1 - Safety Mgmt Site Security Admin Audit	8/17/2011	PM/Safety	Procedure
SM04 REV 2 - Safety Mgmt Notification	10/5/2011	PM/Safety	Procedure
SM06 REV 1 - Safety Mgmt Lessons Learned	10/5/2011	PM/Safety	Procedure
SS1 REV 4 - System Safety Certification	10/18/2011	PM/Safety	Procedure
SS2 REV 4 - System Safety Fire Life	10/18/2011	PM/Safety	Procedure

**Tables of Interviews by Category Area**

No.	PRIORITY	Lead Interviewee	Additional/Support	Recommendation Nos.
<b>PRE-PROCUREMENT PROJECT DEVELOPMENT</b>				
1	Delivery Method Selection & Criteria	Bryan Pennington, Julie Owen	Sameh Ghaly, Tim Lindholm	5,15,57,68
2	General Readiness	Bryan Pennington, Julie Owen	Sameh Ghaly, Tim Lindholm	1,2,3,4,6,16,37,38,39
3	Utilities & Third Party	Eduardo Cervantes	David Mieger, Philip Tong	58,79,80,81,82,83,84,85, 86,87,88,89
4	City Approvals	Eduardo Cervantes	N/A	35,36,40,90
5	Life of Project Budget	Melissa Wang	Julie Owen	8,55,56,107,108
6	Risk Management	David Davies	Julie Owen, Camelia Davis	9,32,33,34
7	Project Management Plan	Bryan Pennington, Julie Owen	Sharon Gookin	41,42,43,45,47,48
<b>POST-PROCUREMENT PROJECT MANAGEMENT</b>				
8	Contract Administration	Ivan Page	Sameh Ghaly, Tim Lindholm	17,18,19,20,21,22,23,24, 25,26,29,30,64
9	Board Delegation	Bryan Pennington, Julie Owen	Sameh Ghaly, Tim Lindholm	44,73,74,75,76,77,78
10	Enforce & Compliance	Ivan Page	Sameh Ghaly, Tim Lindholm	28
11	Partnering	Sameh Ghaly, Tim Lindholm	Bryan Pennington, Sharon Gookin	10,11,12,13,14
12	Quality Program	Camellia Davis	Julie Owen	91,104
13	Lessons Learned	Camellia Davis	All Interviewees	51
14	Safety Management	Vijay Khawani	Kenneth Hernandez, Charles (Pat) Chism	66,67
<b>PROJECT MANAGEMENT SUPPORT</b>				
15	Public Involvement	Yvette Rapose	Anthony Crump, Maya Emsden	71,72,95
16	PMIS	Julie Lansford	Julie Owen	27,31,96,106,107
17	Administrative Controls	Ivan Page	Sameh Ghaly, Tim Lindholm	61,69,70
18	Reorganization, Staff Analysis & Training	Julie Owen, Sameh Ghaly	Kathy Knox	46,59,65,97,98,99,100, 101,102,103
19	Project Management KPIs	Bryan Pennington, Julie Owen	Sameh Ghaly, Tim Lindholm, Ivan Page	62,63
<b>STRATEGIC PROGRAM OVERSIGHT</b>				
20	Metro-wide Program Oversight (EIT)	Bryan Pennington, Julie Owen	Sharon Gookin	49,50,52,92,93,94
<b>RELOCATED GROUPS</b>				
21	Highways	Ernesto Chaves	Nellie Derderian	53,54,60
22	Asset Management	Denise Longley	Bryan Pennington	7

**List of Interviewees**

2023 BP Review - Interviewees				
INTERVIEWEE(S)	Position Title	Department	Mode	Date
David Davies	Deputy Executive Officer Program Management, Program Control (Risk)	Program Management/ Project Management Oversight	Teams	4/21/2022
Eduardo Cervantes	Executive Officer, Interim Project Engineering (Third-Party Administration)	Program Management/Third Party	Teams	4/26/2022
Melissa Wang	Deputy Chief Financial Officer Office of Management & Budget	Strategic Financial Management/ Office of Management & Budget	Telephone	6/7/2022
Debra Avila	Deputy Chief Vendor/Contract Management Chief Admin Services Officer	Strategic Financial Management/ Vendor Contract Management	Teams	6/16/2022
Ivan Page	Executive Officer, Vendor/Contract Management Contract Admin-Ping/MASD/OIG	Strategic Financial Management/ Vendor Contract Management	Teams	6/16/2022
Anthony Crump	Executive Officer (Interim) Community Relations (Construction Focus)	Customer Experience Office/ Community Relations	Teams	6/17/2022
Maya Emsden	Executive Officer (Interim) Art Asset Management & Cultural Programming	Customer Experience Office/ Art & Community Enrichment	Teams	6/17/2022
Yvette Rapose	Chief Communications Officer	Customer Experience Office/ Communications	Teams	6/17/2022
Julie Lansford	Director Configuration Systems Program Control	Program Management/ Project Controls	Teams	6/22/2022
Ernesto Chaves	Sr. Executive Officer (Interim) Engineering (Highway Capital)	Planning & Development/ Highway	Teams	6/23/2022
Nellie Derderian	Director, Financial & Administrative Management Services (Road & Highways)	Planning & Development/ Highway	Teams	6/23/2022
Charles (Pat) Chism	Director, Construction Safety	Safety Office/ Risk/Safety & Asset Management	Teams	6/27/2022
Kenneth Hernandez	Deputy Chief Risk, Safety & Asset Management Officer/Risk Management	Safety Office/ Risk/Safety & Asset Management	Teams	6/27/2022
Vijay Khawari	Executive Officer Corporate Safety	Safety Office/ Risk/Safety & Asset Management	Teams	6/27/2022
Denise Longley	Deputy Executive Officer Strategic Development (Facilities/Operations) Asset Management	Safety Office/ Enterprise Transit Asset Management	Teams	6/28/2022
Julie Owen	Sr. Executive Officer Project Management Oversight	Program Management/ Project Management Oversight	Teams	6/22/22; 7/1/2022
Philip Tong	Director, Financial & Administrative Services Executive Office County-wide Planning & Development	Planning & Development/ Long Range Transportation	Teams	7/28/2022
Tim Lindholm	Deputy Chief Program Management Officer Alternate Delivery/Construction	Program Management	Teams	8/9/2022
Sameh Ghaly	Deputy Chief Program Management Officer Project Management, Construction	Program Management/ Construction	Teams	8/10/2022
Bryan Pennington	Chief Program Management Officer Project Management, Construction	Program Management/ Construction	Teams	9/9/2022
Sharon Gookin	Deputy Chief Executive Officer	Office of the CEO	Teams	12/2/2022
Camila Davis	Executive Officer, Interim Quality Department	Program Management/ Quality Management	Teams	4/21/2022; 4/22/22
David Mieger	Sr. Executive Officer, County-wide Planning & Development Executive Office, Long Range Planning & Mobility	Planning & Development/ Long Range Transportation	Email / Teams	7/27/22; 7/28/2022
Kathy Knox	Executive Officer, Project Control & Administration	Program Management/ Construction	Email	9/30/22; 10/03/22

