



Metro

*Los Angeles County Metropolitan Transportation Authority
One Gateway Plaza
3rd Floor Board Room*

Agenda - Final

Thursday, March 16, 2023

11:00 AM

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**LAX Hilton Hotel, 5711 W Century Blvd, Los Angeles, CA 90045*

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(ALSO APPLIES TO BOARD COMMITTEES)

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In accordance with State Law (Brown Act), all matters to be acted on by the MTA Board must be posted at least 72 hours prior to the Board meeting. In case of emergency, or when a subject matter arises subsequent to the posting of the agenda, upon making certain findings, the Board may act on an item that is not on the posted agenda.

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REMOVAL FROM THE BOARD ROOM - The Chair shall order removed from the Board Room any person who commits the following acts with respect to any meeting of the MTA Board:

- a. Disorderly behavior toward the Board or any member of the staff thereof, tending to interrupt the due and orderly course of said meeting.
- b. A breach of the peace, boisterous conduct or violent disturbance, tending to interrupt the due and orderly course of said meeting.
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Public comment will be taken as the Board takes up each item. To give public comment on an item, enter #2 (pound-two) when prompted. Please note that the live video feed lags about 30 seconds behind the actual meeting. There is no lag on the public comment dial-in line.

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CALL TO ORDER**ROLL CALL**

24. **SUBJECT: FISCAL YEAR 2024 PROGRAM MANAGEMENT ANNUAL PROGRAM EVALUATION** [2023-0073](#)

RECOMMENDATION

RECEIVE AND FILE status report on FY24 Program Management Annual Program Evaluation.

25. **SUBJECT: EARLY INTERVENTION TEAM STATUS REPORT** [2023-0106](#)

RECOMMENDATION

RECEIVE AND FILE status report on the Early Intervention Team.

Attachments: [Attachment A - EIT Status Report](#)
[Attachment B - Appendix EIT Status Report](#)
[Presentation](#)

- SUBJECT: GENERAL PUBLIC COMMENT** [2023-0156](#)

RECEIVE General Public Comment

Consideration of items not on the posted agenda, including: items to be presented and (if requested) referred to staff; items to be placed on the agenda for action at a future meeting of the Committee or Board; and/or items requiring immediate action because of an emergency situation or where the need to take immediate action came to the attention of the Committee subsequent to the posting of the agenda.

COMMENTS FROM THE PUBLIC ON ITEMS OF PUBLIC INTEREST WITHIN COMMITTEE'S SUBJECT MATTER JURISDICTION**Adjournment**



Board Report

File #: 2023-0073, File Type: Informational Report

Agenda Number: 24.

REVISED
CONSTRUCTION COMMITTEE
MARCH 16, 2023

SUBJECT: FISCAL YEAR 2024 PROGRAM MANAGEMENT ANNUAL PROGRAM EVALUATION

ACTION: RECEIVE AND FILE

RECOMMENDATION

RECEIVE AND FILE status report on FY24 Program Management Annual Program Evaluation.

ISSUE

The Annual Program Evaluation (APE) is a priority initiative created to evaluate Metro's capital program annually. Given the challenges of managing a multi-billion-dollar capital program, a comprehensive review of the risks associated with the costs and schedules of the program is conducted annually. This report summarizes the results of the FY24 APE review performed by Program Management.

BACKGROUND

Los Angeles Metro Program Management is delivering the largest transportation infrastructure program in the country. The Program Management department implemented the Annual Program Evaluation initiative in 2016 to provide transparency into the performance of capital projects. The Program Management department's mission statement is "together we build World Class transportation to transform the quality of life in our communities."

In support of the mission statement, the APE initiative comprehensively evaluates Metro's capital program, including Transit, Highway, and Regional Rail projects. As part of the process, staff reviewed and updated project costs and schedules to current conditions, challenges, and risks. Any changes to project budgets/schedules and the reasons for the adjustments will be reported to the Board annually for approval. In addition, APE is a project management tool that brings greater consistency, transparency, and discipline to better manage and deliver Board-approved projects. The APE is a dynamic tool updated annually as projects progress toward completion and any changes approved by the Board are incorporated.

DISCUSSION

Program Management is responsible for a portfolio of projects comprising more than 70 projects in total. For the FY24 APE, Program Management is primarily focused on new projects that will carry-over through FY24, and all other projects estimated at \$5 million or greater. Program Management staff evaluated 36 projects for the APE, including six Major Transit Construction projects, five Alternative Project Delivery Projects, eight Shovel Ready projects, eleven Capital projects, and six projects in Closeout, which totals between \$25.2-\$26.8 billion. The total program size has increased approximately 13.1% from \$23.7 billion in FY23 (see Attachment A FY24 Program Management APE presentation for a complete project listing).

The primary focus remains on managing the projects within the Board-approved life of project (LOP) budgets and schedules established for these projects. A summary of the potential adjustments requiring future Board approval to Metro's capital program in FY24 is included in the attached FY24 Program Management APE presentation.

Market conditions, material costs, and resource availability continue to drive construction inflation. Inflation is fading from 9.1% (40 year high) to 6.5% but remains well above the Federal Reserve's 2% target. Three months ago, construction craft labor unemployment was 3.3% (a 23 year low); and professional, scientific, and technical services (A/E) unemployment rate 2.1%. Updated economic projections indicate that these challenges will continue into 2023, and supply chain issues and labor impacts will continue as cost and schedule drivers. The sheer size of Metro's capital program and aggressive implementation schedule create unprecedented challenges to project delivery. In response to these challenges, Program Management implemented several strategic initiatives to improve planning, consistency, transparency, and discipline to project delivery. These strategic initiatives are complementary and performed in conjunction with the Early Intervention Team (EIT) strategic initiatives. Program Management's key initiatives for contracting strategy and cost containment include:

- Organization
 - The current staff/consultant Ratio is 23% FTEs and 77% consultants, with a target of 50/50. Recruitment efforts are underway to rebalance the staff/consultant ratio which will provide future cost saving benefits and ensure the retention of organizational knowledge and experience.
 - As part of our best practices review, we are updating the Metro Rail System Design Criteria and have focused on several lessons learned, including review of contract changes on the Crenshaw and Regional Connector projects, defining root causes, and making corrections; and review and revision of contractual language in master contracts with the assistance of counsel and Vendor Contracts Management; and review of our contract for claims avoidance language.
 - To invest in staff careers and improve corporate knowledge, Program Management managers are developing training programs to further increase skills and the level of competency within the department.
 - Program Management, in collaboration with the Chief People Office, is proposing a new hiring strategy to successfully recruit industry leaders.
- Processes

- Stage Gate Reviews at key points during project development are conducted in conjunction with the EIT to provide cross agency collaboration and cost control as outlined within the Early Intervention Team status report.
- Project Control procedures are being updated to address Alternative Delivery and Federal Transit Administration oversight procedures for new cost and schedule contingency targets. Currently, 28 of the 35 Project Control procedures are updated with target completion in 2023.
- CEO board delegated authority is utilized to accelerate the contract change process within the Board adopted the life of project budget.
- Updated processes are rolled out whereby cost/schedule/risk are managed and controlled across the project life cycle. More information is found in the Early Intervention Team status report.
- Alternative Delivery
 - As part of the Alternative Delivery roll-out, staff has delivered new contract templates for use with Construction Manager/General Contractor (CMGC) and Progressive Design-Build (PDB) contracts; developed a guidance manual and training program; completed training for core Alternative Delivery project staff; and scheduled training for all Program Management staff. In addition, material initiatives addressing price fluctuations are being studied.
- Risk
 - New technology to map subsurface utilities was piloted to mitigate risks that contribute to contract change orders.
 - Standard specification and investigation protocols were updated to address differing site conditions for geotechnical and environmental matters, including adopting state-of-the-art technology for horizontal directional drilling.
- Scope Issues
 - A new Master Cooperative Agreement (MCA) with the City of Los Angeles is underway to ensure better scope control. Memorandums of Understanding (MOUs) are being developed assuring thorough engagement with other agencies for project delivery.
 - Professional services soft costs are being monitored and mitigated as they can account for up to a third of project costs.

FINANCIAL IMPACT

The FY24 Program Management APE report has no specific budgetary or financial impacts. The APE report serves as an annual and early notice instrument to assess the scope, cost, and schedule risk items affecting the respective projects under the oversight of Program Management. Risk items affecting scope, cost, and schedule are identified on a project-by-project basis within the APE Presentation.

Should any potential project risks affecting scope, cost, and schedule parameters be realized, the Chief Program Management Officer will return to the Board with separate recommendations to address the identified risks and adjust the project cost and/or schedule accordingly.

EQUITY PLATFORM

While the APE encompasses 36 separate projects with project-specific community engagement activities and equity impacts, the program can generally categorize projects into the following six groups for a high-level equity assessment of anticipated benefits and considerations.

Major Transit Capital

These eight mega-capital projects support transit access and connectivity through new construction and expansion across Los Angeles County. While specific project areas vary in demographics, land use, and jurisdiction, these projects are all intended to improve access to key destinations, such as jobs, health care, school, and neighborhood amenities, via high-quality transit. Other potential anticipated equity benefits include a reduction in single occupancy vehicle use and reliance, improved air quality, and a reduction in household transportation costs. Any needed mitigation strategies are determined and implemented at the project-level.

Multi-modal Capital

These five capital projects are anticipated to expand multi-modal options for travelers through a variety of interventions, including light rail, active transportation infrastructure, and high-occupancy vehicle lane improvements. While project types and geographies vary, the shared impact is anticipated to diversify modes and costs of travel choices. In particular, transit and active transportation infrastructure enhancements are anticipated to improve safety for people walking and rolling. Any needed mitigation strategies are determined and implemented at the project-level.

Assets Capital

Capital improvements for six Metro asset projects will serve Metro employees as well as the public. These projects will update equipment and other assets, which are anticipated to maintain safe working conditions for Metro employees and minimize project and service delivery disruptions for Metro riders. Specifically, the Transit Learning Center is an exciting resource for a new generation of potential Metro workforce members to gain skills and connections for future career opportunities.

Infrastructure Capital

Infrastructure maintenance and improvements contribute to safe and accessible conditions for Metro riders and the general public, including soundwall protection, wayfinding, grade and modal separation, and transit station upgrades. These five capital projects are anticipated to have minimal if any, equity impacts.

Regional Rail

Similar to the Major Transit Capital projects and Multi-modal Capital Projects, the six projects that fall under the Regional Rail capital program are anticipated to expand transit and other multi-modal choices for travelers in Los Angeles. Anticipated improvements include improved station access, increased rail capacity, and safer right-of-way improvements between different modes. Any needed mitigation strategies are determined and implemented at the project level.

Highways

The seven Highway capital projects are anticipated to improve conditions for travelers and the surrounding project areas of existing highway corridors via soundwall protection, high-occupancy vehicle lane expansion, highway safety design, and some multi-modal infrastructure. These projects are not anticipated to encroach on surrounding communities or further burden neighborhoods adjacent to existing highways.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

The recommendation supports Strategic Plan Goal #1 - Provide high-quality mobility options that enable people to spend less time traveling. This will be accomplished by planning and delivering multiple capital projects on time and on budget.

NEXT STEPS

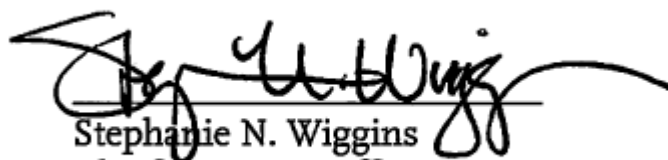
Program Management will request the resources required for project delivery success through the FY24 Budget process for Board approval. Project managers will work to deliver projects safely, on-time and within the Board-approved budgets. Staff will continue to provide the Board with monthly updates on the project status throughout the year. The next FY24 Program Management APE report will be presented to the Board in Spring 2024. Projects with Individual LOP identified increases will return to the Board for a request for approval as necessary.

ATTACHMENTS

Attachment A – FY24 Annual Program Evaluation Report

Prepared by : Julie Owen, Senior Executive Officer, (213) 922-7313

Reviewed by: Sameh Ghaly, Interim Chief Program Management Officer,
(213) 418- 3369


Stephanie N. Wiggins
Chief Executive Officer

Fiscal Year 2024
Program Management
Annual Program Evaluation (APE)



Presentation Overview



FY24 Construction Market Outlook

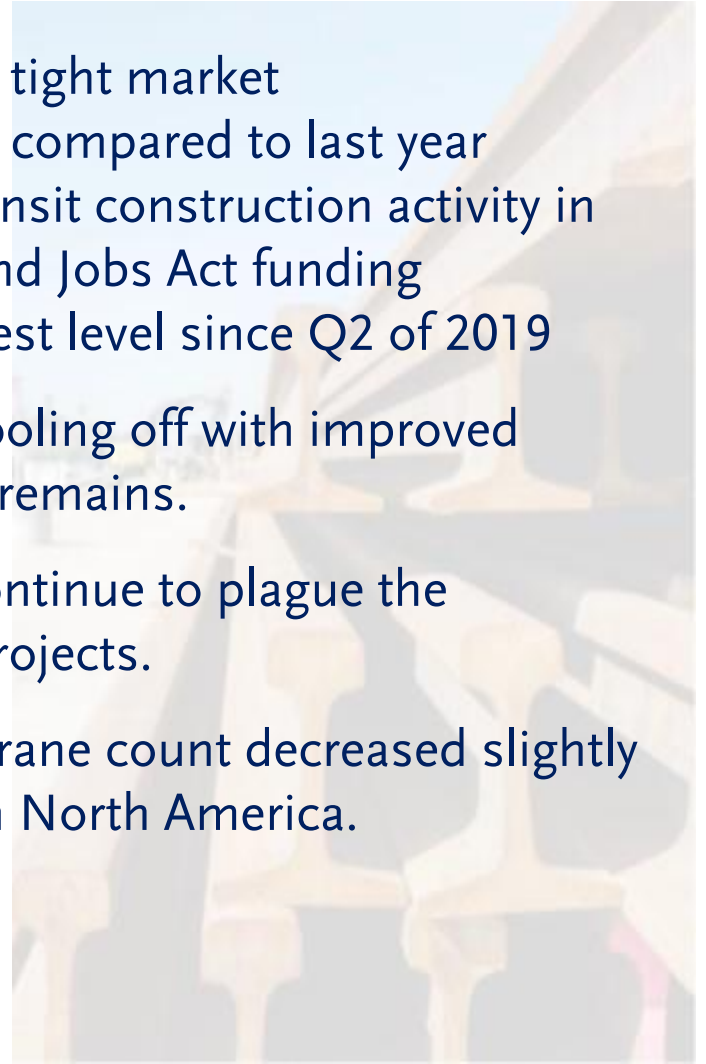
Industry Market Outlook: Continues to be a tight market

- Construction projects started up by 16% compared to last year
- Contractors expect higher increase in transit construction activity in 2023 due to Infrastructure Investment and Jobs Act funding
- Contractors' backlog remains at its highest level since Q2 of 2019

Material Price Trends: Material prices are cooling off with improved production levels but potential for volatility remains.

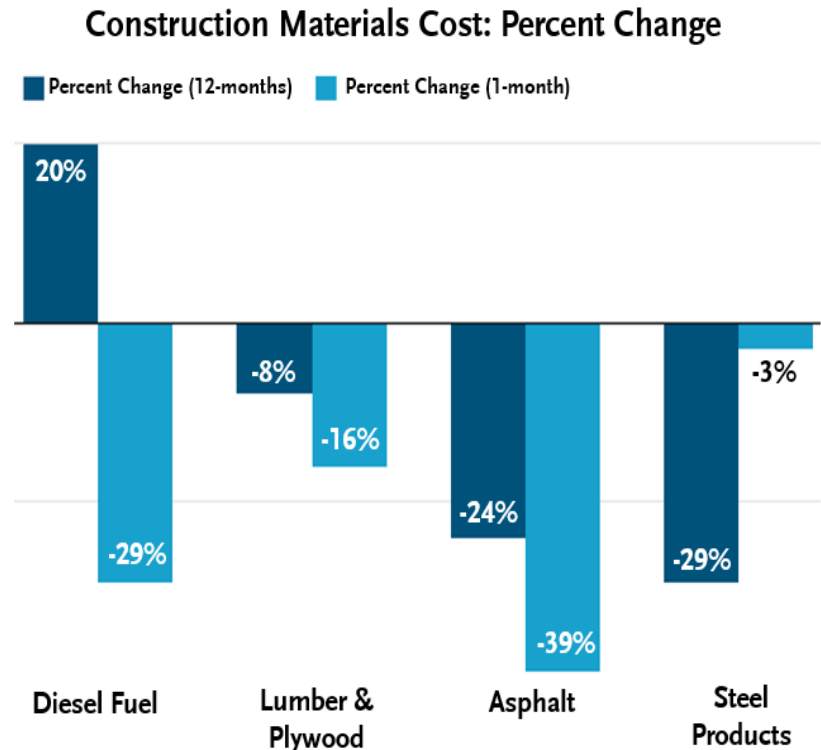
Labor Trends: Skilled labor shortages will continue to plague the construction industry to adequately staff projects.

Local Construction Indicator: Los Angeles crane count decreased slightly but remains the city with the most cranes in North America.



Construction Market Outlook

- Steel and lumber prices significantly decreased from last month
- Steel mills production levels ramping up
- Prices are leveling out in 2023 but contractors remain wary materials may increase again according to a recent AGC survey



Source: Bureau of Labor Statistics

Construction Market Outlook

Construction Costs Declined by

- 5% in past 6 months
- 2% in past 3 months

Bid Prices Increased by

- 9% in past 6 months
- 0% in past 3 months

Even with decline in material costs, over the last year bid prices are increasing but remaining flat over the last quarter, due to an increase in worker compensation and market risks.

Skilled Labor Shortage Continues

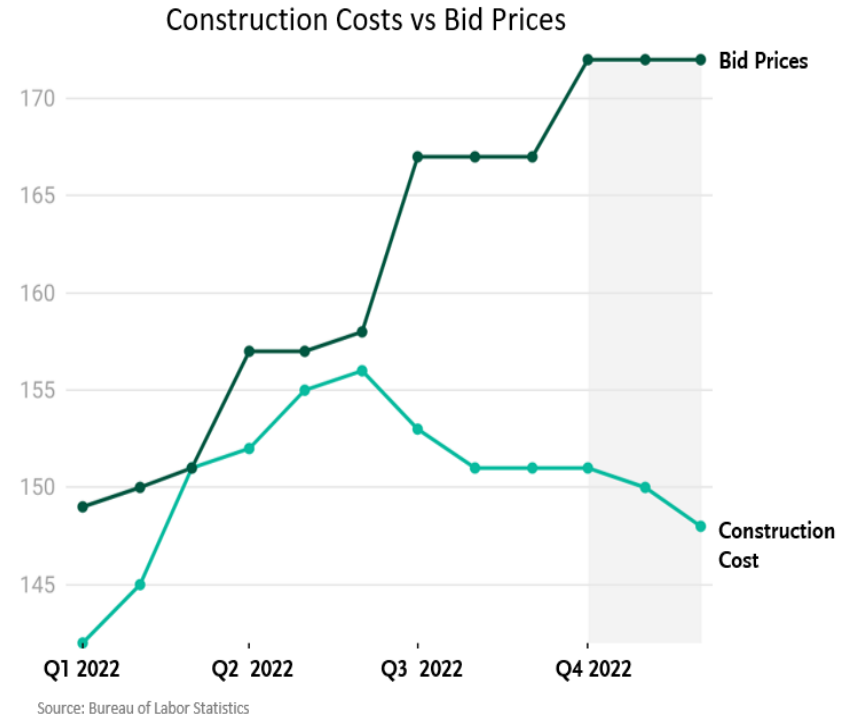
Construction Unemployment Rate

- 3-Months Ago: 3.4% (**23-year low**); Current: 4.4%

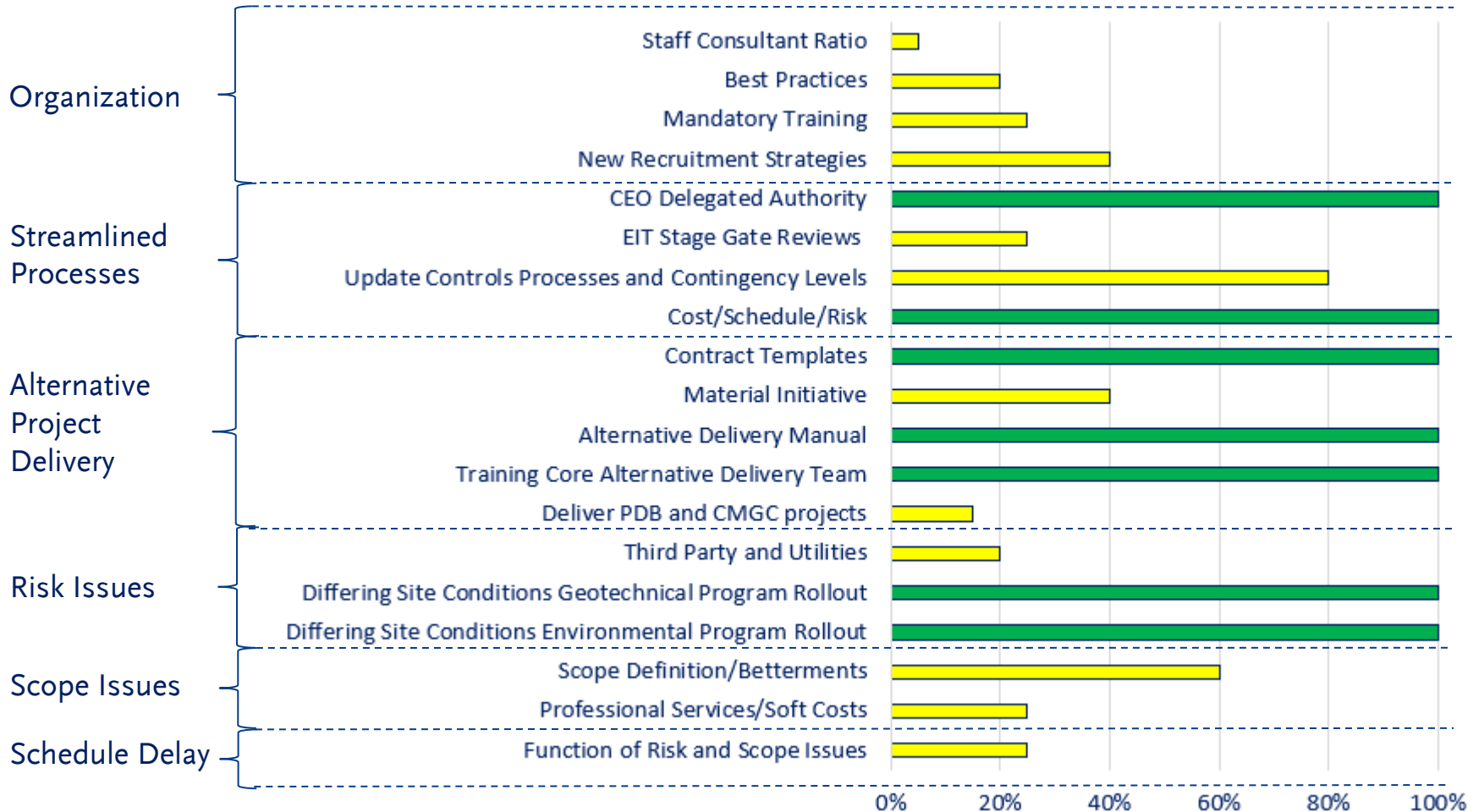
Construction Professionals Unemployment Rate

- 3-Months Ago: 2.2%; Current: 2.1%.

