

Metro

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



Agenda - Final

Thursday, May 17, 2018

10:15 AM

**One Gateway Plaza, Los Angeles, CA 90012,
3rd Floor, Metro Board Room**

Construction Committee

James Butts, Chair

Jacquelyn Dupont-Walker, Vice Chair

Robert Garcia

Janice Hahn

Sheila Kuehl

Carrie Bowen, non-voting member

Phillip A. Washington, Chief Executive Officer

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(ALSO APPLIES TO BOARD COMMITTEES)

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A member of the public may address the Board on agenda items, before or during the Board or Committee's consideration of the item for one (1) minute per item, or at the discretion of the Chair. A request to address the Board should be submitted in person at the meeting to the Board Secretary. Individuals requesting to speak on more than three (3) agenda items will be allowed to speak up to a maximum of three (3) minutes per meeting. For individuals requiring translation service, time allowed will be doubled.

Notwithstanding the foregoing, and in accordance with the Brown Act, this agenda does not provide an opportunity for members of the public to address the Board on any Consent Calendar agenda item that has already been considered by a Committee, composed exclusively of members of the Board, at a public meeting wherein all interested members of the public were afforded the opportunity to address the Committee on the item, before or during the Committee's consideration of the item, and which has not been substantially changed since the Committee heard the item.

The public may also address the Board on non-agenda items within the subject matter jurisdiction of the Board during the public comment period, which will be held at the beginning and/or end of each meeting. Each person will be allowed to speak for up to three (3) minutes per meeting and may speak no more than once during the Public Comment period. Speakers will be called according to the order in which the speaker request forms are received. Elected officials, not their staff or deputies, may be called out of order and prior to the Board's consideration of the relevant item.

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- 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.
- c. Disobedience of any lawful order of the Chair, which shall include an order to be seated or to refrain from addressing the Board; and
- d. Any other unlawful interference with the due and orderly course of said meeting.

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NOTE: ACTION MAY BE TAKEN ON ANY ITEM IDENTIFIED ON THE AGENDA

CALL TO ORDER**ROLL CALL****15. SUBJECT: WEST SANTA ANA BRANCH TRANSIT CORRIDOR**[2018-0072](#)**RECOMMENDATION**

CONSIDER:

A. RECEIVING AND FILING:

1. West Santa Ana Branch Transit Corridor Updated Northern Alignment Options Screening Report, including project goals; and
2. Update on Public-Private Partnership (P3) project delivery procurement process

B. AUTHORIZING:

1. Northern alignment options to carry forward into Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR)
 - a. Concept E: Union Station via Alameda Underground
 - b. Concept F: Union Station via Alameda Underground/Center Aerial
 - c. Concept G: Downtown Transit Core Underground

C. AUTHORIZING the Chief Executive Officer to execute:

1. Modification No. 2 to Contract No. AE5999300 with WSP USA Inc. for technical services for the evaluation of the three northern alignments in the Draft EIS/EIR in the amount of \$2,760,752, increasing the total contract value to \$12,405,244; and
2. Modification No. 1 to Contract No. PS2492300 with Arellano Associates for outreach support for the augmented Community Participation Program as part of the evaluation of the three northern alignments in the Draft EIS/EIR in the amount of \$429,310, increasing the total contract value to \$922,203.

Attachments: [Attachment A - NA Updated Screening Report Executive Summary](#)
[Attachment B - Original Northern Alignments Map](#)
[Attachment C - New Northern Alignments Map](#)
[Attachment D - Northern Alignment Summary of Project Goals Results](#)
[Attachment E - Northern Alignment Summary of Select Performance Measurements](#)
[Attachment F - Recommended Northern Alignments Map v2](#)
[Attachment G1 - Trips Common to both Options Origins](#)
[Attachment G2 - Trips Common to both Options Destinations](#)
[Attachment H-1 Procurement Summary](#)
[Attachment H-2 Procurement Summary](#)
[Attachment I-1 Contract Modification Log](#)
[Attachment I-2 Contract Modification Log](#)
[Attachment J-1 - DEOD Summary for H-1](#)
[Attachment J-2 - DEOD Summary for H-2](#)
[Presentation](#)

(ALSO ON PLANNING AND PROGRAMMING COMMITTEE)

30. SUBJECT: PROGRAM MANAGEMENT MAJOR PROJECT STATUS REPORT [2018-0217](#)

RECOMMENDATION

RECEIVE oral report on the Major Project Status by the Chief Program Management Officer.

Attachments: [Presentation](#)

31. SUBJECT: PROJECT LABOR AGREEMENT/CONSTRUCTION CAREERS POLICY (PLA/CCP) [2018-0188](#)

RECOMMENDATION

RECEIVE AND FILE the:

A. Status update on the Project Labor Agreement and Construction Careers Policy programs through the quarter ending March 2018; and

B. Female Participation Action Plan Update.

Attachments: [Attachment A - PLA CCP Completed Contracts](#)
[Attachment B - Female Participation Action Plan](#)
[Attachment C - PLA CCP Report Data through March 2018](#)
[DRAFT Board Presentation PLA CCP May 2018](#)

32. **SUBJECT: 2018 LOS ANGELES CONSTRUCTION MARKET ANALYSIS** [2018-0086](#)

RECOMMENDATION

RECEIVE AND FILE the 2018 Los Angeles Construction Market Analysis report.

Attachments: [Attachment A - Los Angeles Construction Market Analysis Presentation](#)
[Attachment B - 2018 LA Construction Market Analysis Executive Summary](#)

33. **SUBJECT: OFFICE OF THE INSPECTOR GENERAL CHANGE ORDER/MODIFICATION CONSTRUCTION SPOT CHECKS** [2018-0191](#)

RECOMMENDATION

RECEIVE AND FILE this Office of the Inspector General report on Change Order/Modification Construction Spot Checks for the period ending February 28, 2018.

Attachments: [Presentation](#)

34. **SUBJECT: DIVISION 20 PORTAL WIDENING TURNBACK PROJECT** [2018-0186](#)

RECOMMENDATION

CONSIDER:

- A. AUTHORIZING the Chief Executive Officer to execute a 5-year cost-plus fixed fee Contract No. AE48636MC074 with DHS Consulting, Inc. to provide Construction Management Support Services for the Division 20 Portal Widening Turnback Project, in an amount not-to-exceed \$13,029,957.91;
- B. APPROVE Contract Modification Authority in the amount of \$2,605,991.82 or 20% of the not-to-exceed contract award value and authorize the CEO to execute individual Contract Modifications within the Board approved Contract Modification Authority.

Attachments: [Attachment A - Procurement Summary](#)
[Attachment B - DEOD Summary](#)

- SUBJECT: GENERAL PUBLIC COMMENT** **2018-0314**

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 #: 2018-0072, File Type: Contract

Agenda Number:

**PLANNING AND PROGRAMMING COMMITTEE
MAY 16, 2018**

SUBJECT: WEST SANTA ANA BRANCH TRANSIT CORRIDOR

ACTION: APPROVE RECOMMENDATIONS

RECOMMENDATION

RECOMMENDATIONS A AND B APPROVED AS AMENDED DURING MAY'S REGULAR BOARD MEETING, RECOMMENDATION C TO BE VOTED ON DURING JUNE'S REGULAR BOARD MEETING.

CONSIDER:

A. RECEIVING AND FILING:

1. West Santa Ana Branch Transit Corridor Updated Northern Alignment Options Screening Report, including project goals; and
2. Update on Public-Private Partnership (P3) project delivery procurement process

B. AUTHORIZING:

1. Northern alignment options to carry forward into Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR)
 - a. Concept E: Union Station via Alameda Underground
 - b. Concept F: Union Station via Alameda Underground/Center Aerial
 - c. Concept G: Downtown Transit Core Underground

FASANA AMENDMENT: As part of the environmental process, consider studying up to 6-car platforms.

C. AUTHORIZING the Chief Executive Officer to execute:

1. Modification No. 2 to Contract No. AE5999300 with WSP USA Inc. for technical services for the evaluation of the three northern alignments in the Draft EIS/EIR in the amount of \$2,760,752, increasing the total contract value to \$12,405,244; and

- 2. Modification No. 1 to Contract No. PS2492300 with Arellano Associates for outreach support for the augmented Community Participation Program as part of the evaluation of the three northern alignments in the Draft EIS/EIR in the amount of \$429,310, increasing the total contract value to \$922,203.

ISSUE

At the March 1, 2018 meeting, the Board authorized expanding the northern alignment study area to address scoping period comments and updated technical information. Based on community input and technical analysis, a Northern Alignment Alternatives and Concepts Updated Screening Report (Updated Screening Report) has been completed. Attachment A contains the Executive Summary, inclusive of performance, travel and cost information. The full report is on file and available upon request.

The Updated Screening Report recommends three (3) northern alignment options to be carried forward into the environmental document for further analysis. The Board is deciding on actions necessary to advance the NEPA and CEQA review of the West Santa Ana Branch (WSAB) Transit Corridor (Project), but is not making a decision about the final project. Board action is needed in order to proceed forward with the environmental analysis and remain on schedule per the Measure M groundbreaking date of Fiscal Year (FY) 2022. In addition, Board action in May would facilitate efforts for project acceleration.

BACKGROUND

The WSAB Project is a proposed light rail transit (LRT) line that would extend approximately 20 miles from downtown Los Angeles through southeast Los Angeles County (LA County). South of downtown Los Angeles, a single alignment has been identified following existing right-of-way parallel to the Blue Line owned by Union Pacific, then along Randolph Avenue in the City of Huntington Park using Metro owned Right-of-Way (ROW), then following the San Pedro Subdivision Branch (owned by Port of Los Angeles and Port of Long Beach), to the eight-mile, Metro-owned, abandoned Pacific Electric ROW to the southern terminus in the City of Artesia. WSAB would traverse a highly populated area, with high numbers of low-income and heavily transit-dependent residents. A primary goal of the Project is to improve mobility by connecting the communities of southeast LA County with the Metro rail network.

The Project is identified in Measure M as a light rail transit (LRT) project. The exact project description of all projects set forth in the Measure M ordinance are to be defined by the environmental process, which includes features such as termini, alignment and stations. Per Measure M and Metro’s 2009 Long-Range Transportation Plan (as amended), the Project has a \$4 billion (B) (2015\$) allocation based on the cost estimate in the Measure M Expenditure Plan (Proposition A and C funds may not be used for underground segments). Per Measure M, funding becomes available in two cycles as follows:

Measure M Expected Opening Date	L RTP Funding Allocation (2015\$)
FY 2028	\$1 billion

FY 2041	\$3 billion
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Measure M indicates that an early delivery of the second funding cycle may be made possible with a Public Private Partnership (P3) delivery method. A P3 is being pursued as a delivery strategy for accelerating the second funding cycle, which may enable Metro to deliver the project in one phase, coupled with a comprehensive delivery approach.

The entire Project is also included in Metro's "Twenty-Eight by '28 Initiative" project list as an aspirational project schedule to be completed in time for the 2028 Olympic and Paralympic Games in Los Angeles. Therefore, efforts are being made to achieve an early project delivery; this May 2018 Board action would facilitate efforts for project acceleration.

Northern Alignments

In September 2016, the Board authorized award of a professional services contract (Legistar file 2016-0571) to environmentally clear the Project under the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). As part of this planning process, a Northern Alignment Options Screening Report (April 2017) was prepared to further assess six northern alignment options previously analyzed in the Technical Refinement Study (TRS), received by the Board in September 2015 (Legistar file 2015-0994). As a result of the Northern Alignment Options Screening Report, per Board action at the April 2017 meeting (Legistar file 2017-0152), four northern alignment options were carried into the scoping period for the environmental analysis as shown in Attachment B:

- A. Pacific/Alameda
- B. Pacific/Vignes
- C. Alameda
- D. Alameda/Vignes

In June 2017, as part of the environmental process, public scoping meetings were held in the cities of Bellflower, Huntington Park, Los Angeles, and South Gate. The meetings provided project updates to stakeholders and solicited comments through an extended formal comment period that ended in August 2017. At the conclusion of the public scoping period, over 1,100 comments were received. Approximately 400 of the comments were submitted by Little Tokyo stakeholders. A majority of the comments expressed strong opposition to some or all of the northern alignment options and were particularly opposed to an elevated alignment along Alameda Street. In general, comments from the Little Tokyo community included concerns regarding the potential visual impact of an aerial alignment and concerns regarding the potential construction impacts brought on by a WSAB alignment through their community. Similarly, the Arts District and Industrial District communities also generally expressed concerns with an at-grade or elevated alignment along Alameda Street.

Metro also received scoping letters from several agencies. In their scoping letters, Metrolink, the Federal Railroad Administration (FRA) and the California High Speed Rail Authority (HSR) expressed concerns regarding the northern alignment options. Specifically, their comments focused on encouraging Metro to seek alternatives that do not limit or preclude the potential for existing or future regional railroad capacity at Union Station (LAUS), reasoning that LAUS is the regional rail hub and, therefore, should prioritize regional rail services due to limited platform availability.

In response to comments received during the scoping period and ongoing technical analysis, the project team analyzed additional northern alignment options, coordinating with several departments. Considerations brought to bear in developing additional alignments responsive to public comment included potential terminus station areas and identifying opportunities and challenges as they relate to operations, transit oriented communities (TOC) and constructability of the alignments. Additional new northern alignment options were developed and further refined. The new northern alignment concepts that emerged can be found in Attachment C. They are:

- E. Alameda (underground) to Union Station
- F. Alameda (underground)/Center (aerial) to Union Station
- G. Downtown Transit Core underground to 7th/Metro or Pershing Square station areas
- H. Arts District/6th Street underground to Union Station via extended Purple or Red Lines

DISCUSSION

Given the factors identified in the scoping comments and workshops, an Updated Screening Report was completed to provide a detailed screening evaluation of the original and new northern alignment concepts to identify the highest performing alignment options. As part of the Updated Screening Report, eight northern alignment options were analyzed, including the original four alignments and four supplemental northern alignment concepts. The eight options were evaluated based on how well they addressed the qualitative Project goals as well as key, quantitative performance factors.

The Project goals are intended to qualitatively guide the overall planning process and serve as one of several performance measurement tools. Attachment D summarizes how each alignment qualitatively performed when compared to the goals. The Project goals are:

- Provide Mobility Improvements
- Support Local and Regional Local Use Plans and Policies
- Minimize Environmental Impacts
- Ensure Cost Effectiveness and Financial Feasibility
- Ensure Equity

In addition to the Project goals, staff also quantitatively evaluated each northern alignment options against key performance factors. These factors which aim to capture the customer impact and experience are compared for each alignment in Attachment E.

Community Engagement

The Updated Screening Report provides a summary of the outreach efforts held March through April 2018, including location of meetings held and feedback received. Comments received at the community meetings, via the online comment form and via e-mail cite both LAUS and the Downtown Transit Core as the top preferences for potential riders beginning/ending their trips. Of those who indicated an alignment preference, Concepts E and G are preferred. Other comments submitted pertained to pedestrian connections, safety, homelessness, first/last mile connections, parking supply, impacts at and around stations, property values, noise levels, aesthetics, construction

impacts, alignment configuration, budget, ridership, P3 potential, and property acquisitions. Stakeholder briefings, meetings, presentations and comment letters received from the southern portion of the project corridor revealed a substantial amount of support for a one seat ride to LAUS and opposition to a terminus in the Arts District.

Briefings, meetings, presentations and comment letters received from stakeholders in the northern portion of the project corridor yielded interest in additional alignments and an interest in having Metro consider heavy rail transit as the mode for WSAB. A rough order of magnitude (ROM) cost for a 20-mile WSAB heavy rail alignment based on recent Metro projects was prepared and found the cost to range between \$12.3B and \$18.4B. It has also been determined, in consultation with the Federal Transit Administration (FTA), that the environmental process would need to be restarted, thereby impacting the project schedule.

Recommended Alignments

Based on the technical evaluation and public/stakeholder input, the Updated Screening Report recommends three options to be carried forward into the Draft environmental document for further analysis and refinement. Attachment F includes a map of the three recommended alignments. These alignments also represent a reasonable range of alternatives to be evaluated as required by the state and federal environmental process.

- Two alignments would terminate at LAUS; one would terminate in the Downtown Transit Core.
- All three alignments are completely underground or have substantial underground configurations in the downtown LA area.
- All three options would run parallel to the Blue Line between the Slauson and Washington stations, thereby allowing transfer opportunities, which would also provide relief to the Blue Line. As the Blue Line tends to operate at capacity in one direction at the peak hour, providing passengers with an alternative to riding the Blue Line all the way into downtown LA was identified as an important operational consideration.
- All three alignments would provide at least one station to serve the Arts District area.
- Attachments G1 and G2 illustrate trips that are common to the LAUS and Downtown Transit Core termini. Approximately 90% of trips are common to both termini.

The three recommended options are:

- **Concept E - Union Station via Alameda Underground:**
 - Description: Extends approximately 7.9 miles between LAUS and the Florence/Salt Lake Station along the Metro Blue Line and Alameda Street.
 - Ridership: It has estimated daily boardings of 81,000 of which includes an estimated 27,000 new riders.
 - Connectivity: This alignment allows for a direct connection to LAUS.
 - Cost Estimate: As a mostly underground alignment, Concept E has a preliminary capital cost of \$5.8B (2017\$).
 - Overall Evaluation: Concept E received an overall score of High and is recommended to move forward.
 - Other Factors: This option would provide a one seat ride to the west side of LAUS,

providing transfer opportunities to Metro rail and bus and regional rail services. The alignment addresses community concerns expressed as part of the Scoping process. The alignment also includes an optional station at 1st/Central providing a connection to the Regional Connector future north/south and east/west connections. The alignment could serve an Arts District Station in the vicinity of Alameda and 7th Streets.

- **Concept F - Union Station via Alameda/Center:**

- Description: Extends approximately 8.1 miles between LAUS and the Florence/Salt Lake Station along the Metro Blue Line, Alameda Street and then Center Street.
- Ridership: It has estimated daily boardings of 74,500 of which includes an estimated 26,000 new riders.
- Connectivity: This alignment allows for a direct connection to LAUS and therefore one transfer to the future north-south line and regional rail services.
- Cost Estimate: As a partially underground alignment, Concept F has a preliminary capital cost of \$5.4B (2017\$).
- Overall Evaluation: Concept F received an overall score of Medium/High and is recommended to move forward.
- Other Factors: This option would provide a one seat ride to LAUS, providing transfer opportunities to Metro rail and bus and regional rail services. The alignment addresses community concerns expressed as part of the Scoping process; however, an aerial configuration would be required on Center Street to terminate at Platform 2. The alignment could serve an Arts District Station in the vicinity of Alameda and 7th Streets.

- **Concept G - Downtown Transit Core:**

- Description: Extends approximately 8.0 miles between the Downtown Transit Core and the Florence/Salt Lake Station parallel to the Metro Blue Line then primarily under Alameda, 7th and 8th Streets.
- Ridership: It has estimated daily boardings of 78,500 of which includes an estimated 25,000 new riders.
- Connectivity: If the terminus allows for a connection to 7th/Metro Center, one transfer can be made to Red, Purple, North-South and East-West lines. If the terminus allows for a connection to Pershing Square, then two transfers are required to access the future North-South and East-West lines. Two transfers are needed to access regional rail services.
- Cost Estimate: As a mostly underground alignment, Concept G has a preliminary capital cost of \$5.8B (2017\$).
- Overall Evaluation: Concept G received an overall score of Medium/High and is recommended to move forward.
- Other Factors: This option would support connectivity for emerging Transit Oriented Communities at South Park/Fashion District and the Arts District South Station, and provide access to very high population and employment densities. It best serves transit dependent/Environmental Justice communities. Extending WSAB to a potential 5th/Flower station at the Regional Connector creates significant problems in allowing for a station connection at Pershing Square. Therefore, this alignment does not allow for a future direct extension to a future 5th/Flower station.

The three concepts recommended to move forward will be further studied as part of the Draft EIS/EIR. The remaining five concepts will be eliminated from further consideration, as these concepts do not perform as well in advancing the goals of the Project. The environmental document will describe the five eliminated concepts and explain why they were dropped from further consideration. This will be done as part of the Scoping and Updated Screening Process description of the environmental document where staff will capture alternatives that have been considered but were dropped from further evaluation.

Cost Estimates

All project cost estimates are rough order of magnitude. None of the eight options are close to the estimated budget in Measure M. Significant project design development remains. Cost estimates are expected to increase, resulting from further defining the project during the environmental review and public, stakeholder and partner engagement processes. Therefore, cost was not deemed determinative in screening alignments into the subsequent environmental review process. However, a reasonable and achievable funding package will be prepared to address costs and deliver a project within the envelope suggested by the estimated costs.

Technical Services Contract Modification No. 2

The execution of Contract Modification No. 2 will allow the contractor to conduct additional analysis, design work and updates to the technical reports to reflect the approved northern alignments and complete the environmental document.

Outreach Services Contract Modification No. 1

The execution of Contract Modification No. 1 will allow the outreach contractor to continue implementing focused outreach services to the corridor communities in support of the environmental document.

P3 Procurement Activities

Public Private Partnership (P3) is an innovative project delivery and financing model where Metro partners with a private sector firm to improve project performance, reduce short- and long-term costs, transfer project risks, and accelerate completion of a project. P3 delivery can include private sector participation in funding the project, as well as the operations and maintenance over extended periods of time. The procurement process for the WSAB Project will be a two-stage procurement, consisting of a Request for Qualification (RFQ) phase followed by a Request for Proposals (RFP) phase. Interim milestones for achieving the RFQ and RFP phases include Market Sounding, Shortlisting of Procurement Options, Qualitative Assessment, Risk Identification/Analysis, and Value for Money Assessment. These deliverables will form the P3 Business Case that will drive an effective competitive procurement that can best deliver on Metro's project objectives. During this process, Metro will provide regular updates to the Board, as well as conducting Small Business Outreach.

Market Sounding

The Metro P3 Team completed a phased Market Sounding to support delivery of the WSAB P3 Project. Market Soundings is a series of separate, one-on-one discussions between a public project sponsor (and its P3 advisors) and current P3 market participants to assess a project's financial feasibility, risk allocation, and other related topics, to help inform the optimal approach for delivering the project. The Project Team anticipates undertaking up to three Market Soundings over the next 12 months (leading up to the issuance of the RFQ). Once the Market Sounding is complete, findings will be compiled to inform subsequent key decisions that will determine the path forward for the WSAB P3.

A few key findings from the first Market Sounding included the following:

- Confirmed a strong interest in a P3 and were broadly supportive of Design-Build-Finance-Operate-Maintain arrangement.
- Identifying one operator for the entire alignment was recommended, even if the Project is phased.
- Considerations for including rolling stock could lead to potential efficiencies.
- In general, the industry indicated that TOC should not be included as part of the P3.
- Participants indicated that affordability of the project scope and timing of delivery would need to be confirmed before procurement, and that an affordability cap could bring additional certainty and ensure successful transaction close if projected costs exceed budget.