### Evaluation Ranking of Implementation of 2016 Recommendations

No.	CONSTRUCTION MANAGEMENT PRIORITIES	ALL Recommendation Nos.	ESTABLISHED 59%	EVOLVING 28%	NEEDS IMPROVEMENT 13%	SPOTLIGHT Recommendation Nos. BOLD
<b>A. PRE-PROCUREMENT PROJECT DEVELOPMENT</b>						
1	Delivery Method Selection & Criteria	5,15,57,68		5,15,57,68		5,15,57,68
2	General Readiness	1,2,3,4,6,16,37,38,39	1,2,16,37	3,38,39	4,6	1,2,3,4,6,16,37,38,39
3	Utilities & Third Party	58,79,80,81,82,83,84,85,86,87,88,89	58,79,80,82,83,85,86,87,88,89	81	84	58,79,80,81,82,83,84,85,86,87,88,89
4	City Approvals	35,36,40,90		35,36,40	90	35,36,40,90
5	Life of Project Budget	8,55,56,107,108	55,56,108	8,107		8,55,56,107,108
6	Risk Management	9,32,33,34	34	9	32,33	9,32,33,34
7	Project Management Plan	41,42,43,45,47,48	42,45,48	47	41,43	41,42,43,45,47,48
<b>B. POST-PROCUREMENT PROJECT MANAGEMENT</b>						
8	Contract Administration	17,18,19,20,21,22,23,24,25,26,29,30,64	18,20,21,22,23,24,25,26,30	17	19,29,64	17,18,19,20,21,22,23,24,25,26,29,30,64
9	Board Delegation	44,73,74,75,76,77,78	44,73,74,75,76,77,78			44,73,74,75,76,77,78
10	Enforce & Compliance	28			28	28
11	Partnering	10,11,12,13,14		10,11,12,13,14		10,11,12,13,14
12	Quality Program	91,104	104	91		91,104
13	Lessons Learned	51		51		51
14	Safety Management	66,67	67		66	66,67
<b>C. PROJECT MANAGEMENT SUPPORT</b>						
15	Public Involvement	71,72,95	95	71,72		71,72,95
16	PMIS	27,31,96,106,109	27,31,96,106,109			27,31,96,106,109
17	Administrative Controls	61,69,70	61,69,70			61,69,70
18	Reorganization, Staff Analysis & Training	46,59,65,97,98,99,100,101,102,103,105	59,97,98,99,100,101,103,105	46,102	65	46,59,65,97,98,99,100,101,102,103
19	Project Management KPIs	62,63	62,63			62,63
<b>D. STRATEGIC PROGRAM OVERSIGHT</b>						
20	Metro-wide Program Oversight (EIT)	49,50,52,92,93,94	92,93	49,50,52,94 - 67%		49,50,52,92,93,94
<b>E. RELOCATED GROUPS</b>						
21	Highways	53,54,60	53,54,60			53,54,60
22	Asset Management	7	7			7

### 2016 Recommendations and Management Responses

2023 CAPITAL PROJECTS CONSTRUCTION MANAGEMENT BEST PRACTICES REVIEW 2016 RECOMMENDATIONS SORTED BY (1) CLUSTER, (2) CONNECTED PRIORITIES and (3) RECOMMENDATION NUMBER				
CLUSTER A: CONNECTED PRIORITIES - PRE-PROCUREMENT PROJECT DEVELOPMENT				
PRIORITY #1, DELIVERY METHOD SELECTION & CRITERIA				
2016 Rec No.	2016 Summary Recommendation	2016 Program Management's Initial Response	2017 Audit Response	RANK
5	Consider project delivery methodology decision on a project-by- project basis.	Agree. A formal project delivery selection process needs to be developed and implemented. We are in the early stages of developing this process and have already started to formalize and document the decision making process.	Addressed under PSC Task #4, Project Delivery Selection Procedure	EVOLV
15	Carefully evaluate design build on a case-by-case basis	Agree that the delivery method selection needs to be carefully analyzed for each project. See response to recommendation #5.	Addressed under PSC Task #4, Project Delivery Selection Procedure	EVOLV
57	Assess the most effective method of project delivery	Agree. See response to #5.	Addressed under PSC Task #4, Project Delivery Selection Procedure	EVOLV
68	Develop and implement a detailed decision-making process on the selection of a project delivery method	Agree that project delivery method selection process needs to be more formalized and thoroughly evaluated. Also, need to eliminate "one size fits all" rules such as design cannot exceed 30% on design-build projects. See response to #5.	Addressed under PSC Task #4, Project Delivery Selection Procedure	EVOLV
PRIORITY #2, GENERAL READINESS				
1	Adopt FTA oversight procedures and checklists for all projects. Provide training and audit compliance	In general agree that a checklist would be valuable to implement. We need to research the FTA operating procedures more to determine if this is a checklist that is most appropriate for Metro projects or whether there are other models that can be used.	Addressed under PSC Task #3, Readiness Procedure. Implementation of FTA procedures at management's direction as applicable to Metro projects.	ESTAB
2	Implement a formal Stage-Gate process	Agree. Should note that a stage gate from design to construction would not apply in design-build. Also, note that the project requirements do not have to be at 100% complete to move into the next stage, but gaps should be identified along with a plan to address gaps.	Addressed under PSC Task #3, Readiness Procedure. Check-points used instead of Stage-Gates	ESTAB
3	Allow two (2) years to identify and relocate utilities. Start third party coordination in Planning	Do not agree. The time allocated in the project schedule for utilities to be relocated does need to be a major focus in the development of project schedules and will continue to be emphasized. However, limiting when engineering can start appears arbitrary and could significantly delay projects. Many engineering activities can proceed while concurrently addressing necessary utility relocations.	Not accepted by Metro - limiting when engineering can start engineering activities can proceed while concurrently addressing necessary utility relocations	EVOLV
4	Metro's decision to accelerate the timeline for delivering its capital program has placed a significant burden on project stakeholders. The volume and pace of construction far exceeds the capacity of utility companies, government reviewers and other third parties to keep up. Metro should continue to develop and implement strategies to support third parties, such as providing financial assistance to utility companies and government entities in order to obtain the necessary resources to effectively support project delivery.	Agree. Review of the processes used by approving agencies to streamline the duration is also needed.	Addressed under PSC Tasks #6 & #7, Risk Management & Lessons Learned Program Plan	Needs impv
6	Use gateway process, stakeholder engagement program and FTA oversight procedures	Agree, but do not think this is a major problem at Metro. Will include it on readiness checklists that are developed.	Addressed under PSC Task #3, Readiness Procedure	Needs improv
16	Assure readiness by using FTA OP-54	Agree that a readiness checklist is needed that assesses the project risks specific to a design build delivery method. NOTE: While agree with the recommendation, there are concerns about some of the discussion of this item. In general, it ignores many of the benefits of design build and just focuses on the negative. Also, question the statement "where projects have not gone well like Crenshaw."	Addressed under PSC Task #3, Readiness Procedure	ESTAB
37	Develop and implement executive-level partnering (esp. Caltrans)	Agree.	Monthly meeting underway	ESTAB
38	Engage with utility companies in the Planning phase	Agree.	Program Management's PMs are engaged in projects in the planning phase earlier and are involving utility companies earlier	EVOLV
39	Establish quarterly coordination meetings (esp. w/ utilities)	Agree, although will have to evaluate if quarterly is the right interval.	Meetings with utility companies are on-going	EVOLV
PRIORITY #3, UTILITIES & THIRD PARTY				
58	Assess the use of Advance Utility Relocation (AUR) projects to support highway projects	Agree for selected projects.	Program Management will assess the use of AUR projects to support highway projects on a case-by-case basis, and will implement if feasibility.	ESTAB
79	Continue to expand the best practices of having a dedicated third party coordination group and use of advance utility relocation (AUR) contracts, master service agreements with utilities and other third parties and advance identification.	Agree.	Addressed under PSC Task #3, Readiness Review Checklist.	ESTAB
80	Increase Third Party Coordination Unit staffing level	Agree that the third party group needs to be sized consistent with the workload. Getting needed positions approved through the annual budgeting process is challenging. See response to #39.	Additional Metro staffing level was approved in the FY18 process in addition to the consultants as needed support. Continual effort to refine staffing level as appropriate.	ESTAB
81	Metro should increase its investment in utility identification by doing more exploratory work during early phases of project delivery (planning, preliminary engineering).	Agree.	Addressed under PSC Task #3, Readiness Review Checklist.	EVOLV
82	Communicate utility risk to contractors	Agree.	Addressed under PSC Task #3, Project Readiness Procedure	ESTAB
83	Complete as much utility work in advance of construction contract	Agree where appropriate.	Already implemented, Westside PLE Section 1 Project success in address utility work in advance are being learned to be applied consistently on other projects.	ESTAB