Demand for projects is outpacing the supply of workers. Job openings outpacing hiring. Record low number of unemployed construction workers.



Progress on FY23 Strategic Initiatives and Mitigation Measures



FY24 Program

36
Projects

APE focuses only on those capital projects, managed by Program Management, with a total project cost greater than \$5M:

- 24 Transit Construction Projects
- 6 Regional Rail Projects
- 6 Highway Modernization Projects

Up to
\$26.8B
Program

Overall Program dollars increased up to 13.1% from \$23.7 billion in FY23 to between **\$25.2-\$26.8 billion in FY24**. In addition to the projects in APE, Program Management manages/oversees 40+ projects less than \$5M. **There are approximately 70+ total projects being managed by Program Management throughout the fiscal year.**

Benefits

- A key goal of Measure M is to expand regional access to high-quality transit options.
- Bus/rail service ridership typically has a ~60-75% of boardings from EFCs, which is greater than the 40% of the county that the 2022 EFC designation comprises
- Capital investment of Measure M anticipated to create jobs, reduce pollution, generate local economic benefits, and increase personal quality time and overall quality of life.
- To measure program and capital investment cost-effectiveness, the Metro Board requested staff to develop greenhouse gas emissions goals. This is an ongoing effort with an update to the Board on progress scheduled for later this calendar year.

Metro Project Completion Summary

80% of active construction projects, as listed below, were or will be completed on time.

Project Completion in FY23

Regional Connector Transit Project

Bus Facility Maintenance Improvements & Enhancements Phase III

Light Rail Transit Freeway Stations Sound Enclosures

Sound Wall Package 11/North Hollywood

Eastside Access Improvements

Division 1 Improvements - 6th/Central Downtown LA Industrial District

Crenshaw/LAX Transit Project

Project Completion Planned in FY24

Metro Center Street Project

I-710 Early Action Soundwalls Package 2

I-5 South Capacity Enhancements – Valley View Interchange

I-5 North Capacity Enhancements – Buena Vista to Magnolia

Anticipated LOP Increase and New Projects

Anticipated FY23/FY24 LOP Budget Increases
Project Name
Purple Line Extension Section 1
Purple Line Extension Section 2
Purple Line Extension Section 3
Division 20 Portal Widening Turnback Facility
Rail to Rail Corridor Active Transportation Connector Project
Metro Center Street Project
C/LAX Closeout “Catch-All” Project
Soundwall Package 11
Projects for LOP Adoption
Project Name
I-605 South Street Interchange Improvement
Eastbound SR-91 Atlantic to Cherry Auxiliary Lane Improvements
I-710 Early Action Soundwalls Package 2

Individual project details are in the Appendix.

Major Transit Construction Projects

PROJECT LISTING	DELIVERY METHOD	FUNDING TO DATE (in Mil.)	EST. COST RANGE (in Mil.)	% COMPLETE
Major Transit Construction				
Regional Connector Transit Project	DB	\$1,755.8	\$1,755.8	98.0%
Westside Purple Line Extension Section 1 Project	DB	\$3,128.9	\$3,353.9	82.0%
Gold Line Foothill Extension Phase 2B Project*	DB	\$1,532.9	\$1,532.9	65.0%
Westside Purple Line Extension Section 2 Project	DB	\$2,441.0	\$2,546.0	57.0%
Westside Purple Line Extension Section 3 Project	DB	\$3,223.6	\$3,273.6	45.5%
C/LAX Closeout “Catch-All” Project	DBB	\$47.0	\$57.0	35.0%
Sub-total:		\$12,129.2	\$12,519.2	

*Pomona to Montclair segment awaiting funding.

- High risk due to project duration, complexity, and ground conditions.
- Associate potential schedule impacts.
- Market conditions affects in FY23.
- Based upon project risk profile/market conditions, the costs may increase up to 5% this year.

Capital Projects

PROJECT LISTING	DELIVERY METHOD	FUNDING TO DATE (in Mil.)	EST. COST RANGE (in Mil.)	% COMPLETE
Capital Projects				
Metro Eastside Access Improvements Project	DBB	\$29.7	\$29.7	90.0%
Metro Center Street Project (ESOC)	DB	\$130.1	\$143.7	63.6%
Rosecrans/Marquardt Grade Separation Project	DB	\$156.4	\$156.4	49.0%
Division 20 Portal Widening Turnback Facility	DBB	\$876.7	\$956.7	46.0%
Airport Metro Connector Project	DBB	\$898.6	\$898.6	32.1%
Rail to Rail Corridor Active Transportation Connector Project	DBB	\$143.3	\$158.3	25.0%
I-5 North County Enhancements Project	DBB	\$679.3	\$679.3	20.7%
Soundwall Package 10	DBB	\$72.5	\$72.5	6.0%
Systemwide Signage	DBB	\$24.1	\$24.1	1.0%
Transit Learning Center	DBB	\$20.0	\$20.0	1.0%
Division 1 Street Closure	DBB	\$9.5	\$9.5	1.0%
Subtotal:		\$3,040.2	\$3,148.8	

Alternative Project Delivery Projects

PROJECT LIST	DELIVERY METHOD	FUNDING TO DATE (in Mil.)	EST. COST RANGE (in Mil.)	% COMPLETE
Alternative Project Delivery Projects				
LINK Union Station Project	CM/GC	\$950.4	\$1,750.4 - \$2,130	16.0%
Metro G Line Bus Rapid Transit (BRT) Improvements*	PDB	\$391.0	\$392.0-\$511.0	6.0%
BRT Connector Red/Orange Line (NoHo to Pasadena BRT)	CM/GC	\$267.0	\$263.0 - \$386.0	4.0%
I-105 Express Lanes	CM/GC	\$325.0	\$780.0-\$1000.0	2.0%
East San Fernando Valley	PDB	\$2,591.8	\$2,811.0-\$3,575.0	1.0%
Sub-total:		\$4,525.2	\$5,996.4 - \$7,602.0	

*Based on projected budget and funds available through FY23, prior to Board adoption of life-of-project budget.

- Initial award for design and pre-construction services only.
- Alternative Project Delivery provides an opportunity to optimize project scope and reduce costs to conform with available funding.
- Construction pricing at 100% design.
 - Metro G Line project to negotiate at 85% design
- Board approval required to enter construction.

Shovel Ready Project Development

PROJECT LISTING	DELIVERY METHOD	FUNDING TO DATE (in Mil.)	EST. COST RANGE (in Mil.)	% COMPLETE
Shovel Ready Project Development				
I-710 Early Action Soundwalls Package 2*	DBB	\$9.4	\$9.4	36.8%
I-605/South Street Interchange Improvement	DBB	\$23.1	\$23.1	21.7%
Eastbound SR-91 Atlantic to Cherry Auxillary Lane Improvements	DBB	\$94.7	\$94.7	8.3%
Brighton to Roxford Double Track Project*	DBB	\$97.2	\$300.0	6.0%
Lone Hill to White Double Track Project*	DBB	\$8.3	\$180.0	4.0%
Doran Street and Broadway/Brazil Grade Separation Project*	DBB	\$11.0	\$279.0	2.0%
Doran Street Active Transportation Project*	DB	\$19.3	\$25.0	0.0%
Doran Street Interim Improvements*	DBB	\$9.0	\$9.0	0.0%
Subtotal:		\$272.0	\$920.2	

*Based on projected budget and funds available through FY23, prior to Board adoption of life-of-project budget.

Projects in Closeout

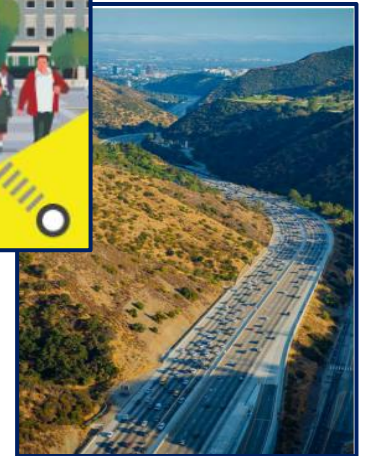
Projects in Closeout				
Willowbrook/Rosa Parks Station Improv.	DB	\$128.3	\$128.3	100.0%
Metro Blue Line Track and System Refurb.	DB	\$102.3	\$102.3	100.0%
Crenshaw/LAX Transit Project	DB	\$2,148.0	\$2,148.0	99.9%
Patsaouras Plaza Bus Station Construction	DB	\$50.9	\$50.9	99.0%
Soundwall Package 11	DBB	\$102.5	\$109.2	93.2%
Metro Blue Line Signal System Rehabilitation	DB	\$119.0	\$119.0	90.0%
Subtotal:		\$2,651.0	\$2,657.7	



Metro Transit Capital Program Summary

Planned Transition from Countywide Planning to Program Management in FY24:

- West Santa Ana Branch Transit Corridor
- Green Line Extension to Torrance
- LA River Bike Path
- North San Fernando Valley BRT



Next Steps

-  Project Managers to manage project scope, budget, and schedule for quality, on-time and within budget delivery.
-  Maintain resources and staffing needed to manage and support project delivery.
-  Present project-specific Life-of-Project budgets for Board review and adoption.
-  Seek additional revenue sources needed to fulfill funding commitment required to build and deliver projects.



APPENDIX – INDIVIDUAL PROJECT DETAILS



MAJOR TRANSIT CONSTRUCTION PROJECTS

Regional Connector Transit Project

Original
LOP
\$1420.0M

Current
LOP
\$1,755.8M

Current Forecast
LOP
\$1,755.8M

Forecast
Completion
Summer 2023

Project
Complete
98%



Regional Connector Transit Project

Cost: No additional anticipated LOP increase in FY24.

Schedule: Revenue Service Date targeted for Spring 2023.

Mitigation Measures: The Project has afforded access of the guideway and station platforms to Operations for purposes of testing, familiarization, and training of staff.

Accomplishments:

- Progress throughout is measured in excess of 98% complete; final material/device installations and punch list adjustments are underway.
- Efforts remain focused on comprehensive systems-integrated testing and related safety certification documentation; liaison with CPUC staff has been initiated to introduce the Project with guided tours
- Operations are fully engaged with training operators and maintenance-of-way staff; simulated service began in early January 2023
- Coordinated preparations for initiating revenue service by all Metro departments are underway.

Challenges/Risks:

- Trouble-shooting of electrical systems among interfaces of older systems and components adjacent to the Project's newer technologies have been identified and are being resolved
 - Testing has posed challenges to maintain start-up.
-

Gold Line Foothill Extension Phase 2B

**Original
LOP**
\$1,406M

**Current
LOP**
\$1,532.9M

**Current
Forecast**
\$1,532.9M

**Forecast
Completion**
Spring 2026 (Pomona)
Spring 2029 (Montclair)

**Project
Complete**
65%



- Gold Line Rail Corridor (shared with freight)
- Metrolink Rail Corridor
- Gold Line Station
- Gold Line Station and Metrolink Station (not shared)
- Planned Grade Separation for Gold Line Trains Only

Gold Line Foothill Extension Phase 2B

Cost: Project segmented to Pomona. Remaining segment is seeking funding to complete the project.

Schedule: Due to unfavorable economic conditions affecting bid prices, the alignment contract was restructured to terminate in Pomona, reducing the completion date with the alignment ending in Montclair.

Mitigation Measures: Seeking additional funding to complete the project.

Accomplishments:

- Freight Track Relocation: Completed
- Delivery of All Rail Needed for Project: Completed
- Grade Crossings: Long-Term Reconstruction of 20 (out of 21) Crossings Completed
- Bridges: 18 (out of 19) New or Renovated Bridges Complete
- Stations: Three of the four stations are currently under construction

Challenges/Risks:

- The contract option to extend the existing contract to Montclair expired on 10/7/21; the Construction Authority is negotiating a possible one-year extension of this “Montclair Option”.
- Securing funding for remaining initial proposed alignment to Montclair.

Westside Purple Line Extension Project



Westside Purple Line Extension Section 1

<u>Original LOP</u>	<u>Current LOP</u>	<u>Current Forecast</u>	<u>Forecast Completion</u>	<u>Project Complete</u>
\$2,773.9M	\$3,128.9M	\$3,353.9M	Fall 2024	82%

Cost: Anticipated Board Request for Increase: \$225M.

Schedule: The Project is trending behind the project completion date of Fall 2024.

Mitigation Measures: Continued monitoring of critical and near-term critical path schedule activities. The Project is actively engaging with specialty subcontractors on progress to determine any critical needs.

Accomplishments:

- Completed cross passage concrete work, removal of the TBM cutterhead, track installation (Reaches 2 & 3), and roof concrete placement complete at all three Stations. Permanent power available at Wilshire/La Brea Station.

Challenges/Risks:

- Due to the impacts associated with the Reach 3 tunnel anomaly, there is a possibility that the Revenue Service Date (RSD) will not achieve the FFGA date of October 31, 2024. The current schedule forecast for RSD is Fall 2024. The Project is currently trending behind the target RSD.
- The current project budget does not include cost exposures from unmerited contractor claims. These claims will be subject to the dispute resolution process (subject to the Board's approval).

Westside Purple Line Extension Section 2

<u>Original LOP</u>	<u>Current LOP</u>	<u>Current Forecast</u>	<u>Forecast Completion</u>	<u>Project Complete</u>
\$2,441.0M	\$2,441.0M	\$2,546.0M	Fall 2025	57%

Cost: \$105.0M LOP increase forecasted in FY2024. Proposed LOP \$2,546.0M.

Schedule: Original baseline schedule milestones are still being maintained and monitored.

Mitigation Measures: Closely monitoring cost exposures and schedule slippages.

Accomplishments:

- Completed reach 4 and 5 BR & BL tunnel excavations
- Complete excavation at Century City Constellation Station box and entrance
- Complete construction of invert slab and platform level walls at Wilshire/Rodeo Station and advance concourse deck level walls and station entrance
- Started construction of tunnel cross passages
- Start Wilshire/Rodeo Station appendage construction

Challenges/Risks:

- Due to the Contractor's forecasted completion date, the Project is identifying opportunities to potentially mitigate delays and not impact the current Substantial Completion date.
- Changes to project scope, Requests for Changes (RFCs), Notices of Intent to Claim (NOICs), Open Claims, and elements in the Risk Register are posing additional risks to cost and schedule containment for the project.

Westside Purple Line Extension Section 3

<u>Original LOP</u>	<u>Current LOP</u>	<u>Current Forecast</u>	<u>Forecast Completion</u>	<u>Project Complete</u>
\$3,223.6M	\$3,223.6M	\$3,273.6M	Spring 2027	45.5%

Cost: \$50M LOP increase to concurrent non-FFGA project due to VA easement agreement and hi-rail vehicle storage (added scope).

Schedule: Metro has reviewed the re-sequencing schedules from both C1151 Tunnels and C1152 Stations contractors and has determined that re-sequencing is the responsibility of the contractors based upon the information provided by the contractors. This can be re-evaluated should additional information be provided by the contractors.

Mitigation Measures: Implement agreed recovery schedule and further reduce negative float through acceleration.

Accomplishments:

- Tunnels Contract: Tunneling completed. Stations Contract: Completed final design, decking, Westwood/UCLA Station utility relocation, and Westwood/VA steam line tunnel relocation. Started station excavation.

Challenges/Risks:

- Due to the Contractor's forecasted completion date, the Project is identifying opportunities to potentially mitigate delays and not impact the current Substantial Completion date.
- Tunneling production rate. Turnover of Tunnels to C1152.
- Commissioning of VA relocated steam line, to enable continued excavation of Westwood/VA station excavation.

C/LAX Closeout “Catch-All”

<u>Original LOP</u>	<u>Current LOP</u>	<u>Current Forecast</u>	<u>Forecast Completion</u>	<u>Project Complete</u>
\$47M	\$47M	\$57M	Fall 2024	35%

Cost: Anticipated LOP increase of \$10M in FY23. Current risks may require a future LOP increase as noted below.

Schedule: Change in complete date due to delay in scope development and procurement of Catch-All Contract no.2.

Mitigation Measures: Continued monitoring of critical and near-term critical path activities. Future opportunities to build schedule contingency will be reviewed and implemented as they are recognized.

Accomplishments:

- CLAX “Construction Punch Out Work” Contract C1217 completed key items for K-Line start of Service Operations.

Challenges/Risks:

- Catch-All contract no. 2 “K-Line Paving & Improvement” is in scope development; delay of six months.
- Unanticipated cost increase due to market conditions and inflation for Catch-All Contract
 - Legal and claim support services for three months due to REA2 Evaluation hearing delay.
 - Extension of CMSS staffing to support Contract C1217.
 - Longer than anticipated procurement due to availability of materials.



CAPITAL PROJECTS

Eastside Access Improvements Project

<u>Original LOP</u>	<u>Current LOP</u>	<u>Current Forecast</u>	<u>Forecast Completion</u>	<u>Project Complete</u>
\$29.7M	\$29.7M	\$29.7M	Spring 2023	90%

Cost: There is potential for cost increases for the Segment 2 work performed by Regional Connector.

Schedule: No Change. Hashimoto Plaza to be completed late Spring 2023.

Mitigation Measures:

- EAIP Team is coordinating with Regional Connector Team for the Segment 2 work as there is potential for changes related to the work Regional Connector Constructor is performing under C0980 Mod 152 and C0980 CO 51 based on the RFIs that have been generated.
- Work with City of LA to expedite review and approval of submittals.

Accomplishments:

95% of Contract C1207 work – Segments 1, 3, 4, 5, 6 and 7 – is complete. This includes all bike lanes, pedestrian/ADA improvements, LED street lighting improvements, and mid-block crosswalk and traffic signal.