Request for Qualifications and Request for Proposals

The RFQ/RFP process will provide an opportunity for Metro to evaluate the most qualified firms on the basis of technical and financial capability, as well as a strong track record of safety and completing successful P3 projects of similar size and complexity. Current schedule for the WSAB project includes releasing the RFQ in 2019. The Metro P3 Team will determine the subsequent schedule for release of the Draft and Final RFP and Project Agreement, as the project scope continues to be developed by Countywide Planning and Development. The Team will advise the Board once the dates are determined.

DETERMINATION OF SAFETY IMPACT

These actions will not have any impact on the safety of our customers and/or employees because this Project is at the study phase and no capital or operational impacts results from this Board action.

FINANCIAL IMPACT

The FY 2017-18 budget includes \$4,507,640 in Cost Center 4370 (Systemwide Team 3), Project 460201 (WSAB Corridor Admin) for professional services. Since this is a multi-year contract, the Cost Center Manager and Chief Planning Officer will be responsible for budgeting in future years.

Impact to Budget

The funding for this Project is from Measure R 35%. As these funds are earmarked for the WSAB Transit Corridor project, they are not eligible for Metro bus and rail capital and operating expenditures.

ALTERNATIVES CONSIDERED

The Board could decide not to approve the recommended northern alignment options to be carried forward into the Draft EIS/EIR. This alternative is not recommended, as this would impact the Project's environmental clearance schedule and would not be responsive to comments received during the scoping period on the current alignments or consider updated technical information. This would also not be consistent with prior Board direction to advance the Project and Measure M. The narrowing of the options will ensure the Project remains on schedule and will also support the procurement of a contractor to deliver the Project.

The Board may also advance other alignment options into the environmental clearance process. The following options are identified below, along with staff's reasoning for why these options are not as well-suited to achieve the Project goals as the recommended options. Including more options than necessary in the environmental document has cost, schedule and risk implications.

- Alternatives A: Pacific/Alameda and B: Pacific/Vignes - Both alignments would turn north via Pacific Avenue to Santa Fe, terminating at LAUS. These alignments are not recommended to move forward because land uses along this alignment are not supportive to transit and there is insufficient interest from local jurisdictions to leverage transit with TOC.
- Alternatives C: Alameda and D: Alameda/Vignes - Both alignments would turn north via Alameda Street in an aerial configuration terminating at LAUS. These alignments are not recommended to move forward due to significantly negative urban design impacts, strong community opposition and potential cumulative construction impacts to the Little Tokyo Community.
- Concept H: Arts District/6th Street - This alignment would turn north parallel to the Los Angeles River in an underground configuration with a station at the Arts District/6th Street. This alignment would include extending either the Red or Purple Line to this station for passenger service as part of the WSAB project, providing a transfer opportunity to passengers wishing to travel to LAUS. This alignment is not recommended to move forward due to low compatibility with the Project goals, including low ridership and limited benefits to transit-dependent and minority populations. Furthermore, all of the three recommended options serve areas of the Arts District. The recommendation to not carry forward Concept H into the WSAB environmental process does not preclude a separate effort to study and/or environmentally clear an Arts District station.
- Alignments and Modes Suggested by Others - Various stakeholders in the northern portion of the Project corridor expressed interest in potential new alignments, including shifting Concept G (Downtown Transit Core) or Concept H (Arts District/6th Street) to head west from the proposed 7th/Alameda Station or Arts District/6th Street station, respectively, and travel southwest to the existing Pico Station of the Metro Blue and Expo Lines. Although a potential alignment to the Pico Station may provide additional and direct connectivity to South Park/Fashion District and LA Live/Staples Center, this alignment would increase travel time and further reduce the number of new riders traveling between the southern portion of this alignment and northern destinations. Moreover, it results in a forced transfer to travel from the

Pico station to 7th/Metro Center for those whose destination is elsewhere.

As previously noted, heavy rail transit was also suggested as a mode. A rough order of magnitude (ROM) cost for a 20-mile WSAB heavy rail alignment based on recent Metro projects was prepared and found the cost to range between \$12.3B and \$18.4B. It has also been determined, in consultation with the FTA, that the environmental process would need to be restarted, thereby impacting the project schedule. Therefore, heavy rail transit is not recommended.

NEXT STEPS

Upon Board approval, staff will continue to perform the necessary environmental analyses and outreach to complete the Draft EIS/EIR, along with concurrently proceeding with the P3 procurement process. In addition, staff will execute the contract modifications with WSP for technical services and with Arellano Associates for outreach support services.

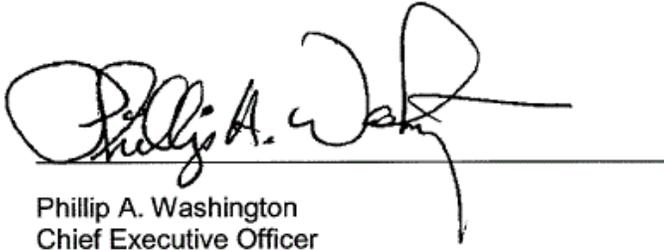
As a result of Board approval, a series of updated scoping meetings will be held in summer 2018 to update communities and public agencies on the northern alignment options being carried forward into the environmental document and gather their feedback, as required by NEPA and CEQA. The FTA is serving as lead agency for purposes of NEPA and staff will be coordinating with the FTA on the updated scoping meetings. Staff will also continue to provide briefings to key stakeholders, in addition to continued public outreach efforts along the corridor.

ATTACHMENTS

- Attachment A - Northern Alignment Alternatives and Concepts Updated Screening Report- Executive Summary
- Attachment B - Original Northern Alignment Map
- Attachment C - New Northern Alignments Map
- Attachment D - Northern Alignments Summary of Project Goals Results
- Attachment E - Northern Alignments Summary of Key Performance Measurements
- Attachment F - Recommended Northern Alignments Map
- Attachment G1 - LAUS and Downtown Transit Core Origin Trips
- Attachment G2 - LAUS and Downtown Transit Core Destination Trips
- Attachment H-1 - Procurement Summary AE5999300
- Attachment H-2 - Procurement Summary PS2492300
- Attachment I-1 - Contract Modification/Change Order Log AE5999300
- Attachment I-2 - Contract Modification/Change Order Log PS2492300
- Attachment J-1 - DEOD Summary for H-1
- Attachment J-2 - DEOD Summary for H-2

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West Santa Ana Branch Transit Corridor

Final Northern Alignment Alternatives and Concepts Screening Report
Executive Summary



Metro®

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ACRONYMS AND ABBREVIATIONS

BRT	Bus Rapid Transit
CEQA	California Environmental Quality Act
EJ	Environmental Justice
Environmental Study	West Santa Ana Branch Transit Corridor Environmental Study
LA County	Los Angeles County
LAUS	Los Angeles Union Station
L RTP	Long-Range Transportation Plan
Metro	Los Angeles County Metropolitan Transportation Authority
NEPA	National Environmental Protection Act
P3	Public-Private Partnership
Project	West Santa Ana Branch Transit Corridor
ROM	Rough-Order-of-Magnitude
SIP	Strategic Implementation Plan
Study Area	West Santa Ana Branch Transit Corridor Study Area
TOC	Transit Oriented Community
TOD	Transit Oriented Development
TRS	Technical Refinement Study
VMT	Vehicle Miles Traveled
WSAB	West Santa Ana Branch

EXECUTIVE SUMMARY

The West Santa Ana Branch (WSAB) Transit Corridor (Project) is a proposed light rail transit line that would extend approximately 20 miles from downtown Los Angeles through southeast Los Angeles County (LA County), traversing densely populated, low-income and heavily transit-dependent communities not currently served by Metro Rail. The Project is one of the many transit projects funded by LA County Measure R (approved in November 2008) and Measure M (approved in November 2016). The Project is identified in the Los Angeles County Metropolitan Transportation Authority's (Metro) 2009 Long-Range Transportation Plan with anticipated ground breaking in 2022.

In September 2016, Metro initiated the WSAB Transit Corridor Environmental Study (Environmental Study). Public Scoping Meetings, as part of the environmental process, took place in the cities of Bellflower, Los Angeles, South Gate, and Huntington Park in June 2017. The comments received from the public at those meetings resulted in the development of new alignment and station concepts. The evaluation of these new Concepts as well as the original Alternatives is the subject of this report.

ES.1 Summary of Results

Based on the findings of the Northern Alignment Alternatives and Concepts screening analysis, a northern terminus at Los Angeles Union Station (LAUS) or in the Downtown Transit Core would provide the highest benefits. This was further confirmed based on input gathered from public outreach meetings held in March 2018. The evaluation resulted in three Concepts that best align with Project goals:

- **Concept E: Alameda (underground)** aligns with the overall project goals for the Project. This Concept rates high for mobility improvements, minimizes environmental impacts, and ensures equity by providing more transit access to minority and low-income communities. Concept E is also supportive of land use plans and policies by serving high population and employment densities. The significant underground section of this alignment would result in high capital costs and risks; however, the opportunity to provide a direct connection to LAUS, the East-West (Gold Line/Regional Connector), and the North-South (Blue Line) Lines offers benefits that best meet the project goals, objectives, and evaluation criteria.
- **Concept F: Alameda/Center**, with a similar alignment as Concept E, also aligns with the overall project goals by rating high in mobility improvements and ensures equity to minority and low-income communities. Concept F would provide additional benefits of a connection to emerging Transit Oriented Communities (TOC) near the Arts District North Station and an aerial connection into LAUS above the Gold Line Platform or on Platform 2. The significant underground section of this alignment would also result in high capital costs and risks; however, the opportunity to provide a direct connection to LAUS and the Blue Line offers benefits that meet the project goals, objectives, and evaluation criteria.
- **Concept G: Downtown Transit Core** also aligns with the overall project goals by supporting connectivity for emerging TOCs, and providing access to very high population densities, employment densities and transit-dependent/environmental justice communities. Like Concepts E and F, the significant underground portions of this alignment, particularly in the Downtown Core, would result in high capital costs and risks. Based on modeling results, transfers to the Regional Connector at the 7th

Street/Metro Center terminus would likely attract more riders than a terminus at Pershing Square. This Concept would offer valuable benefits of mobility and supportive land use while meeting the project goals, objectives, and evaluation criteria.

Table ES-1. Summary of Results

Evaluation Criteria	Northern Alignment Alternatives and Concepts							
	Alt A Pacific/ Alameda	Alt B Pacific/ Vignes	Alt C Alameda (aerial)	Alt D Alameda/ Vignes	Concept E Alameda (underground)	Concept F Alameda/ Center	Concept G Downtown Transit Core	Concept H Arts District/ 6 th Street
1. Provide Mobility Improvements								
2. Support Local and Regional Land Use Plans and Policies								
3. Minimize Environmental Impacts								
4. Ensure Cost Effectiveness and Financial Feasibility								
5. Ensure Equity								
Overall Ratings	Medium/ Low	Medium/ Low	Medium	Medium	High	Medium/ High	Medium/ High	Low

Note: Since the proposed alignment for all Alternatives and Concepts is the same south of Florence/Salt Lake Station, evaluation results shown are attributed to differences in the Northern Alignments.

ES.2 Study Area

Stretching over 20 miles from Elysian Park in the north to the Los Angeles/Orange County line in the south, the WSAB Transit Corridor Study Area (Study Area) is approximately 98 square miles and incorporates 20 individual cities – the cities of Los Angeles, Vernon, Maywood, Huntington Park, Commerce, Bell, Cudahy, Bell Gardens, South Gate, Lynwood, Compton, Downey, Paramount, Bellflower, Long Beach, Lakewood, Norwalk, Artesia, Cerritos and Hawaiian Gardens – as well as portions of unincorporated LA County (see Figure ES-1). The Study Area includes some of LA County's most densely developed and low-income residential neighborhoods and encompasses major regional employment centers, including the industrial and manufacturing backbone of the County.

As population and employment continue to increase within the Study Area, daily travel is also projected to increase. Under current (2017) conditions, the Study Area has approximately 6.39 million daily person trips. Over the next 25 years (by 2042), the daily person trips are projected to increase by 14 percent to approximately 7.26 million daily person trips. For both 2017 and 2042, approximately 31 percent of the trips stay within the Study Area, 33 percent are trips from the Study Area to destinations outside the Study Area, and 36 percent are trips into the Study Area from points outside the Study Area.

This increase of nearly 900,000 daily person trips between 2017 and 2042 may further burden the existing transportation network. Although auto travel is the predominant travel mode (with 86 percent of home-based work trips made by auto), there is significant transit demand given the high proportion of transit-dependent populations.

Figure ES-2 presents the daily trip flows from the Study Area destinations (trips beginning in the Study Area) and the primary locations where these trips are traveling. The majority of trips beginning within the Study Area have destinations within the Study Area. Those with districts adjacent to the Study Area (Central Los Angeles, Gateway Cities East and West) have the next highest number of trips. Districts that are farther away from the Study Area (South Bay, Westside, and San Gabriel Valley) have the next level of trip destinations.

Figure ES-3 shows daily trip flows by attractions to the WSAB Study Area generally shows the reverse of which are trips coming into the Study Area. Similar to the productions, the majority of trips stay within the Study Area, and the districts adjacent to the Study Area have a high number of trips coming into the corridor. In terms of attractions, the Study Area has a high number of trips (approximately 289,000) from the San Gabriel Valley traveling to the Study Area.

As shown in these figures, about half of the daily travel begins and ends in the WSAB Transit Corridor, followed by a significant travel demand between the Study Area and the Central LA District. There is also a significant travel demand between the Study Area and the Gateway Cities and the South Bay.

Figure ES-1. WSAB Transit Corridor Study Area

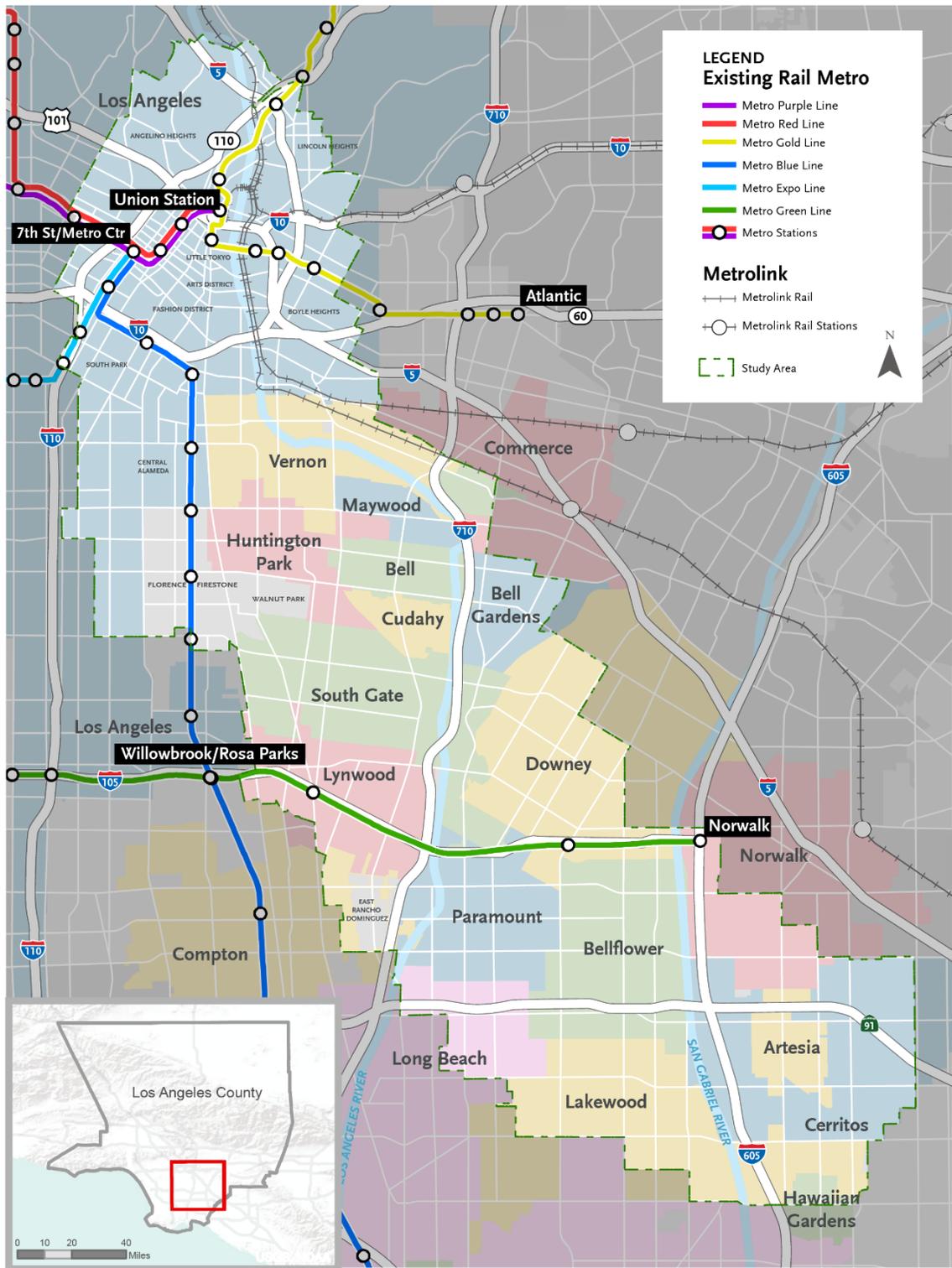


Figure ES-2. WSAB Transit Corridor Study Area Trip Destinations Map

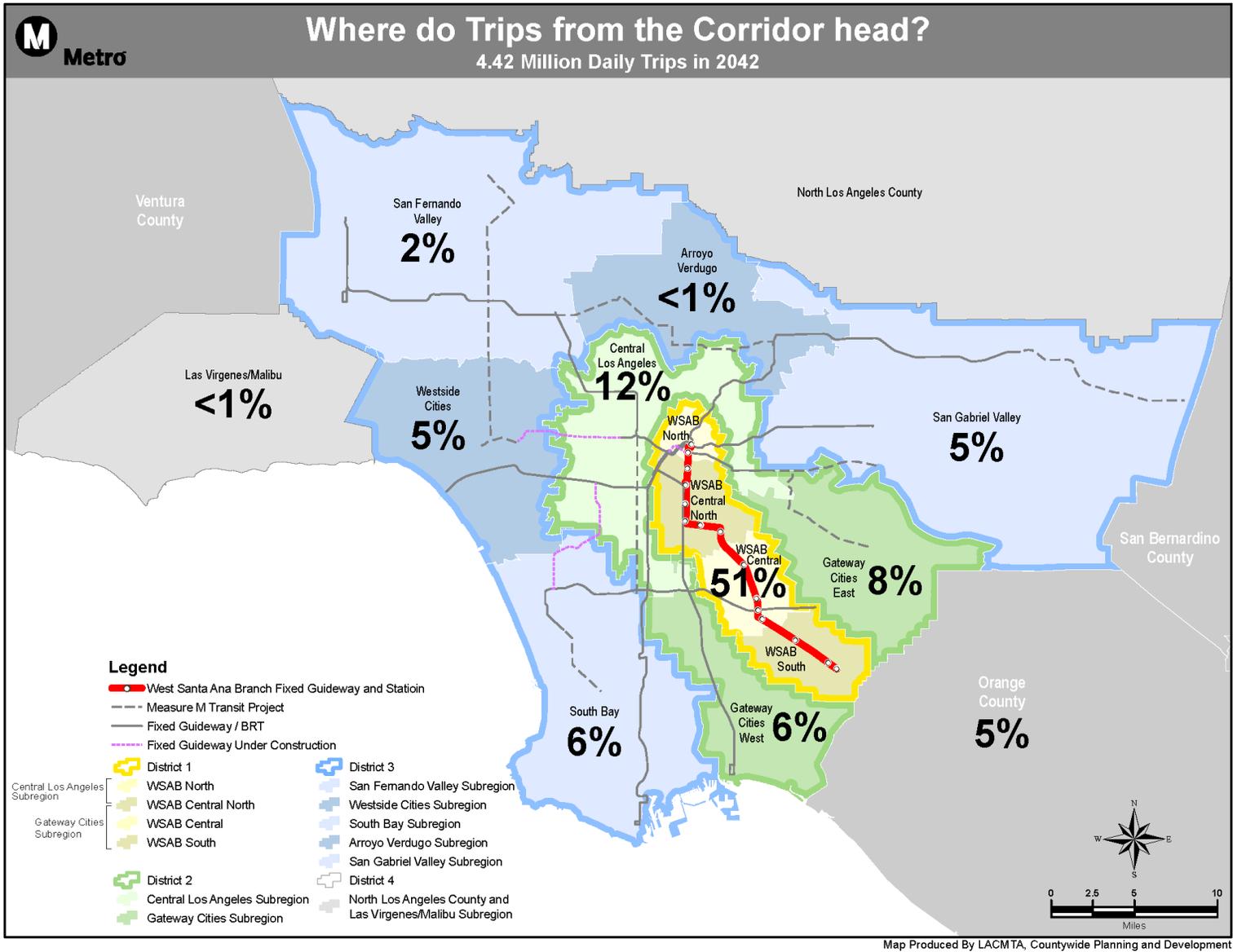
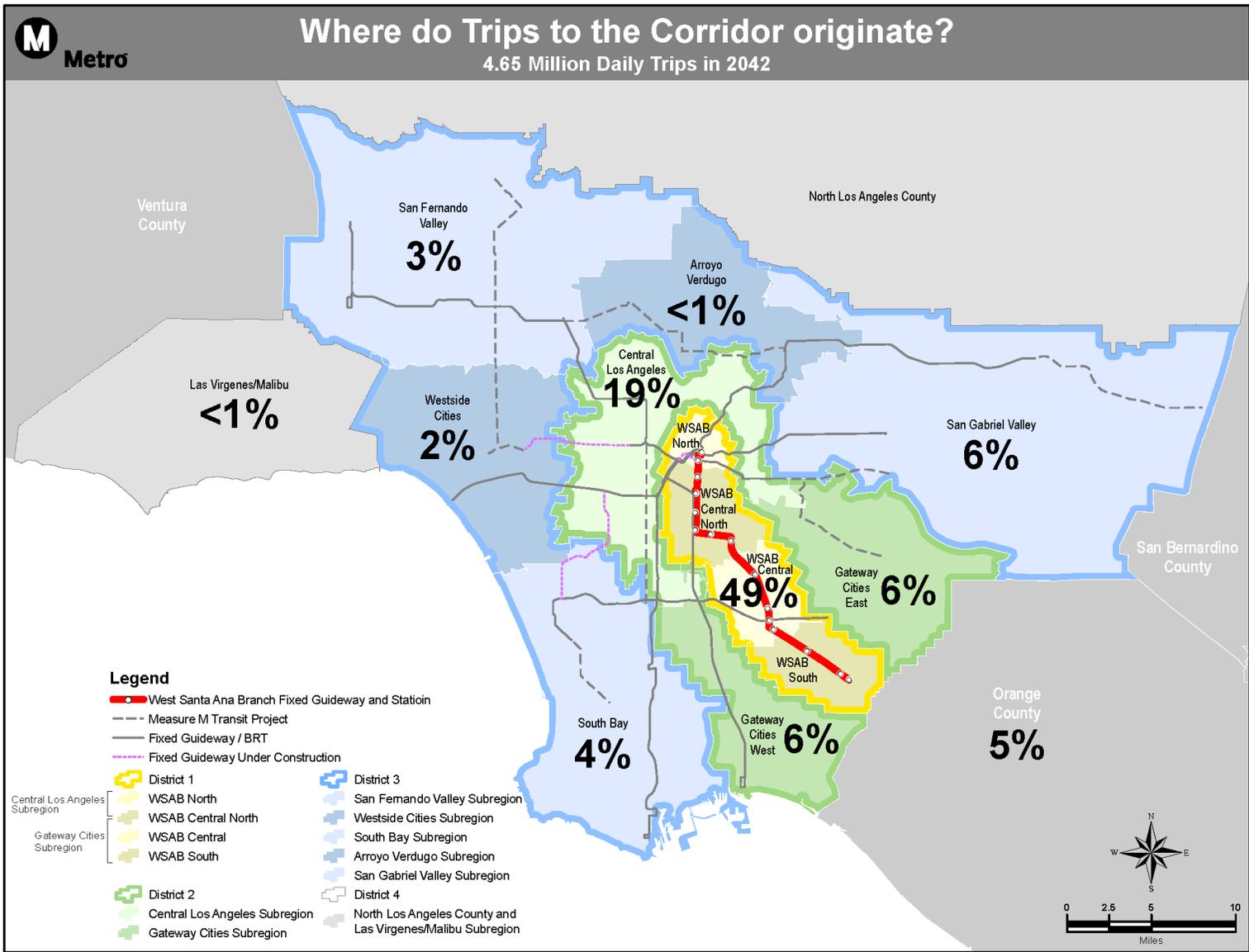


Figure ES-3. WSAB Transit Corridor Study Area Trip Origin Map



ES.3 Study Background

In September 2016, Metro initiated the WSAB Transit Corridor Environmental Study with the goal of environmentally clearing the Project under the California Environmental Quality Act (CEQA) and the National Environmental Protection Act (NEPA). As part of this planning process, a Northern Alignment Options Screening Report (April 2017) was prepared to further assess the six Northern Alignment Options previously analyzed in the Technical Refinement Study (TRS), completed in September 2015. As a result of the Northern Alignment Options Screening Report, the following four of those six Northern Alignment Options were carried into the scoping period for the environmental analysis: Pacific/Alameda, Pacific/Vignes, Alameda, and Alameda/Vignes.