2016 Rec No.	2016 Summary Recommendation	2016 Program Management's Initial Response	2017 Audit Response	RANK
84	Enforce Utility investigations requirements and penalties for non-compliance	Not sure what type and amount of penalties are being proposed. Would need more information on this.	Going forward, PMs and Third Party will assess and if needed, advise V/CM to enforce non-compliance penalties. [BRYAN Q]	NEEDS IMPR
85	Allow more time and contingency for identification and relocation	Agree that this should be considered on a project-by-project basis.	Addressed under PSC Task #6, Risk Management	ESTAB
86	Apply for FTA funding for AUR contracts	Metro frequently uses FTA funds for advance utility relocations as part of the overall cost of a project.	Already implemented - Metro frequently uses FTA funds for advance utility relocations as part of the overall cost of a project.	ESTAB
87	Re-engineer the Utility Relocation process	Will investigate.	Addressed under PSC Task #7, Lessons Learned	ESTAB
88	Establish a Utility Relocation Technology Assessment Team	Have to investigate whether the cost and effort to do this would provide significant value.	Continuous efforts is underway to monitor utility relocation technology.	ESTAB
89	Establish a Utility Relocation Process Improvement Team	See response to #88.	Addressed under PSC Task #7, Lessons Learned, and Lessons Learned Report re: Engage Third Parties Early. Continuous efforts are underway to apply lessons learned on other projects	ESTAB
<b>PRIORITY #4, CITY APPROVALS</b>				
35	Develop and implement strategic executive-level partnering (esp. COLA)	Agree. Already underway.	Already implemented at Metro	EVOLV
36	Execute new Master Cooperative Agreement with City of LA	Agree. Need to discuss with City of LA.	Mayor's Measure M 1/8/2017 Letter to City Depts on Accountability and Responsible Delivery of Transportation Infrastructure (attached)	EVOLV
40	The Third party Coordination Unit should assess all Master Agreements, develop the recommended Metro improvements to these agreements, as needed, and engage with utility companies to create new master Agreements. These engagements can be accomplished through the quarterly coordination meetings suggested in item c above.	Agree, but will require agreement from the utility companies.	Addressed under PSC Task #3, Readiness Procedure	EVOLV
90	Establish a Legislative/Legal Improvement Team	See response to #88.	Not accepted by Metro - not necessary for utility relocation	NEEDS IMPR
<b>PRIORITY 5: LIFE OF PROJECT BUDGET</b>				
8	Develop and implement an LOP with phased reassessments	Agree. Plan to implement two step LOP budget (Phase 1 design; Phase 2 construction) for design-bid-build projects. As part of the new Annual Program Evaluation process, LOP budget for each project will be evaluated on an annual basis.	Already implemented at Metro	EVOLV
55	Establish Independent Cost Estimate and Contingency review	Agree.	Addressed under PSC Tasks #3 & #6, Readiness Procedure & Risk Management	ESTAB
56	Establish detailed Work Breakdown Structure (WBS) for scheduling and budgeting	Agree.	Already implemented prior to IG audit	ESTAB
107	Incorporate entire capital program into PMIS and Metro's reporting system	Agree. See response to #106.	Program Management will determine whether to use PMIS CM for a project depending on its size and complexity.	ESTAB
108	Reassess and implement revised executive-level reporting requirements	Agree	Program Management has implemented and is continually enhancing the reporting requirements, if needed.	ESTAB
<b>PRIORITY #6: RISK MANAGEMENT</b>				
9	Incorporate risk management into the culture of the organization from conception through closeout	Agree. A more formal risk management program needs to be developed.	Addressed under PSC Task #6, Risk Management Program Plan, new Risk Manager will be onboard Dec 2017	EVOLV
32	Revise risk and contingency procedures for all projects	Agree	Addressed under PSC Task #6, Risk Management	NEEDS IMPR
33	Enforce procedures using risk to set contingencies for all projects	Agree	Addressed under PSC Task #6, Risk Management	NEEDS IMPR
34	Hide contingency amounts or send a strong message	Do not agree. Do not see this as a problem.	Recommendation not accepted by Metro	ESTAB
<b>PRIORITY #7: PROJECT MANAGEMENT PLAN</b>				
41	Develop and implement strategic plan for project team management	Disagree with the need for a strategic PMO, however a strategic plan as part of a Program Management Department's Program Management Plan will be investigated.	Addressed in Program Management Plan	NEEDS IMPR
42	Implement an IPMO environment for all projects	Agree.	Program Management will determine to establish IPMO for a project depending on its size and complexity.	ESTAB
43	Require all projects to utilize a Project Management Plan (PMP)	Agree for most larger projects.	Addressed under PSC Task #3, Readiness Procedure	NEEDS IMPR
45	Reduce the number of internal management meetings with project team	Agree.	Management has been advised. Will address case-by-case basis, to install capability for remote conferencing with field staff from Gateway	ESTAB
47	Adopt Project Management Institute (PMI) as the organizational standard for project management	Agree. We will research PMBOK and other standards to determine how to effectively incorporate recommendation.	Metro uses various tools and guidance required to deliver project and is not restricted to only PMI standards.	EVOLV
48	Assign a Project Manager at project initiation and empower with the authority for project decision-making throughout the lifecycle.	Agree that Project Manager should be involved throughout the project lifecycle and empowered with decision making authority upon the completion of planning. During the planning phase, responsibilities should be shared with the Planning Department.	A new Sr. EO, Project Management was approved in the FY18 budget to lead interface with Planning beginning with environmental/planning phases of new Measure R/M transit projects.	ESTAB

2016 Rec No.	2016 Summary Recommendation	2016 Program Management's Initial Response	2017 Audit Response	RANK
<b>CLUSTER B: CONNECTED PRIORITIES - POST-PROCUREMENT PROJECT MANAGEMENT</b>				
<b>PRIORITY #8, CONTRACT ADMINISTRATION</b>				
2016 Recommendation No.	2016 Summary Recommendation	2016 Program Management's Initial Response	2017 Audit Response	
17	Address delays as they occur	Couldn't agree more. It is currently being addressed.	Already in progress	EVOLV
18	Establish timelines for agency response	Agree.	Already implemented - Current Metro's procedures and RE Manual already cover this item	ESTAB
19	Establish a contractor's daily overhead rate	Agree. Will need concurrence from Vendor/Contract Management	Solicitation is customized on case-by-case basis and is implemented as appropriate on major transit projects.	NEEDS IMPR
20	Establish a change control group with a strong leader	Agree that a visit to SFPUC Water by Metro senior management may be valuable in getting their insights as described in the report. Disagree. This recommendation would add to the confusion of responsibility and accountability. The Project Manager should have lead responsibility for dealing with the change process, with support from appropriate departments. See Recommendation #26.	Amended response: Chief Program Mgmt Officer, Deputy Chief Program Management Officer, and Sr. EO, Program Control meet with EO, V/CM for Construction on a monthly basis to address issues, potential disputes, and changes.	ESTAB
21	Establish minimum requirements for Contract Administrators in the Change Control Group	Agree. Will need concurrence from Vendor/Contract Management.	Job specification has been revised to require heavy construction and change control experience	ESTAB
22	Improve Contract Administration training	Agree. Will need concurrence from Vendor/Contract Management.	Implementation of V/CM Training Program is in progress. (see attached V/CM Training Program)	ESTAB
23	Consistently apply change control processes	Agree	Change control processes are already in place. Program Management will determine the most appropriate format/form tracking for each project, depending on its size and complexity.	ESTAB
24	Establish an audit function	Agree	Addressed under PSC Task #3, Readiness Procedure	ESTAB
25	Establish accountability for document turnaround times	Agree. This is being tracked as part of the Key Performance Indicators.	Already Implemented - Being tracked as part of Key Performance Indicators (KPIs)	ESTAB
26	Metro should put the Project Manager/Construction Manager back in charge of the change order process, with support from co-located professional contract administrators from Vendor/Contract Management.	Agree. Will need concurrence from Vendor/Contract Management	Addressed under PSC Tasks #7. PMs in collaboration with CA is to be responsible of the change control process. Pursuant of the 1-year pilot LOP budget program for the 4 major transit projects, signature authority levels for mods/change orders were streamlined (see attached)	ESTAB
29	The currently specified timeframes should be revised to a more realistic timeframe, and exceptions to the hard durations be allowed for special circumstances. The ten calendar days after notice to submit a Time Impact Analysis is unrealistic. The notice is due at the start of a delay, but the TIA cannot be completed until the delay itself has ended or a reasonably accurate date can be forecast. Thus it is better to state "Notify Metro within five calendar days of becoming aware of a delay and submit a Time Impact Analysis within ten calendar day after the delay has ended, can be reasonable forecast, or upon demand by the Engineer, whichever is earlier".	Suggest the following language "Notify Metro within five calendar days of becoming aware of a delay and submit a Time Impact Analysis within ten calendar days if the delay can be reasonably forecast or the delay has ended. Metro may provide additional time for the Time Impact Analysis to be completed at its discretion."	Staff has further evaluated the recommendation and determined the current specification should remain unchanged. Metro has not experienced any major complaints (schedulers & contractors) to the current spec language/section.	NEEDS IMPR
30	Use a model more like the SFPUC best practice described above, where the PM and CM are in charge of the change order process, with support from professional contract administrators that are empowered to disagree with the PM/CM if they are not following the contract. An enhancement to the SFPUC model Metro might consider is to have the Field Contract Administrators that handle contractor change orders remain VCM employees, but deploy them to the field in a matrix organization. To handle the volume of changes during the accelerated \$40B capital program, it is also recommended that VCM procure one or more on call Contract Administration firms to help them handle the volume. All consultant staff should meet the same qualifications and get the same training as Metro VCM staff. These are cross cutting recommendations, impacting numerous processes. It should be noted that when implementing the recommendations for this issue, it is essential that these recommendations be closely coordinated and integrated, not only for this set of recommendations, but in consideration with all of the proposed recommendations within this report (refer to the Implementation roadmap within the Executive Summary for additional discussion).	Agree. Will try to plan a visit to SFPUC.	Project Managers in collaboration with the Contract Administrators are responsible of the change control process. Pursuant of the 1-year LOP Budget program for the 4 major transit projects, signature authority levels for mods/changes were streamlined.	ESTAB
64	Establish enforcement and compliance mechanism into Contractor performance evaluations	Agree that feedback needs to be given to contractors/consultants. Not sure formal performance appraisals are the right approach. Better to integrate into the quality program.	Already implemented through QA Program - feedback needs to be given to contractors/consultants. Not sure formal performance appraisals are the right approach. Better to integrate into the quality program	NEEDS IMPR
<b>PRIORITY #9, BOARD DELEGATION</b>				
44	Establish governance model with delegated authority	Agree with this approach. Like the example escalation ladder shown.	The Board approved Pilot Life-of-Project Budget Program is in progress.	ESTAB
73	Improve adherence to Metro rule (Pub. Util. Code, Sec. 130630)	Agree.	Implemented Pilot LOP Budget Program	ESTAB
74	Assess increasing Board meeting frequency	Do not agree. One board meeting per month is sufficient. However, the long lead times to get a board item on the agenda and approved is a problem.	Not accepted by Metro - one board meeting per month is sufficient	ESTAB
75	Delegate more authority to Chief Executive Officer (CEO)	Agree, but first have to build more confidence in project delivery capabilities before requesting this from the Board.	Already implemented	ESTAB
76	Reassess Board review and approval process	Agree. See the response to #74.	Already implemented - Pilot program in place	ESTAB
77	The Board of Directors should recognize and support a need for process improvement.	Agree.	Through the PSC efforts, Metro has addressed the need for process improvement.	ESTAB