Challenges/Risks:

- Traffic control coordination with adjacent Metro projects (Division 20).
- Hashimoto Plaza LED lighting improvements transferred to BSL at unanticipated cost.
- Segment 2 work still in progress including esplanade bioswales, planters, and Class 1 bike lane plus the Wayfinding Installation remains.
- ~~Compromise with the City for track removal needed to build Bike Lanes at Center and Banning.~~

Metro Center Street Project

**Original
LOP**
\$ 112.7M

**Current
LOP**
\$130.7M

**Current
Forecast**
\$143.7M

**Forecast
Completion**
2023

**Project
Complete**
63.6%



Metro Center Street Project

Cost: In Nov 2022, the Board authorized to replace lapsed Prop 1B funds of \$32.2 millions with Prop C 5% Security funds. Due to differing site conditions, design delays by the Design Build Contractor, supply chain issues, extended completion schedule, the current forecast LOP budget is \$143.7 M based on August 2022 Independent Cost, Schedule, Risk Assessment.

Schedule: The substantial completion is in Q4 2023, one year after the original completion date.

Mitigation Measures:

A recovery schedule with mitigations is being developed by the Contractor per Metro's request Enhanced coordination with Metro Division 20 Portal Widening Project to schedule interface works. Negotiate open claims to resolve disputes, avoid further escalation and reduce cost and schedule impacts. Perform additional site investigations to address differing site conditions in Public ROW including Center St sidewalks.

Accomplishments:

Matt foundation, steel erection, and roof deck were completed.

Challenges/Risks:

- Seeking board approval to increase in LOP budget by \$13M based on August 2022 independent cost, schedule, and risk assessment. LOP increase accommodates a year long delays due to combination of unforeseen site obstructions and UPS re-designs.

Rosecrans/Marquardt Grade Separation Project

Original
LOP
\$156.4M

Current
LOP
\$156.4M

Current
Forecast
\$156.4M

Forecast
Completion
2025

Project
Complete
49%

Cost: No Change.

Schedule: Assure project closeout by 2025.

Mitigation Measures: Work with funding partners so grant funding allocations meet construction schedule timeline.

Accomplishments:

- Construction notice to proceed issued in June 2022
- Mobilization and 50% of "clearing and grubbing" work is completed.

Challenges/Risks:

- BNSF may not be able to approve Absolute Work Windows (AWWs) for pre-cast girder erection, due to BNSF's limits of work windows and freight train operations.
- BNSF requests for project betterments
- Loss of grant funding if funding partners are not fully engaged and approve latest construction schedule.



Division 20 Portal Widening Turnback

**Original
LOP**
\$801.7M

**Current
LOP**
\$876.7M

**Current
Forecast**
\$956.7M

**Change in Forecast
Completion**
Winter 2025 to
Spring 2026

**Project
Complete**
46%



Division 20 Portal Widening Turnback

Cost: Anticipated LOP increase through FY24. Current risks may require a future LOP increase.

Schedule: Change in completion date due to change orders related to design issues, differing site conditions. Key change orders are critical path to be addressed prior to base contract work.

Mitigation Measures: Currently prioritizing construction activities, working with contractor to update project schedule

Accomplishments:

- Traction Power Substation Grounding Grid and Pad.
- Metering Switchgear Pad and Cabinet installation.
- First Street Bridge Repairs and Bent Removals complete.
- West Portal Structure bracing and demolition.
- Milestone 2 - Completion of TPSS Pad, Grounding Grid, Site Work, Ductbank, and Other Associated Infrastructure to Set TPSS.

Challenges/Risks:

- Design changes and revisions. Differing site conditions.
 - Portal Wall Demolition: relocation of existing systems and utilities that have been difficult to identify.
 - Ductbank Realignment in the Southern Yard.
 - Time Impacts - Portal Wall Demolition and Construction Phasing.
 - Traction Power Sub-Station (TPSS) Delivery and Installation Delay Impacts.
 - Professional Services Support Contracts.
-

Airport Metro Connector

Original
LOP
\$898.6M

Current
LOP
\$898.6M

Current
Forecast
\$898.6M

Change in Forecast
Completion
Fall 2024

Project
Complete
32.1%



Airport Metro Connector

Cost: No Change.

Schedule: No Change.

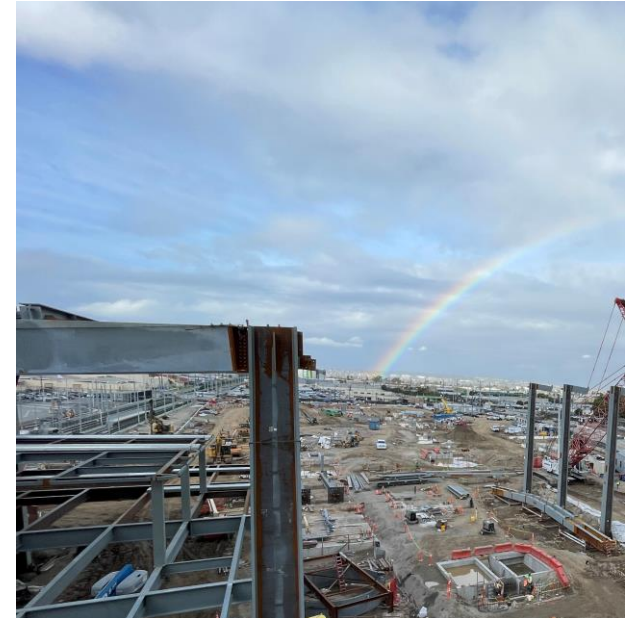
Mitigation Measures: Not Applicable.

Accomplishments:

- Early Works Contract (Demolition, grading and installation of turnbacks) – Contract awarded and NTP issued on May 12, 2021. Contract was substantially complete on July 19, 2022.
- Main AMC Construction Contract – Contract awarded and NTP issued on October 25, 2021. Construction started March 2022. Main structure foundation work completed, and installation of structural steel and main utility runs in progress
- Acquired Hertz Property

Challenges/Risks:

- Supply chain issues affecting delivery of structural steel and electrical equipment.
- Interface with CLAX operation and current adjacent LAWA Projects



Rail to Rail Active Transportation Corridor

<u>Original LOP</u>	<u>Current LOP</u>	<u>Current Forecast</u>	<u>Forecast Completion</u>	<u>Project Complete</u>
\$ 116.0M	\$143.3M	\$158.3M	Fall 2024	25%

Cost: Additional anticipated LOP increase of approximately \$15M through FY24 due largely to unforeseen soil contaminants.

Schedule: No Change.

Mitigation Measures: Not Applicable.

Accomplishments:

- Executed \$27,295,000 funding agreement with City of LA for work in public ROW in March 2022.
- Increased LOP from \$116.0M to 143.28M in April 2022 to include work in public ROW.
- Groundbreaking ceremony July 2022.
- Redesign efforts in support of the City of LA Slauson Connect project.
- Completed placing concrete for retaining wall footing and walls to 8th Ave.

Challenges/Risks:

- Unforeseen contamination in Metro ROW may impact schedule due to additional treatment/clean-up
- Unforeseen subsurface conditions in the Public ROW intersections.
- Third party expenditures with City of LA are much higher than forecasted in preliminary design due to the work in public ROW.
- Challenging schedule from LADOT for obtaining traffic control approval which may delay construction in Public ROW as Traffic control plans must be approved ahead of Contractor’s schedule.
- Tree Grant awarded to City is scoped to install a greater number of trees than feasible by design.

I-5 North County Enhancements Project



Current
LOP
\$679.3M

Available
Funding
\$679.3M

Forecast
Completion
Summer 2026

Project
Complete
20.7%

Cost: No Change.

Schedule: No Change.

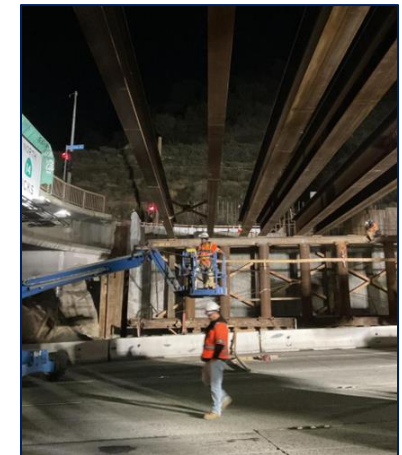
Mitigation Measures: Not Applicable.

Accomplishments:

- Secured \$47M in INFRA - Federal Funding
\$247M in TCEP - SB1 State Funding
- Construction Support Services Contract awarded Aug 2020
- Bids issued Nov 2020, Bids Received Feb 2021; LOP approved by Metro Board Mar 2021; Contract award to OHL USA July 2021; NTP for project August 23, 2021; Construction start Oct 2021; work on Stage 1 Phase 1 and Phase 2 – several bridges, multiple retaining walls, drainage, barrier/roadway demo, excavation and base placement
- Anticipated Substantial Completion July 2026.

Challenges/Risks:

- Coordinating with other Stakeholders: FHWA, City of Santa Clarita, LA County, CHP, NPS, CDFW.



Soundwall Package 10



Original
LOP
\$50.9M

Current
LOP
\$72.5M

Current
Forecast
\$72.5M

Forecast
Completion
Winter 2026

Project
Complete
6%

Cost: No Change.

Schedule: No Change.

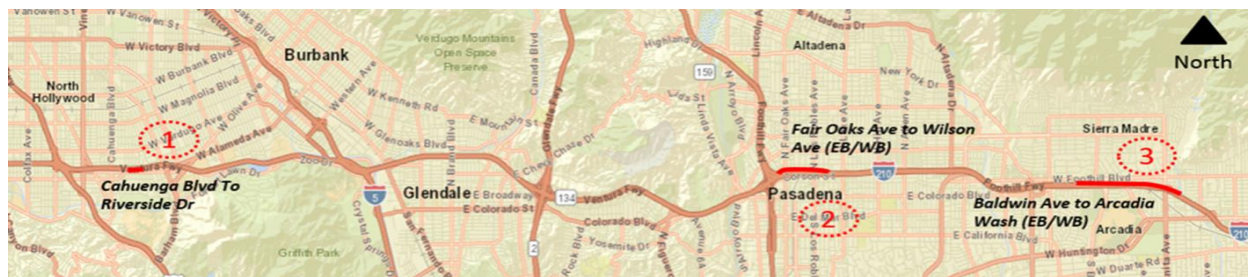
Mitigation Measures: Not Applicable.

Accomplishments:

- Secured \$48.6M in HIP - Federal Funding
- Constructability Review Complete
- Construction Cooperative Agreement Executed
- CSSC Contract has been awarded.
- Construction Contract has been advertised.
- LOP Approved by Metro Board in December 2022.
- Field office has been opened in City of Pasadena.

Challenges/Risks:

- Encroachment Permit from City of Pasadena is Conditional





ALTERNATIVE PROJECT DELIVERY PROJECTS



Link Union Station (LINK US)

Preconstruction <u>Phase Budget</u>	Available <u>Funding</u>	Current Forecast <u>LOP Budget</u>	Change in Forecast <u>Completion</u>	Project <u>Complete</u>
\$297.8M	\$950.4M	\$1,750.4 - \$2,130.0	2032	16%



Link Union Station (LINK US)

Cost: The Project Team is developing a Bottom-up Estimate. Costs will be refined to account for recent Value Engineering and any reduction in risk associated with access to the West Bank Storage Tracks.

Schedule: The master schedule has been extended to account for a new CMGC Procurement that coincides with NEPA environmental clearance, as well as the risks from acquiring a portion of the West Bank Storage Tracks from BNSF.

Mitigation Measures: Once a budget and schedule has been refined, the project will proceed with Advanced Preliminary Engineering while NEPA is being finalized. This project is being delivered Alternative Project Delivery which provides an opportunity to optimize project scope and reduce costs to conform with available funding.

Accomplishments:

- On May 26, 2022, the Metro Board approved a Preconstruction Budget of \$297.8 million for the Preconstruction Work of the Link US Phase A Project including planning, design, preconstruction services by CMGC, Real Estate Acquisition and 3rd Party Work.
- On May 26, 2022, the Metro Board approved a Project Management Funding Agreement (PMFA) in the amount of \$423.3 million with the California High Speed Rail Authority.

Challenges/Risks:

- NEPA Approval prior to CMGC Award.
 - Agreement from BNSF to occupy a portion of the West Bank Storage Tracks prior to CMGC Award.
 - Substantial funding gap as a result of cost escalation, potential railroad impacts, revised base scope costs, and other impacts.
-

G Line (Orange) Bus Rapid Transit Improvements

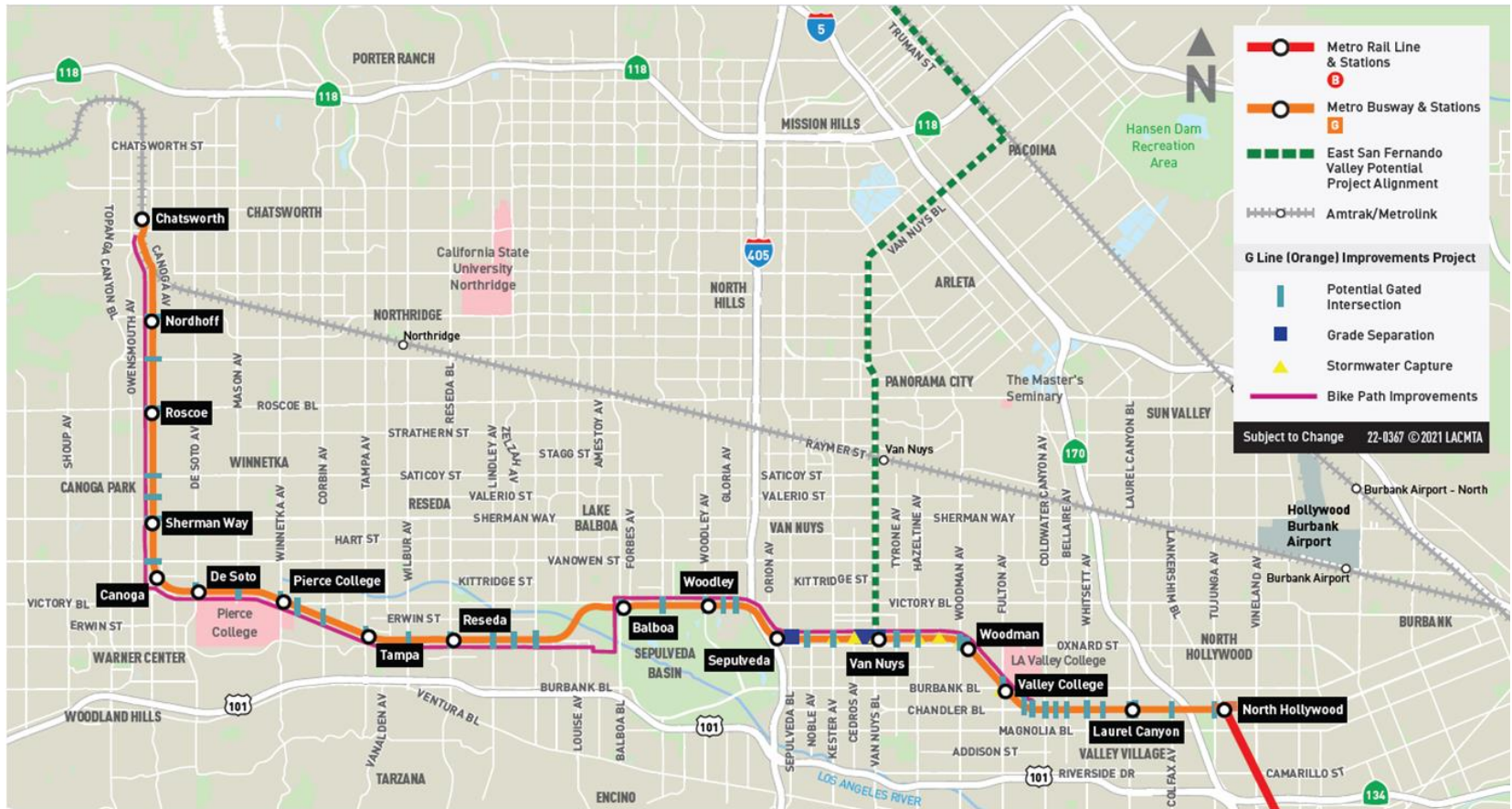
**Pre-Construction
Phase Budget**
\$149.7M

**Available
Funding**
\$391.0M

**Current Forecast
LOP Budget**
\$392.0M - \$511.0M

**Change in Forecast
Completion**
Winter 2026

**Project
Complete**
6%



G Line (Orange) Bus Rapid Transit Improvements

Cost: Increase in estimated costs due to added gated intersection scope and stormwater capture scope (*not in original Expenditure Plan*), with additional application of market-based escalation.

Schedule: Change in completion date due to pivot to Progressive Design Build (PDB) delivery method which required board action and development of new contract.

Mitigation Measures: Implementing progressive design build project delivery to support potential cost reduction strategies and encourage contractor collaboration and optimization of the design, scope, pricing and schedule.

Accomplishments:

- Completed installation and testing of Pilot Gate project.
- Award and Approval of PDB Contract Phase 1 by the board in August 2022.
- Notice to Proceed was issued in November 2022.

Challenges/Risks:

- Gates for bus transit do not exist in US; new technology to be developed and tested.
- Traffic impacts/mitigation due to gates.
- Uncertainty of fiber availability to satisfy project requirements.
- Right of way acquisitions and major utility relocations.
- Integration with Sepulveda and ESFV Transit Corridor projects.
- Maintaining existing bus operation during construction.
- City Agency review and approval time may delay project schedule.

I-105 Express Lanes

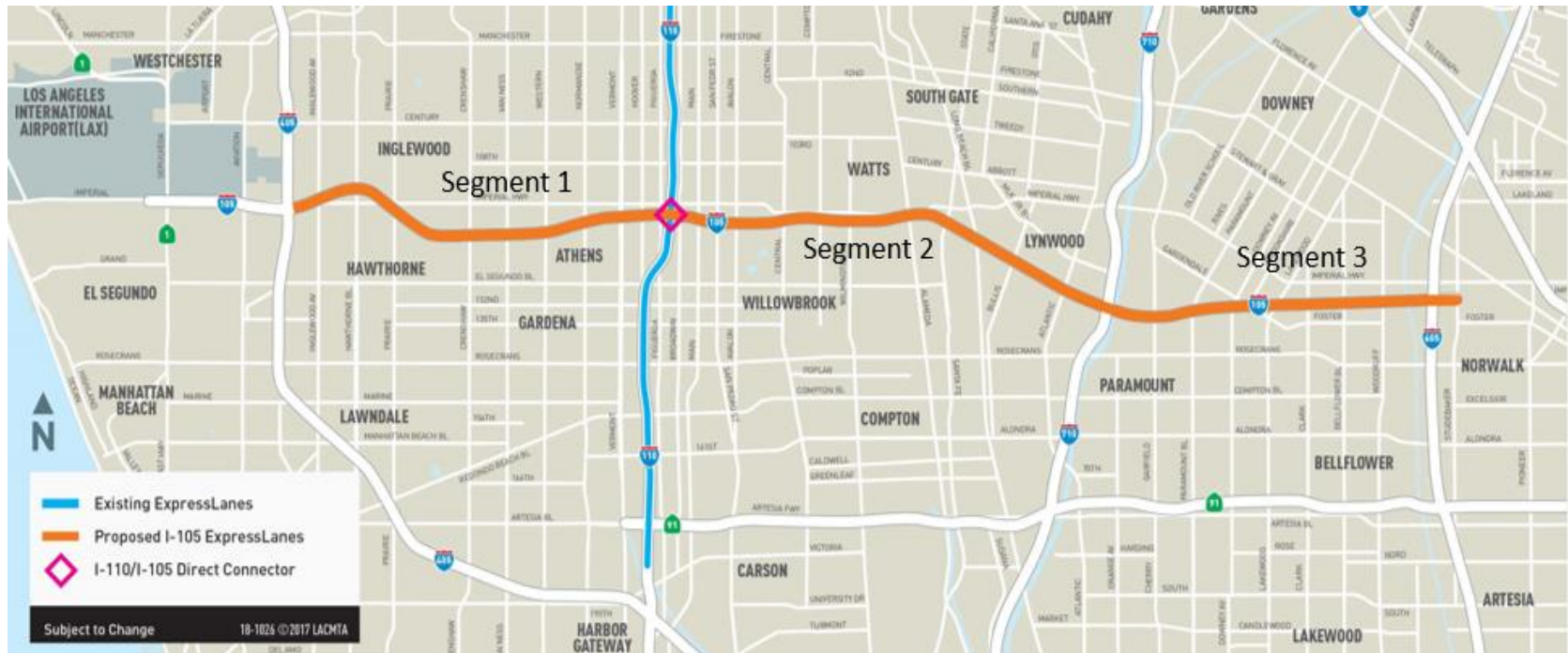
Pre-Const. Phase
Budget
 \$119.4M

Available
Funding
 \$325.0M

Current Forecast
LOP Budget
 \$780.0-\$1000M

Forecast
Completion
 Summer 2028

Project
Complete
 2%



I-105 Express Lanes

Cost: Segment 1 estimate by CMGC; ICE is in progress. Seg 2/3 estimating process has not started.