Public Scoping Meetings, as part of the environmental process, took place in the cities of Bellflower, Los Angeles, South Gate, and Huntington Park in June 2017. The meetings provided project updates and information to stakeholders with the intent to receive comments and questions during a comment period ending in August 2017.

Although the Project was defined for the Environmental Study, several factors have emerged since August 2017 that required revisiting the Project alternatives. These include:

- **Scoping Comments Received** – 1,122 comments were received during the Public Scoping Period between June and August 2017. Comments related to the Northern Alignment Options identified some level of opposition, with the highest levels of concerns related to potential impacts to the Little Tokyo community.¹ Evaluating new Concepts is in response to the issues raised during the Public Scoping Period. Comments were also received from the California High-Speed Rail Authority, Metrolink, and the Federal Railroad Administration stating a preference for alignments that do not limit existing or planned capacity at LAUS for regional rail services.
- **Updates to the Long-Range Transportation Plan (LRTP)** – The passing of Measure M initiated the acceleration of major highway and transit projects within LA County. The updated LRTP Expenditure Plan would affect No Build project assumptions (with respect to the timeline of background projects), as well as an anticipated accelerated timeline for the WSAB Transit Corridor. As such, the WSAB Transit Corridor Options needed to be updated to be consistent with projects, programs and initiatives within the updated LRTP.
- **TOD/TOC Planning Initiatives** – Metro, in partnership with the City of South Gate and the Eco-Rapid Transit Joint Power Authority, has received a grant from the Federal Transit Administration’s Pilot Program for the WSAB Transit Corridor Transit Oriented Development (TOD) Strategic Implementation Plan (SIP). While the WSAB Transit Corridor TOD SIP does not directly influence the alternatives development process for the WSAB Transit Corridor, it is important to consider future development potentials when evaluating the Northern Alignment Alternatives and Concepts.
- **Advancing Engineering and Planning Phases** – Following approval of Measure M, several regional and long-term projects have advanced into further engineering and planning phases that would affect the Northern Alignment Alternatives and Concepts.

¹ Approximately 400 comments were received by Little Tokyo community stakeholders.

These include Blue Line upgrades, Bus Rapid Transit (BRT) initiatives and studies, and environmental studies progressing on the Division 20 Portal Widening and Turnback Facility, Regional Rail (Amtrak, Metrolink, and High-Speed Rail), and Link US at LAUS. Given the advancement of these projects, it is important that the Northern Alignment Alternatives and Concepts considers these projects within its own development timeline.

In addition, Metro is exploring a public-private partnership (P3) as an alternative strategy for delivering the WSAB Transit Corridor. The design of the WSAB Transit Corridor needs to consider P3 best practices as a part of the evaluation process.

ES.4 Purpose of the Study

Given the factors described above, additional concepts and planning analyses were initiated based on direction from the Metro Board (March 1, 2018). As a result, updated evaluations were conducted on the four Northern Alignment Options presented at the Public Scoping Meeting in June 2017: A) Pacific/Alameda; B) Pacific/Vignes; C) Alameda (aerial); and D) Alameda/Vignes. To address concerns raised during the Public Scoping Period as well as other factors described above, four new Northern Alignment Concepts were developed: E) Alameda (underground); F) Alameda/Center; G) Downtown Transit Core; and H) Arts District/6th Street.

The purpose of this study is to present the screening evaluation of all eight Northern Alignment Alternatives and Concepts (between downtown Los Angeles and the City of Huntington Park). Following completion of this report, Metro staff will make recommendations to the Metro Board of Directors (anticipated in May 2018) on alternatives and/or concepts to be studied further as part of the NEPA/CEQA environmental analysis phase of the Project development.

ES.5 Goals, Objectives, and Evaluation Criteria

Building on extensive stakeholder and agency outreach, the goals and objectives of the WSAB Transit Corridor were established through the development of the Alternatives Analysis Study in 2010, where goals and objectives were identified through a 24-month period of public meetings and work sessions with elected officials, stakeholders, advisory committee members, and communities. These goals were further confirmed in 2015 during the TRS through technical meetings with key stakeholders, including Eco-Rapid Transit, Study Area cities, and the California Department of Transportation (Caltrans); and were further discussed in 2017 as part of the WSAB Transit Corridor Scoping Meetings and in community update meetings in March 2018. Based on the planning and community involvement activities, the following five goals were developed for the Project:

- Goal 1: Provide Mobility Improvements
- Goal 2: Support Local and Regional Land Use Plans and Policies
- Goal 3: Minimize Environmental Impacts
- Goal 4: Ensure Cost Effectiveness and Financial Feasibility
- Goal 5: Ensure Equity

For this evaluation, the criteria were developed based on earlier studies and reports, updated model forecasting (as described in section ES.3), cost estimates and engineering analysis for

the four new Concepts, as well as discussions, reviews, and input received by various Metro departments. The Northern Alignment Alternatives and Concepts were evaluated based on how well each aligns with the project goals and advances the overall objectives of the Project.

Figure ES-4 presents a flow chart that represents the evaluation process used to identify the **Alternatives and Concepts that best meet the project goals, objectives, and evaluation criteria** established for the Project. Please note that the “Purpose and Need” and “Goals and Objectives” were defined in previous stages of this study. In response to the public comments received in June 2017, new alignment Concepts were developed, evaluated with the expectation that they will be forwarded to the Metro Board and that the Board will determine which alignments should be carried forward into the environmental document.

Figure ES-4. Evaluation Process

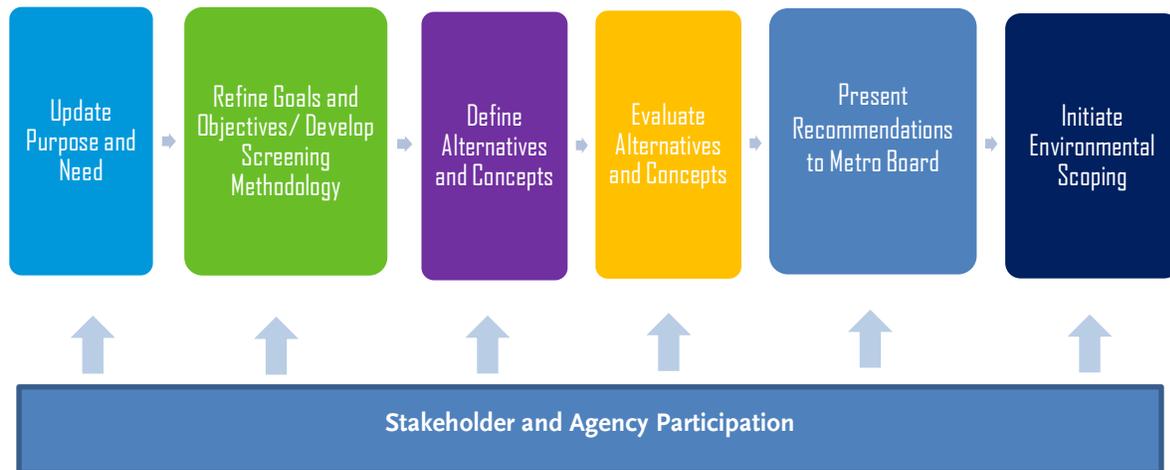


Table ES-2 provides a list of the evaluation criteria established for each goal and set of objectives.

Table ES-2. Goals, Objectives, and Evaluation Criteria

Goals	Objectives	Evaluation Criteria
1. Provide Mobility Improvements	1.1 Improves travel speeds and reduces travel times	<ul style="list-style-type: none"> ▪ Daily hours of user benefits ▪ Minutes of travel time from southern to northern termini
	1.2 Supports other transit systems along the corridor	<ul style="list-style-type: none"> ▪ Effects to other Metro Rail Lines ▪ Streamlines/improves customer experiences (number of daily one-seat rides)
	1.3 Connects with the greater transit network	<ul style="list-style-type: none"> ▪ Connections to other Metro Rail Lines ▪ Direct access to regional rail (commuter rail) ▪ Potential for future extensions
	1.4 Provides an alternative to a congested freeway and arterial network. Serves local and regional trips	<ul style="list-style-type: none"> ▪ Number of daily boardings ▪ Number of new transit trips ▪ Peak load points versus operational limits
	1.5 Supports active transportation and first/last mile connections	<ul style="list-style-type: none"> ▪ Quality of the pedestrian environment and public realm near station areas ▪ Potential connections to bicycle facilities
2. Support Local and Regional Land Use Plans and Policies	2.1 Serves major employment centers and high-density residential neighborhoods	<ul style="list-style-type: none"> ▪ 2042 population density within ½ mile of stations ▪ 2042 employment density within ½ mile of stations
	2.2 Encourages local economic development, projects, plans, and jobs	<ul style="list-style-type: none"> ▪ Consistent with Plans and Metro's policies supporting Transit-Oriented Communities ▪ Supports land values and real estate market trends ▪ Potential Joint Use/Joint Development Opportunities within ¼ mile of stations
	2.3 Serves affordable housing developments	<ul style="list-style-type: none"> ▪ Number of existing affordable housing units within ½ mile of stations
	2.4 Supports and is consistent with local plans	<ul style="list-style-type: none"> ▪ Consistent with development patterns and land uses (scale/intensity of development) ▪ Consistent with ongoing planning efforts that update zoning/development standards

Goals	Objectives	Evaluation Criteria
3. Minimize Environmental Impacts	3.1 Minimizes environmental and community impacts	<ul style="list-style-type: none"> Reduction in regional vehicle miles traveled Level of effects to sensitive uses (e.g., historic properties)
	3.2 Minimizes impacts to the transportation network	<ul style="list-style-type: none"> Impacts to roadway travel lanes, parking, and truck movements Disruption to existing rail Right-of-Way (ROW)
	3.3 Minimizes other environmental impacts	<ul style="list-style-type: none"> Impacts to visual, noise, hazards and other environmental considerations
4. Ensure Cost Effectiveness and Financial Feasibility	4.1 Costs are financially feasible	<ul style="list-style-type: none"> Rough-Order-of-Magnitude capital costs
	4.2 Provide a cost-effective project	<ul style="list-style-type: none"> Capital cost compared to number of new riders per year
	4.3 Minimizes risk of cost increase	<ul style="list-style-type: none"> Intensity of engineering challenges Amount of property acquisition
5. Ensure Equity	5.1 Provides benefits to transit-dependent and minority populations	<ul style="list-style-type: none"> Percentage of transit-dependent persons within ½ mile of stations
	5.2 Minimizes adverse effects to an EJ community	<ul style="list-style-type: none"> Potential adverse effects to EJ communities
	5.3 Provision of new reliable fixed service to underserved communities	<ul style="list-style-type: none"> New fixed service to transit-dependent persons around station areas
	5.4 Serves low-income riders	<ul style="list-style-type: none"> Estimated number of low-income riders

ES.6 Northern Alignment Alternatives and Concepts

For purposes of assessing all eight of the Northern Alignment Alternatives and Concepts, the northern section of the alignment is generally assumed to be the portion of the WSAB alignment north of the Florence/Salt Lake Station in the City of Huntington Park. The original four Northern Alignment Alternatives (A through D) were presented during the 2017 Public Scoping Meetings (Figure ES-5). The new Northern Alignment Concepts (E through H) were developed to address concerns raised during the 2017 Public Scoping Period (Figure ES-6). Table ES-3 summarizes major characteristics of the Concepts followed by a description of the alignments and stations.

Original Northern Alignment Alternatives

- A. **Pacific/Alameda** – Extends approximately 7.4 miles between LAUS and Florence/Salt Lake Station along Pacific Boulevard/Santa Fe Avenue then Alameda Street. This concept would provide five stations north of Florence/Salt Lake: LAUS (with Station Options above the Metro Gold Line or at Platform 2 in the LAUS Rail Yard²), Little Tokyo, Arts District, Pacific/Vernon, and Pacific/Randolph (Figure ES-7).
- B. **Pacific/Vignes** – Extends approximately 7.2 miles between LAUS and the Florence/Salt Lake Station along Pacific Boulevard/Santa Fe Avenue then Vignes Street. This concept would provide four stations north of Florence/Salt Lake: LAUS (LAUS Rail Yard), Arts District, Pacific/Vernon, and Pacific/Randolph (Figure ES-8).
- C. **Alameda (aerial)** – Extends approximately 8.0 miles between LAUS and the Florence/Salt Lake Station along the Metro Blue Line then Alameda Street. This concept would provide seven stations north of Florence/Salt Lake: LAUS (LAUS Rail Yard), Little Tokyo, 7th/Alameda, Washington, Vernon, Slauson, and Pacific/Randolph (Figure ES-9).
- D. **Alameda/Vignes** – Extends approximately 8.1 miles between LAUS and the Florence/Salt Lake Station along the Metro Blue Line then Alameda Street to Vignes Street. This concept would provide seven stations north of the Florence/Salt Lake Station: LAUS (LAUS Rail Yard), Arts District, 7th/Alameda, Washington, Vernon, Slauson, and Pacific/Randolph (Figure ES-10).

New Northern Alignment Concepts

- E. **Alameda (underground)** – Extends approximately 7.9 miles between LAUS and the Florence/Salt Lake Station along the Metro Blue Line and Alameda Street. This concept would provide seven stations north of Florence/Salt Lake: LAUS (with station options in the LAUS Forecourt or East of the Metropolitan Water District Building), Little Tokyo, Arts District South, Washington, Vernon, Slauson, and Pacific/Randolph (Figure ES-11).
- F. **Alameda/Center** – Extends approximately 8.1 miles between LAUS and the Florence/Salt Lake Station along the Metro Blue Line, Alameda Street then Center Street. This concept would provide seven stations north of the Florence/Salt Lake

² Concepts connecting to LAUS via aerial alignment into the LAUS Rail Yard have two potential terminus options. Option A: above the existing Gold Line platforms and Option B: Platform 2.

Station: LAUS (LAUS Rail Yard), Arts District North, Arts District South, Washington, Vernon, Slauson, and Pacific/Randolph (Figure ES-12).

- G. Downtown Transit Core** – Extends approximately 8.0 miles between the Downtown Transit Core and the Florence/Salt Lake Station; parallel to the Metro Blue Line then primarily under Alameda, 7th and 8th Streets. This concept would provide seven stations north of Florence/Salt Lake: 7th Street/Metro Center or Pershing Square³), South Park/Fashion District, Arts District South, Washington, Vernon, Slauson, and Randolph (Figure ES-13). Please note that references to the Downtown Transit Core terminus refers to a new underground station at 8th and Flower Streets with an underground pedestrian connection to the existing 7th/Metro Center Station. A potential terminus at Pershing Square refers to a new underground station at 5th Street and Broadway with an underground pedestrian connection to the existing Pershing Square Station.
- H. Arts District/6th Street** – Extends approximately 7.6 miles between LAUS and the Florence/Salt Lake Station along the Metro Blue Line then underground from the Blue Line to the Arts District/6th Street Station. This concept then assumes a revenue service extension of the Red/Purple Line to LAUS. This concept would provide four stations north of the Florence/Salt Lake Station: Arts District/6th Street, Vernon, Slauson, and Pacific/Randolph (Figure ES-14).

All Alternatives and Concepts would converge in the City of Huntington Park and follow the San Pedro Subdivision for 11 miles from the Florence/Salt Lake Station to the Pioneer Station in City of Artesia. Eight proposed stations would be located within the rail ROW along the southern portion of the Project. The San Pedro Subdivision is owned by the Ports of Long Beach and Los Angeles.

Table ES-3. Characteristics of the Northern Alignment Alternatives and Concepts

Alternative/ Concept	Length ¹	Preliminary Proposed Configuration ¹	# of Proposed Stations ¹
A. Pacific/Alameda	7.7 miles	3.6 miles aerial; 2.9 miles at-grade; 1.2 miles underground	5 stations: 3 aerial; 1 at-grade; 1 underground
B. Pacific/Vignes	7.5 miles	3.0 miles aerial; 2.9 miles at-grade; 1.6 miles underground	4 stations: 2 aerial; 1 at-grade; 1 underground
C. Alameda (aerial)	8.3 miles	5.8 miles aerial; 2.5 miles at-grade	7 stations: 6 aerial; 1 at-grade
D. Alameda/Vignes	8.3 miles	5.0 miles aerial; 2.5 miles at-grade; 0.8 miles underground	7 stations: 5 aerial; 1 at-grade; 1 underground
E. Alameda (underground)	8.1 miles	3.2 miles aerial; 2.5 miles at-grade; 2.4 miles underground	7 stations: 3 aerial; 1 at-grade; 3 underground
F. Alameda/Center	8.2 miles	3.6 miles aerial; 2.4 miles at-grade; 2.2 miles underground	7 stations: 4 aerial; 1 at-grade; 2 underground
G. Downtown Transit Core	8.1 miles	2.8 miles aerial; 3.2 miles at-grade; 2.1 miles underground	7 stations: 3 aerial; 1 at-grade; 3 underground

³ Note that initial evaluations indicated higher mobility benefits for a terminus station near 7th Street/Metro Center compared to Pershing Square. However, given potential capacity and operational constraints resulting from the additional passengers connecting from a terminus at 8th Street and Flower, both the 7th Street/Metro Center and Pershing Square Stations should continue to be evaluated as part of Concept G.

Alternative/ Concept	Length ¹	Preliminary Proposed Configuration ¹	# of Proposed Stations ¹
H. Arts District/6 th Street	7.6 miles	2.6 miles aerial; 2.4 miles at-grade; 2.6 miles underground	4 stations: 2 aerial; 1 at-grade; 1 underground

Note: ¹ Description is provided between the Northern Terminus Station and the Florence/Salt Lake Station.

Figure ES-5. WSAB Transit Corridor Original Northern Alignment Alternatives



Figure ES-6. WSAB Transit Corridor New Northern Alignment Concepts



Figure ES-7. A) Pacific/Alameda Northern Alignment Alternative



Figure ES-8. B) Pacific/Vignes Northern Alignment Alternative



Figure ES-10. D) Alameda/Vignes Northern Alignment Alternative



Figure ES-11. E) Alameda (underground) Northern Alignment Concept



Figure ES-12. F) Alameda/Center Northern Alignment Concept



Figure ES-13. G) Downtown Transit Core Northern Alignment Concept



Figure ES-14. H) Arts District/6th Street Northern Alignment Concept



ES.7 Screening Evaluation

The screening evaluation was conducted to determine how well each of the eight Northern Alignment Alternatives and Concepts met the goals and objectives of the Project, as summarized in Table ES-2. As previously identified, the five Project goals are:

- Goal 1: Provide Mobility Improvements
- Goal 2: Support Local and Regional Land Use Plans and Policies
- Goal 3: Minimize Environmental Impacts
- Goal 4: Ensure Cost Effectiveness and Financial Feasibility
- Goal 5: Ensure Equity

The goals and objectives in this Screening Report were assessed on their potential performance in qualitative and quantitative measures. A “high”, “medium”, or “low” rating was assigned based on the alternative’s or concept’s ability to meet the project’s goals and objectives. Table ES-4 presents the typical rating methodology for each criterion.

Table ES-4. Rating Methodology

Rating		Description
	High	A high rating indicates the alternative or concept highly supports and satisfies the criterion, or has a low potential for negative impacts.
	Medium	A medium rating indicates the alternative or concept moderately supports the criterion, or has a moderate potential for negative impacts.
	Low	A low rating indicates that an alternative or concept does not support or conflicts with the criterion, or has a high potential for negative impacts.

Findings of the screening evaluation are based on individual criteria analyzed for each of the alternatives and concepts, and is then summarized through ratings of the major objectives (high, medium, or low). Note that no weighting was applied to the results of the screening evaluation as each goal was given equal consideration. The resulting evaluation demonstrates how each alternative and concept compares to the major goals of the Project with an overall high, medium, or low rating.