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78	Develop and implement a Board education series	Agree that this would be helpful if it could be scheduled.	Chief Program Management Officer has met and exchanged information on project delivery process with Board members i.e. Pilot LOP Budget Program, Contingency and Change Activities, Annual Program Evaluation, Program Management Plan, etc.	ESTAB
<b>PRIORITY #10: ENFORCE AND COMPLIANCE</b>				
28	Improve contractor compliance and Metro enforcement	Agree. Will need concurrence from Vendor/Contract Management	Going forward, Metro will enforce contractor compliance pursuant to contract and if needed, implement financial disincentives.	NEEDS IMPR
<b>PRIORITY #11: PARTNERING</b>				
10	Consider making partnering mandatory on all projects	Agree. However would suggest formal partnering on "most" projects, not "all" projects. This is already underway at Metro.	Already implemented at Metro on "most" projects	EVOLV
11	Establish a partnering procedural standard	Agree that partnering should be consistent across projects.	Metro is member of International Partnering Institute. Program Management Chief and Deputy Chief attend the partnering session as much as possible to ensure consistency in quality of partnering across projects.	EVOLV
12	Utilize multi-tiered partnering	Agree. Metro executive staff also participates	Already implemented at Metro	EVOLV
13	Train staff and contractors prior to partnering sessions	Agree, this can be part of the initial partnering meeting.	Prior to partnering sessions, all participants, including facilitators, are informed and made aware of the rules, intent, purpose, and objectives of the partnering sessions.	EVOLV
14	Enforce a post-partnering follow-up plan	Agree with post session follow-up and pre-session scorecard survey. Already being done on many projects. Do not agree with imposing consequences. Will lead to unnecessary disputes	Not accepted by Metro - Already being done on many projects at Metro. Do not agree with imposing consequences, which may lead to unnecessary disputes	EVOLV
<b>PRIORITY #12: QUALITY/LESSONS LEARNED</b>				
91	Metro needs to begin an initiative to develop, update and detail policies and procedures organization wide, especially for capital project delivery and project management. Institute Quality Assurance into all Policies and Procedures. Institute a quarterly project review that includes measurement of compliance to Policies and Procedures. Utilize a Lessons Learned program to make the results of these reviews available to the wider capital program. Institute an annual review of Policies and Procedures to encourage continual process improvement. Ensure that policies and procedures are updated. The policies and procedures reviewed in this study for example have not been reviewed and updated in over 2 years, and the documented changes in the last two (2) years were only due to the renaming and reorganizing of department such as the movement of the PMO from Engineering and Construction, to its own Division.	Agree. Have already bought the Quality Director from Denver RTD to work with staff and make recommendations.	Addressed under PSC Task #7, Lessons Learned Program Plan. As part of continual process improvement, policies and procedures for capital project delivery and project management are being reviewed for updates/revisions, as required, and will be accessible in Sharepoint.	EVOLV
104	Assess the risk of Quality Management within the Engineering & Construction division	We had the Quality Manager from Denver RTD spend some time at Metro and he made a number of pertinent observations, which we need to evaluate.	Already implemented at Metro	ESTAB
<b>PRIORITY #13, LESSONS LEARNED</b>				
51	Establish formal, organization-wide Lessons Learned Program	Agree with recommendation to establish a formal Lessons Learned Program, but this can be done within the existing Program Management Department.	Addressed under PSC Task #7, Lessons Learned	EVOLV
<b>PRIORITY #14: SAFETY</b>				
66	Consider installing a safety "ticker" in the Metro lobby, to communicate the importance of safety to stakeholders and the organization to applaud the success of the safety program.	Defer to safety department. Safety reminders, notifications more appropriate at project locations.	Sharing vital safety information at the Project Construction site level starts with a "Bulletin-Board." Metro's Contractors are required by contract and by State/Federal safety regulations to establish a project construction site "Bulletin-Board" which displays vital safety and other pertinent information such as: Current Work Related Injury/Illness Log, Call/OSHA Annual Permits (Scaffold/Falsetwork/Vertical Shoring, Excavation & Diesel Permits); OSHA Citations/Disposition information, Underground Classifications, Emergency Phone Numbers & Hot-Line Incident Reporting Information, Evacuation Procedures, Hot Work Permits, Job Safety & Health Poster and (Employee Rights & Responsibilities).  Add Mgmt Info Since the focus of this study was on Construction Management activities related to the construction of large Capital Projects, the directly affected stakeholders are the employees and public at the various sites where the construction activity occurs. Therefore, from a safety standpoint, the messaging needs to be focused towards the audience who needs to be most aware of safety performance, and with those with whom the message will resonate the most. Therefore, Metro's & our partner Contractors' strategy has been to communicate the importance of safety and to showcase each capital project's safety record on an on-going basis at the construction sites and in the immediate adjacent community, rather than in the headquarters lobby, where there is a transitory audience and where it will have negligible impact. The communication of safety efforts and their results are done through various means at the sites on any given projects, ranging from all-hands meetings, safety banners, safety bulletin boards, and signage. We believe this prominent showcasing of our collective efforts has had a positive impact on the safety performance of the projects, as acknowledged in the Consultant's report	NEEDS IMPR
67	Incorporate safety considerations into the updating of design criteria, standards and specifications	Agree.	Already implemented prior to IG audit	ESTAB