Schedule: No change.

Mitigation Measures: Project will be delivered by segment. Pursuing Federal grants, TIFIA loan, and revenue bonds backed by toll revenue as part of funding plan. Implementing Construction Manager/General Contractor (CM/GC) project delivery to support State grant schedule and potential cost reduction strategies and encourage contractor collaboration and optimization of the design, scope, pricing and schedule.

Accomplishments:

- Notice to Proceed (NTP) was issued to CMGC Contractor on November 10th and CMGC Phase 1, Pre-Construction work has initiated.
- For Segment 1, 95% Design was submitted on 12/20/22 and 100% design is in progress, for Segment 2 and 3, 35% Design submitted to Caltrans.

Challenges/Risks:

- Measure M/State SB 1 grant funds partial project cost, funding plan relies on future TIFIA loan and/or revenue bonds to be repaid by toll revenue.
- Accelerated design schedule for Segment 1 to meet SB1 requirements to issue construction contract by December 2023, which requires close partnership with Caltrans.
- Multiple contracts on the project require close coordination.
- Close coordination required with Metro rail operations to minimize disruption to C line and all the proposed improvements including OCS and tie replacements.
- Close coordination required with Metro WSAB project.

East San Fernando Valley Transit Corridor

Cost: FFGA value and Metro LOP differential will be on the order of \$61M as FTA has defined FFGA cost eligibility to not include investments pre-dating the EPD Award. FFGA value forecast as of December 2022 is \$3.573B; work continues to address risks and thereby reduce the FFGA budget.

Schedule: FTA risk assessment reflects 2030 completion; Project is reviewing the entire schedule to ensure a reasonable baseline is established in the FFGA.

Mitigation Measures: Implementing progressive design-build project delivery to encourage contractor collaboration, optimization of the design, scope, pricing and schedule, and risk reduction. Collaboration with the City of LA's many stakeholders continues to be a priority. Of particular concern is the undergrounding of power and communication lines in the northern half of the Project which poses significant challenges to scope, environmental clearance, schedule, cost and funding.

Accomplishments:

- Preliminary Engineering 30-60% in late 2022; designs of utility adjustments and realignments have progressed considerably with the full design of 1 of 7 packages contracted.
- Construction Management contract awarded in August 2022; P3 Solar and Storage Equipment for MSF awarded in November 2022; PDB contract awarded in February 2023; AUA issued in late 2022.
- Received \$600M in February 2023 from Transit Intercity Rail Capital Program (TIRCP) State funding.

Challenges/Risks:

- Utility issues (especially LADWP undergrounding) are impacting project cost and schedule.
 - ROW acquisition schedule has lagged due to prolonged contracting efforts which may ultimately strain timely access for the PDB contractor.
 - Reducing funding gap and securing residual funds needed among federal, state and local sources.
-

North Hollywood to Pasadena BRT

Design, Pre-Procurement Budget	Available Funding	Current Forecast LOP Budget	Forecast Completion	Project Complete
\$13.7 M	\$317.0 M	\$ 263.0-\$386.0 M	Spring 2027	4%

Cost: The proposed project is estimated to cost estimate between \$263 million to \$386 million. The project has \$317M in programmed capital funding including \$267M in the Measure M Expenditure Plan and \$50 million SB1 funds.

Schedule: FEIR was approved in FY22, procurement of CMSS, Design Engineer and CMGC to be completed in FY24, Design and Construction to follow FY24-FY27.

Mitigation Measures: Project Delivery via CMGC to provide opportunities to pursue phasing strategies and value engineering opportunities to reduce project cost, minimize construction impacts and potentially open segment sections early.

Accomplishments:

- FEIR approved by Board April 28, 2022
- Design advancing to Preliminary Engineering
- Scope and scheduling meetings being held with authorities having jurisdiction

Challenges/Risks:

- Staffing/Project Resources
- Coordination with authorities having jurisdiction and associated scope creep.

A high-speed train, possibly a Shinkansen, is shown on tracks. The train is white with a teal stripe and has the number 670 on its front. The background features palm trees and a clear sky. The text "SHOVEL READY PROJECT DEVELOPMENT" is overlaid in the center.

SHOVEL READY PROJECT DEVELOPMENT

I-710 Early Action Soundwall Package 2



Design, Pre-Procurement Budget
\$4.77M

Available Funding
\$9.44M

Current Forecast
\$9.44M

Forecast Completion
Summer 2025

Project Complete
36.80%

Cost: No Change.

Schedule: No Change.

Mitigation Measures: Not Applicable.

Accomplishments:

- Constructability Review Completed
- Construction Cooperative Agreement Executed
- CSSC Contract has been awarded

Challenges/Risks:

- Funding approval to pursue construction.
- TCE Extension would have cost and schedule implications.



I-605/South Street Interchange Improvement



Design, Pre-Procurement Budget
\$5.0M

Available Funding
\$23.06M

Current Forecast
\$23.06M

Forecast Completion
Summer 2024

Project Complete
21.70%

Cost: No Change.

Schedule: No Change.

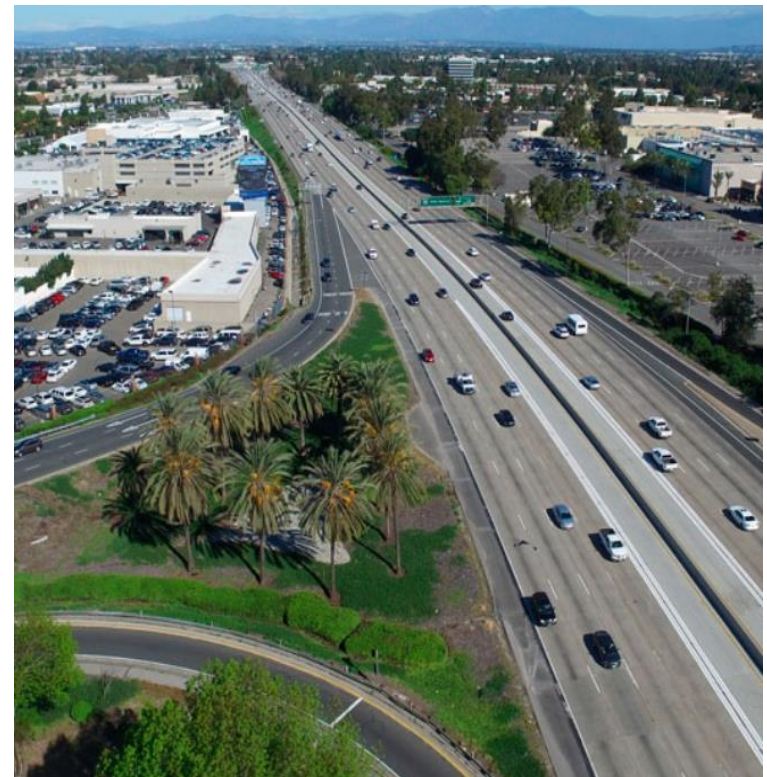
Mitigation Measures: Not Applicable.

Accomplishments:

- Constructability Review Completed
- CSSC Contract has been awarded
- Caltrans Cooperative Agreement executed.

Challenges/Risks:

- Funding approval to pursue construction.
- City Restriction of no lane closures during the holiday season.



EB SR-91 Atlantic to Cherry Auxiliary Lane Improvements



<u>Design, Pre-Procurement Budget</u>	<u>Available Funding</u>	<u>Current Forecast</u>	<u>Forecast Completion</u>	<u>Project Complete</u>
\$7.9M	\$94.7M	\$94.7M	Summer 2028	8.30%

Cost: No Change.

Schedule: No Change.

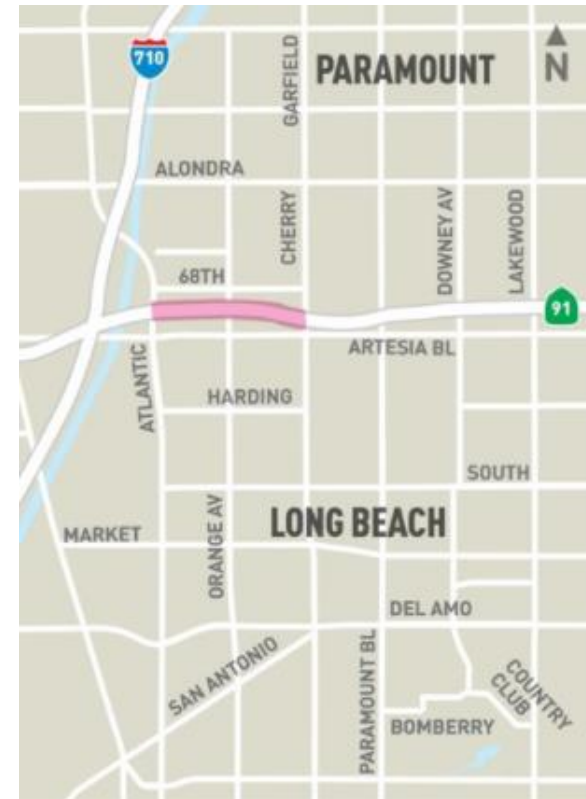
Mitigation Measures: Not Applicable.

Accomplishments:

- Design has been completed pending final RTL.
- Constructability Review Completed
- Caltrans Cooperative Agreement executed.
- Construction Management Support Services RFP has been issued.

Challenges/Risks:

- TCEP funding obligation deadline
- Delay of final RTL would impact project advertisement schedule.



Brighton to Roxford Double Track Project

Design Phase <u>Budget</u>	Available <u>Funding</u>	Total Project <u>Forecast</u>	Change in Forecast <u>Completion</u>	Project <u>Complete</u>
\$17.8 M	\$97.2M	\$300.0 M	2027	6%

Cost: \$4.3M to account for out-of-scope services, third party coordination and other design condition changes.

Schedule: One year extension to complete design phases for segments 1, 2 and 4.

Mitigation Measures: Issue contract modification and task order contract. Staff will continue to look for local, state, and federal funding opportunities for construction.

Accomplishments:

- Secured \$77.3M for Segment 1 improvements through the AVL Service and Capacity 2020 TIRCP grant.
- City of Los Angeles has approved all roadway geometrics at the grade crossings for segments 1, 2 and 4.

Challenges/Risks:

- Significant changes to existing conditions or betterment third party requests.
- Obtaining construction funding for segments 2, 3 and 4.
- Third party utility modification approvals.



Lone Hill to White Double Track

Design Phase Budget	Current Design Phase LOP	Total Project Forecast	Forecast Completion	Project Complete
\$8.3M	\$8.3M	\$180.0M	2027	4%

Cost: \$4M to account for out of scope of work from the 60% submittal and third-party services.

Schedule: One year extension for project reviews and new approving agency oversight.

Mitigation Measures: Staff will continue to seek construction funding and contract modification.

Accomplishments: Preliminary Engineering and CEQA completion and submitted 60% final design.

Challenges/Risks:

- Obtaining \$169.5M to fully fund the project with a construction start by 2026.
- Cities can elect not to proceed with quiet zone ready infrastructure and request soundwalls.



Doran and Broadway/Brazil Grade Separation Project

<u>Design Phase</u>	<u>Available</u>	<u>Total Project</u>	<u>Forecast</u>	<u>Project</u>
<u>Budget</u>	<u>Funding</u>	<u>Forecast</u>	<u>Completion</u>	<u>Complete</u>
\$11.0M	\$11.0M	\$279.0M	2030	2%

Cost: \$5M to account for out-of-scope services, third party coordination and other design direction changes.

Schedule: Two-year extension to split the project into two phases and revise Salem/Sperry Overpass per City requests.

Mitigation Measures: Continue to seek construction funding and issue contract modification. Sought full funding for Phase a through grant programs such as Railroad Elimination Crossing, Consolidated Rail Infrastructure and Safety Improvements (CRISI), and Transit and Intercity Rail Capital Program (TIRCP). If awarded, seeking same programs for Phase B in 2024.

Accomplishments:

- Army Corps approved geotechnical boring within the Verdugo Wash
- Submitted \$38.5M request through the 2022 Railroad Crossing Elimination/Consolidated Rail Infrastructure and Safety Improvements Programs to fully fund Phase A improvements

Challenges/Risks:

- Obtaining construction funding for the Salem/Sperry Overpass (\$220.5M) and the Doran Street Grade Separation project (\$53.3M) and agency design approvals.

Doran Street Active Transportation Project

Design Phase	Available	Total Project	Forecast	Project
<u>Budget</u>	<u>Funding</u>	<u>Forecast</u>	<u>Completion</u>	<u>Complete</u>
\$3.0M	\$19.3M	\$25.0M	2025	0%

Cost: No Change.

Schedule: One year to start and complete design build procurement documents.

Mitigation Measures: Issue task order to prepare bidding documents.

Accomplishments:

- Project has received CEQA Notice of Exemption approval.

Challenges/Risks:

- Maintain \$16.3M of ATP grant funding and secure remaining \$5.7M needed for project.
- Obtaining Army Corps approval to construct the Riverwalk Bridge project.



Doran Street Interim Improvements

**Construction
Phase Budget**
\$9.0M

**Available
Funding**
\$9.0M

**Current Forecast
LOP Budget**
\$9.0M

**Forecast
Completion**
2025

**Project
Complete**
0%

Cost: No Change.

Schedule: Construction schedule extended while waiting for 2022 Railroad Crossing Elimination/ Consolidated Rail Infrastructure and Safety Improvement Program award notification for grade separation work with approval from California Public Utilities Commission (CPUC).

Mitigation Measures: Seeking board approval for \$600k for real estate costs for acquisition work at the Propane Facility.

Accomplishments:

- Completed construction of Broadway/Brazil traffic signal improvements.
- Final design approval for all project partners.

Challenges/Risks:

- Resume right-of-way work to meet revised CPUC approved construction completion.





PROJECTS IN CLOSEOUT



Crenshaw/LAX Transit Project

Original
LOP
\$1,749.0M

Current
LOP
\$2,148.0M

Current
Forecast
\$2,148.0M

Change in Forecast
Completion
Fall 2019 to
Fall 2022

Project
Complete
99.9%



Crenshaw/LAX Transit

Cost: Anticipated LOP increase in FY24 due to current risks as noted below.

Schedule: Started revenue service October 7, 2022. Project's Final Acceptance is anticipated by fall 2023.

Mitigation Measures: Negotiating outstanding change orders including credit and Request for Equitable Adjustment (REA) resolution.

Accomplishments:

- Started Revenue service with minimum issues reported.
- Safety Certification Verification Report (SCVR) was submitted to CPUC on 9/13/22 and approved and accepted by CPUC on 9/28/2022.
- Metro Operations completed "K-Line Standard Operating Procedures" and operator training.
- Continue to resolve outstanding changes including credit change orders.

Challenges/Risks:

- Project Team continues to make progress to finish the remaining work including punch list items, training, submittals, and as-built drawings to achieve the Project's Final Acceptance.
- The closing and resolving remaining California Public Utility Commission (CPUC) non-safety critical open items is progressing slower than anticipated.
- Resolution of REA claim has slipped by three months.
- Additional funding will be needed to address REA resolution.

Soundwall Package 11

<u>Original LOP</u>	<u>Current LOP</u>	<u>Current Forecast</u>	<u>Forecast Completion</u>	<u>Project Complete</u>
\$98.38M	\$102.5M	\$109.2M	Summer 2023	93.2%

Cost: Additional anticipated LOP increase of \$6.7M in FY23 Q3 due to ongoing vandalism and maintenance costs.

Schedule: No schedule change in FY24.

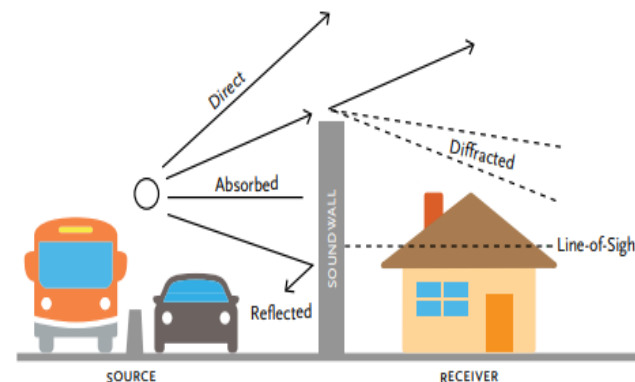
Mitigation Measures: Working with CALTRANS and getting them to accept ownership. Metro and CALTRANS are collaborating to resolve the issues and determine a joint path forward..

Accomplishments:

- NTP for Soundwall Package 11 December 2017 (FY18 Q2); Period of Performance is 48 months
- Board for LOP increase January 2021
- Substantial Completion: February 2022 (FY22 Q3)
- Punchlist / All construction complete: April 2022 (FY22 Q4)
- Contract Close-out: July 2022 (FY23 Q1)
- Project Close-out: June 2023 (FY23 Q4)
- Completed 99% of current Contract Value

Challenges/Risks:

- Homeless encampments along the job site
- Recurring vandalism and theft
- Timely billing by DWP and other 3rd parties
- CALTRANS not taking ownership keeps maintenance costs on Metro books impacting LOP.





Board Report

File #: 2023-0106, File Type: Informational Report

Agenda Number: 25.

CONSTRUCTION COMMITTEE MARCH 16, 2023

SUBJECT: EARLY INTERVENTION TEAM STATUS REPORT

ACTION: RECEIVE AND FILE

RECOMMENDATION

RECEIVE AND FILE status report on the Early Intervention Team.

ISSUE

In response to the FY23 Annual Program Evaluation (APE) Follow-up Report presented in June 2022, the Board requested development of an Early Intervention Team (EIT) to: create a list of comprehensive checklist criteria on successful project delivery to address topics such as funding strategy and project delivery method for all Measure M Expenditure Plan Projects; and include metrics to help evaluate the success and progress of cost control efforts. Implementation of this directive has been advanced with a status report provided in October 2022. This report is the second progress update.

BACKGROUND

Los Angeles Metro is delivering the largest transportation infrastructure program in the country. The Program Management FY24 Annual Program Evaluation (APE) reported a FY24 program size of up to \$26.8 billion, a 13.1% increase from FY23, and a portfolio of more than 70 projects. The program has been experiencing construction market pressures from labor shortages, material costs, and market risks. Updated economic projections indicate that these challenges will continue throughout 2023 and will continue to drive construction inflation. Inflation has decreased to 6.5% but remains well above the Federal Reserve's 2% target.

The EIT is setup to draw on the collective wisdom of cross department collaboration to review and assess cost and schedule drivers, potential corresponding mitigation strategies currently in practice at Metro, as well as new mitigation strategies needed across the full life cycle of projects, from planning through construction and finally into operations and maintenance. Led by the Deputy Chief Executive Officer, the EIT kicked off their effort in July 2022.

The EIT was established to provide additional leadership support for LA Metro's capital program, given the capital portfolio was experiencing elevated fluctuations in project cost and delayed delivery timelines. Structured, increased cross-collaboration across LA Metro development and delivery teams was highlighted as a way to improve delivery outcomes across LA Metro's portfolio of

interrelated and complex capital projects. This was especially important given the magnitude of projects being developed and delivered in the near-term, as well as providing necessary transportation infrastructure in service to the 2028 Olympic and Paralympic Games.

Since July 2022, the EIT has been meeting at least bimonthly as a cross-departmental team and has identified and agreed upon overall objectives and selected planned actions to guide the team's work.

EIT Objectives

In October 2022, staff provided to the Board an initial status update of the EIT purpose, objectives, and progress. The overarching objectives of the EIT initiative included:

- Improving successful delivery of the capital program, with a focus on cost and schedule containment strategies and clear, shared inter-departmental objectives;
- Considering and complementing existing agency programs; and
- Advancing an update of project forecasts, with consideration of full lifecycle costs, in a manner that would enable the CEO and the Board to assess and address the agency's ability to continue delivery of the planned capital projects with existing available resources.

The following EIT actions have also been established in previous updates to the Board and are currently underway:

- Assess primary cost drivers and corresponding mitigation actions that need to be considered for successful project delivery, including decision points related to funding strategies and delivery models;
- Update project cost estimates, with consideration of significant external market drivers, for use as the basis for future metrics to evaluate the success and progress of agency cost control efforts;
- Confirm the method for providing estimate ranges, as appropriate for major projects in all phases of delivery (planning, design, construction, and ongoing operations and maintenance);
- Propose processes that support cost control efforts and indicate which processes effectively build upon previous department specific approaches (e.g., Cost Control Policies, BR 2017-0596), including the adoption and update of comprehensive checklists within the current stage gate and corresponding readiness review procedures;
- Conduct project-focused reviews to align EIT interventions and discussions more quickly with immediate and long-term project needs; and
- Identify required resource needs to implement the scope of recommended EIT processes and procedures.