Goal 1: Provide Mobility Improvements

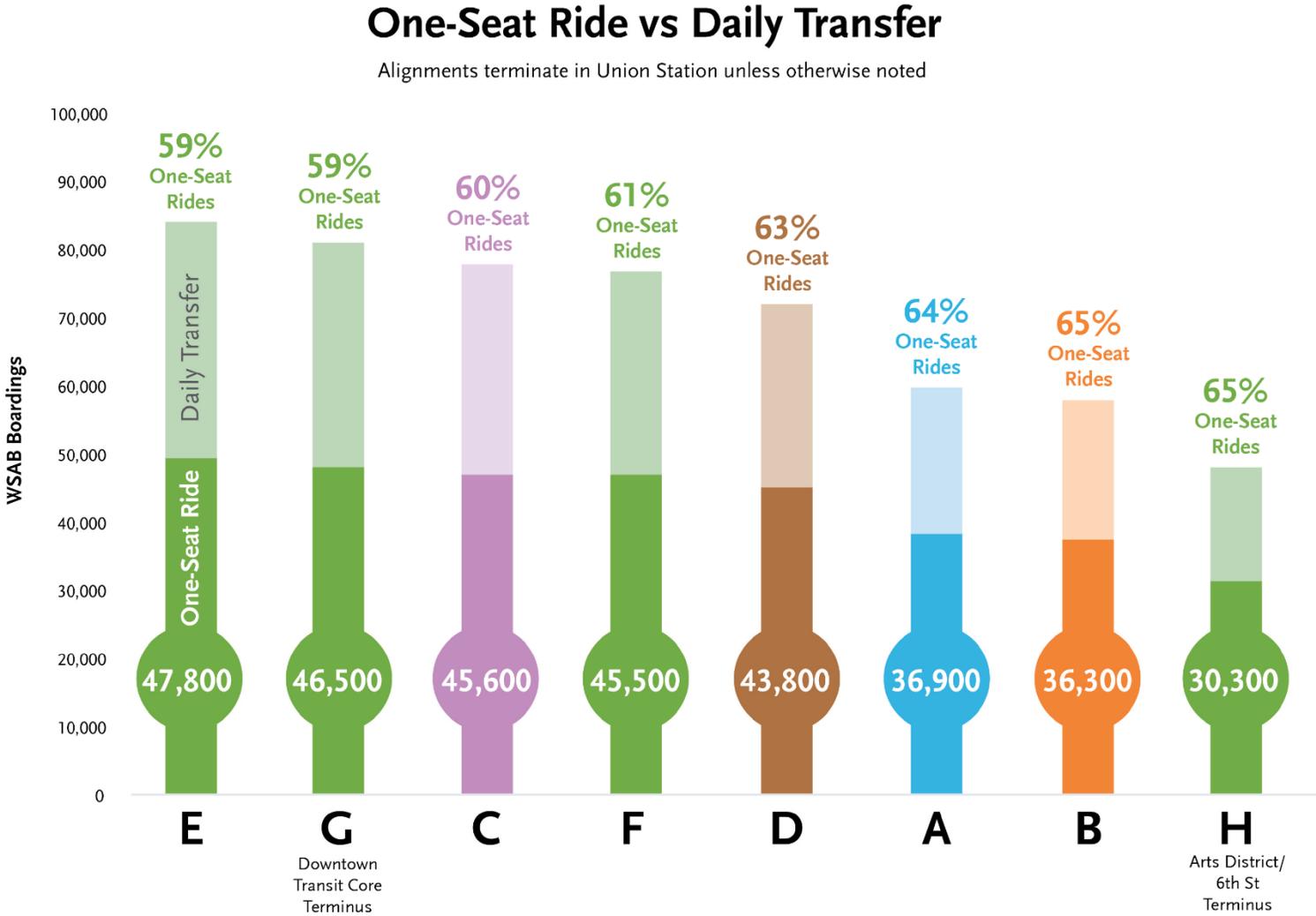
Based on the criterion analyzed, alignments along Alameda Street (Alternatives C and D, and Concepts E and F) and Concept G: Downtown Transit Core would provide the greatest overall mobility improvement benefits (Table ES-5). These Alternatives and Concepts connect directly to LAUS or the Downtown Transit Core and serve high-density residential and employment corridors, resulting in greater user benefits (overall time savings to the passenger) and higher daily boardings (each time a passenger boards a transit vehicle). These Alternatives and Concepts also directly serve numerous existing and planned Metro and regional rail lines and would be supported by first-/last-mile connections (bicycle and pedestrian accessibility), enhancing the overall mobility of the transit network. Figure ES-15 presents a comparison of one-seat rides versus daily transfers by Alternatives and Concepts.

Table ES-5. Goal 1: Provide Mobility Improvements

Evaluation Criteria	Northern Alignment Alternatives and Concepts							
	Alt A Pacific/ Alameda	Alt B Pacific/ Vignes	Alt C Alameda (aerial)	Alt D Alameda/ Vignes	Concept E Alameda (underground)	Concept F Alameda/ Center	Concept G Downtown Transit Core	Concept H Arts District/ 6 th Street
1.1 Improves travel speeds and reduces travel times (daily hours of user benefits)	22,000 hours	22,500 hours	24,000 hours	23,500 hours	25,000 hours	24,000 hours	24,000 hours	18,500 hours
1.2 Improves travel speeds and reduces travel times inclusive of any necessary transfers (minutes of travel time)	36.6 minutes	34.5 minutes	35.5 minutes	35.5 minutes	33.5 minutes	34.0 minutes	33.6 minutes	37.5 minutes
1.3 Supports other transit systems (effects to other Metro Lines)	Medium	Medium	Medium	Medium	Medium	Medium	High	Low
1.4 Supports other transit systems (daily one-seat ride)	36,900 daily one-seat rides	36,300 daily one-seat rides	45,600 daily one-seat rides	43,800 daily one-seat rides	47,800 daily one-seat rides	45,500 daily one-seat rides	46,500 daily one-seat rides	30,300 daily one-seat rides
1.5 Connects with the greater transit network (connections to Metro Lines, regional rail and future extensions)	Medium	Low	High	Medium	High	Medium	Medium	Low
1.6 Provides an alternative to freeway and arterial network. Serves local and regional trips. (Daily boardings; new transit trips, peak operational limits)	58,000 Boardings (24,500 new riders)	56,000 Boardings (25,000 new riders)	75,500 Boardings (26,000 new riders)	69,500 Boardings (25,500 new riders)	81,500 Boardings (27,000 new riders)	74,500 Boardings (26,000 new riders)	78,500 Boardings (25,000 new riders)	46,500 Boardings (19,500 new riders)
1.7 Supports active transportation and first/last mile connections (bicycle and pedestrian connections)	Medium	Medium	Medium	Medium	Medium	Medium	High	Low
Goal 1 Ratings								

Note: Since the proposed alignment for all Alternatives and Concepts is the same south of Florence/Salt Lake Station, evaluation results shown are attributed to differences in the Northern Alignments.

Figure ES-15. WSAB Transit Corridor Study Area One-Seat Ride vs. Transfers



Goal 2: Support Local and Regional Land Use Plans and Policies

TOCs are places (such as corridors or neighborhoods) that, by their design, allow people to drive less and access transit more. A TOC maximizes equitable access to a multi-modal transit network as a key organizing principle of land use planning and community development. TOCs differ from TODs in that a TOD is a specific building or development project that is fundamentally shaped by close proximity to transit. TOCs promote equity and sustainable living in a diversity of community contexts by (a) offering a mix of uses that support transit ridership of all income levels (e.g. housing, jobs, retail, services and recreation); (b) ensuring appropriate building densities, parking policies, and urban design that support accessible neighborhoods connected by multi-modal transit; and (c) ensure that transit related investments provide equitable benefits that serve local, disadvantaged and underrepresented communities.⁴

With regard to land values and real estate market trends, the greatest densities permitted in the Downtown Core (regional center general plan land use designation) are directly associated with the higher assessed parcel valuations from the LA County Assessor. Concept G includes the Pershing Square, 7th Street/Metro Center and the Fashion District communities and stands out with the highest assessed value ratio, which is generally indicative of maximum economic development opportunity, although the buy-in is high. The other Alternatives and Concepts essentially show ratios where the largest component of the total assessed valuation for these station areas is land. While traditionally the development buy-in is low and risks are high, emerging residential housing markets in areas south and east of the downtown core represent substantial development opportunities. In the short term, the underlying land use entitlements and surrounding remaining industrial uses are the likely factors that slow the pace of new growth and development in these station areas.

Overall, Concept G provides the greatest compatibility with existing and planned land uses as the proposed stations along the corridor serve the second-highest population density, the highest employment density, and affordable housing units. Concept G would also be supportive of TOC investments and development patterns within downtown Los Angeles. Although other Alternatives and Concepts connecting to LAUS (Alternatives A, B, C, D and Concepts E and F) would generally serve high population and employment densities, these alignments would offer only moderate support of local land use and regional plans and policies in terms of land use, affordable housing, and development patterns.

It has been noted that the northern terminus station proposed in Concept H provides an opportunity to connect to an emerging TOC. However, compared to potential TOC investment and development near the Downtown Core and LAUS, Concept H would not connect to the highest population and employment densities within downtown Los Angeles.

⁴ Where Metro identifies disadvantaged and underrepresented communities, included are lower-income households as well as the following protected categories as defined by the California Fair Employment and Housing Act (FEHA): race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age for individuals over forty years of age, military and veteran status, and sexual orientation.

Table ES-6. Goal 2: Support Local and Regional Land Use Plans and Policies

Evaluation Criteria	Northern Alignment Alternatives and Concepts							
	Alt A Pacific/ Alameda	Alt B Pacific/ Vignes	Alt C Alameda (aerial)	Alt D Alameda/ Vignes	Concept E Alameda (underground)	Concept F Alameda/ Center	Concept G Downtown Transit Core	Concept H Arts District/ 6 th Street
2.1 Serves major employment centers and high-density residential (2042 Population Density)	27,880 persons/ square mile	17,670 persons/ square mile	16,180 persons/ square mile	10,350 persons/ square mile	16,040 persons/ square mile	16,740 persons/ square mile	24,160 persons/ square mile	1,980 persons/ square mile
2.2 Serves major employment centers and high-density residential (2042 Employment Density)	15,130 jobs/ square mile	10,100 jobs/ square mile	15,520 jobs/ square mile	11,200 jobs/ square mile	14,520 jobs/ square mile	13,510 jobs/ square mile	44,260 jobs/ square mile	11,210 jobs/ square mile
2.3 Encourages local economic development (TOC policies; supports land values; potential joint development opportunities)	Medium	Medium	Medium	Medium	Medium	Medium	High	Low
2.4 Serves affordable housing developments (number affordable housing units near stations)	3,750 affordable housing units	1,270 affordable housing units	4,590 affordable housing units	3,960 affordable housing units	5,600 affordable housing units	5,040 affordable housing units	20,980 affordable housing units	550 affordable housing units
2.5 Supports and is consistent with local plans (development patterns; character of public realm; development standards)	Medium	Medium	Medium	Medium	Medium	Medium	High	Low
Goal 2 Ratings								

Note: Since the proposed alignment for all Alternatives and Concepts is the same south of Florence/Salt Lake Station, evaluation results shown are attributed to differences in the Northern Alignments.

Goal 3: Minimize Environmental Impacts

Concept E provides the greatest overall potential to minimize environmental impacts. Concept E would be primarily underground, and would likely avoid impacts that would affect the at-grade environment (e.g., sensitive uses, transportation network, visual impacts, hazards, etc.). This concept would also have the highest reduction in vehicle miles traveled (VMT) from travelers reducing their auto trips and result in a reduction in greenhouse gas and other pollutants (Table ES-7).

Alternative B and Concepts F and H would have moderate environmental impacts and partially avoid sensitive uses. Alternative B and Concept F would have moderate impacts to the transportation network and other environmental considerations and have high VMT reductions. Although Concept H would likely avoid any sensitive uses, the concept would offer the lowest VMT reduction compared to all of the alternatives and concepts considered.

It is anticipated that Alternatives A, C, and D and Concept G would need to address significant environmental impacts given the potential effects to sensitive uses and other potential environmental impacts. Alternative A and C would include an aerial alignment through the Little Tokyo Station and would likely affect sensitive uses and travel lanes where columns and/or straddle bents may restrict turns, reduce lane widths, and interrupt sight distances. Alternatives A and C would also likely result in visual and noise impacts near the Little Tokyo community and Alameda Street and have a higher potential for hazardous materials encounters in the heavily industrial area of Los Angeles. Although Alternative D would avoid direct surface impacts to the Little Tokyo community, it would likely result in transportation and visual impacts related to the aerial alignment along Alameda Street south of 5th Street. The columns and/or straddle bents associated with the Alternative D aerial structure would result in transportation impacts similar to impacts that would occur for Alternatives A and C. Concept G may likely affect the historic core of Los Angeles and its associated designated Historic Cultural Monuments. Concept G may also have a high potential for vibration impacts when passing underground due to the historic and dense nature of the downtown core area. Additionally, this Concept has one of the lowest VMT reductions.

It should be noted that while Goal 3 is to minimize adverse environmental impacts, the ability to maximize environmental benefits should also be considered. VMT reduction is greater for Alternatives and Concepts that connect directly to LAUS. As a major Metro transfer point and Metrolink's hub station, LAUS has the ability to provide direct regional rail connections to the WSAB corridor that do not currently exist. This will enable certain automobile drivers that currently travel long distances to and from the WSAB corridor to have a potential rail option for that trip instead. For example, someone who currently drives from Claremont to Bellflower for work could now make that trip on rail. As such, it is notable that both Concepts G and H, whose alignments require an extra transfer to connect to LAUS, do not reduce VMT as significantly as the other alignments and would therefore have less environmental benefits.

Table ES-7. Goal 3: Minimize Environmental Impacts

Evaluation Criteria	Northern Alignment Alternatives and Concepts							
	Alt A Pacific/ Alameda	Alt B Pacific/ Vignes	Alt C Alameda (aerial)	Alt D Alameda/ Vignes	Concept E Alameda (underground)	Concept F Alameda/ Center	Concept G Downtown Transit Core	Concept H Arts District/ 6 th Street
3.1 Minimizes environmental and community impacts (Reduction in VMT)	624,400 VMT reduction	645,500 VMT reduction	621,100 VMT reduction	611,500 VMT reduction	648,800 VMT reduction	629,100 VMT reduction	458,300 VMT reduction	327,300 VMT reduction
3.2 Minimizes environmental and community impacts (Effects to sensitive uses)	Low	Medium	Low	Medium	High	Medium	Low	Medium
3.3 Minimizes impacts to the transportation network (Impacts to travel lanes, parking and truck movements; disruption to existing rail ROW)	Medium	Medium	Low	Low	High	Medium	High	Medium
3.4 Minimizes other potential environmental impacts (Impacts to visual, noise, hazards, and other environmental topics.)	Low	Medium	Low	Low	High	Medium	Low	Medium
Goal 3 Ratings								

Note: Since the proposed alignment for all Alternatives and Concepts is the same south of Florence/Salt Lake Station, evaluation results shown are attributed to differences in the Northern Alignments.

Goal 4: Ensure Cost Effectiveness and Financial Feasibility

Overall, the original four Northern Alignment Alternatives would demonstrate medium findings of cost effectiveness and financial feasibility as they were developed as a combination of lower cost assumptions, such as at-grade, aerial, and minimal underground segments. Given public scoping comments and stakeholder input, the four new Northern Alignment Concepts offers reduced social costs (i.e., environmental and equity) of at-grade and aerial alignments by proposing variations with new and longer underground segments. The trade-off, however, is higher capital cost.

Based on the updated Rough-Order-of-Magnitude (ROM) capital costs, engineering challenges, and potential amount of property acquisition needed, the Northern Alignment Concepts E, F, and G would rate low as their overall capital costs would be higher than the four original Northern Alignment Alternatives. Concept H has a lower capital cost than the other Northern Alignment Alternatives and Concepts but has the highest capital cost / new riders per year. This makes Concept H the least cost-effective alignment since it attracts far fewer new riders than the other Northern Alignment Alternatives and Concepts.

Concepts E, F, G, and H present the greatest potential engineering challenges due to the length of tunneling required adjacent to vertical structures ranging from low to high rise in a highly developed urban area with existing infrastructure. These engineering challenges and acquisition needs result in risks, which could decrease the overall cost effectiveness of these concepts (Table ES-8).

Table ES-8. Goal 4: Ensure Cost Effectiveness and Financial Feasibility

Evaluation Criteria	Northern Alignment Alternatives and Concepts							
	Alt A Pacific/ Alameda	Alt B Pacific/ Vignes	Alt C Alameda (aerial)	Alt D Alameda/ Vignes	Concept E Alameda (underground)	Concept F Alameda/ Center	Concept G Downtown Transit Core	Concept H Arts District/ 6 th Street
4.1 Costs are financial feasible (*ROM capital costs in \$Billions)	\$4.7 Billion (2017\$)	\$4.7 Billion (2017\$)	\$4.6 Billion (2017\$)	\$5.0 Billion (2017\$)	\$5.8 Billion (2017\$)	\$5.4 Billion (2017\$)	\$5.8 Billion (2017\$)	\$4.5 Billion (2017\$)
4.2 Provide a cost-effective project (capital cost / new riders per year)	\$607	\$596	\$557	\$620	\$679	\$655	\$729	\$740
4.3 Minimizes risk of cost increase (engineering challenges)	Higher risks with tunneling in Arts District	Higher risks with tunneling in Arts District	Less risk with aerial or at-grade	Risks with short tunneling in Arts District	Higher risks with tunneling			
4.4 Minimizes risk of cost increase (property acquisition)	Medium risks due to property impacts	Medium risks due to property impacts	Higher risks due to more property impacts	Higher risks due to more property impacts	Lower risk due to reduced property impacts	Medium risks due to property impacts	Lower risk due to reduced property impacts	Lower risk due to reduced property impacts
Goal 4 Ratings								

Notes: *ROM capital cost is based on early engineering assumptions and are provided to demonstrate general differentiators in costs.

Since the proposed alignment for all Alternatives and Concepts is the same south of Florence/Salt Lake Station, evaluation results shown are attributed to differences in the Northern Alignments

Goal 5: Ensure Equity

The goal to ensure equity focuses on benefits to transit-dependent and minority populations, and low-income groups and the potential for adverse effects to Environmental Justice (EJ) communities. EJ communities are areas that are made up by a majority of minority or low-income individuals who may be disproportionately affected by the construction of a new transit project relative to other communities within the city. Concept G would serve the highest amount of transit-dependent persons (51.6 percent are transit dependent within ½ mile of the stations) and the highest number of low-income riders (32,400 low-income riders), and would provide new fixed service to underserved communities near the Arts District South and South Park/Fashion District Stations. This concept would also likely have minimal adverse effects to EJ communities such as Little Tokyo and Chinatown based on its proximity away from the communities. As a result, Concept G would receive the highest rating.

Both Concept E and Concept F would serve a high number of transit-dependent populations (38.4 percent and 38.8 percent, respectively) and low-income riders (31,700 and 28,400 low-income riders, respectively). Therefore, both of these concepts received high ratings.

Alternative B and Concept H would serve the lowest percentage of transit-dependent persons (21.6 percent and 24.1 percent, respectively) and low-income riders (21,300 and 19,000 low-income riders, respectively) compared to all other Alternatives and Concepts. As Alternative B would only provide two stations and Concept H would only provide one station for the entire northern alignment segment, this would limit the provision of new fixed service to transit-dependent communities compared to the other Alternatives and Concepts.

Table ES-9. Goal 5: Ensures Equity

Evaluation Criteria	Northern Alignment Alternatives and Concepts							
	Alt A Pacific/ Alameda	Alt B Pacific/ Vignes	Alt C Alameda (aerial)	Alt D Alameda/ Vignes	Concept E Alameda (underground)	Concept F Alameda/ Center	Concept G Downtown Transit Core	Concept H Arts District/ 6 th Street
5.1 Provides benefits to transit-dependent and minority populations (% transit-dependent persons within ½ mile of stations)	34.7% transit dependent	21.6% transit dependent	39.7% transit dependent	35.8% transit dependent	38.4% transit dependent	38.8% transit dependent	51.6% transit dependent	24.1% transit dependent
5.2 Minimizes adverse effects to an EJ community (potential adverse effects to EJ communities)	Low	Medium	Low	Medium	High	High	High	High
5.3 Provision of new reliable fixed service to underserved communities (new fixed service to transit-dependent persons around station areas)	Medium	Medium	Medium	Medium	Medium	Medium	High	Low
5.4 Serves low-income riders (estimated number of low-income riders)	22,100 low-income riders	21,300 low-income riders	29,600 low-income riders	26,800 low-income riders	31,700 low-income riders	28,400 low-income riders	32,400 low-income riders	19,000 low-income riders
Goal 5 Ratings								

Note: Since the proposed alignment for all Alternatives and Concepts is the same south of Florence/Salt Lake Station, evaluation results shown are attributed to differences in the Northern Alignments

ES.8 Community and Stakeholder Outreach

To support development of the new Northern Alignment Concepts and discuss the original four Alternatives, community update meetings were held to communicate Alternatives and new Concepts being considered with stakeholders along the WSAB Transit Corridor. Five meetings were held between March 12 and March 19, 2018, with over 250 people participating in-person and approximately 85 written comment cards received. Over 270 people have viewed the recording of the Artesia webcast as of April 2, 2018. Table ES-10 presents the meeting details. Comments also continue to be received via the project e-mail address and the online comment submission form available on the project website. Two additional public meetings are planned for late April/early May 2018, prior to the Metro Board decision.

Table ES-10. WSAB Public Outreach Meetings March 2018

Meeting #	Community	Date	Time	Location	Number of Participants
1	Little Tokyo	Monday, March 12, 2018	3 to 5 PM	Nishi Hongwanji Buddhist Temple 815 E 1st St, Los Angeles, CA 90012	75
2	Little Tokyo	Monday, March 12, 2018	6 to 8 PM	Nishi Hongwanji Buddhist Temple 815 E 1st St, Los Angeles, CA 90012	36
3	Artesia*	Tuesday, March 13, 2018	6 to 8 PM	Albert O. Little Community Center 18750 Clarkdale Av, Artesia, CA 90701	52
4	Bell	Saturday, March 17, 2018	10 AM to 12 PM	Bell Community Center 6250 Pine Ave, Bell, CA 90201	26
5	Downey	Monday, March 19, 2018	6 to 8 PM	Barbara J. Riley Community and Senior Center 7810 Quill Dr., Downey, CA 90242	64

Note: *The Artesia meeting was also conducted as a live webcast, which was recorded and is available for viewing on the project website.

Meeting participants were encouraged to provide comments, and were specifically asked to consider the following about the new Northern Alignment Concepts:

1. Where would you prefer to end/begin in downtown (i.e., Downtown Transit Core, Union Station, Arts District)?
2. Are there destinations beyond the WSAB Transit Corridor you ultimately want to reach?
3. What are your comments on the new Northern Alignments?

In addition, presentations have been made to the Gateway Cities Council of Governments Transportation Committee and over twenty stakeholder and community organizations.

Comments received cited both LAUS and the Downtown Transit Core as the top preferences for beginning/ending their trips, followed by the Arts District. Other destinations meeting participants desire to reach include Pasadena, Glendale, Burbank, Orange County, and Metrolink/Amtrak connections to other cities from LAUS. Not everyone responded to Question 3, although of those who did, Concept G was most selected, followed by Concept E. Other comments submitted pertained to pedestrian connections, safety, first/last mile in relation to a community's need, parking supply and impacts at stations, traffic around stations, property values, noise levels, budget, ridership, P3 potential, and property acquisitions.