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<b>CLUSTER C: PROJECT MANAGEMENT SUPPORT</b>				
<b>PRIORITY #15: PUBLIC INVOLVEMENT</b>				
2016 Recommendation No.	2016 Summary Recommendation	2016 Program Management's Initial Response	2017 Audit Response	
71	Develop strategic Public Involvement Action Plan	Agree that Community Relations is vital to a successful project. Believe this is happening, but needs to be emphasized.	Already implemented	EVOLV
72	Establish process improvement committee to develop recommendations (surrounding the community involvement)	Do not agree. Do not believe another committee is needed.	Not accepted by Metro - do not believe another committee is needed	EVOLV
95	Establish a Capital Project Delivery website	Project information is currently available on Metro website but will assess potential enhancements.	Already implemented project information is currently available on Metro website, but will assess potential enhancements	ESTAB
<b>PRIORITY #16: PROJECT MANAGEMENT INFORMATION SYSTEM (PMIS)</b>				
27	All project use PMIS contract management database	Agree that a consistent reporting mechanism is needed. Need to research whether this is PMIS or something else.	Program Management will determine whether to use PMIS CM for a project depending on its size and complexity.	ESTAB
31	Use PMIS on all projects, including CM14 record of negotiation form	Agree. Will evaluate the use of PMIS to document negotiations.	Program Management will determine whether to use PMIS CM for a project depending on its size and complexity.	ESTAB
96	Improve end-user documentation for PMIS	Agree to assess current documentation for improvement.	PMIS module-specific training are available and accessible to all users in Sharepoint.	ESTAB
106	Utilize PMIS for all projects	Agree. Metro will evaluate the resources needed to expand use of PMIS for all capital projects, including Highway and Regional Rail projects.	Program Management will determine whether to use PMIS CM for a project depending on its size and complexity.	ESTAB
109	Develop additional training on the use of PMIS	Agree. Will assess our existing role based training and documentation for improvement, including "desk instructions".	Different PMIS/CM trainings are being offered at least quarterly for users, including contractors, configuration management, contract administrators, etc.	ESTAB
<b>PRIORITY #17: ADMINISTRATIVE PROCESS</b>				
61	Improve configuration management and document control processes	Agree. While we believe the existing processes are adequate, we agree that it would be helpful to reassess for potential improvement.	Updates to CF and document control processes are already in progress.	ESTAB
69	Establish a scheduling section within Project Controls	While not a separate section within Program Control, there are scheduling resources available which perform the recommended roles and responsibilities. Will reassess capabilities and performance for potential improvement.	Already implemented - there are scheduling resources available within Program Control who perform the recommended roles and responsibilities. Will reassess capabilities and performance for potential improvement	ESTAB
70	Establish close-out compliance mechanisms	Agree.	Already in-place prior to IG audit	ESTAB

2016 Rec No.	2016 Summary Recommendation	2016 Program Management's Initial Response	2017 Audit Response	RANK
<b>PRIORITY #18, REORGANIZATION, STAFF ANALYSIS &amp; TRAINING</b>				
46	Establish soft skills training and development for all project team members	Agree. Need to do an assessment of department training needs tailored to the functions of the Program Management Department.	Program Management Leadership Institute (PMLI) is a training for all project team members. Addressed under PSC Task #5, Training.	EVOLV
59	Provide staff training and education in project management and highway technical skills	Agree.	Implemented at Metro through PMLI. In addition to highway technical skills, specific off-site training provided include PMI training/certification, construction management, and construction related legal training, and ITS related training.	ESTAB
65	Assess whether additional safety training is needed	Defer to safety department.	In addition to specific contract Safety/Security/ requirements, Metro conducts Construction Safety Orientation (CSO) for newly hired employees whose job responsibilities/tasks require them to enter into on-going construction work-site/zones including underground environments. The safety orientation covers Metro's Core Values, Philosophies, Documents, Safety Personnel, Functions, Activities, Metro Construction Safety History and Lessons-Learned and Site Specific issues. In addition to an initial CSO, Metro employees and site visitors are required to participate in safety orientations to review safety procedures related to Personal Protective Equipment and specific underground self-rescuer training prior to visiting underground/tunnel environments. Metro's Contractors are required contractually to submit an Injury Illness Prevention Program and the law mandates that Contractors provide specific safety training for their employees. The Corporate Safety department has assessed the need for the training topics that need to be covered for Metro employees based on the tasks they perform, and has identified which training topics pertain to each discipline. Based on this assessment, the department offers all regulatory-required training to Metro employees based on their job-specific duties. This training is conducted routinely by 2 dedicated safety trainers and other subject-matter experts in the various topics. Since the Study was focused on Capital Project Construction Management, Metro requires the contractor(s), (who are normally hired for Capital Project construction), through the contract they enter into with Metro to design/build our Capital Projects, to provide the required safety training to employees they hire. The responsibility to provide all necessary task-specific training therefore rests solely with the various contractors who construct the Capital Projects. Therefore, it would be inappropriate for Metro to assess what additional training, if any, is needed for such contractors or their employees.	NEEDS IMPROV
97	Staff augmentation contracts managed by individual functional departments	The consultant personnel are managed by the Project Manager to whose project they are assigned as extension of staff.	Not accepted by Metro - the consultant personnel are managed by the Project Manager to whose project they are assigned as extension of staff	ESTAB
98	Expand participation of the PM Academy	Agree. Program Management will continue to support Talent Development in the assessment of agency wide needs and enhance the PM curriculum as appropriate. See response to #46.	Program Management has implemented Program Management Leadership Institute and as each division has implemented or in the progress of implementing own department training.	ESTAB
99	Further develop the PM curriculum	Agree that development of communications and interpersonal skills should be a key component of any training program. Will work with Talent Management to enhance the PM curriculum.	Program Management has implemented Program Management Leadership Institute	ESTAB
100	Develop formal curriculum for all levels of staff	Agree. See response to #46.	Addressed under PSC Task #5, Training. Also Program Management Leadership Institute (PMLI) is a training for all project team members.	ESTAB
101	Establish training programs and tie to HR development goals	Agree. See response to #46.	Already implemented - Part of Program Management Leadership Institute Training program	ESTAB
102	Develop and implement a detailed staffing analysis process for all departments	Agree. The process for requesting and budgeting for staff is challenging. This will require coordination with the OMB department.	Addressed under PSC Task #3, Readiness Review Checklist	EVOLV
103	Develop strategic plan for the use of consultants	Agree. that we need to strategically define and describe the use of consultants in the Program Management Department.	Addressed in the Program Management Plan	ESTAB
105	Consider development of a step pay system	Agree. Will require coordination with OMB and HR. The hiring and salary process can be a challenge in finding and keeping good people.	Pilot compensation structure program in progress	ESTAB

2016 Rec No.	2016 Summary Recommendation	2016 Program Management's Initial Response	2017 Audit Response	RANK
<b>PRIORITY #19, SAFETY MANAGEMENT</b>				
66	Consider installing a safety "ticker" in the Metro lobby, to communicate the importance of safety to stakeholders and the organization to applaud the success of the safety program.	Defer to safety department. Safety reminders, notifications more appropriate at project locations.	<p>Sharing vital safety information at the Project Construction site level starts with a "Bulletin Board." Metro's Contractors are required by contract and by State/Federal safety regulations to establish a project construction site "Bulletin-Board" which displays vital safety and other pertinent information such as; Current Work Related Injury/Illness Log, Cal/OSHA Annual Permits (Scaffold/Falsetwork/Vertical Shoring, Excavation &amp; Diesel Permits); OSHA Citations/Disposition information, Underground Classifications, Emergency Phone Numbers &amp; Hot-Line Incident Reporting Information, Evacuation Procedures, Hot Work Permits, Job Safety &amp; Health Poster and (Employee Rights &amp; Responsibilities).</p> <p>Add Mgmt Info Since the focus of this study was on Construction Management activities related to the construction of large Capital Projects, the directly affected stakeholders are the employees and public at the various sites where the construction activity occurs. Therefore, from a safety standpoint, the messaging needs to be focused towards the audience who needs to be most aware of safety performance, and with those with whom the message will resonate the most. Therefore, Metro's &amp; our partner Contractors' strategy has been to communicate the importance of safety and to showcase each capital project's safety record on an on-going basis at the construction sites and in the immediate adjacent community, rather than in the headquarters lobby, where there is a transitory audience and where it will have negligible impact. The communication of safety efforts and their results are done through various means at the sites on any given projects, ranging from all-hands meetings, safety banners, safety bulletin boards, and signage. We believe this prominent showcasing of our collective efforts has had a positive impact on the safety performance of the projects, as acknowledged in the Consultant's report</p>	NEEDS IMPR
67	Incorporate safety considerations into the updating of design criteria, standards and specifications	Defer to safety department. Safety reminders, notifications more appropriate at project locations.	<p>Sharing vital safety information at the Project Construction site level starts with a "Bulletin Board." Metro's Contractors are required by contract and by State/Federal safety regulations to establish a project construction site "Bulletin-Board" which displays vital safety and other pertinent information such as; Current Work Related Injury/Illness Log, Cal/OSHA Annual Permits (Scaffold/Falsetwork/Vertical Shoring, Excavation &amp; Diesel Permits); OSHA Citations/Disposition information, Underground Classifications, Emergency Phone Numbers &amp; Hot-Line Incident Reporting Information, Evacuation Procedures, Hot Work Permits, Job Safety &amp; Health Poster and (Employee Rights &amp; Responsibilities).</p> <p>Add Mgmt Info Since the focus of this study was on Construction Management activities related to the construction of large Capital Projects, the directly affected stakeholders are the employees and public at the various sites where the construction activity occurs. Therefore, from a safety standpoint, the messaging needs to be focused towards the audience who needs to be most aware of safety performance, and with those with whom the message will resonate the most. Therefore, Metro's &amp; our partner Contractors' strategy has been to communicate the importance of safety and to showcase each capital project's safety record on an on-going basis at the construction sites and in the immediate adjacent community, rather than in the headquarters lobby, where there is a transitory audience and where it will have negligible impact. The communication of safety efforts and their results are done through various means at the sites on any given projects, ranging from all-hands meetings, safety banners, safety bulletin boards, and signage. We believe this prominent showcasing of our collective efforts has had a positive impact on the safety performance of the projects, as acknowledged in the Consultant's report</p>	ESTAB
<b>PRIORITY #10, PROJECT MANAGEMENT KPIs</b>				
62	Develop a Project Manager Performance Plan	Agree.	Metro's Individual Performance Plan is in place	ESTAB
63	Develop Project Manager performance metrics into performance assessments	Agree.	Performance metrics in Project Manager IPPs	ESTAB