DISCUSSION

Below is a summary of key approach and actions of the EIT effort since October 2022. Attachment A includes a more detailed status update and progress review of the EIT.

The EIT has focused its attention on the earlier phases of the project lifecycle, where it has the greatest opportunity to influence project outcomes and where a cross-functional leadership team is

best positioned to create and pressure test approaches and alternatives to drive increased value assurance. The EIT has identified six intervention points for EIT Project Reviews (Attachment B). For each intervention point, the EIT has identified an extensive list of potential cost drivers and risks and translated those into a comprehensive set of targeted questions to guide EIT Project Reviews.

The EIT has focused on understanding the intervention points across the project lifecycle that enable, protect, and enhance project value. The EIT team selected three projects to undergo the initial EIT Project Reviews with the intention to improve cost and schedule outcomes by providing a forum for meaningful cross-departmental dialogue in advance of approaching key project decision points, as well as test and improve the EIT processes to make the EIT more useful for future projects' EIT engagement. The projects selected for this round of feedback from the EIT included:

- East San Fernando Valley (ESFV) Transit Corridor project,
- East Side Transit Corridor Phase 2 (ESP2), and
- I-105 Express Lanes.

All three projects have already undergone their first EIT Project Review with the full cross-functional EIT. Each project team provided responses to the EIT targeted questions and prepared a presentation on the status of their project. These documents facilitated the dialogue around key cost drivers, project scoping, basis for selection of the project delivery method, project risks, and challenges with select stakeholders. Having senior representatives from all key departments present in the discussion led to cross-departmental collaboration on key issues, instant feedback for the project teams, fast unlocking of roadblocks, and accelerated decision-making. During the EIT Project reviews, action items were noted, including potential opportunities for improvement. Finally, a representative of the EIT followed up with each project team's leadership to share their written findings and recommendations as the projects continue to advance to future decision points.

Value of EIT To Date

By bringing together a group of senior leaders with diverse experience to provide guidance at critical moments in a projects' trajectory, the initial EIT Project Reviews have started to improve project outcomes and have received positive feedback from project teams.

Examples of the value to date are:

East San Fernando Valley Transit Corridor:

- Exploring an alternative solution to the existing ROW acquisition needs by utilizing PDB contractor resources
- Creation of a value engineering process that is optimal for an alternative delivery method
- Early identification and management of project risk by creating opportunities to work with contractors and stakeholders during design development
- Confirm that project outcomes align with LA Metro's goals

Eastside Transit Corridor Phase 2:

- Increased understanding of the complexity of the construction, operations, and engineering associated with the project being an extension of an existing system. (e.g.,

phasing of work, customer experience considerations, and potential extension of the fiber network).

- Discussion with EIT assisted with the direction of the recommended LPA to choose a larger yard that accommodated future system capacity.
- Creation of greater awareness within the team on what work is needed and future steps so that they can effectively integrate them into technical solutions

I-105 Express Lanes:

- Early engagement of LA Metro's Operations decision makers to problem-solve key project scope elements (e.g., West Santa Ana Branch crossing) and identification of innovative design solutions to deliver a successful project outcome and mitigate integration risk with the existing system,
- Implementation of a proactive stakeholder engagement process and early coordination discussions with contractors, which could reduce cost and schedule overruns, as well as benefit the success of adjacent projects,
- Development of a more complete construction scope definition, with buy-in from third-party stakeholders, and
- Reduction in rework for third parties and owners of adjacent projects by involving them earlier in the schedule coordination discussions with Metro's contractor

The EIT will continue to expand and adapt to further support LA Metro's capital program by formalizing processes and policies, conducting additional project reviews, and supporting the three projects above as they advance through other EIT points in their project lifecycle.

EQUITY PLATFORM

The recent EIT project focused reviews examined three projects that are all in equity focus communities with a desired outcome to deliver the projects on-time and within budget. The projects selected were the East San Fernando Transit Corridor, Eastside Transit Corridor Phase 2 and, 105 Express Lanes from I-405 to I-605. The East San Fernando and Eastside projects are 100% within or adjacent to Equity Focus Communities. The 105 Express Lanes is 70% within or adjacent to Equity Focus Communities. Each of these projects are working with the stakeholder communities to minimize disruption and balance community benefits and stakeholder engagement. Collaborative cost management and risk mitigation strategies help ensure Metro remains a responsive and responsible steward of taxpayer dollars. This helps focus Metro's infrastructure program on riders and residents who rely the most on Metro's system. Future Project Reviews will continue to build on lessons learned from ongoing projects and prior EIT interventions to improve processes with the intention of realizing improved project outcomes and associated equity benefits.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

Recommendation supports the following strategic goals:

Strategic Plan Goal #1 - Provide high-quality mobility options that enable people to spend less time

traveling. This will be accomplished by planning and delivering multiple capital projects on time and on budget.

Strategic Plan Goal #5 - Provide responsive, accountable, and trustworthy governance within the Metro organization.

NEXT STEPS

In July 2023, EIT will report back to the Board with an update on the program-wide, organization-wide Early Intervention Team process, including the status on further advancement of all identified EIT objectives and planned actions.

ATTACHMENTS

Attachment A - EIT Status Report

Attachment B - Appendix EIT Status Report

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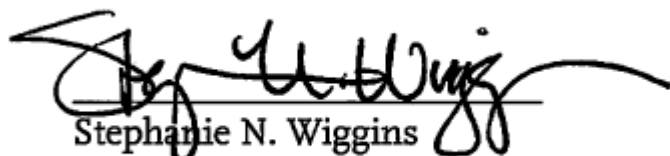
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EIT STATUS REPORT TO METRO BOARD

FINAL DRAFT

March 2023 (Construction Committee)

TABLE OF CONTENTS

- 1 Executive Summary..... 1**
- 2 Background..... 3**
 - 2.1 Capital portfolio Context for Initiation of EIT.....3
 - 2.2 formation, establishment, & structure of early intervention team.....3
 - 2.3 objectives & planned actions of EIT.....3
 - 2.4 summary of October 2022 board meeting.....4
- 3 EIT Project Review Process & Workflow 6**
 - 3.1 Overview LA Metro Project Life Cycle6
 - 3.2 Overview of EIT Project Review Process.....7
 - 3.3 Initiation Phase.....9
 - 3.3.1 Project life cycle phase overview9
 - 3.3.2 EIT Project Review #0 (EIT 0): Initial Briefing9
 - 3.4 Planning Phase9
 - 3.4.1 Project life cycle phase overview9
 - 3.4.2 EIT Project Review #1 (EIT 1): Pre-Draft Environmental 10
 - 3.4.3 EIT Project Review #2 (EIT 2): Pre-Final Environmental 11
 - 3.4.4 EIT Project Review #3 (EIT 3): Pre-transition to Engineering..... 12
 - 3.5 Engineering Phase 13
 - 3.5.1 Project life cycle phase overview 13
 - 3.5.2 EIT Project Review #4 (EIT 4): Pre-Final Delivery Method Selection 13
 - 3.5.3 EIT Project Review #5 (EIT 5): Pre-RFP/IFB Release 14
 - 3.6 Procurement Phase..... 14
 - 3.6.1 Project life cycle phase overview 14
 - 3.6.2 EIT Project Review #6 (EIT 6): Pre-NTP..... 15
 - 3.7 Construction / Integration Phase..... 15
 - 3.7.1 Project life cycle phase overview 15
 - 3.8 Operations / Activation / Integration Phase..... 16
 - 3.8.1 Project life cycle phase overview 16
- 4 EIT Status of Pilot Project Reviews Completed & Underway..... 17**
 - 4.1 Overview of EIT Project Reviews..... 17
 - 4.2 East San Fernando Valley Transit Corridor (EIT Initial Pilot Project)..... 19
 - 4.2.1 Project Background 19
 - 4.2.2 EIT process 19
 - 4.2.3 EIT findings and recommendations 19
 - 4.2.4 Potential project improvements and next steps.....20
 - 4.3 Eastside Transit Corridor Phase 220
 - 4.3.1 Project Background 20

4.3.2	EIT process	20
4.3.3	EIT findings and recommendations	20
4.3.4	Potential project improvements and next steps.....	21
4.4	I-105 Express Lanes	21
4.4.1	Project Background	21
4.4.2	EIT process	22
4.4.3	EIT findings and recommendations	22
4.4.4	Potential project improvements and next steps.....	23
5	Next Steps & Priorities for EIT.....	25
5.1	Value of EIT to Date	25
5.2	Near-Term Priorities: EIT Planned Assessments & KPI Integration	26
5.3	Forward-looking Priorities: Capital Program	26

FIGURES

Figure 1.	Project Influence Curve.....	7
Figure 2.	Project Phases & Identified EIT Reviews	8
Figure 3.	EIT Review Meetings for 3 In-flight Projects.....	17

1 EXECUTIVE SUMMARY

The Early Intervention Team (EIT) was stood up to help provide additional leadership support for LA Metro's capital program. The need for increased cross-collaboration to deliver on the inter-related and complex capital portfolio was highlighted by the critical need to deliver near-term projects and meet the mandate of the 2028 Olympic and Paralympic Games in a time when the capital portfolio was experiencing elevated fluctuations in project cost and delayed delivery timelines. The EIT was created in July 2022 in an effort led by the Deputy Chief Executive Officer (DCEO). Since then, the team has identified an extensive list of potential cost drivers and risks and translated those into a comprehensive set of targeted questions to guide EIT Project Reviews. The team has developed and documented a Project Review Process and conducted three EIT Project Reviews.

The EIT has focused its attention on the early project lifecycle phases where it has the greatest opportunity to influence the project outcomes and where a cross-functional leadership team is best positioned to create and pressure test approaches and alternatives to drive increased value. The EIT has identified six intervention points for EIT Project Reviews.

During the project Initiation phase, the team has

- **EIT 0: Initial Briefing** to create an executive leadership team, assess the potential project solutions to deliver on the intended project benefits, and to set and agree to project Key Performance Indicators (KPIs) and where the EIT can support.

In the Planning phase, there are three EIT Project Reviews:

- **EIT 1 (Pre-Draft Environmental)**: Key checkpoint to confirm a reasonable number of project alternatives are considered and ensure robust stakeholder engagement to pressure test project alternative outcomes
- **EIT 2 (Pre-Final Environmental)**: confirm refined project scope, schedule, and cost for Locally Preferred Alternative (LPA), iterate and syndicate list of identified project risks, and identify actions to advance project delivery
- **EIT 3 (Pre-transition to Engineering)**: Monitor project risks and mitigation strategies, ensure smooth transition to engineering phase and, inform viability of project delivery methods

During the Engineering phase, there are two EIT Project Reviews:

- **EIT 4 (Pre-Final Delivery Method Selection)**: support the creation of a well-informed final delivery method recommendation and drive continued internal and external stakeholder engagement
- **EIT 5 (Pre-Request for Proposal/Invitation for Bids Release)**: confirm scope with original project definition team and assess project readiness for a successful procurement phase

The Procurement phase has the final EIT Project Review:

- **EIT 6 (Pre-Notice to Proceed for a negotiated GMP delivery)**. This project review is at the inflection point where committed capital expenditures begin to outweigh the potential to influence remaining project costs. Specifically for alternative delivery projects utilizing a

pre-construction phase to collaborate between owner, designer and contractor this review confirms a satisfactory project scope and design definition that enables a thorough cost estimate for a successful construction phase. Also, this review ensures clearly defined roles and responsibilities across critical stakeholders to guide decision-making rights and improve collaboration.

To test the EIT Project Review process and targeted questions, the EIT selected three projects that were approaching key project development milestones. The EIT has already supported the identification of potential project improvements, including:

- **East San Fernando Valley (ESFV) Transit Corridor:** Creation of a new value engineering process that is tailored to the Progressive Design Build delivery method.
- **East Side Transit Corridor Phase 2 (ESP2):** Increased understanding on the complexity of the construction, operations, and engineering associated with the project being an extension of an existing system (e.g., phasing of work, customer experience component, and extension of the fiber network).
- **I-105 Express Lanes:** Early engagement of LA Metro Operations team decision makers to problem solve key project scope elements (e.g., West Santa Ana Branch LRT crossing) and identify innovative design solutions to deliver a successful project outcome and mitigate integration risk with the existing system.

The EIT will continue to expand and adapt to further support LA Metro's capital program by formalizing processes and policies, conducting additional project reviews, and supporting the three projects above as they advance through other points in the lifecycle.

2 BACKGROUND

2.1 CAPITAL PORTFOLIO CONTEXT FOR INITIATION OF EIT

In response to the June 2022 Fiscal Year 2023 (FY23) Annual Program Evaluation (APE) Follow-up Report to the LA Metro Board of Directors (Board), additional direction was received from both Director Sandoval and Director Dupont-Walker, directing the Chief Executive Officer (CEO) to:

- Develop an Early Intervention Team (EIT) comprised of representatives across the agency;
- Create a comprehensive checklist of criteria for successful project delivery, addressing topics such as funding strategy and project delivery method;
- Include metrics to help evaluate the success and progress of cost control efforts; and
- Include a cost estimate range and design level for all projects in Monthly Planning Major Project Status Reports.

Collectively, these directives, motions, and requests from the Board, which followed various Program Management department updates on the opportunities to improve management of the capital program, led to the formation of the EIT.

2.2 FORMATION, ESTABLISHMENT, & STRUCTURE OF EARLY INTERVENTION TEAM

In line with directives received from the Board members, the CEO assigned the Deputy Chief Executive Officer (DCEO), Sharon Gookin, to lead the EIT initiative. The EIT kicked off its effort in July 2022 and has since been meeting at least bimonthly as a cross-departmental team. The EIT cross-departmental team is composed of individuals from the Office of the CEO, Operations, Program Management, Countywide Planning, Office of Management and Budget, Vendor Contract Management, Government Relations, and Customer Experience. Representatives from each of the departments were chosen directly by Department Chiefs and Senior Leadership Team (SLT) members.

Structuring the team in this manner led to the advancement of the effort in a holistic way that:

- **Enhances teamwork across the full agency** in the development of strategies to address the challenges facing the capital delivery program;
- **Recognizes the role each department plays in the successful delivery** of the projects while encouraging cross-departmental collaboration to address the full lifecycle needs of projects;
- **Facilitates a framework whereby previous and related initiatives** within each department can be validated and expanded to agency-wide initiatives; and
- **Provides consistency and rigor** in the approach for project-based reviews along with a **vehicle for direct engagement** on those reviews.

2.3 OBJECTIVES & PLANNED ACTIONS OF EIT

To kick off the EIT initiative, the team identified and agreed upon overall objectives and selected planned actions that would guide the team's work. These objectives are in line with the Board directive related to the formation of the EIT. Overarching objectives of the EIT initiative include:

- Improving the successful delivery of the capital program, with a focus on cost containment strategies and inter-departmental collaboration objectives;
- Considering and complementing existing agency programs and procedures; and
- Advancing an update of project forecasts, with consideration of full-lifecycle costs, in a manner that will enable the CEO and the Board to assess and address the agency's ability to continue delivery of the planned capital projects with existing available resources.

The flowing EIT actions have been established in previous updates to the Board and are currently underway:

- **Assess primary cost drivers** and corresponding mitigation actions that need to be considered for successful project delivery, including decision points related to funding strategies and delivery models;
- **Update project cost estimates**, with consideration of significant external market drivers, for use as the basis for future metrics to evaluate the success and progress of agency cost control efforts;
- **Confirm the method for providing estimate ranges**, as appropriate, for major projects in all phases of delivery (planning, design, and construction);
- **Propose processes that support cost control efforts** and indicate which processes effectively build upon previous department-specific approaches, including the adoption and updates of comprehensive checklists within the current stage gate and corresponding readiness review procedures;
- **Conduct project-focused reviews** to align EIT interventions and discussions more quickly with immediate and longer-term project needs; and
- **Identify required resource needs to implement the scope** of recommended EIT processes and procedures.

2.4 SUMMARY OF OCTOBER 2022 BOARD MEETING

During the October Board meeting, the DCEO gave the Board an update on the formation, establishment, and anticipated benefits resulting from the EIT initiative. In addition, the objectives and actions, both ongoing and planned, of the EIT were described. During the presentation, the DCEO discussed how the greatest potential for influencing a project – through scope, cost, schedule, and risk – is in the early project life cycle phases, particularly planning and engineering, and explained the specific reasoning for the selection of certain projects to undergo the first EIT Project Reviews.

The Board was then updated on the work that has been performed by the EIT as of October 2022, including:

- Initial assessment of cost drivers and corresponding mitigation actions for key project lifecycle phases (Planning, Engineering, Construction, Operations);
- EIT meetings conducted to facilitate cross-department discussion and collaboration related to these initial assessments;
- Program Controls process of updating project cost estimates to current market conditions; and
- Initial EIT Project Review conducted for the East San Fernando Valley (ESFV) Transit Corridor.

Lastly, the Board was informed on the EIT's next steps over the coming 3-6 months, including:

- Continue to advance agency processes and procedures that support cost control efforts;
- Follow-up with EIT feedback on the ESFV;
- Perform additional project-focused reviews for other select projects (I-105 Express Lanes and East Side Transit Corridor Phase 2 (ESP2));
- Continue the full update of Measure M capital project cost estimates; and
- Report back to Board on the overall EIT effort.

3 EIT PROJECT REVIEW PROCESS & WORKFLOW

3.1 OVERVIEW LA METRO PROJECT LIFE CYCLE

The LA Metro project life cycle process spans from project initiation through operations. This life cycle can be broken down into six phases; each phase possesses a separate set of critical activities, cost drivers, challenges, risks, and opportunities to create value.

At a high-level, the six project life cycle phases are listed below, along with a sampling of key activities within each phase:

- **Initiation** is focused on identifying project requirements, stakeholders, and potential funding sources
- **Planning** develops project alternatives to meet the identified project objectives through the completion of the environmental approval process. This includes the development of the Locally Preferred Alternative (LPA) and the subsequent environmental approval document
- **Engineering** refines the scope of the selected LPA into an actionable design, including an updated cost and schedule estimate
- **Procurement** advances the selection of the consultant and/or contractor for project execution, given the project scope and chosen delivery method
- **Construction/Integration** delivers the physical asset, including integration testing as appropriate, according to the project's defined scope, schedule, and cost
- **Operations/Activation/Integration** prepares for the acceptance of an operating transportation system into revenue service, as well as continued asset operation

Throughout the six project life cycle phases, the project's scope, cost, schedule, and risk profile can be revised over time as more information and detail become available. Therefore, the project has a continuous need for cost and schedule control throughout its lifecycle and should begin at the earliest phase of project development, project initiation. The potential for positive influence on project outcomes is highest in the earliest phases of project development, particularly during the planning phase as key information is discovered, alternatives are developed, and high-level delivery methods are evaluated. For this reason, the EIT is best positioned early in the project life cycle to ensure LA Metro is creating the foundation for successful project execution across its capital program portfolio. In later phases of the life cycle, the EIT would remain an available forum for consultation to support cross-functional problem-solving if major design changes occur and/or help is needed to monitor progress against important metrics, for example.

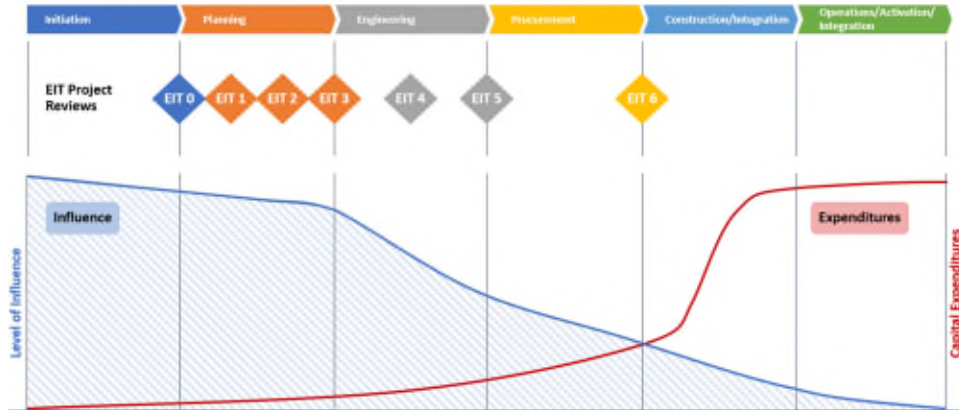


Figure 1. Project Influence Curve with EIT Project Review Timing

3.2 OVERVIEW OF EIT PROJECT REVIEW PROCESS

In the development of the EIT Project Review Process, each project life cycle phase was assessed to determine where key scope, schedule, cost, and risk determinations are made, as well as the evolution of underlying factors that drive the project team’s ability to deliver the intended project outcomes effectively and successfully. Within the project life cycle phases, the EIT members collectively identified a set of junctures when engagement with the cross-departmental EIT members can help to accelerate, protect, and enhance the project outcomes by surfacing and pressure testing assumptions and options. An initial set of intervention points for EIT Project Reviews were identified that span the project life cycle and are concentrated in the early project phases where there is greater ability to influence the project outcomes (Figure 2).