ES.9 Findings Summary

Each of the Northern Alignment Alternatives and Concepts provides a unique set of benefits that must be considered against the potential costs and challenges. The following discussion summarizes the key findings:

- Alternative A: Pacific/Alameda:** By serving LAUS, and providing a Little Tokyo Station and an Arts District North Station, moderate mobility benefits are achieved with long travel times (36.6 minutes), limited user benefits (22,000 hours), a moderate number of boardings (58,000) and a low number of new riders (24,500) compared to the other Alternatives and Concepts. However, this Alternative's station areas would collectively serve the highest residential and employment densities. There are also TOC opportunities near the Arts District North Station that would meet the needs of emerging communities and stakeholders. In terms of environmental impacts and ensuring equity, this Alternative would need to address significant environmental challenges with effects to sensitive uses and EJ communities like Little Tokyo. Given the tradeoffs of moderate mobility, land use and cost and likely significant environmental and social justice concerns, Alternative A receives an overall rating of **Medium/Low**.
- Alternative B: Pacific/Vignes:** This Alternative would provide many of the same moderate benefits as the Alternative A, but would not propose a Little Tokyo Station, therefore minimizing adverse effects to that EJ community. However, without a Little Tokyo Station, this Alternative misses a key connection to the East-West Line (Gold Line/Regional Connector) thereby further limiting mobility benefits and access to high residential and employment densities. For equity, this Alternative would rate low since it would not serve a high percentage of transit dependent (21.6 percent), minority, or low-income riders (21,300) compared to the other Alternatives and Concepts. Based on the moderate mobility, land use, environmental and cost considerations; and the limited ability to ensure equity for the project; Alternative B receives an overall rating of **Medium/Low**.
- Alternative C: Alameda (aerial):** The Alameda (aerial) Alternative provides connections to LAUS, Little Tokyo, Arts District South, and Metro Blue Line (North-South Line), resulting in significant mobility benefits with higher user benefits (24,000 hours), number of boardings (75,500) and new riders (26,000). By following the Metro Blue Line, this Alternative serves low-income and densely populated areas that would benefit from additional transit service and helps to address overcrowding on the Metro Blue Line. However, this Alternative would need to address significant environmental challenges including visual impacts from a primarily aerial alignment along Alameda

Street, through Little Tokyo, then into LAUS. Given the tradeoffs of high mobility benefits, moderate land use, equity and cost, and significant environmental concerns, Alternative C receives an overall rating of **Medium**.

- **Alternative D: Alameda/Vignes:** As with Alternative C, this Alternative provides new transit service to a transit-dependent community along the Metro Blue Line (North-South Line) and results in substantial mobility benefits including user benefits (23,500 hours), number of boardings (70,000) and new riders (25,500). With at-grade and aerial alignments, this Alternative would likely have environmental impacts near the Little Tokyo community and transportation and visual impacts along Alameda Street. This Alternative would support a moderate amount of residential and employment densities and have a medium amount of cost and risk as it limits the amount of underground segments proposed. Given the high mobility benefits, but medium findings for land use, cost and equity, and low findings for environmental impacts, Alternative D receives an overall rating of **Medium**.
- **Concept E: Alameda (underground):** The new Concept E would provide similar or better benefits as the Alameda (aerial) Alternative with an underground alignment to address environmental concerns for the Little Tokyo community. This Concept would connect to both the North-South and East-West Lines thereby providing significant mobility benefits with higher user benefits (25,000 hours), and highest number of boardings (81,500) and new riders (27,000). By following the Metro Blue Line, then transitioning into an underground alignment, this Concept would serve low-income and densely populated areas to the south with the fastest, most direct connection into LAUS (33.5 minutes). Although this Concept would likely have less environmental impacts to consider (since it is mostly underground), it would have the highest cost and risk compared to the other alternatives and concepts. Given that Concept E would rate high in all of the goals except for cost and risk, this Concept receives an overall rating of **High**.
- **Concept F: Alameda/Center:** The new Concept F provides similar mobility benefits as Alternative D but provides a faster connection (34.0 minutes) with an underground alignment north of I-10 to the Gold Line resulting in higher number of boardings (74,500) and new riders (26,000). Since a majority of the alignment is underground, the Alternative would likely have less environmental impacts to consider. However, this would result in higher costs and risks. Given the tradeoffs of high mobility and equity benefits, moderate land use and environmental concerns; and high financial cost and risk with tunneling, Concept F receives an overall rating of **Medium/High**.
- **Concept G: Downtown Transit Core:** The new Concept G would provide a fast and direct connection (33.6 minutes) to the highest residential and employment densities in downtown Los Angeles. With emerging TOCs at South Park/Fashion District and the Arts District South Station, this Concept would provide significant mobility benefits to low-income and minority populations with 51.6 percent of persons near station areas being transit dependent. High mobility benefits include user benefits (24,000 hours), daily boardings (78,500), and new riders (25,000). Although Concept G is primarily underground, there are significant environmental impacts to consider, including potential impacts to historic uses near proposed station areas and the lower reduction in VMT compared to the other alternatives and concepts. Given the high mobility, land use, and equity benefits, but potential risk of underground tunnel costs

and environmental impact concerns, this Concept receives an overall rating of **Medium/High**.

- **Concept H: Arts District/6th Street:** The new Concept H would provide opportunities to connect to an emerging TOC near Arts District/6th Street. However, compared to the other alternatives and concepts, Concept H would provide significantly lower mobility and land use benefits. With only one station connecting to the Red/Purple Line, this Concept would generally provide limited user benefits (18,500 hours), fewest daily boardings (46,500), and fewest new riders (19,500). This Concept would also support very low population densities and a small number of low-income and minority communities since the station and alignment would primarily be located in the core industrial area of Los Angeles. Concept H would not provide comparable benefits to the other alternatives or concepts; therefore, this Concept receives an overall rating of **Low**.

West Santa Ana Branch Transit Corridor

Original Northern Alignments Map



West Santa Ana Branch Transit Corridor

New Northern Alignments Map



West Santa Ana Branch Transit Corridor

Northern Alignment Summary of Project Goals Results

Evaluation Criteria	Northern Alignment Alternative and Concepts							
	Alt A Pacific/ Alameda	Alt B Pacific/ Vignes	Alt C Alameda (aerial)	Alt D Alameda/ Vignes	Concept E Alameda (underground)	Concept F Alameda/ Center	Concept G Downtown Transit Core	Concept H Arts District/ 6 th Street
1. Provide Mobility Improvements								
2. Support Local and Regional Land Use Plans and Policies								
3. Minimize Environmental Impacts								
4. Ensure Cost Effectiveness and Financial Feasibility								
5. Ensure Equity								
Overall Ratings	Medium/ Low	Medium/ Low	Medium	Medium	High	Medium/ High	Medium/ High	Low

West Santa Ana Branch Transit Corridor

Northern Alignment Summary of Select Performance Measurements

Transit Trips Projected to 2042

Northern Alignment Original Alternatives & New Concepts	Daily WSAB Boardings	Daily New Transit Trips	Daily Low-Income Riders	One-Seat Rides	Travel Time (minutes)	ROM Cost Estimate (2017 \$B's)	Cost per New Riders per Year (2017 \$)
A Pacific/Alameda	58,000	24,500	22,100	36,900	36.6	\$4.7	\$607
B Pacific/Vignes	56,000	25,000	21,300	36,300	34.5	\$4.7	\$596
C Alameda (aerial)	75,500	26,000	29,600	45,600	35.5	\$4.6	\$557
D Alameda/Vignes	69,500	25,500	26,800	43,800	35.5	\$5.0	\$620
E Alameda (underground)	81,500	27,000	31,700	47,800	33.5	\$5.8	\$679
F Alameda/Center	74,500	26,000	28,400	45,500	34.0	\$5.4	\$655
G Downtown Transit Core	78,500	25,000	32,400	46,500	33.6	\$5.8	\$729
H Arts District/6 th St	46,500	19,500	19,000	30,300	37.5	\$4.5	\$740

ROM = Rough order of magnitude

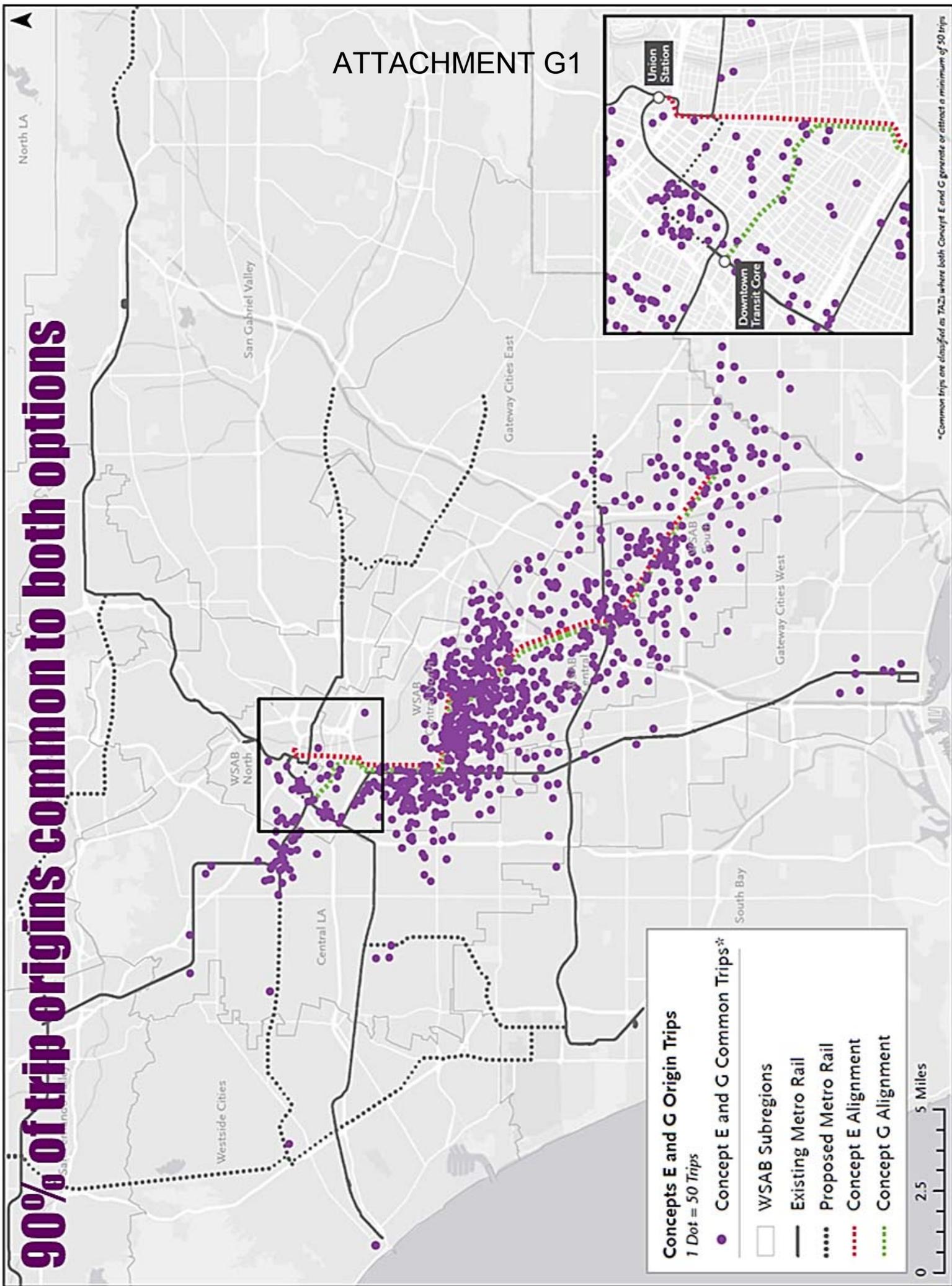
West Santa Ana Branch Transit Corridor

Recommended Northern Alignments Map



90% of trip origins common to both options

ATTACHMENT G1



Concepts E and G Origin Trips
1 Dot = 50 Trips

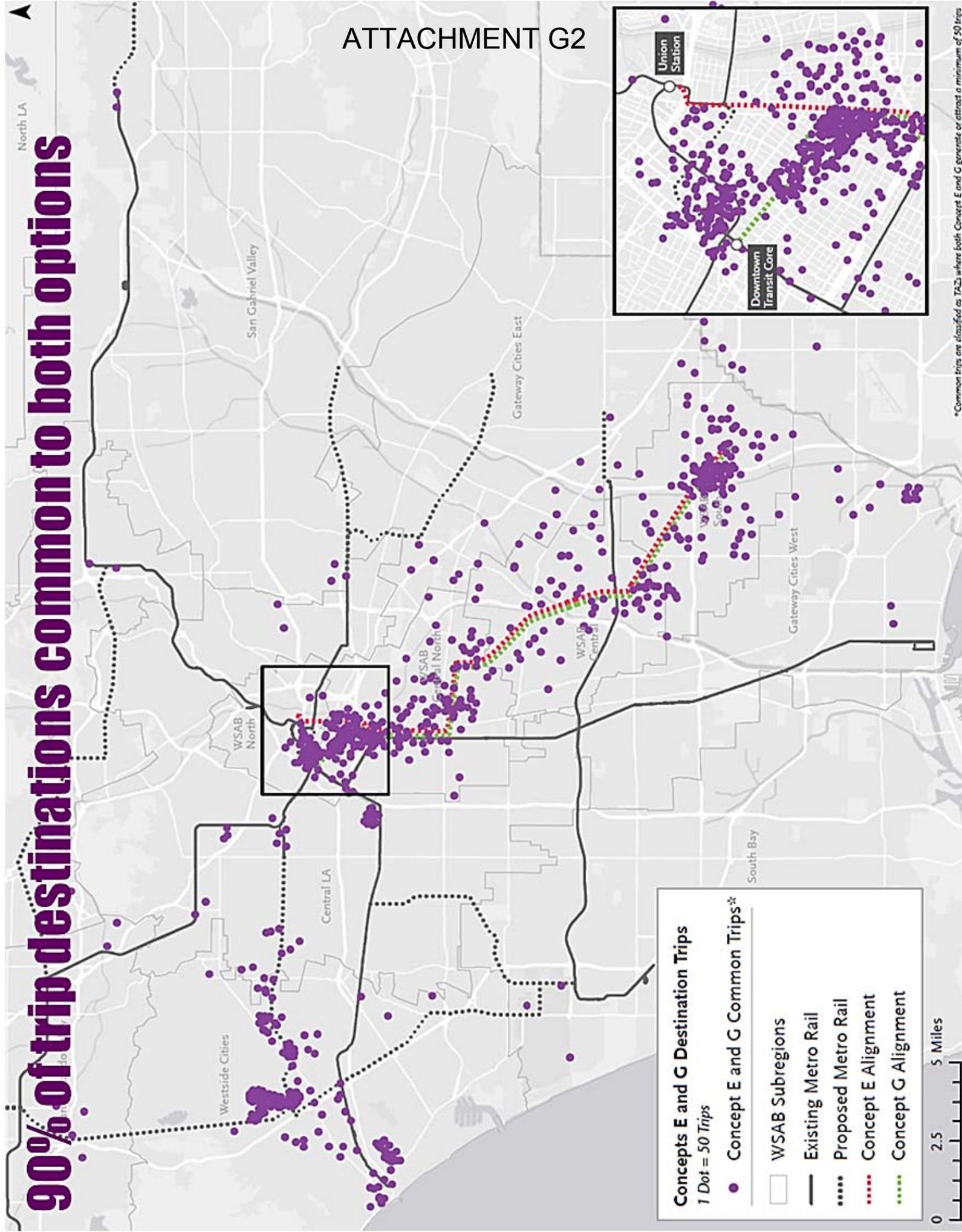
- Concept E and G Common Trips*
- WSAB Subregions
- Existing Metro Rail
- ⋯ Proposed Metro Rail
- ⋯ Concept E Alignment
- ⋯ Concept G Alignment



*Common trips are classified as TAZs where both Concept E and G generate or attract a minimum of 50 trips

90% of trip destinations common to both options

ATTACHMENT G2



Concepts E and G Destination Trips
 1 Dot = 50 Trips

- Concept E and G Common Trips*
- WSAB Subregions
- Existing Metro Rail
- ⋯ Proposed Metro Rail
- ⋯ Concept E Alignment
- ⋯ Concept G Alignment

0 2.5 5 Miles

*Common trips are classified as TAZs where both Concept E and G generate or attract a minimum of 50 trips

PROCUREMENT SUMMARY

WEST SANTA ANA BRANCH TRANSIT CORRIDOR/AE5999300

1.	Contract Number: AE5999300		
2.	Contractor: WSP USA Inc.		
3.	Mod. Work Description: Environmental review and technical analysis on the three northern alignments in the Draft EIR/EIS		
4.	Contract Work Description: West Santa Ana Branch Transit Corridor Technical Services		
5.	The following data is current as of: May 3, 2018		
6.	Contract Completion Status		Financial Status
	Contract Awarded:	9/26/2016	Contract Award Amount: \$9,392,326
	Notice to Proceed (NTP):	6/26/2017	Total of Modifications Approved: \$252,166
	Original Complete Date:	9/30/2020	Pending Modifications (including this action): \$2,760,752
	Current Est. Complete Date:	9/30/2020	Current Contract Value (with this action): \$12,405,244
7.	Contract Administrator: Gina Romo		Telephone Number: (213) 922-7558
8.	Project Manager: Teresa Wong		Telephone Number: (213) 922-2854

A. Procurement Background

This Board Action is to approve Contract Modification No. 2 issued in support of the environmental review and technical analysis on the three northern alignments in the Draft EIR/EIS for the West Santa Ana Branch Transit Corridor.

This Contract Modification was processed in accordance with Metro's Acquisition Policy and the contract type is a firm fixed price.

On September 26, 2016, the Board awarded a firm fixed price Contract No. AE5999300 to Parsons Brinckerhoff, Inc., now WSP USA Inc., in the amount up to \$9,392,326 for the West Santa Ana Branch Transit Corridor.

Refer to Attachment I-1 – Contract Modification Log.

B. Cost Analysis

The recommended price has been determined to be fair and reasonable based upon an independent cost estimate, cost analysis, technical analysis, and fact finding. All direct rates and fee remain unchanged from the original contract.

Proposal Amount	Metro ICE	Negotiated Amount
\$2,760,752	\$2,722,357	\$2,760,752

PROCUREMENT SUMMARY

WEST SANTA ANA BRANCH TRANSIT CORRIDOR COMMUNITY PARTICIPATION PROGRAM/ PS2492300

1.	Contract Number: PS2492300		
2.	Contractor: Arellano Associates, LLC		
3.	Mod. Work Description: Continue implementing outreach services as part of the Community Participation Program for the environmental review and clearance of the West Santa Ana Branch Transit Corridor Project (WSAB).		
4.	Contract Work Description: Outreach services as part of the Community Participation Program for WSAB.		
5.	The following data is current as of: May 4, 2018		
6.	Contract Completion Status		Financial Status
	Contract Awarded:	9/26/16	Contract Award Amount: \$492,893
	Notice to Proceed (NTP):	9/26/16	Total of Modifications Approved: \$0
	Original Complete Date:	9/25/20	Pending Modifications (including this action): \$429,310
	Current Est. Complete Date:	9/25/20	Current Contract Value (with this action): \$922,203
7.	Contract Administrator: Lily Lopez		Telephone Number: (213) 922-4639
8.	Project Manager: Teresa Wong		Telephone Number: (213) 922-2854

A. Procurement Background

This Board Action is to approve Contract Modification No. 1 issued to augment the Community Participation Program to continue implementing focused outreach services to the corridor communities in support of the environmental documents for the WSAB Transit Corridor Project.

This Contract Modification was processed in accordance with Metro's Acquisition Policy and the contract type is firm fixed price. All other terms and conditions remain in effect.

On September 26, 2016, the Board awarded a firm fixed price Contract No. PS2492300 to Arellano Associates, LLC in the amount of \$492,893 to perform the environmental clearance study community outreach for the WSAB Transit Corridor based on the passage of Measure M.

Refer to Attachment I-2 – Contract Modification/Change Order Log for modifications issued to date.

B. Cost Analysis

The recommended price has been determined to be fair and reasonable based upon an independent cost estimate, cost analysis, technical analysis, fact finding, and negotiations. Direct labor rates for this modification were negotiated based on the current Consumer Price index and fee remained unchanged from the original contract.

Proposal Amount	Metro ICE	Negotiated Amount
\$429,310	\$413,986	\$429,310

CONTRACT MODIFICATION/CHANGE ORDER LOG

WEST SANTA ANA BRANCH TRANSIT CORRIDOR/AE5999300

Mod. No.	Description	Status (approved or pending)	Date	\$ Amount
1	Addition of a travel demand model review and calibration of six main tasks.	Approved	11/21/2017	\$252,166
2	Environmental review and technical analysis on the three northern alignments in the Draft EIR/EIS for the West Santa Ana Branch Transit Corridor.	Pending	5/24/2018	\$2,760,752
	Modification Total:			\$3,012,918
	Original Contract:	9/26/2016		\$9,392,326
	Total:			\$12,405,244

CONTRACT MODIFICATION/CHANGE ORDER LOG

WEST SANTA ANA BRANCH TRANSIT CORRIDOR COMMUNITY PARTICIPATION
PROGRAM / PS2492300

Mod. No.	Description	Status (approved or pending)	Date	\$ Amount
1	Continue implementing outreach services as part of the Community Participation Program for the environmental review and clearance for WSAB Transit Corridor Project.	Pending	Pending	\$429,310
	Modification Total:			\$429,310
	Original Contract:	9/26/16		\$492,893
	Total:			\$922,203

DEOD SUMMARY

WEST SANTA ANA BRANCH TRANSIT CORRIDOR/AE5999300

A. Small Business Participation

WSP USA Inc. (WSP) made a 26.12% Disadvantaged Business Enterprise (DBE) commitment. The project is 44% complete and the current DBE participation is 23.12%, a shortfall of 3.00%. WSP explained that their shortfall is related to the timing of certain scope items that will be performed by DBE's, including Lenax Construction, who has not performed to date. WSP confirmed that they will achieve their contractual DBE commitment.

Small Business Commitment	26.12% DBE	Small Business Participation	23.12% DBE
----------------------------------	-------------------	-------------------------------------	-------------------

	DBE Subcontractors	Ethnicity	% Committed	Current Participation¹
1.	BA Inc.	African American	1.44%	4.04%
2.	CityWorks Design	Hispanic American	3.55%	3.77%
3.	Connetics Transportation Group	Asian Pacific American	0.68%	1.16%
4.	Epic Land Solutions	Caucasian Female	1.03%	1.73%
5.	Geospatial Professional Services	Asian Pacific American	0.23%	0.44%
6.	Lenax Construction	Caucasian Female	2.01%	0.00%
7.	Terry A. Hayes Associates	African American	13.26%	8.30%
8.	Translink Consulting	Hispanic American	3.92%	3.68%
Total			26.12%	23.12%

¹Current Participation = Total Actual amount Paid-to-Date to DBE firms ÷ Total Actual Amount Paid-to-date to Prime.

B. Living Wage and Service Contract Worker Retention Policy Applicability

The Living Wage and Service Contract Worker Retention Policy is not applicable to this Modification.

C. Prevailing Wage Applicability

Prevailing Wage requirements are applicable to this project. DEOD will continue to monitor contractors' compliance with the State of California Department of Industrial Relations (DIR), California Labor Code, and, if federally funded, the U S Department of Labor (DOL) Davis Bacon and Related Acts (DBRA). Trades that may be covered include: surveying, potholing, field, soils and materials testing, building construction inspection, construction management and other support trades.

D. Project Labor Agreement/Construction Careers Policy

Project Labor Agreement/Construction Careers Policy is not applicable to this Contract.