2016 Rec No.	2016 Summary Recommendation	2016 Program Management's Initial Response	2017 Audit Response	RANK
<b>CLUSTER D: STRATEGIC PROGRAM MANAGEMENT</b>				
<b>PRIORITY #20: METRO-WIDE PROJECT OVERSIGHT</b>				
2016 Recommendation No.	2016 Summary Recommendation	2016 Program Management's Initial Response	2017 Audit Response	
49	Implement an organization-wide project management initiative.	Agree with the objectives of the recommendation, but responsibility should reside with the Program Management Department versus a separate strategic PMO.	Program Management Plan was developed in October 2016	EVOLV
50	Establish a Strategic Program Management Office (PMO)	Disagree with the need for a separate strategic PMO. The Program Management Department, with support from other groups can achieve the objectives of a strategic PMO.	Program Management Department, with support from other groups can achieve the objectives of a strategic PMO.	EVOLV
52	Assign ownership of capital project delivery to the Strategic PMO	Same as response to #50.	Not accepted by Metro - disagree with the need for a separate strategic PMO. The Program Management Department, with support from other groups, can achieve the objectives of a strategic PMO	EVOLV
92	Establish project metrics for compliance to policies and procedures	Agree.	Addressed under PSC Task #3, Project Readiness Procedure	ESTAB
93	Establish a Knowledge Management System to maintain and access all policies and procedures;	Agree that policies and procedures need to be more widely disseminated.	Using Sharepoint	ESTAB
94	All departments own their policies and procedures, Strategic PMO ensures consistency, compliance and integration	Agree on accountability for compliance with policies and procedures but disagree on need for strategic PMO.	Each department owns responsibility of their policies/procedures related to project management and capital project delivery are accessible in Sharepoint. Updates/revisions are supported/facilitated by Configuration Management	EVOLV

<b>CLUSTER E: RELOCATED GROUPS</b>				
<b>PRIORITY #21 HIGHWAY</b>				
	2016 Summary Recommendation	2016 Program Management's Initial Response	2017 Audit Response	
53	Incorporate IPMO structure into highway projects	Agree for select highway construction projects.	This was implemented prior to IG audit (such as I-405)	ESTAB
54	Improve highway reporting process	Agree, has already started.	Already implemented at Metro	ESTAB
60	Develop a Quality Plan for highway projects	Agree.	Already in-place prior to IG audit	ESTAB
<b>PRIORITY #22: ASSET MANAGEMENT</b>				
7	Establish Life Cycle Asset Management Program	Agree. Metro has recently established a State of Good Repair Department and policies are being developed consistent with MAP-21 requirements.	Metro has recently established a State of Good Repair Department and policies are being developed consistent with MAP-21 requirements. Attached is Metro's Transit Asset Management Plan developed in July 2015.	ESTAB



CLUSTER A: CONNECTED PRIORITIES - PRE-PROCUREMENT PROJECT DEVELOPMENT		
2023 Rec No.	2023 Recommendation	2023 Metro Management's Response
<b>CATEGORY #1, DELIVERY METHOD SELECTION &amp; CRITERIA</b>		
1.1	PMG should continue to timely update policies and procedures to include the range of alternative delivery methods currently used by Metro.	In Process: There are several new departmental policies and procedures that have been updated, such as the Risk Management, Estimating and schedule specifications. PMG will continue working with internal departments to update estimating spec and other controls specs. Anticipated completion date: 12/23. Updates to the Value Engineering policy are expected to be signed by Operations in October 2023.
<b>CATEGORY #2, GENERAL READINESS</b>		
2.1	Metro should investigate strategic initiatives to beneficially support third parties' cooperative and timely assistance toward timely and cost-efficient project delivery.	In process: Metro advances cooperative agreements with municipalities along future projects. The new MCA with the City of Los Angeles is for all projects in the City boundaries and is in final review phase, anticipated to be complete in October 2023. A similar citywide agreement is anticipated with LADWP next, with a target date of October 2024.
2.2	Third party utility relocation issues continue to be one of the larger reasons for change orders and project delays. The OIG recommends the PMG partner with the Early Intervention Team ("EIT") to revisit the PMG's 2016 rejection of Recommendation Nos. 3 and 6 and apply a lessons learned approach to investigating the feasibility of initiating utility relocation work much earlier in the pre-construction management process to remove unnecessary risk and enhance mitigation by planning and scheduling of relocation completion prior to other project delivery activities, without any intention of limiting or mandating when Engineering can begin. If the progressive design build approach or other alternative delivery approach will minimize utility impacts in the same manner as separate contracts for advanced utility relocation, the PMG's response should be updated.	Completed: PMG is already part of the EIT team and process and utility risk is already discussed with the EIT. Utility relocations are a major risk for any rail project. Potholing, utility mapping, geotechnical investigations can be done earlier. PMG has added advanced construction management staff to support the planning team during the preconstruction process, before the environmental document is finalized. PMG's Third Party Administration team is also included in the EIT process to assist in the planning and scheduling of utility relocations.  The time allocated for the relocation of utilities is a major focus of the development of project delivery schedules. However, for projects which Metro is applying for Federal funding, the earliest start date may be dictated by the FTA New Starts Process. Alternative delivery may in some instances minimize utility related impacts due to the flexibility of early works packages.
<b>CATEGORY #3, UTILITIES &amp; THIRD PARTY</b>		
3.1	Utility investigations, work, and relocations performed by Metro's contractors or others pose cost and schedule risks for Metro projects, including potential issues with reviews, approvals, and oversight by the third-party utility owners. The construction contract may specify timelines and/or sequences for utility-related work. To avoid cost and schedule impacts caused by third parties or contractor(s), Metro should utilize legal counsel's assistance to mitigate the risks related to utility investigations, work, and relocations. Metro should enhance its procedures and relationships to enable self-permitting. Transparency, documentation, and trust are key to Metro achieving self-permitting.	In process: PMG and V/CM are working with County Counsel and other Metro stakeholders to properly address the risks when contractors perform utility-related work on Metro projects. Metro is also negotiating new master cooperative agreements with third-party utility owners, as well as updating of Metro's division 1 specifications.
<b>CATEGORY #4, CITY APPROVALS</b>		