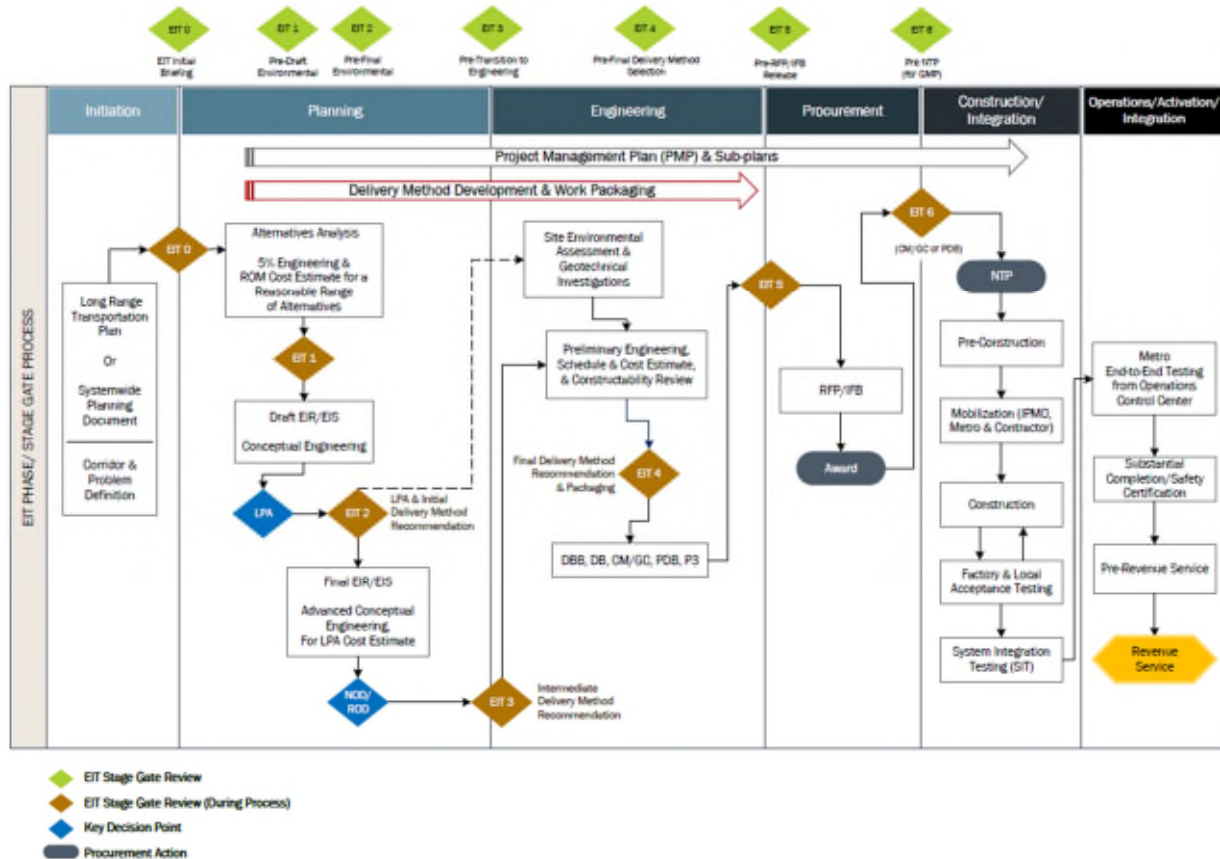


Figure 2. Project Phases & Identified EIT Reviews

To facilitate the EIT Project Review process, a set of targeted questions was developed to foster discussion and understanding of project cost and schedule drivers at each EIT Project Review. These questions are circulated to project teams in advance of the EIT Project Reviews and form the basis for discussion in the review. EIT findings and recommendations are synthesized and shared back to project teams after the review. These findings and recommendations form a component of the next EIT Project Review. Given the importance of the project delivery method decision to future project success, these EIT Project Review questions include focused discussion to support the successful progression of the Delivery Method Process through evaluation, recommendation, and execution. Particularly when assessing alternative delivery methods, the EIT can bring the collective expertise and experience across the agency to inform team discussion on which methods could best enable project success.

The proposed EIT Project Review process and targeted questions encompassed in this status report are being continuously improved and expanded upon based on EIT discussions, industry best practice comparisons, and learnings from initial and planned project reviews – the results of which are outlined in Section 4.

The EIT Project Review process seeks to complement and enhance the existing LA Metro procedures developed and executed by working teams and the project team leadership. The EIT brings an executive and cross-functional viewpoint to critical stages of the project in concert with the ongoing work executed by the project teams. Examples of existing procedures the EIT supports include:

- PC04 - Project Management Plan,
- PM01 – Project Delivery Selection Procedure, and
- PC14 – Program Control: Readiness Review Procedure.

3.3 INITIATION PHASE

3.3.1 Project life cycle phase overview

For the purpose of this document, the Project Delivery Process begins with the Initiation phase. Also referred to as the project’s inception phase, it is the critical first step to understanding the need for the project and defining the project’s basic requirements, stakeholders, and potential funding sources. Potential project solutions and alternatives are assessed, and if an infrastructure solution is required, the project planning phase can commence. Key output from this phase includes the corridor and problem definition, laying the groundwork for the full project planning effort. A feasibility analysis might occur during this phase to help develop the key outputs and confirm that there are potential project solutions and where those solutions might be constrained.

3.3.2 EIT Project Review #0 (EIT 0): Initial Briefing

To support long-term project success, EIT involvement starts at the transition point from initiation to planning. This early involvement of the EIT intends to set the stage for successful execution of an upcoming project.

Intended EIT 0 outcomes are to:

- Establish a cross-functional executive leadership team from across the project lifecycle to define and agree on intended project benefits from project inception;
- Develop a high-level assessment of potential project solutions to deliver on intended project benefits, informed by a broad set of LA Metro stakeholders; and
- Set and agree to project KPIs and identify points in the project lifecycle where the EIT can support the project team.

Markers of success during this phase could include:

- Defined cross functional team that defines and aligns on intended project benefits;
- Clearly defined and properly constrained corridor with clear end points, and operational performance goals (i.e., passengers per hour at peak load);
- General characteristics of potential solutions, including mode types, potential system interfaces, and feasible configurations; and
- Clear set of KPIs to gauge project success over the course of the project’s lifecycle.

This EIT 0 acts to generate support for the project team as they begin advancing alternatives in the planning phase, enabling the project to generate maximum value from inception.

3.4 PLANNING PHASE

3.4.1 Project life cycle phase overview

The next phase of planning involves developing project alternatives to meet the need and objectives identified in the preceding initiation phase. The first step of this phase is developing a reasonable range of alternatives that take into consideration different alignments, configurations,

station locations, and mode alternatives and still meet the intended project outcomes. This is intended to support future phases of the project to demonstrate that all “reasonable” alternatives were considered per California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA). To assess the proposed alternatives and select which to move forward to the Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) evaluation phase, the project team develops evaluation criteria and engages the community through public meeting(s) while researching and conducting design studies. The Alternatives Analysis reports the results of screening process and recommends a reasonable range of alternatives to evaluate if the efforts move on to the environmental process, the Draft EIR.

The Draft EIR/EIS is developed to analyze each alternative’s specific impacts on the environment and community and develop mitigation measures that could be implemented to address those impacts. During the scoping period, the alternatives are presented to the public for input. After the environmental analysis is complete and the Draft EIR has been circulated and public input received, the LPA can be selected. An LPA is selected to advance one main alternative through advanced conceptual engineering, and initial cost estimating, prior to handover to project management.

In this phase, project teams are already considering which delivery methods could be more suitable for each alternative and creating initial recommendations, in support of future Board decision making.

Maximum value is created in the Planning phase by:

- Considering the full range of alternatives and fully understanding their potential order of magnitude for scope, cost, and schedule, particularly considering integration with existing assets;
- Ensuring alternatives’ scope is aligned to consumer needs and project intended outcomes;
- Building well-developed feasibility studies, leading to correct material take-offs (MTO) / bill of materials (BOM) and accurate budget allocation and schedule duration;
- Identifying all key stakeholder and integrating their respective requirements;
- Setting up clear governance structures and KPIs to track cost, schedule, risk, and stakeholder collaboration across the project lifecycle; and
- Assessing potential delivery methods and contracting arrangements for all alternatives, in service to end-to-end value creation.

There are several key touchpoints with the Board in this phase, including decision points to 1) review and release funds for Alternatives Analysis initiation, 2) select the LPA, and 3) approve fund release and progression to the Engineering phase.

With this in mind, EIT has identified three initial intervention points where it can enhance project value and support successful project outcomes in the Planning phase.

3.4.2 EIT Project Review #1 (EIT 1): Pre-Draft Environmental

EIT 1 was developed to ensure clear project governance and sufficient project alternatives are reviewed. This early Project Review is positioned to ensure the initial trajectory of the project is on a successful path, supporting the identification of alternatives and understanding the initial order of magnitude of project scope, schedule, and costs. Alternatives are developed in support

of project needs and environmental considerations, and the EIT aims to ensure the potential magnitude of each alternative is understood.

Intended EIT 1 outcomes are to:

- Confirm a compelling, feasible set of project alternatives to consider, given NEPA/CEQA requirements, project magnitude, potential delivery methods, and the integration with existing infrastructure and communities;
- Test project alternatives against intended project benefits by ensuring alternatives meet project needs and objectives, have no non-value-added cost elements, and scope is well-defined and controllable (measurable and assignable); and
- Ensure robust stakeholder engagement (particularly with relevant external third parties, Construction, and Operations) to pressure test project alternative outcomes and likely impact on project benefits.

Markers of success during this phase could include:

- Objective set of measures to gauge intended project benefits, inform project alternative development, and guide project selection:
 - High level quantified project impacts and benefits by relevant demographic or asset,
 - Rough order of magnitude (ROM) cost and schedule developed for each alternative,
 - Consideration of potential delivery methods for each alternative,
 - High level estimation for construction feasibility,
 - Assessment on impact of current operations / asset base,
- Execution of any needed memorandums of understanding (MOUs).

Positioning of EIT 1 after alternative development and prior to LPA selection allows the EIT to provide feedback and encourage refinement of alternatives under consideration or introduction of a new alternative, if needed.

Following EIT 1, significant work is done by project teams to advance the understanding of each alternative, continue engagement with the full suite of stakeholders, and inform the decision of an LPA. Once the LPA has been decided, there is another opportunity for EIT to enhance project value, support scope development and cost refinement, and enable further refinement of delivery method options.

3.4.3 EIT Project Review #2 (EIT 2): Pre-Final Environmental

After LPA selection, EIT 2 aims to engage project teams to support in the development of a robust LPA scope, schedule, cost estimate and risk plan. The EIT seeks to understand and help identify actions that can advance the project delivery and reduce costs, while ensuring the project team is considering a comprehensive list of value and cost drivers. In the case additional design options were identified in LPA selection, the EIT can aid the team in evaluation of associated customer, cost, schedule, and risk impact.

Intended EIT 2 outcomes are to:

- Refine project scope, schedule, and cost for LPA: As a project advances through the phases, EIT continues to confirm there is adequate advancement and specificity of project scope, schedule, and costs, as well as documentation of potential project risks;
- Iterate and syndicate list of project risks and mitigation strategies: ensure all key project risks have been identified and concrete and feasible mitigation strategies are being considered across each;
- Identify actions to advance project delivery to minimize cost and ensure on-time delivery; and
- Inform initial project delivery recommendation: leverage existing agency and peer learnings to support development of first set of potential delivery methods to consider.

Markers of success during this phase could include:

- Refined preliminary cost estimate and staffing plan for LPA, based on deeper understanding of project scope;
- Plan for tracking KPIs progression against initial estimates and established performance objectives;
- Thorough list of project acceleration activities to unlock long term schedule and cost savings; and
- Draft list of benefits and challenges identified for each delivery model recommended.

3.4.4 EIT Project Review #3 (EIT 3): Pre-transition to Engineering

Following the finalization of environmental studies and conceptual development per approval of the project and Final EIR, the project is intended to transition to the Engineering phase. Value is elevated and protected through seamless handover from Planning to Engineering project team, which EIT 3 aims to facilitate.

Intended EIT 3 outcomes are to:

- Monitor project risks and mitigation strategies: confirm risks identified in earlier phases are being tracked and adjusted on an as-needed basis, given project progress;
- Ensure smooth project handoff to Engineering team through best practice knowledge transfer across teams; and
- Inform viability of project delivery methods being considered, given additional information.

Markers of success during this phase could include:

- Clearly understood scope communicated to project management team;
- Refined cost estimates to support forward-looking cost controls through the Engineering phase; and
- Refined list of pros and cons identified for all potential project delivery methods.

EIT 3 aims to be a launching point for a streamlined Engineering phase, with clearly defined scope, cost and schedule targets, well-defined risks and mitigations, and a clear path to optimal delivery method selection

3.5 ENGINEERING PHASE

3.5.1 Project life cycle phase overview

The Engineering phase can kick off once alternatives have been evaluated and an LPA has been selected. The first step in the Engineering phase includes the site environmental assessment and geotechnical investigations. This work happens parallel to the finalization of the EIR/EIS and advanced conceptual engineering in the Planning phase. Once that is completed, the Planning team hands off the project to the Engineering team to move forward with preliminary engineering, schedule and cost estimate, and constructability review.

With this work completed, the team can perform a more complete risk assessment which is intended to determine if the risks for the project have been identified and that the mitigation process has commenced through the project development process. At this stage, market and construction risks are reviewed as they may influence the decision on the project delivery method. The adequacy of schedule and cost contingencies and specific plans to mitigate the remaining project risks are evaluated. The analysis determines if the project delivery method, schedule, and cost estimate reflect an effective allocation of risks to the parties with the best capability to control each risk and a final delivery method is recommended to the Board for endorsement and final selection.

Maximum value is created in the Engineering phase by:

- Evaluating and executing activities identified in the Planning phase that can begin early (e.g., utility investigation, Master Cooperative Agreement's (MCAs), etc.) to accelerate project timeline and help reduce costs;
- Ensuring timely communication, collaboration, and adequate syndication with internal and external stakeholders throughout the Engineering phase to reduce late-stage scope revisions;
- Considering full range of delivery methods and understanding their potential impact on project execution in support of the final delivery method recommendation; and
- Advancing engineering sufficiently to enable a robust procurement process, depending on the delivery method selected.

EIT engages in the engineering phase at two key points, 1) in support of the final delivery method selection and 2) in preparation for an effective Request for Proposal ("RFP")/ Invitation for Bid ("IFB") process:

3.5.2 EIT Project Review #4 (EIT 4): Pre-Final Delivery Method Selection

As a project progresses through the development cycle, robust work is done to assess which delivery method unlocks the optimum value for the project. The EIT engages with the project team to ensure design and risk considerations are fleshed-out to enable an informed final recommendation.

Intended EIT 4 outcomes are to:

- Support the creation of a well-informed final delivery method recommendation, given preliminary engineering impact assessment, work packaging and phasing strategies, schedule and cost estimates, and constructability reviews across each delivery method being considered; and

- Drive continued stakeholder engagement with internal and external stakeholders to ensure clear project scope and agreement prior to selection of the delivery method.

Markers of success during this phase could include:

- Analysis of all potential delivery methods to guide final selection;
- Robust scope/risk matrix and mitigation actions being actively tracked; and
- Clear set of internal and external stakeholders engaged.

Following the delivery method recommendation and selection, additional clarifying work is completed by the teams, depending on the chosen delivery method. To ensure a robust and fruitful procurement process, the EIT engages again, prior to RFP.

3.5.3 EIT Project Review #5 (EIT 5): Pre-RFP/IFB Release

EIT 5 is intended to be the final team review prior to moving the project forward to procurement. In this checkpoint, the EIT wants to confirm that information and level of engineering have not deviated from original project definition and support the transition from engineering to procurement to ensure a successful RFP/IFB process.

Intended EIT 5 outcomes are to:

- Confirm scope with the original project definition team; ensure engineering innovations and preliminary engineering presented in RFP/IFB aligns with the original project definition and what is supported from prior environmental and funding project reviews;
- Confidence that the proposed procurement strategy has appropriately allocated the project scope, schedule, and cost risk between Metro and Contractors; and
- Assess project readiness for a successful procurement phase by confirming adequate management and controls are in place and identifying opportunities for improvement.

Markers of success during this phase could include:

- Complete engineering package to enable execution of chosen delivery method;
- Target baseline schedule and cost estimate for comparison with proposal/bid submissions.
- Update of the Project Management Plan and required resourcing to enable procurement and construction; and
- Clear RFP/IFB strategy, with specific assessment criteria, and defined response management plan.

3.6 PROCUREMENT PHASE

3.6.1 Project life cycle phase overview

Selecting the adequate project delivery method is critical to a successful procurement and succeeding Construction phase. Evaluating and understanding project risks, complexities, and unique needs enables the project team to identify if the different delivery methods could be suitable to provide opportunities for cost and schedule efficiencies, risk allocation, and increased owner and contractor collaboration. The Procurement phase is intended to assess and select the optimal contractor(s) to deliver on the project's scope, given the chosen delivery method. The procurement team issues an RFP or IFB, depending on the delivery method selected, that

contains all information necessary to enable prospective contractors to prepare and properly submit competitive proposals for review and award by the Board. Contract award and pre-construction preparation is the key output from this phase. After award, the inflection point between level of influence and commitment for expenditures is reached which means the ability to influence remaining project costs decreases as execution begins in earnest.

EIT's involvement in the Procurement phase is focused on protecting and enabling the value created by the selected delivery method during the following Construction phase. Targeted support is provided to projects with alternative delivery methods that may require further definition, either post-RFQ (as described in EIT 5) or even post-award, and prior to giving notice to proceed with a commitment for a negotiated guaranteed maximum price.

3.6.2 EIT Project Review #6 (EIT 6): Pre-NTP

In the case of alternative delivery methods where engineering is not fully developed prior to award (i.e., Construction Manager/General Contractor, Progressive Design Build), EIT reengages post-award to ensure design has been progressed to enable successful evaluation of innovations, confirm cost and schedule remain on track, and identify risks with more certainty. This is done in support of the Notice to Proceed (NTP) decision point and Guaranteed Maximum Price (GMP).

Intended EIT 6 outcomes are to:

- Satisfactory project design to enable successful Construction phase: Assess the further design development completed after award is suitable to negotiate GMP and advance project into Construction phase;
- Confidence in construction readiness / contractor handover: Scope, schedule, cost, and potential risks identified and confidently controlled by the project team; and
- Define clear roles and responsibilities across critical stakeholders to guide decision-making rights, improve collaboration, and strengthen construction performance management and risk mitigation processes to enable project delivery success.

Markers of success during this phase could include:

- Defined roles, responsibilities, decision-rights, and collaboration methods across key stakeholders;
- Baseline schedule and GMP for delivery are within LOP, including acceptable level of contingency for risks.
- Focused and actionable mitigation plans to manage potential risks; and
- Defined, robust contractor and claims management procedures.

Completion of EIT 6 supports transition from procurement to Construction phase, where the EITs ability to influence the project is minimal, project teams are already starting to capture the value set up early in the project life cycle, and LA Metro has other project control procedures that cover construction and beyond.

3.7 CONSTRUCTION / INTEGRATION PHASE

3.7.1 Project life cycle phase overview

Following successful procurement and contractor engagement, the project enters the Construction phase, where the value generated in earlier project phases is acted on. At this point,

construction management is overseeing contractor progress and project controls is tracking cost, schedule, and risks, in line with the previous defined scope and intended project outcomes. Construction management has a robust set of Project Readiness Reviews and project control procedures that track project schedule and costs and manage risks through the risk matrix and mitigation strategies.

EIT's final formal Project Review occurs in the Procurement phase, prior to the inflection point in the project cost influence curve. However, the EIT team remains available to support and guide ongoing projects at the request of project teams. With the collective history and experience in the early project phases, the EIT is well positioned to aid project teams in case of major changes to project needs during the construction and integration phase.

Feedback from project teams throughout the Construction phase and beyond allows the EIT to integrate and improve the ongoing Project Review Process for projects in earlier phases, as well as confirm that the expected project outcomes have been achieved.

3.8 OPERATIONS / ACTIVATION / INTEGRATION PHASE

3.8.1 Project life cycle phase overview

After satisfactory completion of construction and integration of all components, the Activation phase of a project accepts an operating transportation system in accordance with the pre-determined criteria. Testing and commissioning can then review and test all elements of the system to identify problems prior to revenue service. In support of delivering safe, reliable, and quality service, start-up teams are cross-functional.