DEOD SUMMARY

WEST SANTA ANA BRANCH TRANSIT CORRIDOR COMMUNITY PARTICIPATION/PS2492300

A. Small Business Participation

Arellano Associates, LLC made a 100% Small Business Enterprise (SBE) commitment. The project is 53% complete and the current SBE participation is 100%. Arellano Associates, LLC is meeting their SBE commitment

Small Business Commitment	100% SBE	Small Business Participation	100% SBE
----------------------------------	-----------------	-------------------------------------	-----------------

	DBE Prime	% Committed	Current Participation¹
1.	Arellano Associates, LLC	100%	100%
	Total	100%	100%

¹Current Participation = Total Actual amount Paid-to-Date to DBE firms ÷ Total Actual Amount Paid-to-date to Prime.

B. Living Wage and Service Contract Worker Retention Policy Applicability

The Living Wage and Service Contract Worker Retention Policy is not applicable to this Modification.

C. Prevailing Wage Applicability

Prevailing Wage requirements are applicable to this project. DEOD will continue to monitor contractors' compliance with the State of California Department of Industrial Relations (DIR), California Labor Code, and, if federally funded, the U S Department of Labor (DOL) Davis Bacon and Related Acts (DBRA). Trades that may be covered include: surveying, potholing, field, soils and materials testing, building construction inspection, construction management and other support trades.

D. Project Labor Agreement/Construction Careers Policy

Project Labor Agreement/Construction Careers Policy is not applicable to this Contract.

West Santa Ana Branch Transit Corridor

Planning and Programming - May 16, 2018

File 2018-0072

Construction - May 17, 2018

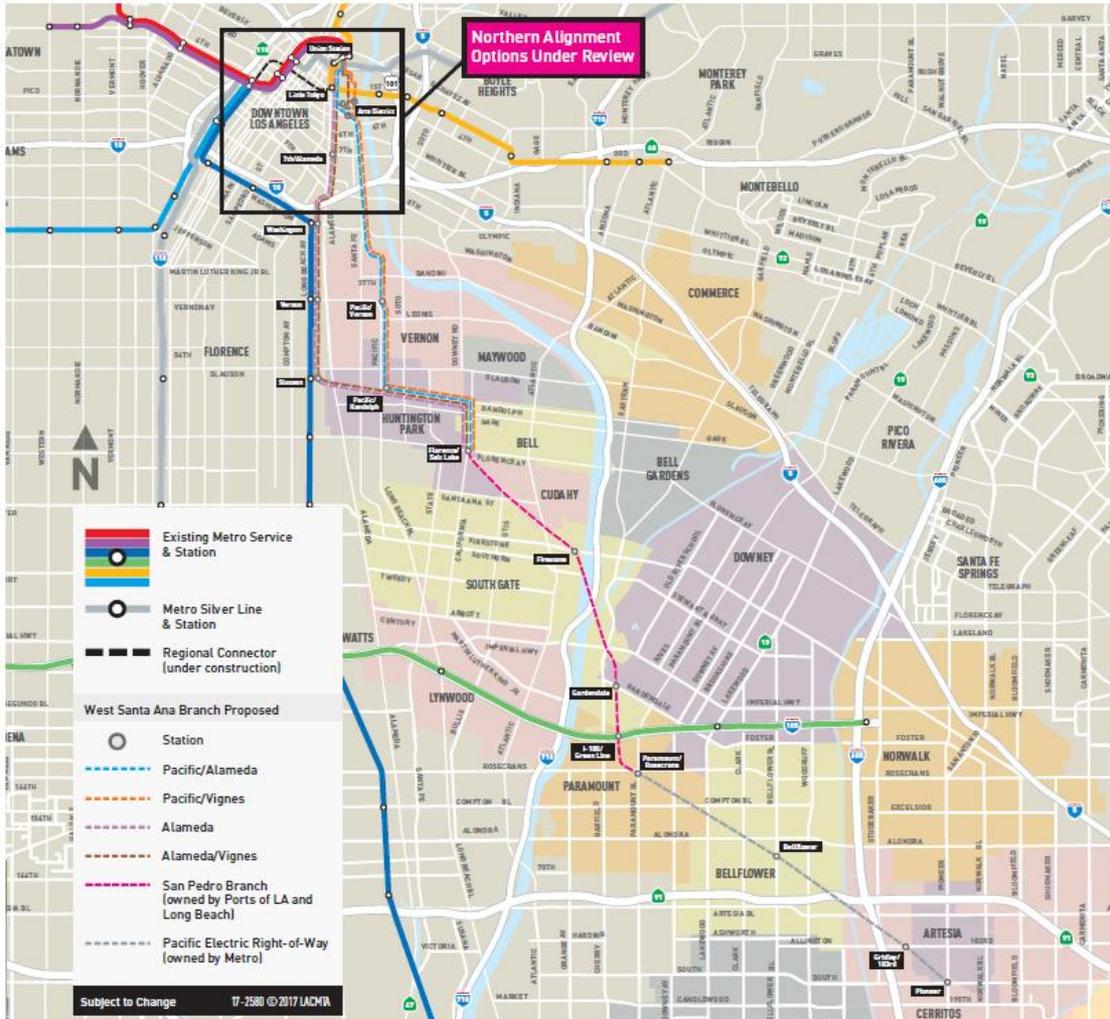


Recommendation

AUTHORIZING:

- 1. Northern alignment options to carry forward into Draft EIS/EIR**
 - a. Concept E: Union Station via Alameda Underground
 - b. Concept F: Union Station via Alameda Underground/Center Aerial
 - c. Concept G: Downtown Transit Core Underground
- 2. Technical services Contract Modification No. 2 in the amount of \$2,760,752 for the evaluation northern alignments in Draft EIS/EIR.**
- 3. Outreach services Contract Modification No. 1 in the amount of \$429,310 for augmented Community Participation Program as part of the evaluation of northern alignments.**

West Santa Ana Branch



- Provide **mobility** improvements
- Support local/regional **land use** plans and policies
- Minimize **environmental** impacts
- Ensure **cost** effectiveness & financial feasibility
- Promote **equity**

Original Northern Alignment Alternatives

- A. Pacific/Alameda
- B. Pacific/Vignes
- C. Alameda (aerial)
- D. Alameda/Vignes



New Northern Alignment Concepts

- E. Alameda (underground)
- F. Alameda/Center
- G. Downtown Transit Core
- H. Arts District/6th St



Recommended Alignments

- E. Alameda (underground)
- F. Alameda/Center
- G. Downtown Transit Core



Performance Compared to Project Goals

Evaluation Criteria	Northern Alignment Alternative and Concepts							
	Alt A Pacific/Alameda	Alt B Pacific/Vignes	Alt C Alameda (aerial)	Alt D Alameda/Vignes	Concept E Alameda (underground)	Concept F Alameda/Center	Concept G Downtown Transit Core	Concept H Arts District/ 6 th Street
1. Provide Mobility Improvements								
2. Support Local and Regional Land Use Plans and Policies								
3. Minimize Environmental Impacts								
4. Ensure Cost Effectiveness and Financial Feasibility								
5. Ensure Equity								
Overall Ratings	Medium/Low	Medium/Low	Medium	Medium	High	Medium/High	Medium/High	Low

Summary of All Northern Alignments

Ridership projected to 2042

Northern Alignment Original Alternatives & New Concepts	Daily WSAB Boardings	Daily New Transit Trips	Daily Low-Income Riders	Travel Time (minutes)	ROM Cost Estimate (2017 \$B's)	Cost per New Riders per Year (2017 \$)
A Pacific/Alameda	58,000	24,500	22,100	36.6	\$4.7	\$607
B Pacific/Vignes	56,000	25,000	21,300	34.5	\$4.7	\$596
C Alameda (aerial)	75,500	26,000	29,600	35.5	\$4.6	\$557
D Alameda/Vignes	69,500	25,500	26,800	35.5	\$5.0	\$620
E Alameda (underground)	81,500	27,000	31,700	33.5	\$5.8	\$679
F Alameda/Center	74,500	26,000	28,400	34.0	\$5.4	\$655
G Downtown Transit Core	78,500	25,000	32,400	33.6	\$5.8	\$729
H Arts District/6 th St	46,500	19,500	19,000	37.5	\$4.5	\$740

ROM = Rough order of magnitude



Community Meetings

- Nine Community Meetings held
 - March 12: Little Tokyo (3pm & 6pm)
 - March 13: City of Artesia @ 6pm (also conducted as a live webcast)
 - March 17: City of Bell @6pm
 - March 19: City of Downey @6pm
 - April 30: LAUS @ 3pm & 6pm
 - May 3: City of Paramount @ 6pm (also webcast)
 - May 15: City of Downey @ 7pm
- Over 490 attendees
- Over 300 webcast views
- Over 150 written comments received



Metro

Key Takeaways

- 90% of trips are common to LAUS and Downtown Transit Core
- 66% of population in the study area are considered Environmental Justice (EJ) communities
 - EJ communities are spread *throughout* the 20 mile corridor
- An average of 62% WSAB riders would enjoy a one seat ride
- Measure M identifies \$4B in 2017\$
 - \$1B- opening 2028
 - \$3B- opening 2041
- All alignments exceed Measure M \$4B allocation
- Board decision on Northern Alignment alternatives to further study in environmental is critical to moving project forward



Board Report

File #: 2018-0217, File Type: Oral Report / Presentation

Agenda Number: 30.

CONSTRUCTION COMMITTEE MAY 17, 2018

**SUBJECT: PROGRAM MANAGEMENT MAJOR PROJECT STATUS
REPORT**

ACTION: RECEIVE ORAL REPORT

RECOMMENDATION

RECEIVE oral report on the Major Project Status by the Chief Program Management Officer.

DISCUSSION

- A. Update report covering the month of May 2018 by the Chief Program Management Officer; and
- B. At the January 26, 2018 Board meeting, the Board approved the continuation and expansion of the authority delegation within Life of Project (LOP) budget management on all Transit and Regional Rail Capital Projects program-wide. Staff is directed to provide quarterly reports on change orders and modifications that are above \$500,000. The next quarterly report is scheduled for July 19, 2018.

Prepared by:

- **Master Schedule** - Julie Owen, DEO, Project Mgmt., (213) 922-7313
- **Crenshaw/LAX** - Sameh Ghaly, Sr EO Project Mgmt., (213) 418-3369
- **Regional Connector** - Gary Baker, EO Project Mgmt., (213) 893-7191
- **Westside Purple Line Ext 1** - James Cohen, EO Project Mgmt., (213) 922-7911
- **Westside Purple Line Ext 2** - Michael McKenna, EO Project Mgmt., (213) 312-3132
- **Westside Purple Line Ext 3** - Michael McKenna, EO Project Mgmt., (213) 312-3132
- **Patsaouras Plaza Busway Station** - Timothy Lindholm, EO Project Engr., (213) 922-7297
- **Willowbrook/Rosa Park Station** - Timothy Lindholm, EO Project Engr., (213) 922-7297
- **The New Blue** - Androush Danielians, EO Project Engr., (213) 922-7598
- **Presentation** - Yohana Jonathan, Departmental System Analyst, (213) 922-7592

Program Management Major Project Status Report

Presented By

Richard Clarke

Chief Program Management Officer

May 2018

Construction Committee

Los Angeles County Metropolitan Transportation Authority



PROJECT BUDGET & SCHEDULE STATUS SUMMARY CHART

Project	Cost Performance	Schedule Performance	Comments
Crenshaw/LAX			Project is 81% complete. The remaining cost contingency is below 1.2% of the total project budget (\$23 million in contingency remains). Contractor is at least 56 days behind schedule. Metro and contractor are working together to implement mitigation strategies to maintain planned revenue service in October 2019.
Regional Connector			Project is 50% complete and proceeding on schedule and cost forecast is within Life of Project budget.
Westside Purple Line Extension-Section 1			Project is 34% complete.
Westside Purple Line Extension-Section 2			Project is 6% complete with no significant issues.
Westside Purple Line Extension-Section 3			<ul style="list-style-type: none"> FTA approval for Entry into Engineering is expected in Spring 2018. FTA approval for Letter of No Prejudice (LONP) is expected in Summer 2018. Award of Contract C1151 Tunnel will occur after LONP approval.
Patsaouras Plaza			Project is 60% complete with approved substantial completion date of December 2018.
Willowbrook/Rosa Parks Station			Design activities are complete. Early Start Phase (Package E) contract awarded, second contract (Package A and C) in procurement process.
Metro Blue Line Projects			<p>Pedestrian Swing Gate project 98% complete. All gates except the ones in 41st Street and Vernon are operational. MBL Signal Rehab project 85% design work is in progress. Bids received April 13, 2018. MBL System and Track Refurbishment.</p> <p>City of Long Beach Fare Gates infrastructure design 100% complete for two stations.</p>

May 2018



On target



Possible problem



Major issue

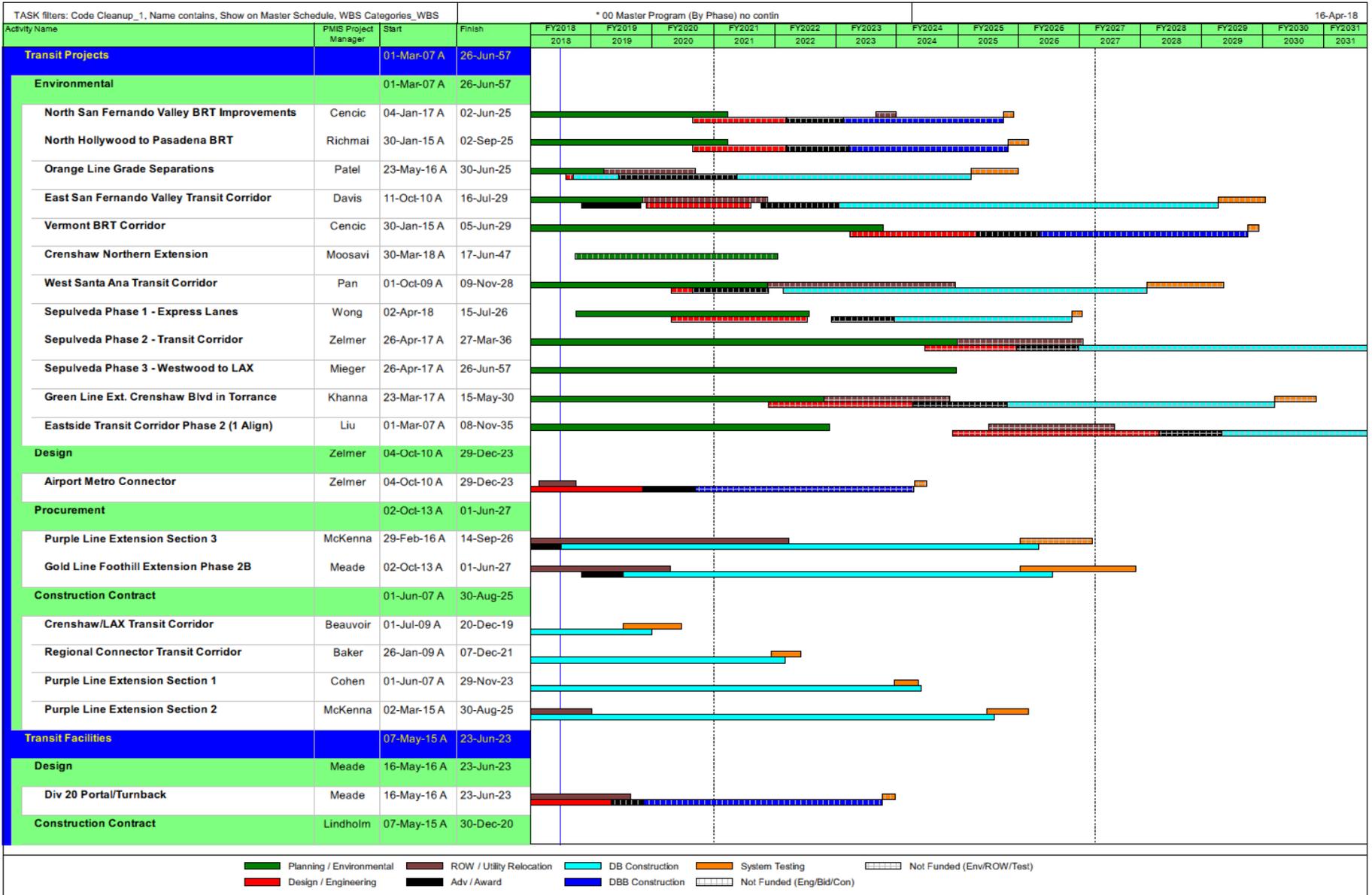


Metro 2

Construction Committee

Los Angeles County Metropolitan Transportation Authority

TRANSIT MASTER SCHEDULE (Page 1 of 2)



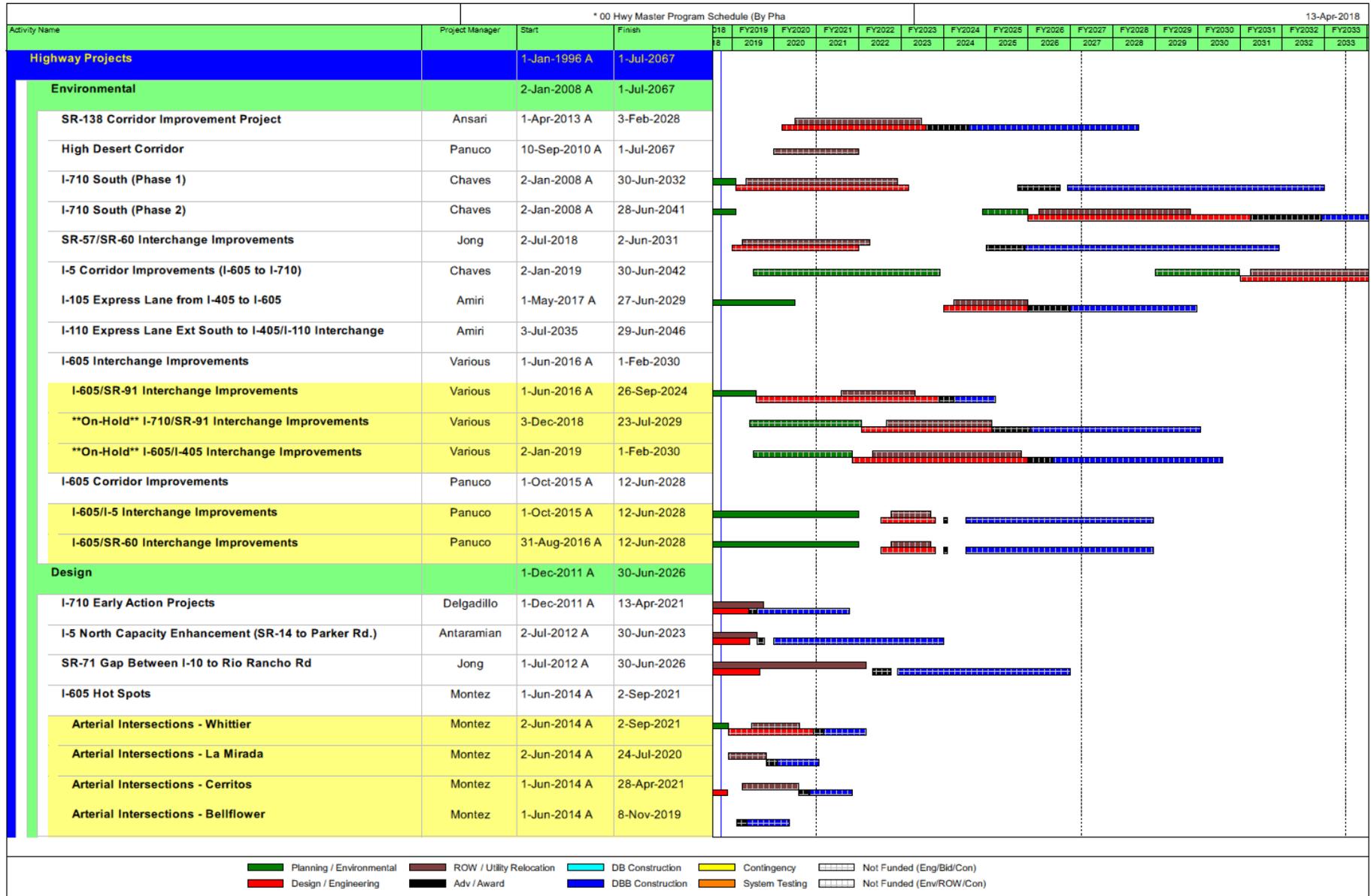
TRANSIT MASTER SCHEDULE (Page 2 of 2)

TASK filters: Code Cleanup_1, Name contains, Show on Master Schedule, WBS Categories_WBS				* 00 Master Program (By Phase) no contin													16-Apr-18
Activity Name	PMIS Project Manager	Start	Finish	FY2018 2018	FY2019 2019	FY2020 2020	FY2021 2021	FY2022 2022	FY2023 2023	FY2024 2024	FY2025 2025	FY2026 2026	FY2027 2027	FY2028 2028	FY2029 2029	FY2030 2030	FY2031 2031
Willowbrooks/Rosa Parks Station Improvement	Lindholm	07-May-15 A	30-Dec-20														
Regional Rail Projects	Owens	02-Sep-13 A	03-Feb-28														
Environmental	Owens	01-Dec-14 A	03-Feb-28														
Link Union Station	Owens	01-Dec-14 A	03-Feb-28														
Design	Owens	01-Apr-15 A	27-Sep-22														
Brighton to Roxford Double Track	Owens	01-Sep-15 A	22-Apr-22														
Lone Hill to CP White	Owens	03-May-16 A	27-Sep-22														
Rosecrans & Marquardt Grade Separation	Owens	01-Apr-15 A	14-Sep-21														
Construction Contract	Owens	02-Sep-13 A	01-Jun-18														
Bob Hope Airport Station	Owens	02-Sep-13 A	01-Jun-18														
Bus Facilities Projects	Gurrola	31-Mar-14 A	14-Feb-19														
Construction Contract	Gurrola	31-Mar-14 A	14-Feb-19														
Patsouras Plaza	Gurrola	31-Mar-14 A	14-Feb-19														
State of Good Repair/Improvements		01-Jul-13 A	31-Jul-20														
Design		21-Sep-15 A	31-Jul-20														
210 Freeway Barrier Rail	Danielans	13-Jun-16 A	28-Jun-19														
MBL Resignaling	Wei	21-Sep-15 A	31-Jul-20														
Construction Contract		01-Jul-13 A	29-Jun-18														
Pershing Sq. Esc. Replace & New Canopy Project	Patel	11-May-15 A	31-Aug-17 A														
MBL Ped Safety Enhancement At-Grade Crossing	Chong	01-Jul-13 A	29-Jun-18														
Small Capital	Joshi	14-Jul-15 A	07-Mar-22														
Design	Joshi	01-Mar-16 A	07-Mar-22														
Eastside Access Improvement Project	Joshi	01-Mar-16 A	07-Mar-22														
Procurement	Joshi	14-Jul-15 A	28-Feb-20														
Rail to Rail	Joshi	14-Jul-15 A	28-Feb-20														

■ Planning / Environmental
 ■ ROW / Utility Relocation
 ■ DB Construction
 ■ System Testing
 Not Funded (Env/ROW/Test)

■ Design / Engineering
 ■ Adv / Award
 ■ DBB Construction
 Not Funded (Eng/Bid/Con)

HIGHWAY MASTER SCHEDULE (Page 1 of 2)