4.1	Metro should complete a new and improved Master Cooperative Agreement between City of Los Angeles and LA Metro.	In Process: A new MCA is anticipated to be completed in October 2023
4.2	Metro should conduct a Legislative/Legal Improvement review to determine if there are any legislative adjustments that would improve work or construction related requirements for transit projects and assist in better resourcing third party stakeholders impacted by (and benefitting from) Metro capital projects.	Current Practice: Government Relations already has a yearly process with County Counsel to conduct legislative reviews, which solicits input from affected Departments.
<b>CATEGORY #5: LIFE OF PROJECT BUDGET</b>		
5.1	Metro should focus on quickly adapting its budgeting practices for all new construction projects given the changing circumstances and trends of increased prices.	Current Practice: The latest Metro construction market analysis is underway to provide updated information on the current state and conditions of the construction market and identify strategies to control/contain costs. Report completion expected December 2023.
5.2	Metro should evaluate, assess, and document emerging financial conditions before requesting a budget change, and include an analysis in the Board request for LOP funding increases.	Current Practice: Metro's risk management and cost estimating processes, which are utilized to assess the magnitude of any LOP budget increase, already addresses the risks posed by emerging financial conditions. For future Board reports recommending LOP budget increases consistent with the Measure R and Measure M Unified Cost Management Policy, PMG will continue to document its evaluations and assessments of all costs.
5.3	Based on statements included in Board Report No. 2023-0106, Attachment A, the OIG understands that EIT Project Review Process will include multiple "intervention points" for review of the Life of Project Budget. The OIG recommends the development and implementation of detailed procedures describing the process for LOP Budget development across the project life cycle. Requests to increase the LOP make after the procurement phase should include a "lessons learned" justification for the increase.	<p>Current Practice: The Early Intervention Team (EIT) has established a project review process that facilitates an agency wide assessment of projects during earlier phases of project development. These reviews include consideration of project forecast cost (not always LOP), applicable to the phase of project development. LOP Budget is established at later stages of project development, typically aligning with initiation or completion of engineering phases. Thus, Project Control procedures govern the oversight and tracking of the LOP.</p> <p>Project control procedures were recently updated in December 2021 regarding budget and cost forecasting. Any request to modify the LOP already includes justifications that detail causes and notification protocols. Lessons learned associated with future LOP increases will be incorporated into board reports. Any LOP Budget increase is subject to multi-department reviews (e.g. VCM, Planning, etc)</p>
<b>CATEGORY #6: RISK MANAGEMENT</b>		
6.1	The PMG should determine whether risk management plans (whether full or "light" plans for smaller projects" – including mitigation plans for risk findings adjusted by PMG management – should be developed for all projects regardless of size, complexity, or use of federal funding.	Completed: Metro Project Controls Procedure PC-07 for Risk and Contingency Management was updated in June 2023 and incorporates a scalable approach for project risk management for all project sizes. The level of effort (LOE) for risk management is determined between the Project Manager and Metro's Risk Manager. Project value is not necessarily the rationale for the project risk management LOE, and smaller value projects may have significant risk that needs to be managed more robustly. At a minimum all projects are required to have in place, and actively manage, a project risk register.

6.2	PMG should strive to establish a progressively robust risk management culture that ensures controlled and mitigated risk throughout the entire project life cycle.	Current Practice: Since December 2018 a full time Risk Manager has been employed to implement effective risk management on Metro projects. Due to the expanding work load, Program Management are expanding the Risk Management resources accordingly.  Risk management requirements have been expanded to include projects in environmental planning, engineering, and construction, through to substantial completion and revenue service.
6.3	PMG should determine if it is beneficial for Risk Management staff to participate in lessons learned discussions to encourage bi-directional sharing of risk-related information. This will ensure knowledge will be transferred, built upon and not be lost, as mature employees retire from Metro.	Completed: Since June 2023 Risk Management staff have been participating in lessons learned discussions. This has resulted in Metro developing a list of generic risks that could be applied to similar projects. PMG is also able to identify management and mitigation strategies that were applied successfully on previous projects and apply them on active projects.
<b>CATEGORY #7: PROJECT MANAGEMENT PLAN</b>		
7.1	Revisit the 2016 Recommendations requiring all projects regardless of size or complexity to develop and use a PMP which will standardize practices related to change management, quality, risk and use of PMIS.	Current Practice: PMG amended the PC04 Project Management Plan procedure to require PMPs on all projects with estimated total project costs greater than \$100M in value (01/05/2023).
<b>CLUSTER B: CONNECTED PRIORITIES - POST-PROCUREMENT PROJECT MANAGEMENT</b>		
<b>2023 Rec No.</b>	<b>2023 Recommendation</b>	<b>2023 Metro Management's Response</b>
<b>CATEGORY #8, CONTRACT ADMINISTRATION</b>		
8.1	PMG should revisit Recommendation Number 29 and review current General Conditions requirements for contractors to submit time impact analysis ("TIA"), and the conditions when to impose a "waiver" on untimely and improper claims that are not properly presented by the contractor. Metro should review its contract language regarding the requirements for TIAs and the conditions for imposing waivers, as well as opportunities to add contractual language emphasizing the contractor's duty to timely submit support for impact damages and to mitigate alleged harm.	In process: Staff is working with County Counsel to review the Changes provisions in the Contract General Conditions including obligations to notify Metro of an event that caused a delay and promptly submit TIAs. V/CM and PMG will work with County Counsel to determine what changes in General Conditions, if any, can be made regarding consequences when delay claims are not timely pursued by the Contractor. Complete by 12/15/23
8.2	PMG should revisit Recommendation Number 64 regarding:	
8.2A	Developing a formal robust Ongoing Performance Assessment Program for consultants and contractors that is used yearly during and at the end of the term of the contract to ensure satisfactory and compliant performance.	Will Consider: PMG and V/CM will initiate discussions with County Counsel on the possibility of implementing a Performance Assessment Program. Complete by 12/15/23
8.2B	Developing and utilize a Past Performance Assessment for consultants and contractors that allows Metro to consider the contractor's overall contract compliance in future solicitations including an opportunity for contractors to respond to assessments.	Will Consider: PMG and V/CM will initiate discussions with County Counsel on the possibility of implementing a Performance Assessment Program. Complete by 12/15/23
8.2C	Updating Metro's General Conditions to inform consultants and contractors of performance assessment actions.	Will Consider: Consistent with the resolution of recommendations 8.2A and B above. Complete by 12/15/23



8.2D	With regard to contractor claims for damages for delays, PMG and V/CM to work together to review, and expand when proper, the use of construction contracts to include a “bid” daily rate for damages that will be used to reimburse substantiated delay damages. The OIG encourages all construction contracts to include a “bid” daily rate for damages that will be used to reimburse substantiated delay damages.	In process: All RFPs and IFBs for construction can require daily delay rates to be bid/proposed. This is already an existing practice on several Metro projects. Program Management practices should include this in the pricing sheets provided to VCM for the prices to be submitted by contractors. PMG and V/CM will engage in discussions with County Counsel on contract terms to determine the types of cost impacts to be covered and the circumstances for payment at the contract daily rate prior to the release of an RFP or IFB. Daily delay rates proposed by a contractor post-award are already subject to audit, but the contract terms will be reviewed to determine if any changes are necessary. Complete by 12/15/23
<b>CATEGORY #9, BOARD DELEGATION</b>		
9.1	Metro should continue the current practice and level of utilizing the delegated authority that has proven to speed up the change approval process with sufficient oversight and quality. The OIG will continue to monitor the change orders.	Current Practice: PMG will continue to utilize the delegated authority with internal oversight consistent with Board approval in Jan 2018.
9.2	We recommend that Metro’s Management Audit Services Department do periodic audits during projects of use of funds for change orders in compliance with Metro Standards which will breed responsibility.	Completed: This is an existing process. Management Audit Services, MAS, performs multiple incurred cost audits every year, which always include testing of material change orders, as the primary source of cost overruns. MAS also performs performance audits and reviews of high risk Metro projects in progress every year, which also examine change orders and the change order process, as drivers of cost and schedule overruns.
<b>CATEGORY #10: ENFORCE AND COMPLIANCE</b>		
10.1	PMG and V/CM should collaborate in the review of current General Conditions establishing timelines and required actions for initial change matters and also for resolution of disputed matters.	In process: PMG, VCM, and County Counsel are in the process of updating the standard form of contract. Anticipated completion March 2024.
10.2	PMG should revise CF14/Change Control to describe the internal processes regarding the 2018 CEO delegations of authority and best practices for using partnering, claims procedures and the Dispute Resolution Board to reach finality on contested change matters.	In Process: CF14 has been amended to include CEO delegated authority and is being routed for approval. Anticipated completion 10/23.
10.3	PMG should consider tracking the Project Manager’s performance in meeting responsive timelines for all change items (merited or not), to confirm compliance with the General Terms and Conditions and PMG’s policies and procedures.	Will consider: Timeliness of changes is currently tracked by Contract Administrator on most projects. Program Management and VCM will consider tracking project team performance on departmentwide basis, taking into consideration that sometimes delays to changes are caused by contractors. Complete by 12/15/23
10.4	Contracts should specify time limits for submission of claims and enforce these time limits where legally permissible. Vendors will request time limits for Metro’s response to their claims so Metro will need to be prepared to respond to that.	Completed: Contract provisions for Claims already require fully prepared and certified claims to be submitted within 60 days from the Contractor having submitted a Notice of Intent to Claim (NOIC). Public Contract Code 9204, for all construction contracts entered into after January 1, 2017, requires Metro to respond to the Claim within 45 days on what is merited or not merited. Since January 2017 the requirements of PCC 9204 has been incorporated into Metro construction contracts.
<b>CATEGORY #11: PARTNERING</b>		
11.1	For effective partnering, Metro should develop effective internal processes for vetting issues appropriate for the partnering process and developing an evaluation of the facts and issues.	Current Practice: PMG executive management and project managers meet prior to each partnering meeting to discuss topics for the meeting. PMG executive management reviews and approves partnering agendas and presentations.