Following satisfactory commissioning and start-up, Operations/Activation/Integration is the end user of Metro facilities. This team oversees the Revenue Service Phase once normal system operations commence after the transit capital project has been completed. During the early part of this phase, the construction contractor or supplier will complete all warranty items, consistent with the terms of the construction or equipment/materials supply contracts.

While the EIT's mandate does not extend to normal system operations, the Project Review Process creates a feedback loop where lessons-learned and operation's insight are continually incorporated in the inception, development, and execution of new project development.

4 EIT STATUS OF PILOT PROJECT REVIEWS COMPLETED & UNDERWAY

4.1 OVERVIEW OF EIT PROJECT REVIEWS

The EIT team selected three projects to undergo the initial EIT Project Reviews with the intentions of (1) beginning to improve cost and schedule outcomes by providing a forum for meaningful cross-departmental dialogue in advance of approaching key project decision points, and (2) testing and improving the EIT processes to make the EIT more useful for future projects' early interventions. The projects selected for this round of feedback from the EIT include:

- East San Fernando Valley (ESFV) Transit Corridor project,
- East Side Transit Corridor Phase 2 (ESP2), and
- I-105 Express Lanes.

These projects were carefully selected to ensure diversity in EIT's first engagements by including different project types and sizes of project scope. Most importantly, each of the projects selected was within the EIT time window (between EIT 0 and EIT 6) so that intervention from the EIT would have the opportunity to meaningfully impact the project outcomes. The final EIT is prior to the procurement release, which is an inflection point for the ability to influence the direction of the project – after procurement the influence steeply decreases.

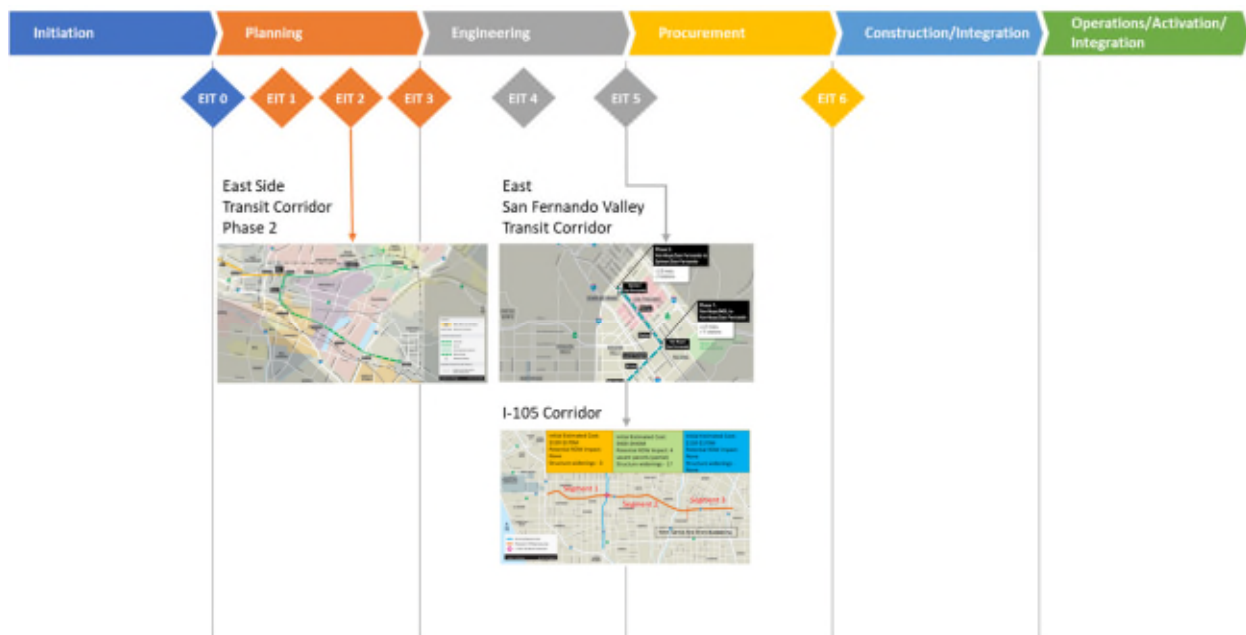


Figure 3. EIT Review Meetings for 3 In-flight Projects

More specifically, each project was selected for the following reasons:

- **ESFV Transit Corridor project** was selected as both the pilot project for EIT and the initial project within EIT 5 because it was experiencing significant growth in its forecasted costs and was approaching the key project award decision point. Therefore, the EIT had an opportunity to confirm project readiness prior to the procurement decision. In addition,

this is the first megaproject that is being delivered using the Progressive Design Build (PDB) alternative delivery method. Thus, the EIT had the opportunity to provide a cross-functional forum to create a better understanding of the alternative delivery method and garner cross-departmental buy-in on the path forward.

- **The East Side Transit Corridor Phase 2** was selected as the second project for an EIT 2 Project Review because it was approaching a different key milestone – the selection of the LPA – and was at an earlier phase in the project development process than the first project. This meant that an EIT Project Review had a greater opportunity to substantially mitigate potential risk by examining the current status and progress of the project. Additionally, the forecasted cost and funding needs were estimated to be higher than the initially available funding. By selecting the project for EIT review, the EIT was able to provide cross-departmental feedback prior to the next funding-related steps, such as the LPA approval.
- **The I-105 Express Lanes project** was specifically selected for an EIT 5 Project Review because it is a highway project and allowed the EIT to test the targeted questions and cost control strategies on a non-transit asset on the same EIT gate as another project and compare the processes. Another important feature was examining this corridor and understanding the risks related to this projects interface with other significant projects like the West Santa Ana Branch and the C-line OCS replacement. Like the ESFV project, the project is also an alternative delivery project; however, it is being delivered using a CM/GC contract, which will be Metro's first CM/GC procurement.

All three projects have already undergone their first EIT Project Review with the full cross-functional EIT team members. For each project, the EIT provided the teams with a list of targeted questions aligned with cost drivers relevant to the project's level of development and invited the project teams to present on the status of their project to the EIT (and therefore, various stakeholders). The project teams prepared a presentation for the EIT discussion and provided written responses to the targeted questions from the EIT. These documents facilitated the dialogue around the key cost drivers and project scoping.

During the EIT Project Review, the project teams walked the EIT through the basis for the selection of the project delivery method, identified project risks, and discussed challenges with select stakeholders. Having senior representatives from all key departments present in the discussion led to cross-departmental engagement on key issues and instant feedback for the project teams.

In addition, the meetings themselves received positive feedback from the project teams, who immediately recognized the benefit of cross-collaboration. Teams mentioned that bringing up issues that the day-to-day project team would normally try to solve on its own received attention during the EIT Project Review from senior leaders, who were able to unlock roadblocks. This accelerated decision-making and delivery timelines of projects.

During the EIT Project reviews, action items were noted, including potential opportunities for improvement (for example, on the ESFV Transit Corridor project, the team identified opportunities related to right-of-way activities and reducing the impact of utilities). Finally, a representative of the EIT reaches out to the leadership of the project team to share their written findings and recommendations as the projects advance to future decision points.

4.2 EAST SAN FERNANDO VALLEY TRANSIT CORRIDOR (EIT INITIAL PILOT PROJECT)

4.2.1 Project Background

The ESFV Transit Corridor project is the largest in LA Metro’s near-term project pipeline and is advancing under a PDB contract, which is new to the agency. The project has several significant overlapping third-party stakeholders and a significant increase in projected costs that presented both opportunities and risks.

The ESFV Transit Corridor is a 9.2-mile light rail transit line that will be completed in two phases, the first of which will finish by 2030. It includes a light rail line running in the center of Van Nuys Boulevard and includes 11 new center platform stations. Phase 2, which includes the northern 2.5-mile segment of the LPA along the LA Metro-owned railroad right-of-way, is still under study.

4.2.2 EIT process

When the EIT engaged with the ESFV Transit Corridor project, engineering was reaching final design and RFPs had been initiated, pending contractor response.

During a meeting held on October 5th, the EIT recognized that there was an opportunity for the team to have a focused discussion on the deliverables that would be expected during the EIT 5 check-in. These deliverables included the status of 3rd party agreements, the selection and finalization of a project delivery method, and other significant cost drivers that Metro’s engineering team identified as typical areas of issue in this phase.

The next major milestone for the ESFV project will be selecting the Progressive Design-Builder (“contractor”) and beginning preconstruction services, where the contractor’s input could have the most influence on cost and schedule.

4.2.3 EIT findings and recommendations

During the Project Review, the EIT discovered and learned crucial information about the project by receiving an update from the project team and provided instant feedback to the leadership of the project. Recommendations were on the following topics, some of which had not been thoroughly examined or considered previously:

EIT insights include:	EIT recommendations include:
There are potential utility relocations on the northern end of the project that may cause a significant increase in project cost	Leverage all agency resources to support resolution of utility scope definition
Value Engineering (VE) proposals were expected to come out of the procurement process and the project team identified the need to assess the proposals properly and timely.	Look into the possibility of performing evaluation of deviations VE during blackout phase
With Right-of-way (ROW) resources constrained, ROW acquisitions will be potentially delayed and impact project delivery.	Analyze the option of outsourcing the ROW scope to the PDB contractor
Team highlighted risk associated with evaluating design deviations and value engineering approvals provided current processes and limited Metro resources	Establish working groups, clear workflows, and enforced review times for Metro resources

4.2.4 Potential project improvements and next steps

The above recommendations are anticipated to lead to the following improvements:

- Exploring an alternative solution to the existing ROW acquisition needs by utilizing PDB contractor resources,
- Creation of a Value Engineering process that is optimal for an alternative delivery method
- Early identification and management of project risk by creating opportunities to work with contractors and stakeholders during design development
- Confirm that project outcomes aligned with LA Metro's goals.

The EIT anticipates the next review with the ESFV project team will occur later in 2023. The next EIT review will include an update by the project team on significant project risks and challenges discussed at the first meeting, a discussion about the effectiveness of the alternative delivery processes, and a discussion about concepts proposed by the PDB contractor that could benefit the cost and/or schedule.

4.3 EASTSIDE TRANSIT CORRIDOR PHASE 2

4.3.1 Project Background

Metro is environmentally clearing an extension of the Metro L Line (Gold) further east from its current terminus at Pomona Boulevard and Atlantic Boulevard in East Los Angeles. The new line will follow Atlantic Boulevard to Citadel Outlets, ending at Lambert Road in Whittier.

The project is planned to start construction in 2029 and be open for service in 2035-2037. The CEQA is anticipated to be certified in summer 2023, and NEPA clearance is expected to be completed by 2025.

4.3.2 EIT process

ESP2 was the EIT's second project review and was held on October 25th, 2022. ESP2 presented an opportunity to focus on a project earlier in its project lifecycle than the ESFV project and discuss topics impactful to a project still in the Planning phase with the team preparing for LPA approval.

Top concerns for a project preparing for LPA approval include: scope definition where project teams would want to have a level of design appropriate at this point in the planning process, teams can demonstrate they have made significant progress and have a path to negotiating agreements with 3rd parties and identification of high risk items on a project risk register.

The opportunity for cross-departmental engagement generated valuable dialogue related to ensuring that the project had the intended benefits. This discussion was largely around interface points with the existing transit system, how to create the least disruption for our current customers, and lifecycle and safety considerations for decisions on key features of the system.

4.3.3 EIT findings and recommendations

During the Project Review, the EIT discovered and learned crucial information about the project by receiving an update from the project team and provided instant feedback to the leadership of

the project. Recommendations were on the following topics, some of which had not been thoroughly examined or considered previously:

EIT insights include:	EIT recommendations include:
Better understanding of how the scope has evolved during the environmental process and potential challenges interfacing with the existing system.	Project team to be mindful of future system needs against existing system capacity, and as design progresses continue working with operations to mitigate unintended scope creep.
The project delivery method and contract packaging are still under consideration and not yet decided	Continue constructability assessment and development of detailed project schedule to facilitate an analysis of appropriate delivery method and packaging strategy for the project.
Operations related considerations flagged during the discussion (e.g., potential use of quad gates to run faster frequencies, connecting old system to new extension system)	Follow up with operations team related to potential operational risks highlighted in the discussion and to validate the current design addresses those risks.

4.3.4 Potential project improvements and next steps

The next steps identified for the Eastside Transit Corridor Phase 2 as they prepared for an LPA included executing agreements to progress the engineering and environmental services to begin NEPA and working with local jurisdictions to finalize Master Cooperative Agreements. These actions are anticipated to lead to the following improvements:

- Increased understanding on the complexity of the construction, operations, and engineering associated with the project being an extension of an existing system. (e.g., phasing of work, customer experience component, and potential extension of the fiber network).
- Discussion with EIT assisted with the direction of the recommended LPA to choose a larger yard that accommodated future growth.
- Creation of greater awareness within the team on what work is needed and future steps so that they can effectively integrate them into technical solutions
- Advancement of initial higher risk work such as geotechnical and utility investigation.
- Development of a detailed project schedule and a constructability assessment to support the project delivery selection

The EIT will bring the project team back for a follow up discussion sometime later in 2023 as the project begins to transition into Preliminary Engineering consistent with EIT 3. The next EIT review will include an update by the project team on significant project risks and challenges discussed from the first meeting.

4.4 I-105 EXPRESS LANES

4.4.1 Project Background

The I-105 Express Lanes project aims to convert one existing HOV lane into a two ExpressLane configuration in each direction. This will require ExpressLane toll equipment, signage, pavement

markings, and partial right-of-way acquisition. From more than four alternatives, this option was selected as the preferred alternative by Caltrans and Metro by evaluating the improved mobility, potential environmental impacts, cost, and community benefit for each alternative.

The I-105 Express Lanes project aims to enhance operations, increase trip reliability, improve traffic flow, and decrease travel times. The initiative will also sustain and proactively manage mobility within the corridor. To allow flexibility in work packaging and delivery timing due to funding availability, the project is separated into three different segments, to be completed in sequence from West (I-405) to East (I-605).

4.4.2 EIT process

The EIT’s third project-focused discussion featured the I-105 Express Lanes, which was held January 13th, 2022. This was a great opportunity to focus on a highway project that is at a similar point in its project lifecycle as the transit alternative delivery project (ESFV) while also being delivered using another new alternative delivery method to Metro, CM/GC (also known as CM at Risk). Both parties discussed topics impactful to a project transitioning to Construction from Engineering.

This review correlates to the topics critical to the EIT 5 check-in in the EIT’s process flow, where the focus was on a project that has been awarded and is preparing for a negotiated GMP. The top concerns for any project preparing for a GMP and NTP for Construction are topics focused on scope clarification and agreed stakeholder interfaces at this point in the Baseline Schedule and Cost negotiation process. Teams can demonstrate they have made their best efforts to plan for and mitigate all known risks and potential cost drivers with the involvement and concurrence of Metro’s departmental leadership.

Although this was largely an EIT 5 review, since it was the first EIT Project Review for the I-105 Express Lanes, it also functioned as the initial EIT Briefing (EIT 0) and included fundamental questions from EIT 1 and 2, which begin to set the parameters for project control (e.g., breakdown of work, organization, project management set up, etc.), as the project had not gone through these previously.

4.4.3 EIT findings and recommendations

During the Project Review, the EIT discovered and learned crucial information about the project by receiving an update from the project team and provided instant feedback to the leadership of the project. Recommendations were on the following topics, some of which elaborate or expand on what had already been considered previously:

EIT insights include:	EIT recommendations include:
<p>Segment 1 has a very tight schedule for achieving Ready to List (RTL) through Caltrans review as it was awarded a \$150M SCCO grant that requires requesting an allocation from CTC by June 2023 and issuing a construction by December 2023</p> <ul style="list-style-type: none"> • RTL requires ROW clearance; however, the process is being delayed due to 	<p>Elevate the ROW issue within Caltrans and Metro leadership for urgency of a mitigating action</p>

Caltrans existing easement issues with LA County at Dominguez Channel	
Rail Operations pointed out that shoring installation/removal for foundation excavations can cause vibrations which may change the track elevation	Confirm track monitoring and shoring requirements with Metro’s MOW track group
Rail Operations cautioned any related I-105 construction would have to coordinate closely with C-line OCS Operations and MOW projects	Engage early with interfacing project teams (C-Line Ops and WSAB) to minimize multiple disruptions to a portion of the corridor Synchronize C-Line MOW (OCS replacement) single-tracking with I-105 project schedule to optimize schedule, costs, and operations disruptions
Program Controls cautioned that Caltrans Middle-mile Broadband work may add cost to Metro’s Express Lanes project without a supplemental funding source	Metro to work with Caltrans on an equitable resolution for this cost driver
WSAB design interface coordination on the critical path is the foundation elements of the future UPRR overcrossing (re-alignment), which must be 100% designed before UP will approve, but cannot be completed until approximately 12-months after ROD. Therefore, any delay to WSAB ROD will impact the follow-on operations for Segment 3 of I-105 Express Lanes	Engage early with interfacing project teams (C-Line Ops and WSAB) to minimize multiple disruptions to a portion of the corridor WSAB team proceed with design early to meet the Segment 3 schedule. I-105 project to build portions of the WSAB interfacing elements to minimize the impacts
Construction of median barrier and foundations requires operations input, to minimize impacts to C-line operations.	Confirm all the correct Ops personnel are given an opportunity to inform decisions on I-105
Bridge widenings in Segments 1 and 2 require close coordination with several municipality and utility stakeholders, which is a significant potential cost driver	Work with the Designer and Contractor to provide a GIS coordination/collaboration platform for design coordination and permitting discussions with the various municipalities and utility owners, especially as the project approaches phase 2 of the CM/GC contract

4.4.4 Potential project improvements and next steps

The above recommendations are anticipated to lead to the following improvements:

- Early engagement of LA Metro’s Operations decision makers to problem solve key project scope elements (e.g., West Santa Ana Branch LRT crossing) and identify innovative design solutions to deliver a successful project outcome and mitigate integration risk with the existing system,
- Implementation of a proactive stakeholder engagement process and early coordination discussions with contractors that could reduce cost and schedule, as well as benefit the success of adjacent projects,

- A more complete construction scope definition with buy-in from all third-party stakeholders, and
- Less rework for third parties and owners of adjacent projects, by involving them earlier in the schedule coordination discussions with Metro's contractor.

The next steps identified for the I-105 project as they prepare for a negotiated work package and guaranteed maximum price (GMP) for phase 2 included setup of their open book estimating process to progress the negotiated scope and GMP to begin construction of the first design segment. The EIT will bring the project team back for a follow up discussion sometime later in 2023 as the project begins to transition into NTP with agreed upon GMP for construction of Segment 1, consistent with EIT 6.

5 NEXT STEPS & PRIORITIES FOR EIT

5.1 VALUE OF EIT TO DATE

To date, EIT has focused on understanding the intervention points across the project lifecycle that enable, protect, and enhance project value. By bringing together a group of senior leaders with diverse experience to provide guidance at impactful moments in project trajectory, the initial EIT Project Reviews have started to move the needle, aiding early identification of project improvement opportunities, and receiving positive feedback from project teams.

Examples of the value to date are:

East San Fernando Valley Transit Corridor:

- Exploring an alternative solution to the existing ROW acquisition needs by utilizing PDB contractor resources,
- Creation of a Value Engineering review process that is optimal for an alternative delivery method
- Early identification and management of project risk by creating opportunities to work with contractors and stakeholders during design development

Eastside Transit Corridor Phase 2:

- Increased understanding on the complexity of the construction, operations, and engineering associated with the project being an extension of an existing system. (e.g., phasing of work, customer experience component, and potential extension of the fiber network).
- Discussion with EIT assisted with the direction of the recommended LPA to choose a larger yard that accommodated future growth.
- Creation of greater awareness within the team on what work is needed and future steps so that they can effectively integrate them into technical solutions

I-105 Express Lanes:

- Early engagement of LA Metro's Operations decision makers to problem solve key project scope elements (e.g., West Santa Ana Branch crossing) and identify innovative design solutions to deliver a successful project outcome and mitigate integration risk with the existing system,
- Implementation of a proactive stakeholder engagement process and early coordination discussions with contractors
- A more complete construction scope definition with buy-in from all third-party stakeholders, and
- Less rework for third parties and owners of adjacent projects, by involving them earlier in the schedule coordination discussions with Metro's contractor.

EIT will continue to build on the momentum generated by this initial phase of work with a set of near-term and forward-looking priorities.

5.2 NEAR-TERM PRIORITIES: EIT PLANNED ASSESSMENTS & KPI INTEGRATION

Given the early success of initial Project Reviews, EIT plans to host one project-focused review per month, focused on projects nearing EIT intervention points. Reviews planned for 2023 include:

- North Hollywood to Pasadena BRT,
- C-line Expansion to Torrance,
- LA River bike path,
- Sepulveda Transit Corridor, and
- West Santa Ana Branch.