HIGHWAY MASTER SCHEDULE (Page 2 of 2)

				* 00 Hwy Master Program Schedule (By Pha)													13-Apr-2018		
Activity Name	Project Manager	Start	Finish	F18	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033
				18	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Construction Contract		1-Jan-1996 A	1-Aug-2022																
South Bay (I-405, I-110, I-105 and SR-91)	Panuco	2-Jan-2014 A	4-Mar-2022																
I-405 Crenshaw Blvd On/Off Ramp Improvements	Panuco	2-Jan-2014 A	4-Mar-2022																
I-405/I-110 Interchange Improvements	Panuco	2-Jan-2014 A	10-Apr-2019																
Countywide Soundwall Construction	Owen	15-Dec-2010 A	21-Jul-2021																
Package #10 - SR-210 Fair Oaks, Lake and Baldwin to San	Owen	2-Sep-2014 A	21-Jul-2021																
Package #11 - SR-170 from 101 to Sherman Way and I-405	Owen	15-Dec-2010 A	21-Dec-2020																
I-5 North Capacity Enhancements SR-134 to SR-118	Subeh	1-Apr-1998 A	15-Jun-2020																
SR-118 to SR-170 (Segment 1A)	Subeh	30-Jul-1999 A	15-Jul-2016 A																
SR-170 to Buena Vista (Segments 2)	Subeh	1-Apr-1998 A	16-Dec-2015 A																
Magnolia to SR-134 (Segment 4)	Subeh	1-Apr-1998 A	18-Dec-2019																
Buena Vista to Magnolia (Segment 3)	Subeh	1-Apr-1998 A	15-Jun-2020																
I-5 South Capacity Enhancements from I-605 to Orange Cour	Gau	1-Jan-1996 A	1-Aug-2022																
I-5 Carmenita Road Interchange	Gau	1-Jan-2001 A	22-Mar-2018 A																
Alondra (Segment 1)	Gau	1-Jan-2001 A	19-May-2016 A																
Imperial Highway (Segment 4)	Gau	1-Jan-2001 A	26-Jul-2019																
Shoemaker - Rosecrans (Segment 3)	Gau	1-Jan-1996 A	28-Nov-2018																
Florence (Segment 5)	Gau	1-Jan-2001 A	30-Jul-2020																
Valley View (Segment 2)	Gau	1-Jan-1996 A	1-Aug-2022																

■ Planning / Environmental
 ■ ROW / Utility Relocation
 ■ DB Construction
 ■ Contingency
 Not Funded (Eng/Bid/Con)

■ Design / Engineering
 ■ Adv / Award
 ■ DBB Construction
 ■ System Testing
 Not Funded (Env/ROW/Con)

CRENSHAW/LAX TRANSIT PROJECT

 BUDGET		
	Current	Forecast
TOTAL COST	\$2,058M	\$2,058M

 SCHEDULE		
	Current	Forecast
REVENUE OPERATION	Oct 2019	Oct 2019

- Overall Project Progress is 81% complete; contractor needs to mitigate at least a 56 day schedule delay
- The Green Line tie-in to Crenshaw/LAX Line completed one week ahead of schedule
- Contractor continues critical track work installation
- Contractor continues concrete wall, roof, and walkway placements for cut-and-cover tunnels
- Contractor continues roof placements for three underground stations along Crenshaw Boulevard
- The Southwestern Yard Maintenance Facility is progressing on schedule



UG #3 Cut-and-cover tunnel – track work plinth construction Southwestern Yard – south yard track leads & APM columns

May 2018



On target



Possible problem



Major issue

Construction Committee

Los Angeles County Metropolitan Transportation Authority



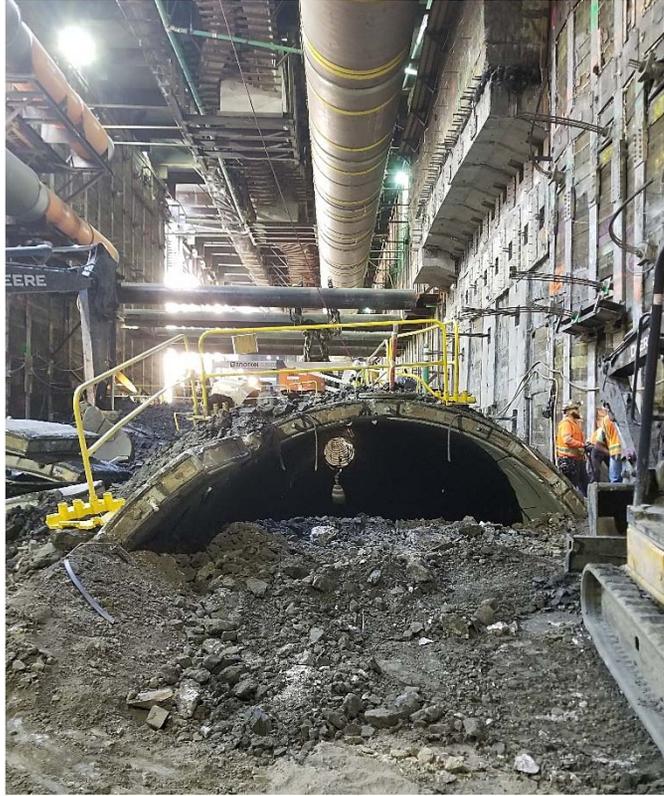
Metro 7

REGIONAL CONNECTOR TRANSIT PROJECT

OK BUDGET		
	Current	Forecast
TOTAL COST	\$1,810M	\$1,810M
* Includes Board approved LOP budget plus finance costs.		

OK SCHEDULE		
	Current	Forecast
REVENUE OPERATION	Dec 2021	Dec 2021

- Overall Project Progress is 50%
- Underground:** Preparations for Sequential Excavation Method (SEM) Cavern excavation near complete; tunnel invert and walkway installation is ongoing
- Little Tokyo/Arts District Station:** Excavation and utility support resumed at station and Wye
- Historic Broadway Station:** Underpinning of LA Times Building in progress; station box and ancillary area excavation continues; bored tunnel segment breakthrough underway
- Grand Av Arts/Bunker Hill Station:** Permanent structural concrete construction continues
- Flower Street:** Utility protection/relocations, support of excavation, decking and excavation continues



Interface of underpinning, bored tunnel breakthrough and Sequential Excavation Method (SEM) Cavern in Historic Broadway Station

May 2018



On target



Possible problem



Major issue

Construction Committee

Los Angeles County Metropolitan Transportation Authority



Metro 8

WESTSIDE PURPLE LINE EXTENSION – SECTION 1

OK BUDGET

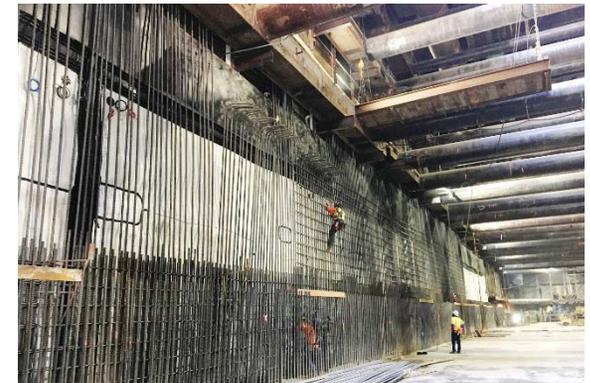
	Current	Forecast
TOTAL COST*	\$3,154M	\$3,154M

* Includes Board approved LOP budget plus finance costs.

OK SCHEDULE

	Current	Forecast
REVENUE OPERATION	Oct 2024 (FFGA)	Nov 2023

- Overall Project Progress is 34% complete.
- At the Wilshire/Western Retrieval Shaft, the 10-day closure for street decking was completed February 26, 2018. Installation of the water treatment system, dewatering wells, ventilation and instrumentation is on-going.
- Concrete placement at the Wilshire/La Brea Station invert slab started on February 13, 2018. Vertical conveyor construction at the south shaft site continues, as well as installation of invert rebar and embeds. Concrete wall pours are scheduled to start in April 2018.
- At the Wilshire/Fairfax Station, station excavation and the installation of walers and struts continues.
- Station excavation under the concrete deck at Wilshire/La Cienega Station continues. Installation of the dewatering system and the utility hanging effort are on-going.
- Tunnel Boring Machines (TBMs) were delivered to Los Angeles in December 2017. All of the TBM components are at the contractor's Riverside staging area. Tunneling is planned to start in August 2018.



Wilshire/La Brea Station



Wilshire/La Cienega Station

May 2018

Construction Committee

Los Angeles County Metropolitan Transportation Authority



On target



Possible problem



Major issue



Metro 9

WESTSIDE PURPLE LINE EXTENSION – SECTION 2

BUDGET

	Current	Forecast
TOTAL COST*	\$2,530M	\$2,530M

* Includes Board approved LOP budget plus finance costs.

SCHEDULE

	Current	Forecast
REVENUE OPERATION	Dec 2026 (FFGA)	Aug 2025

- Overall project progress is 6% complete.
- Final design progress is 57% complete.
- Century City Constellation: AT&T and LADWP (Power) utility relocations are ongoing.
- Wilshire/Rodeo: Southern California Gas (SCG) and AT&T utility relocations are ongoing.
- Negotiations with the City of Beverly Hills (COBH) for a Memorandum of Agreement (MOA) for the C1120 Contract began in August 2017 and are anticipated to complete in Spring 2018.



AT&T Utility Work in Century City



SCG Utility Work in Beverly Hills

May 2018



On target



Possible problem



Major issue

Construction Committee

Los Angeles County Metropolitan Transportation Authority



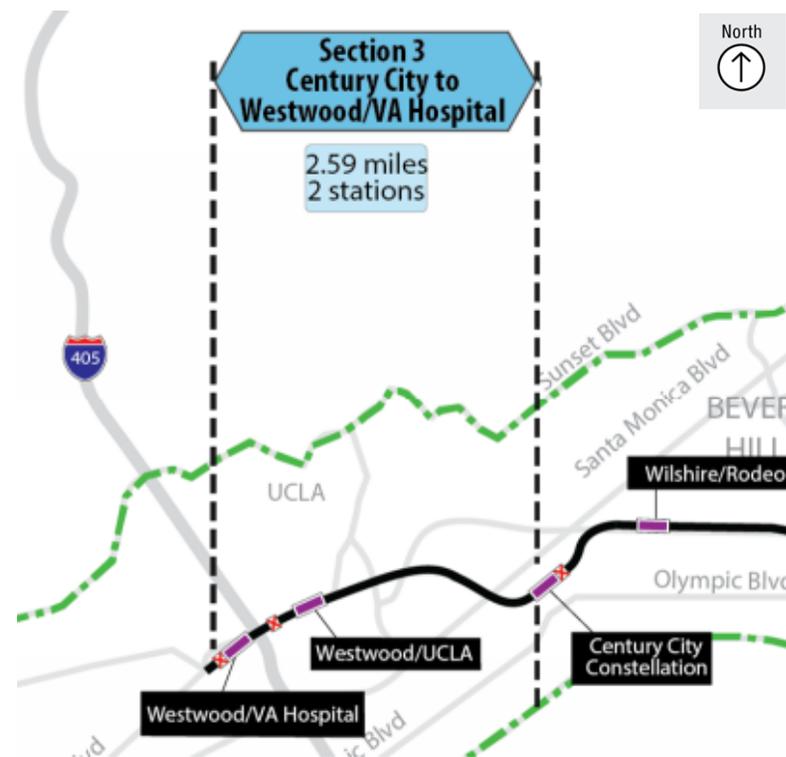
Metro 10

WESTSIDE PURPLE LINE EXTENSION – SECTION 3

 BUDGET	Current	Forecast
TOTAL COST	TBD	\$3,587M

 SCHEDULE	Current	Forecast
REVENUE OPERATION	TBD	2026

- FTA approval for Entry into Engineering is expected in Spring 2018.
- FTA approval for Letter of No Prejudice (LONP) for the Tunnel Contract is expected in Summer 2018.
- C1151 Tunnel Contract – Technical proposals were received on November 13, 2017. Price proposals were received on April 6, 2018.
- C1152 Stations, Trackwork and Systems Contract – Request for Qualifications (RFQ)/Request for Proposals (RFP) was issued on September 15, 2017. Qualifications from respondents were received on November 20, 2017. Proposals are due on June 22, 2018.
- C1153 Advanced Utility Relocations (AUR) Contract – Construction began in April 2018.



May 2018



On target



Possible problem



Major issue

Construction Committee

Los Angeles County Metropolitan Transportation Authority



Metro 11

PATSAOURAS PLAZA BUSWAY STATION

 BUDGET		
	Current	Forecast
TOTAL COST	\$39.7M	\$39.7M

 SCHEDULE		
	Current	Forecast
SUBSTANTIAL COMPLETION	Dec 2018	Mar 2019

- Overall project progress is 60% complete
- All concrete deck pours completed, falsework removal in process
- Elevator foundations in process at south end of bus plaza
- Human bones continue to be discovered, Native American monitor and coroner involved (no delay yet)
- Vignes Street on/off-ramp intermittent non-peak closures ongoing, should wind down in May 2018
- Traffic switch to outside lanes and station construction starts May 2018
- Reviewed Project Status concerns with contractor, contractor has been responsive with submittals



View of project site



Elevator Foundations



Bridge Deck

May 2018



On target



Possible problem



Major issue

Construction Committee

Los Angeles County Metropolitan Transportation Authority



Metro 12

WILLOWBROOK/ROSA PARKS STATION

 BUDGET	Current	Forecast
TOTAL COST	N/A	\$109.3M

 SCHEDULE	Current	Forecast
SUBSTANTIAL COMPLETION	July 2020	July 2020

- Early Start Phase (Package E) Construction mobilization has begun.
- Package A and C at 100% design completion. Procurement of this contract is underway. Package includes provisions for the closure of the Blue Line (the New Blue).
- Pedestrian grade crossing documents submitted to Union Pacific and Public Utilities Commission.



South Platform Improvements



Central Plaza & Bus Bays



Main Plaza

May 2018



On target



Possible problem



Major issue

Construction Committee

Los Angeles County Metropolitan Transportation Authority



Metro 13

THE NEW BLUE

<u>Project Name</u>	Budget	Percent Completed	Forecast Completion	Status
▪ Pedestrian Gates	\$31.4M	98%	June 2018	OK
▪ City of Long Beach Fare Gates Design	\$6M*	100%(Design)	Mar 2018	OK
▪ Blue Line Signal Rehabilitation (OCS, Signals, Div. 11)	\$119M	16%	Aug 2019	OK
▪ Blue Line Track and System Refurbishment (Track, Turnouts, OCS and includes 2 Stations Fare Gates Phase I)	\$90.8M	N/A	Aug 2019	OK
Total: \$247.2M				

Project Status

- **Pedestrian Gates**
 - All Gates except the ones in 41st Street and Vernon are complete and operational.
- **City of Long Beach Fare Gates Design**
 - Design completed on 5th and Wardlow Stations
- **MBL Signal Rehab 85% Design in Progress**
- **MBL Track and System Refurb**
 - Received bids on April 13, 2018



*Budget Estimate

May 2018

OK On target

Possible problem



Major issue

Construction Committee

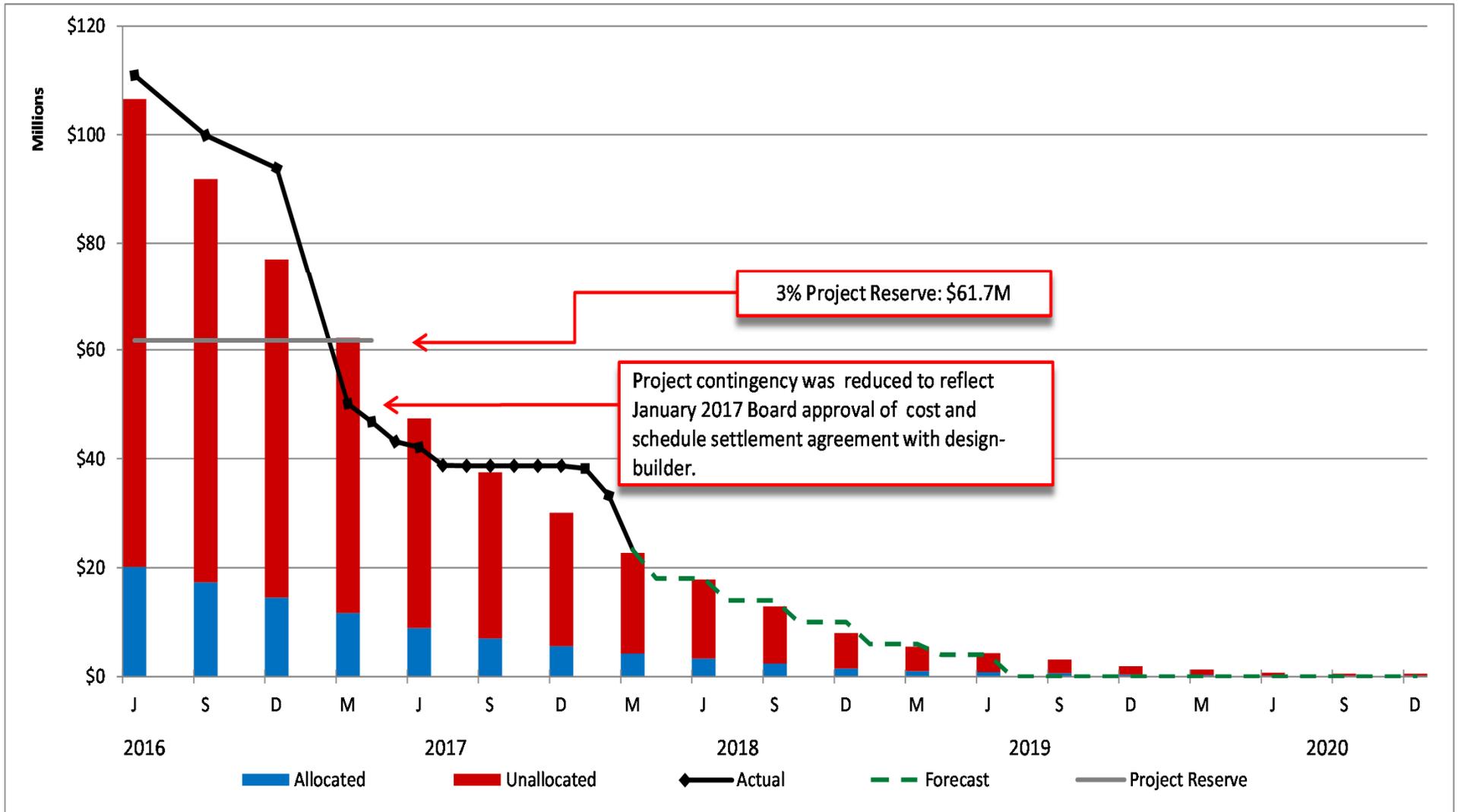
Los Angeles County Metropolitan Transportation Authority