11.2	Metro should implement a “Partnering Positive” culture supported by Executive Management, in order to minimize the need to use Dispute Resolution Board hearings or to litigate a disputed issue.	Current Practice: PMG executive management is actively emphasizing the importance of partnering on all mega projects and other capital projects (based on project size). Partnering should emphasize building trust and fostering open communication, to minimize or avoid disputes. PMG will continue to emphasize partnering as part of its internal training.
<b>CATEGORY #12: QUALITY/LESSONS LEARNED</b>		
12.1	PMG should review whether best practices require expanding the scope of the quality program to include all projects, regardless of size or complexity, to participate in the enhanced Quality Management Program, including the Lessons Learned program.	Completed: The Lessons Learned procedure has been moved from the QMO plan and procedures to the new QMSM, rev 0 which applies to all projects regardless of size or complexity. It has been determined that the QMO plan and procedures does not apply to small low risk projects. Completed Dec 2022.
<b>CATEGORY #13, LESSONS LEARNED</b>		
13.1	PMG should develop a program and culture that reports lessons learned from internal and external management (across all groups) to those participating in capital projects and methods to ensure regular review and revision of policies and procedures to ensure cross-department utilization of all lessons learned to advance and build on the Metro Program Management and improve each project as it planned, designed, developed and constructed.	Current Practice: As projects are completed, PMG is implementing its Lessons Learned process to help with future mega projects. Anticipated completion July 2024. Scope can be expanded as other departments are brought into the process.
<b>CATEGORY #14: SAFETY</b>		
14.1	The Safety Group should revisit Recommendation Number 66 to determine whether there may be opportunities to broadly communicate safety statistics across capital projects to reflect Metro’s Safety culture and to further incentivizes contractor best practices. Sharing statistics monthly or quarterly in the same manner COVID-19 information was shared may be appropriate.	Completed: Safety data that is presented at the FTA quarterly meetings will be shared on the project websites. This data will be updated every quarter to coincide with the schedule of the FTA quarterly meetings. Completed September 2023.
14.2	The Safety group along with the PMG should review the PMG’s pre-2016 safety-related procedures for conformity to current industry best practice standards.	Completed: Separate Memo to OIG will provides status of the pre-2016 safety-related procedures. Completed August 2023.
14.2A	(a) PMG should verify that all projects have the updated construction safety policy.	Completed: All active construction projects included the latest Construction Safety and Security Manual and safety related General Requirements prepared by Metro Safety. Verified with Safety September 2023.
14.2B	(b) V/CM should include updated construction safety policy in future contracts.	Current Practice: As part of the readiness review required by existing PMG policy, and prior to advertising any construction contract, PMG and Metro Safety will verify that the contract documents include the latest Construction Safety and Security Manual and safety related General Requirements. Furthermore, PMG, Safety, VCM, and County Counsel developed new evaluation criteria for future RFPs based each proposers' Experience Modification Rating (EMR). Any contractor with an EMR greater than 1.0 will be considered non-responsive (Completed July 2023)

CLUSTER C: CONNECTED PRIORITIES - PROJECT MANAGEMENT SUPPORT		
023 Rec No.	2023 Recommendation	2023 Metro Management's Response
<b>CATEGORY #15: PUBLIC INVOLVEMENT</b>		
15.1	PMG should consult with Countywide Planning and Development to re-visit the 2016 recommendations to ensure current public outreach practices timing, and methods meet best practice goals by addressing earlier community involvement in the planning phase, implementing a quality and equal platform for all communities, and increasing funding for public outreach efforts.	Will Consider: PMG will schedule a meeting with CPD and CX to review the 2016 recommendations and ensure that Metro's public outreach plans meet the best practice goals.
<b>CATEGORY #16: PROJECT MANAGEMENT INFORMATION SYSTEM (PMIS)</b>		
16.1	PMG should revisit whether all projects should use PMIS regardless of size or complexity	Will Consider: PMG will evaluate potential expansion of PMIS to all capital projects. Estimated completion by June 2024.
16.2	PMG should review whether there are resources available for Oracle Unifier information reporting enhancements, for example an "Alert Report" triggered by looming (or passed) response deadlines.	Agree: PMG will create audit report that alerts for missed deadlines. Estimated completion by December 2023.
<b>CATEGORY #17: ADMINISTRATIVE PROCESS</b>		
17	No Recommendations	N/A
<b>CATEGORY #18, REORGANIZATION, STAFF ANALYSIS &amp; TRAINING</b>		
18.1	Metro should develop and implement an agency-wide initiative for attracting and retaining construction management professionals as full-time employees and consider increasing the ration of employees to consultants.	In Process: Program Management is partnering with Chief People Office to develop and implement an agency-wide initiative for attracting and retaining program management professionals. Procure a consultant to conduct an industry analysis on compensation to improve Metro's salary ranges to attract and retain external program management professionals. To retain existing staff, evaluate Program Management staff salaries to align compensation with current market conditions. Estimated completion - December 31, 2024.
18.2	Metro should develop and implement a program for inviting experts to work for Metro on an as-needed basis to mentor and train new Metro staff.	Will Consider: PMG Deputy Chiefs are already mentoring new project managers. PMG will consider hiring experienced Project Executives to supplement this effort for projects greater than \$500M.
18.3	PMG should revisit the, "2017 Training Needs White Paper" prepared in response to the 2016 BP Study to determine additional training needs.	In Process: The 2017 Training Needs White Paper was a draft document. PMG is currently developing a comprehensive Leadership Development Plan as part of Program Management Leadership Institute (PMLI) - estimated completion March, 2024.
<b>CATEGORY #19, - Project Management Key Performance Indicators ("KPIs")</b>		
19.1	PMG should develop policies and procedures that describe Project Manager roles and responsibilities that will be evaluated, encouraged, and strengthened.	Current Practice: PMG will continue to reinforce roles and responsibilities of all PMG staff through yearly Individual Performance Plans and specific training programs.
19.2	PMG should ensure that the Project Manager Performance Plan identifies and develops future leaders and encourages broad expertise across the entirety of the capital project construction management skillsets.	Current Practice: PMG continues to identify and train future leaders through support in programs such as Metro's Leadership Academy, LeadershipAPTA, and ENO programs.

CLUSTER D: STRATEGIC PROJECT MANAGEMENT		
023 Rec No.	2023 Recommendation	2023 Metro Management's Response
<b>CATEGORY #20: METRO-WIDE PROJECT OVERSIGHT</b>		
20.1	Metro and PMG in particular is recommended to revisit the 2016 Recommendations advocating for the adoption of PMBOK principles and processes, especially in light of the Early Intervention Team (EIT) initiative.	In Process: PMG is expanding the existing training curriculum for Program Management to encompass additional management principles. PMG will continue to be an active participant in the EIT initiative.
20.2	The EIT is essentially a pre-construction initiative but the interdepartmental collaboration may be helpful post-award to provide coordination and support for problem solving. The interdepartmental team may be reconstituted for a revised mission that supports the field office.	Will Consider: The EIT is constituted to cultivate an agency wide response and input during the most crucial phase of the project development, where the influence on the project is the most - the Planning phase. Issues during construction require Subject Matter Experts in construction. The construction phase is the implementation and execution of the construction contract. Post award, and if beneficial, PMG will consider using the EIT as a vehicle to leverage internal departments for collaboration and alignment.
CLUSTER E: RELOCATED GROUPS		
023 Rec No.	2023 Recommendation	2023 Metro Management's Response
<b>CATEGORY #21 HIGHWAY</b>		
21.1	Since the relocation of the Highways group to the Planning department, the PMG should collaborate with Countywide Planning and Development to ensure that Metro's Board is receiving complete information on highway capital projects.	Current Practice: PMG will continue to coordinate with Planning to ensure that complete and transparent information is provided to the Board. Currently, Planning reports on all highway projects that are administered by Caltrans and Program Management reports on all highway projects that are administered by Metro
<b>CATEGORY #22: ASSET MANAGEMENT</b>		
22.1	V/CM should include the contractor's scope of work and should include collecting and reporting asset serial numbers, warranty, and maintenance information.	In process: PMG continues to refine the maintenance and warranty process during the construction phase. PMG will engage Metro Operations to identify pain points related to project turnover and asset identification, and will incorporate lessons learned into future contract requirements. Complete by 12/15/23.