Future Project Reviews will continue to build on lessons learned from ongoing projects and prior EIT interventions to improve processes with the intention of realizing improved project outcomes. Key Performance Indicators (KPIs) to qualitatively and quantitatively measure and track project outcomes will be introduced in the forthcoming reviews. These metrics will come into play following the ongoing re-baselining activities and enable the EIT and project teams to monitor the effectiveness of Metro's cost containment policies, processes, and procedures.

As the EIT Project Review process and KPIs evolve to better shepherd major projects through critical transition points, the EIT will remain in harmony with existing Metro guidance and procedural documents.

5.3 FORWARD-LOOKING PRIORITIES: CAPITAL PROGRAM

EIT interventions are intended and designed to support project development from the earliest phases. Following the successful initial deployment on in-flight projects, EIT is evaluating how to best provide targeted support to LA Metro's capital program priorities, including Metro's Mobility Concept Plan for meeting the travel demands anticipated from the 2028 Olympic and Paralympic Games, the Measure R and Measure M Expenditure Plans, and the Short- and Long-Range Transportation Plans

The collective effort of the EIT is intended to drive cost and schedule fluctuation stability and improve forecast of LA Metro's Capital Program in support of the successful delivery of LA Metro's capital projects to provide transformative infrastructure to our region and ensure responsible stewardship of taxpayer dollars. The EIT will continue to support the development of a realistic, forward-looking capital portfolio that is well positioned to deliver on projects in service to LA County constituents and riders.

Outcomes

Markers of success

EIT0: Initial Briefing	<p>Establish a cross-functional executive leadership team from across the project lifecycle to define and agree to intended project benefits from project inception</p> <p>Develop a high-level assessment of potential project solutions to deliver on intended project benefits, informed by a broad set of LA Metro stakeholders</p> <p>Set and agree to project KPIs and identify points in the project lifecycle where the EIT can support the project team</p>	<p>Defined cross functional team that defines and aligns on intended project benefits</p> <p>Clearly defined and properly constrained corridor with clear end points, and operational performance goals (i.e., passengers per hour at peak load)</p> <p>General characteristics of potential solutions, including mode types, potential system interfaces, and feasible configurations</p> <p>Clear set of KPIs to gauge project success over the course of the project's lifecycle</p>
EIT1: Pre-Draft Environmental	<p>Confirm a compelling, feasible set of project alternatives to consider, given NEPA/CEQA requirements, project magnitude, potential delivery methods, and the integration with existing infrastructure and communities</p> <p>Test project alternatives against intended project benefits by ensuring alternatives meet project needs and objectives, have no non-value-added cost elements, and scope is well-defined and controllable (measurable and assignable)</p> <p>Ensure robust stakeholder engagement (particularly with relevant external third parties, Construction, and Operations) to pressure test project alternative outcomes and likely impact on project benefits</p>	<p>Objective set of measures to gauge intended project benefits, inform project alternative development, and guide project selection</p> <ul style="list-style-type: none">• High-level, quantified project impacts and benefits by relevant demography, geography, or asset type• Rough order of magnitude (ROM) cost and schedule developed for each alternative• Potential delivery methods for each alternative to consider• High-level construction feasibility assessment• Approximate evaluation of project impact of current operations / asset base <p>Execution of any needed memorandums of understanding (MOUs) with relevant parties</p>
EIT2: Pre-Final Environmental	<p>Refine project scope, schedule, and cost for LPA: As a project advances through the phases, EIT continues to confirm there is adequate advancement and specificity of project scope, schedule, and costs, as well as documentation of potential project risks</p> <p>Iterate and syndicate list of project risks and mitigation strategies: ensure all key project risks have been identified and concrete and feasible mitigation strategies are being considered across each</p> <p>Identify actions to advance project delivery to minimize cost and ensure on-time delivery</p> <p>Inform initial project delivery recommendation: leverage existing agency and peer learnings to support development of first set of potential delivery methods to consider</p>	<p>Refined preliminary cost estimate and staffing plan for LPA, based on deeper understanding of project scope</p> <p>Plan for tracking KPI progression against initial estimates and established performance objectives</p> <p>Thorough list of project acceleration activities to unlock long term schedule and cost savings</p> <p>Draft list of benefits and challenges identified for each delivery model recommended</p>

EIT3: Pre-Transition to engineering	<p>Monitor project risks and mitigation strategies: confirm risks identified in earlier phases are being tracked and adjusted on an as-needed basis, given project progress</p> <p>Ensure smooth project handoff to Engineering team through best practice knowledge transfer across teams</p> <p>Inform viability of project delivery methods being considered, given additional information</p>	<p>Clearly understood scope communicated to project management team, as part of a draft project management plan</p> <p>Refined cost estimates to support forward-looking cost controls through the engineering phase</p> <p>Refined list of pros and cons identified for all potential project delivery methods</p>
EIT4: Pre-Final Delivery Method Selection	<p>Support the creation of a well-informed final delivery method recommendation, given preliminary engineering impact assessment, work packaging and phasing strategy, schedule and cost estimates, and constructability reviews across each delivery method being considered</p> <p>Drive continued stakeholder engagement with internal and external stakeholders to ensure clear project scope and agreement prior to selection of the delivery method</p>	<p>Detailed analysis of all potential delivery methods to guide final selection</p> <p>Robust scope/risk matrix and mitigation actions being actively tracked</p> <p>Clear set of internal and external stakeholders engaged</p>
EIT5: Pre-RFP/IFB	<p>Confirm scope with the original project definition team; ensure engineering innovations and preliminary engineering presented in RFQ/RFP aligns with the original project definition and what is supported from prior environmental and funding project reviews</p> <p>Assess project readiness for a successful procurement phase by confirming adequate management and controls are in place and identifying opportunities for improvement</p> <p>Confidence that the proposed procurement strategy has appropriately allocated the project scope, schedule, and cost risk between Metro and Contractors</p>	<p>Complete engineering package to enable execution of chosen delivery method</p> <p>Target baseline schedule and cost estimate for comparison with proposal/bid submissions.</p> <p>Update of the Project Management Plan and required resourcing to enable project procurement and construction</p> <p>Clear RFQ/RFP strategy, with specific assessment criteria and defined response management plan</p>
EIT6: Pre-NTP	<p>Satisfactory project design to enable successful construction phase: Assess the further design development completed after award is suitable to negotiate GMP and advance project into construction phase</p> <p>Confidence in construction readiness / contractor handover: Scope, schedule, cost, and potential risks identified and confidently controlled by the project team.</p> <p>Define clear roles and responsibilities across critical stakeholders to guide decision-making rights, improve collaboration, and strengthen construction performance management and risk mitigation processes to enable project delivery success</p>	<p>Defined roles, responsibilities, decision-rights, and collaboration methods across key stakeholders;</p> <p>Baseline schedule and GMP for delivery are within LOP, including acceptable level of contingency for risks.</p> <p>Focused and actionable mitigation plan to manage potential risks</p> <p>Defined, robust contractor and claims management procedures</p>

Early Intervention Team Program Update

Sharon Gookin, Deputy Chief Executive Officer



Context on LA Metro's Early Intervention Team (EIT)

Reminder of the EIT's purpose:

Improve on-time, on-budget capital program delivery by encouraging collaboration across departments and introducing cost control strategies across the full project life cycle for LA Metro's capital program

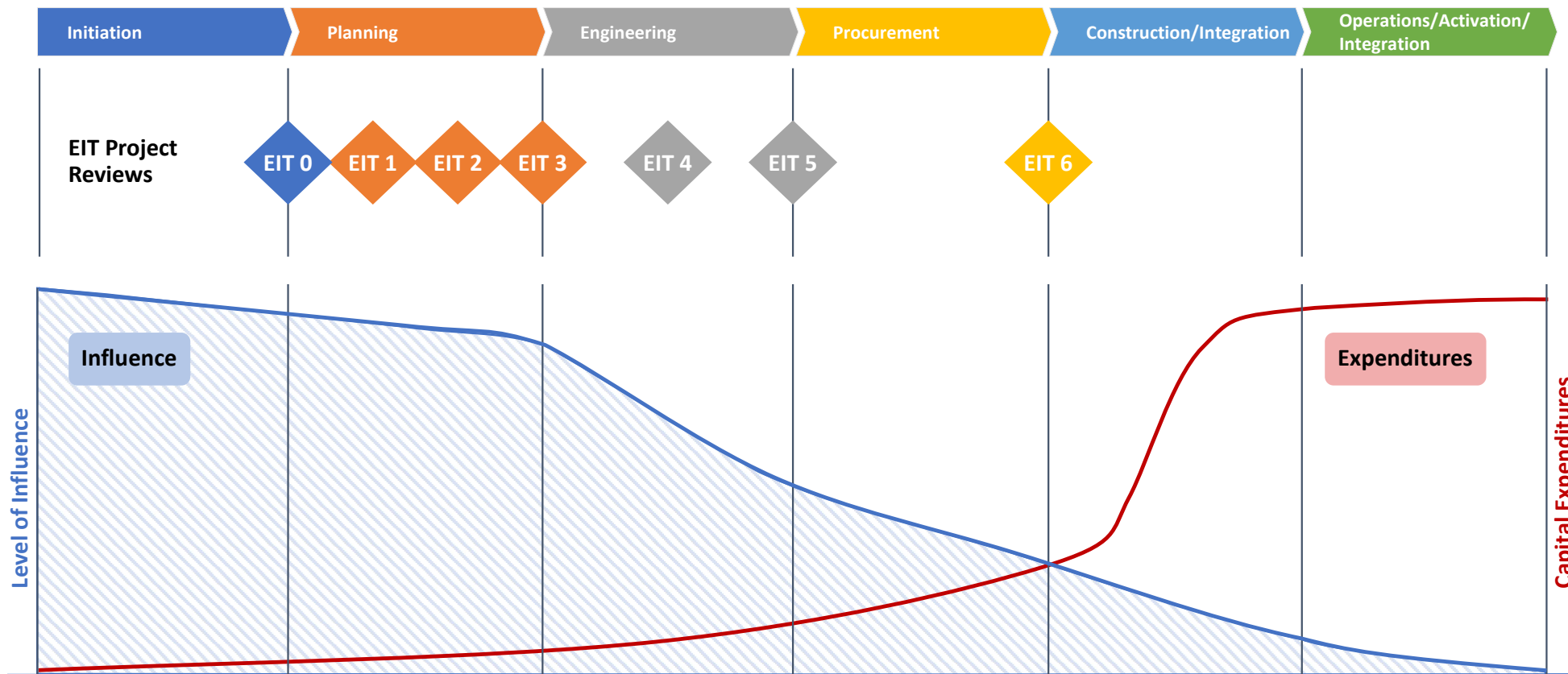
Recall: Overview of October Board update

- EIT launched as a cross-functional team in July 2022 and has met at least twice a month to improve overall capital program and specific project performance
- EIT was focused on developing a comprehensive set of targeted cost control questions and creating the EIT Project Review Process to share executive cross-functional feedback to improve project outcomes
- Since the October Board update, the EIT has conducted four EIT Project Reviews

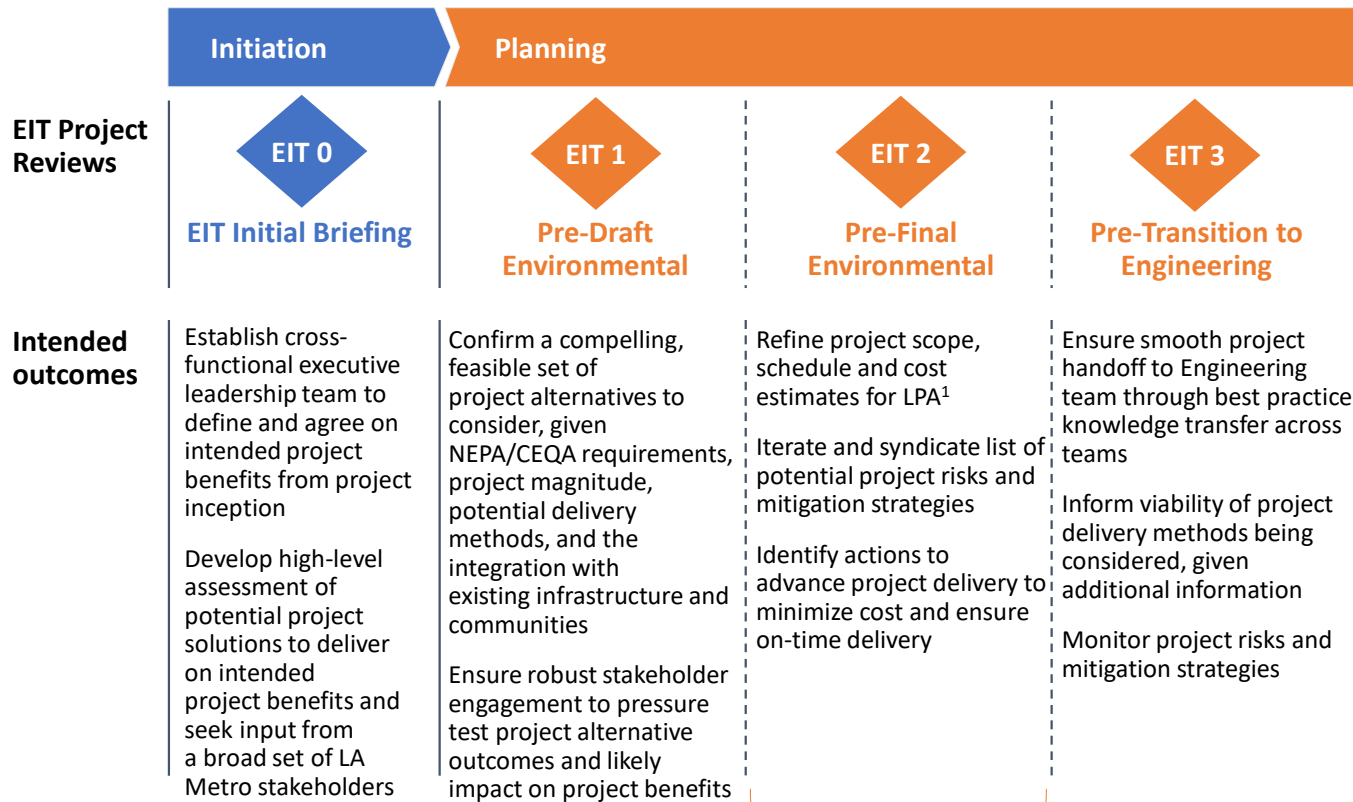
Objectives for today

- Share the overall project cycle and how the EIT Project Review Process improves the likelihood of project success
- Discuss the types of critical actions being taken to improve project outcomes, given the integration of EIT feedback, using specific examples from completed EIT Project Reviews
- Outline the EIT's impact to date and proposed next steps

The EIT focuses LA Metro's Capital Program resources where they can have the most influence on project outcomes: early in the life cycle



EIT Project Reviews are focused on ensuring intended project benefits, on time and on-budget (1/2)



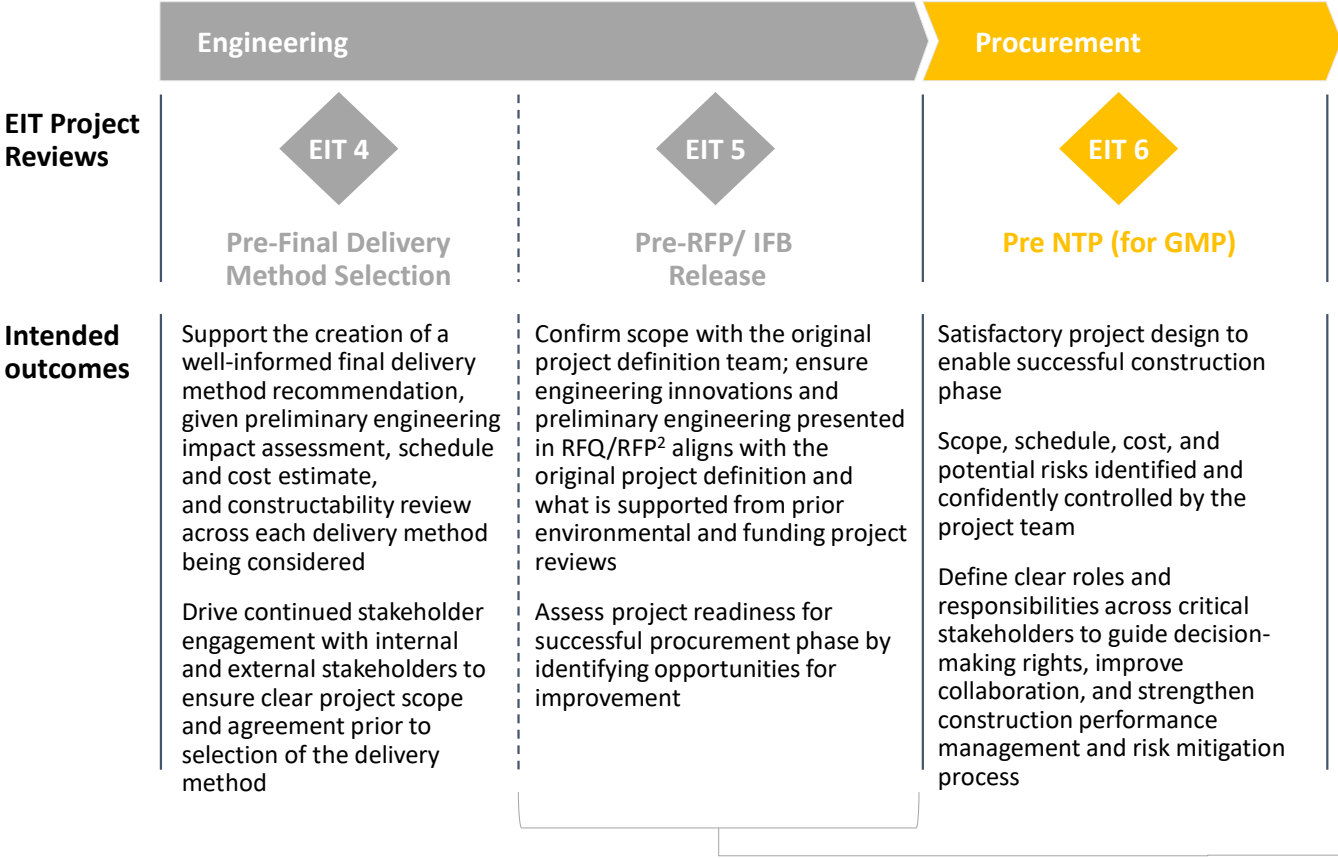
Example EIT Project Review

East Side Transit Corridor

Eastside Transit Corridor Phase 2
Combined Alternative

1. Locally Preferred Alternative

EIT Project Reviews are focused on ensuring intended project benefits, on time and on-budget (2/2)

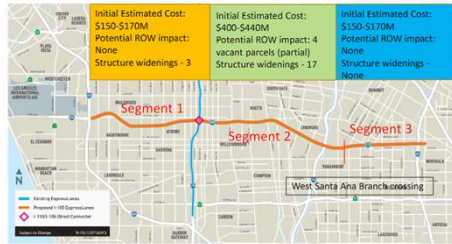


Example EIT Project Review

East San Fernando Valley Transit Corridor



I-105 Corridor



Impact to date and next steps

Impact to date and anticipated outcomes

- Project risks, roadblocks, and alternatives have been reviewed and actions taken across four priority LA Metro capital projects, including:
 - **East San Fernando Valley (ESFV) Transit Corridor:** Advancement of a new value engineering process that is tailored to the Progressive Design Build delivery method
 - **East Side Transit Corridor Phase 2 (ESP2):** Increased understanding on the complexity of the construction, operations, and engineering associated with the project being an extension of an existing system (e.g., phasing of work, customer experience component, and extension of the fiber network)
 - **I-105 Express Lanes:** Early engagement of LA Metro Operations team decision makers to problem solve key project scope elements (e.g., WSAB crossing) and identify innovative design solutions to deliver a successful project outcome and mitigate integration risk with the existing system.
- Senior leader members of the EIT have been able to foster cross-departmental relationships and a more holistic understand of the project life cycle

Next Steps

- Consolidate and share back EIT feedback to targeted questions for three completed Project Reviews
- Continue conducting EIT Project Reviews for 5 new projects that are planned by the end of FY23, including:
 - North Hollywood to Pasadena BRT in February
 - C-line Extension to Torrance in March
 - LA River Bike path in April
 - Sepulveda Transit Corridor in May
 - West Santa Ana Branch in June
- Identify and implement both project and program level KPIs to transition from qualitative to quantitative measures to drive progress
- Integrate and update EIT processes with existing procedures to create a cohesive set of LA Metro standards