Crenshaw/LAX Transit Project

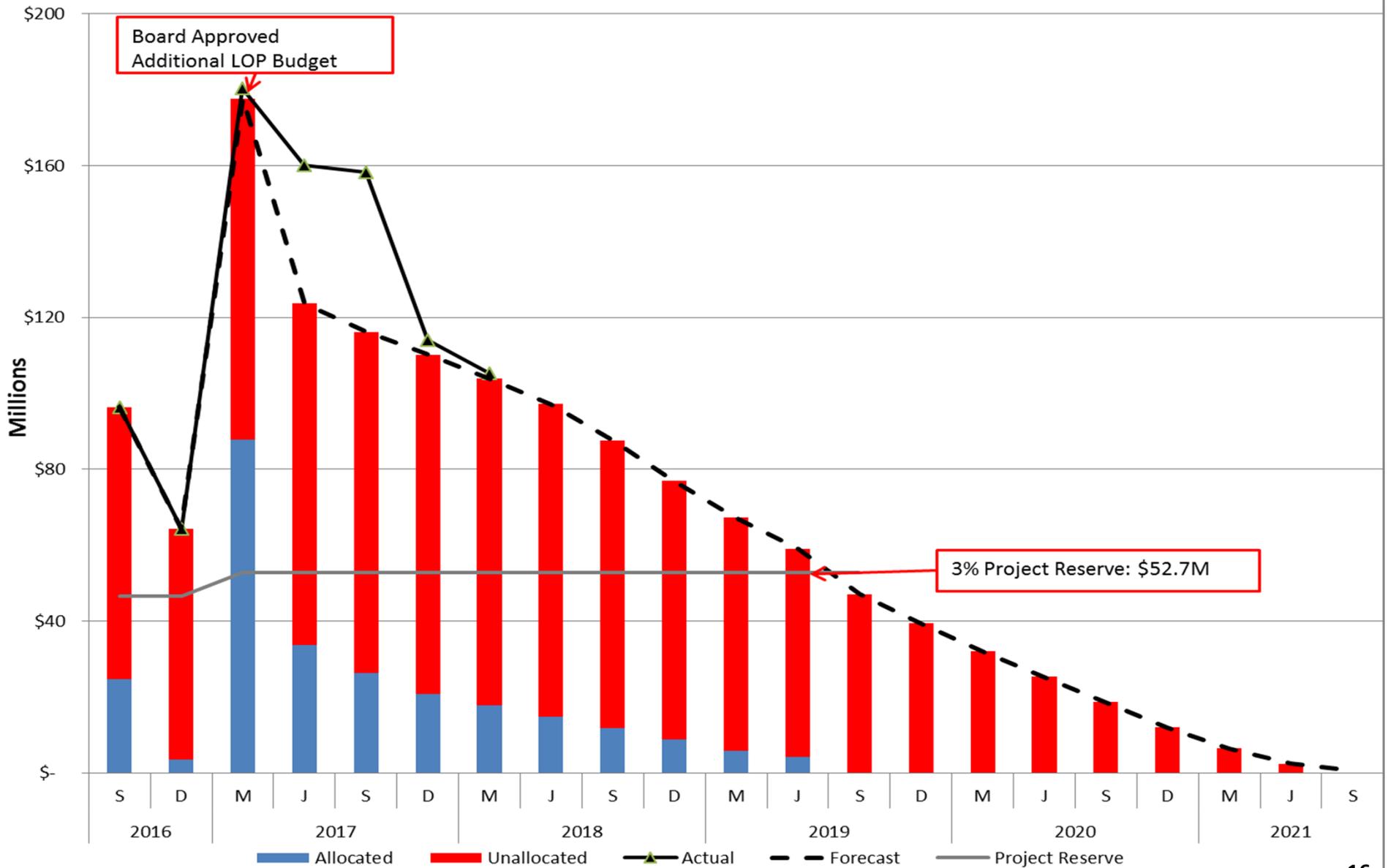
Project Cost Contingency Drawdown

March 2018



Regional Connector

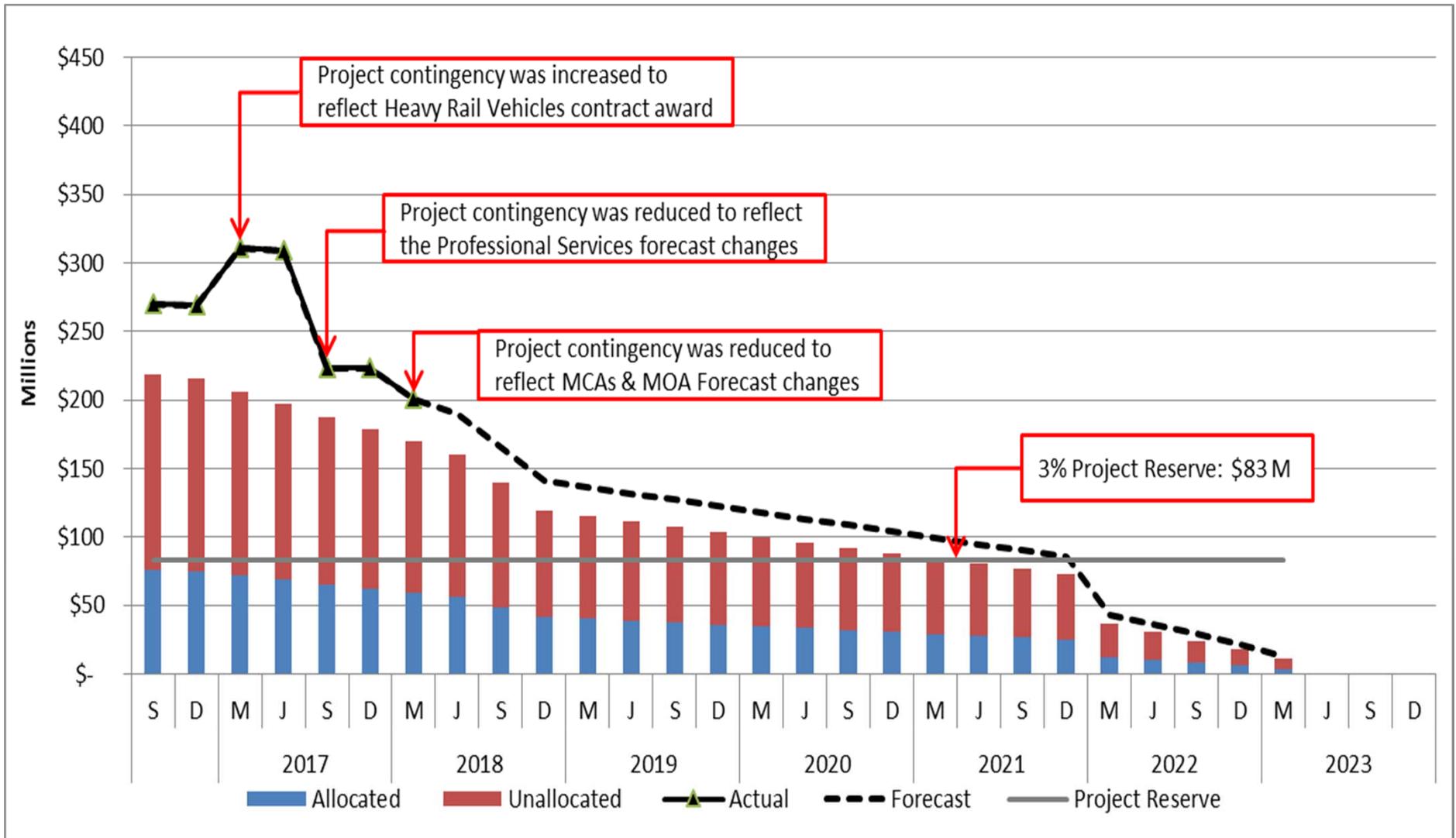
Project Cost Contingency Drawdown



Westside Purple Line Extension – Section 1

Project Cost Contingency Drawdown

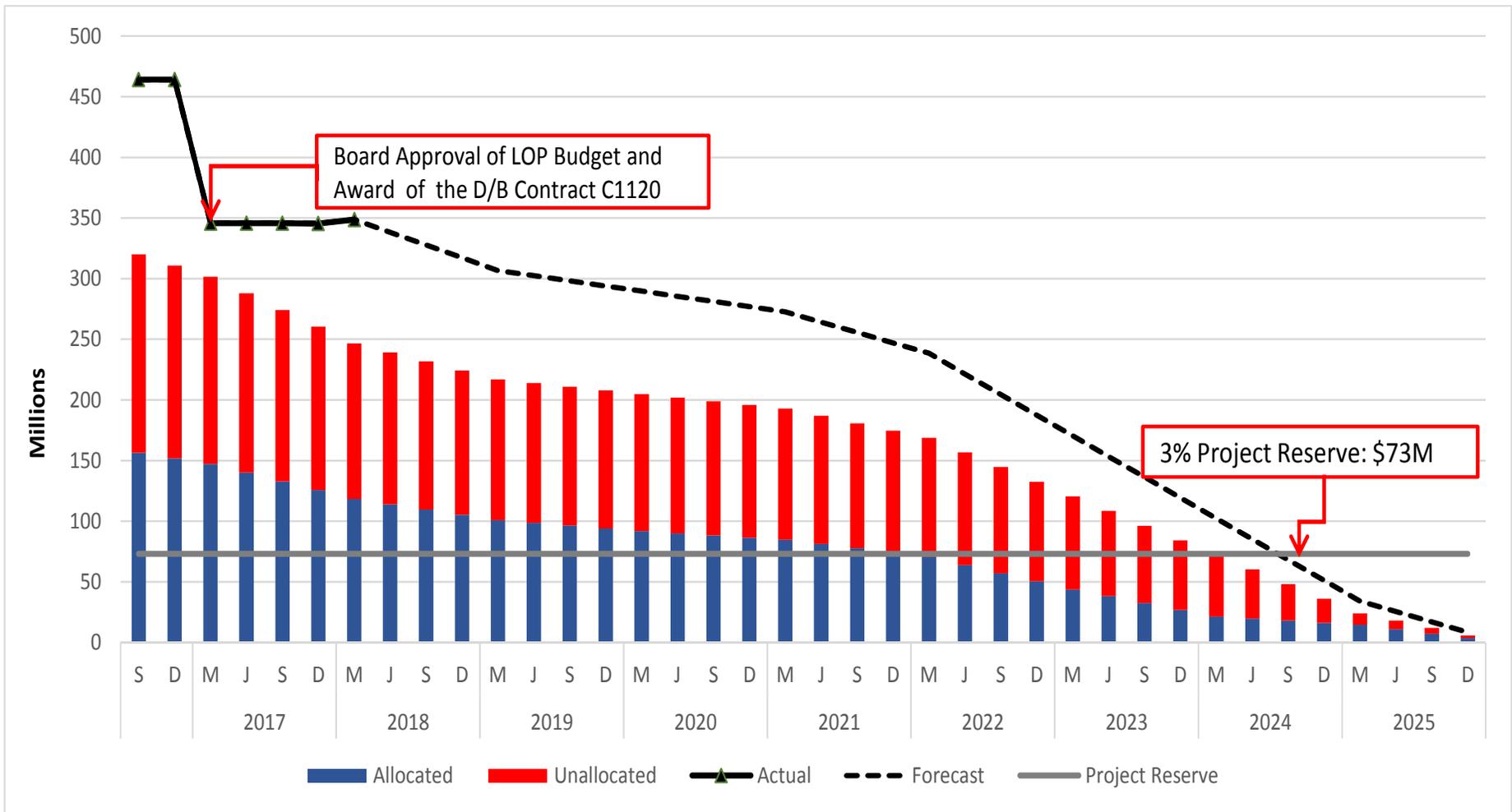
March 2018



Westside Purple Line Extension – Section 2

Project Cost Contingency Drawdown

March 2018





Board Report

File #: 2018-0188, File Type: Informational Report

Agenda Number: 31.

CONSTRUCTION COMMITTEE MAY 17, 2018

SUBJECT: PROJECT LABOR AGREEMENT/CONSTRUCTION CAREERS POLICY (PLA/CCP)

ACTION: RECEIVE AND FILE

RECOMMENDATION

RECEIVE AND FILE the:

- A. Status update on the Project Labor Agreement and Construction Careers Policy programs through the quarter ending March 2018; and
- B. Female Participation Action Plan Update.

ISSUE

In January 2012, the Board approved the Project Labor Agreement (PLA) with the Los Angeles/Orange Counties Building and Construction Trades Council and the Construction Careers Policy (CCP), with a subsequent renewal in January 2017. The PLA/CCP encourages construction employment and training opportunities for members of economically disadvantaged areas throughout the United States on Metro's construction projects. An added value of the PLA is that work stoppages are prohibited.

Consistent with the Board approved PLA and CCP (PLA/CCP), prime contractors are required to provide Metro with monthly reports detailing progress towards meeting the targeted worker hiring goals. Additionally, consistent with Metro's Labor Compliance policy and federal Executive Order 11246 (EO 11246), the prime contractors provide Metro with worker utilization data by ethnicity and gender. In accordance with EO 11246, Metro's program-wide goal for female participation on PLA/CCP construction projects is 6.90%.

As of November 2017, Metro staff has advanced several initiatives with focus on increasing the overall female participation attainment; such initiatives include the development of an action plan, the deployment of a performance score card and continued engagement with Metro's prime contractors and job coordinators. As a result of the focused initiatives, Metro's female participation attainment on active projects has steadily increased from September 2017 reporting of 3.35% to 3.47% as of March 2018. The overall increase is attributed to 71 new female workers being employed on Metro's construction projects between November 2017 and March 2018.

DISCUSSION

This report will provide a status update on the construction contracts covered by the PLA/CCP; an overview of Diversity and Economic Opportunity staff's (DEOD) efforts on the female participation action plan, including an update on the construction projects covered under the Pilot Local Hire Initiative; and an update on outreach activities in support of targeted workforce initiatives.

A. PLA/CCP Status Update

As of March 2018, there are nine active construction contracts with PLA/CCP program requirements, which include one contract subject to the Pilot Local Hire Initiative. All the active construction project contractors are exceeding the 40% Targeted Worker goal; five contractors are exceeding the 20% Apprentice Worker goal; and four contractors are exceeding the 10% Disadvantaged Worker goal.

There are fourteen completed construction contracts. The information on the completed construction contracts is provided as Attachment A.

The following table represents the active construction projects as of the quarterly reporting period.

Active Construction Projects

Project Name:	Prime Contractor:	Targeted Worker Goal (40%)	Apprentice Worker Goal (20%)	Disadvantaged Worker Goal (10%)	Female Utilization Goal (6.90%)	Percentage of Disadvantaged Worker Participation that are in the Criminal Justice System Category *
Crenshaw/LAX Transit Corridor	Walsh/Shea Corridor Constructors	59.78%	23.02%	12.21%	3.57%	36.48%
Regional Connector Transit Corridor	Regional Connector Constructors, JV	58.84%	16.35%	7.29%	2.59%	63.88%
Westside Subway Extension Project, Section 1 – D/B	Skanska-Traylor-Shea, JV	65.29%	16.65%	9.40%	4.26%	76.06%
Metro Blue Line Pedestrian and Swing Gates	Icon-West	63.69%	23.36%	11.75%	0.84%	100.00%
Division 16 Southwestern Yard	Hensel Phelps/Herzog, JV	51.76%	26.40%	9.12%	4.26%	44.33%
Patsaouras Plaza Busway Station	OHL-USA, Inc.	60.13%	11.49%	3.69%	1.55%	43.07%
Bob Hope Airport/Hollywood Way Station	C.A. Rasmussen, Inc.	44.45%	22.73%	13.03%	0.89%	75.13%
Non-Revenue Maintenance Bldg. at Vernon Yard	Access Pacific, Inc.	54.67%	20.36%	10.85%	6.51%	8.26%
New Maintenance of Way/Non Revenue Vehicle Building 61S	Clark Construction, Inc.	55.84%	15.35%	0.07%	0.04%	0.00%

Please refer to the attached PLA/CCP Data Report for additional information on each project.

*Part of Metro’s PLA/CCP workforce requirement is the utilization of disadvantaged workers on

projects. One of the nine criteria for a Disadvantaged Worker is having a criminal record or other involvement with the criminal justice system. The data shown in the table above (last column) is the percentage of Disadvantaged Workers (based on hours worked) that have criminal records or involvement with the criminal justice system that have worked or are still working on Metro's PLA/CCP projects.

Crenshaw/LAX Transit Corridor
Prime: Walsh/Shea Corridor Constructors

The Crenshaw/LAX Transit Corridor project contractor has completed 87.38% of the estimated construction work hours for this project. The contractor is currently exceeding the Targeted Worker goal at 59.78%, Apprentice Worker Goal at 23.02%, Disadvantaged Worker goal at 12.21% and the minority participation percentage goals; however, the contractor is not meeting the 6.90% Female Participation goal at 3.57%. The attainment for the 20% Apprentice Worker goal is based on total apprenticeable hours.

Staff issued an Executive Order 11246 Notice in September 2017 requesting the prime contractor document efforts related to the recruitment of female workers as part of their efforts to increase female participation. The contractor has slightly increased the female participation from September 2017 reporting of 3.27% to 3.57% as of this reporting cycle.

Regional Connector Transit Corridor
Prime: Regional Connector Constructors, Joint Venture

The Regional Connector Transit Corridor project contractor has completed 39.14% of the estimated construction work hours for this project. The contractor is currently exceeding the Targeted Worker goal at 58.84% and the minority participation percentage goals; however, the contractor is not meeting the 20% Apprentice Worker goal at 16.35%, the 10% Disadvantaged Worker goal at 7.29% or the 6.90% Female Participation goal at 2.59%. The attainment for the 20% Apprentice Worker goal is based on total apprenticeable hours.

Staff issued an Executive Order 11246 Notice in September 2017 and met with the prime contractor along with their job coordinator to discuss the low female participation on this project. The contractor has committed to perform more outreach activities focusing on female recruitment as part of their effort to increase female participation. As of this reporting period, the contractor has sponsored several females into various union trades.

The contractor is currently in the process of updating its Employment Hiring Plan (EHP) to address compliance with the PLA/CCP workforce goals. Staff will continue to monitor the contractor's EHP and work closely with the contractor towards meeting all worker goals for this project.

Westside Subway Extension Project, Section 1 Design-Build
Prime: Skanska-Traylor-Shea, a Joint Venture (STS)

The Westside Subway Extension Project, Section 1 project contractor has completed 31.43% of the estimated construction work hours for this project. The contractor is currently exceeding the Targeted Worker goal at 65.29% and the minority participation percentage goals; however, the contractor is not meeting the 20% Apprentice Worker goal at 16.65%, the 10% Disadvantaged Worker goal at 9.40% or the 6.90% Female Participation goal at 4.26%. The attainment for the 20% Apprentice Worker is based on total apprenticeable hours.

The contractor has submitted an EHP which outlines compliance with meeting the PLA/CCP workforce goals Mid-2018. Staff will continue to monitor the contractor's EHP and work closely with the contractor towards meeting all worker goals for this project.

Staff issued an Executive Order 11246 Notice in September 2017 and met with the prime contractor along with their job coordinator to discuss the low female participation on this project. The contractor has committed to perform more outreach activities focusing on female recruitment as part of their effort to increase female participation. As of this reporting period, the contractor has sponsored several females into various union trades.

Metro Blue Line Pedestrian and Swing Gates

Prime: Icon-West

The Metro Blue Line Pedestrian and Swing Gates project Contractor has completed 94.94% of the estimated construction work hours on this project. The Contractor is currently exceeding the Targeted Worker goal at 63.69%, Apprentice Worker goal at 23.36%, Disadvantaged Worker goal at 11.75% and the minority participation percentage goals; however, the Contractor is not meeting the 6.90% Female Participation goal at 0.84%. The attainment for the 20% Apprentice Worker is based on total apprenticeable hours.

Staff issued a notice in September 2017 and met with the prime contractor to discuss the low female participation attainment on this project. The contractor responded by hiring two female workers on the project. Recognizing this project is nearly 100% complete, DEOD will continue to collaborate with the job coordinators to focus efforts on identifying strategies to support the transition of female workers to other Metro construction projects.

Division 16 - Southwestern Yard

Prime: Hensel Phelps/Herzog, J.V.

The Division 16 Southwestern Yard project contractor has completed 76.56% of the estimated construction work hours on this project. The contractor is currently exceeding the Local Targeted Worker goal at 51.76%, Apprentice Worker goal at 26.40%, and the minority participation percentage goals; however, the contractor is not meeting the 10% Disadvantaged Worker goal at 9.12% and the 6.9% Female Participation goal at 4.26%. The attainment for the 20% Apprentice Worker is based on total apprenticeable hours.

The contractor indicated that several disadvantaged workers were hired on the project which will

increase the Disadvantaged Worker attainment above the 10% requirement by next reporting cycle. Staff will work closely with the contractor towards meeting all worker goals for this project. This contract falls under the United States Department of Transportation's (U.S. DOT) Local Hire Pilot Program.

Staff issued an Executive Order 11246 Notice in February 2018 requesting the prime contractor to document efforts related to the recruitment of female workers as part of their effort to increase female participation. The contractor, along with their job coordinator has committed to increase the female participation by performing targeted outreach and collaborating with community-based organizations in recruiting female workers.

Patsaouras Plaza Busway Station

Prime: OHL-USA, Inc.

The Patsaouras Plaza Busway Station project contractor has completed 65.41% of the estimated construction work hours on this project. The contractor is currently exceeding the Targeted Worker goal at 60.13% and the minority participation percentage goals; however, the contractor is not meeting the 20% Apprentice Worker goal at 11.49%, the 10% Disadvantaged Worker goal at 3.69% or the 6.90% Female Participation goal at 1.55%. The attainment for the 20% Apprentice Worker is based on total apprenticeable hours.

Metro staff issued a Notice of Non-Compliance in November 2017 for the low attainment of the Apprentice and Disadvantaged Worker goals. The contractor submitted a revised EHP with an action plan for meeting all PLA/CCP workforce provisions by end of the project. As of this reporting cycle, the contractor has shown progress in the Apprentice Worker attainment and has committed in hiring more disadvantaged workers. Staff will continue to monitor the contractor's EHP and will work closely with the contractor towards meeting all worker goals for this project.

Staff issued an Executive Order 11246 Notice in February 2018 requesting the contractor to document efforts related to the recruitment of female workers as part of their effort to increase female participation. The contractor, along with their job coordinator, has committed to increase female participation by performing targeted outreach and collaborating with community-based organizations in recruiting female workers.

Bob Hope Airport/Hollywood Way Station

Prime: C.A. Rasmussen, Inc.

The Bob Hope Airport/Hollywood Way Station project contractor has completed 89.01% of the estimated construction work hours on this project. The contractor is currently exceeding the Targeted Worker goal at 44.45%, Apprentice Worker goal at 22.73%, Disadvantaged Worker goal at 13.03% and the minority participation percentage goals; however, the contractor is not meeting the 6.9% Female Participation goal at 0.89%. The attainment for the 20% Apprentice Worker is based on total apprenticeable hours.

Staff issued a notice in September 2017 and met with the prime contractor to discuss the low female utilization attainment on this project. The contractor responded by hiring two female workers on the project. Recognizing this project is nearly 100% complete, DEOD will continue to collaborate with the job coordinators to focus efforts on identifying strategies to support the transition of female workers to other Metro construction projects.

Non-Revenue Maintenance Building at Vernon Yard
Prime: Access Pacific, Inc.

The Non-Revenue Maintenance Building at Vernon Yard project contractor has completed 86.40% of the estimated construction work hours on this project. The contractor is currently exceeding the Targeted Worker goal at 54.67%, Apprentice Worker goal at 20.36%, Disadvantaged Worker goal at 10.85%, and the minority participation percentage goals; however, the contractor is not meeting 6.90% Female Participation goal at 6.51%. The attainment for the 20% Apprentice Worker is based on total apprenticeable hours.

As of the last reporting cycle, contractor attained the 6.90% Female Participation goal yet has receded slightly below the goal for this reporting cycle.

New Maintenance of Way/Non Revenue Vehicle Building 61S
Prime: Clark Construction, Inc.

The New Maintenance of Way/Non-Revenue Vehicle Building 61S project contractor has completed 15.80% of the estimated construction work hours for this project. The contractor is currently exceeding the Targeted Worker goal at 55.84% and the minority participation percentage goals; however, the contractor is not meeting the 20% Apprentice Worker goal at 15.35%, the 10% Disadvantaged Worker goal at 0.07% or the 6.90% Female Participation goal at 0.04%. The attainment for the 20% Apprentice Worker is based on total apprenticeable hours.

The contractor has submitted an EHP which outlines compliance with meeting the PLA/CCP workforce goals by 50% project completion. Staff will continue to monitor the contractor's EHP and work closely with the contractor towards meeting all worker goals for this project.

The contractor is at the early stage of construction with 15.80% project completion. Staff will issue an Executive Order 11246 Notice reminding the Contractor of the 6.90% female participation goal.

Female Workers on Active Construction Projects

In consideration of ongoing efforts to review and report on Metro's female participation attainment, the following table highlights the number of cumulative female workers on active PLA/CCP projects within the last three months.

Project Name:	Prime Contractor:	No. of Female Workers January 2018	No. of Female Workers February 2018	No. of Female Workers March 2018
Crenshaw/LAX Transit Corridor	Walsh/Shea Corridor Constructors	140	143	147
Regional Connector Transit Corridor	Regional Connector Constructors, JV	50	50	53
Westside Subway Extension Project, Section 1	Skanska-Traylor-Shea, JV	56	57	61
Metro Blue Line Pedestrian and Swing Gates	Icon-West	4	4	4
Division 16 – Southwestern Yard	Hensel Phelps/Herzog, JV	23	28	28
Patsaouras Plaza Busway Station	OHL, USA, Inc.	2	2	2
Bob Hope Airport/Hollywood Way Station	C.A. Rasmussen, Inc.	2	2	2
Non-Revenue Maintenance Bldg at Vernon Yard	Access Pacific, Inc.	2	2	3
New Maintenance of Way/Non Revenue Vehicle Bldg. 615	Clark Construction, Inc.	Project has not started	1	1

B. Female Participation Action Plan Update

As requested by Metro's Board, DEOD staff conducted a cursory assessment of other agencies' workforce programs, hiring best practices and strategies utilized to increase female participation. Staff incorporated various best practices into Metro's Female Participation Action Plan provided as Attachment B. The following is an update as of this reporting period.

- Tool Kit: The tool kit will provide contractors with industry best practices for outreach, recruitment, training and retention of female workers. The tool kit will also include a resource guide that contains a list of support services that have been identified by female construction workers as vital to achieve a sustained career in the construction industry. Staff has

completed a draft list of support services and providers for inclusion in the resource guide. The guide will include, but not be limited to:

- Women's support services;
- Family source, work source, and youth source services;
- Childcare and afterschool programs;
- Gender sensitivity and management training resources;
- Ex-offender/ new contributor resources; and
- Healthcare and housing resources.

Status: In progress

Milestone: Publish the tool kit in June 2018

- Regional Construction Industry Workforce Disparity Study: Perform a Workforce Disparity Study to determine the availability of women in the construction trades throughout the Los Angeles County region. The study will identify the demand for construction labor by Metro and other agencies in the region, the available labor supply, and any labor supply constraints. The Request for Proposal for professional services for the disparity study was issued in April 2018.

Status: Solicitation issued and currently in black-out period

Milestone: Anticipated contract award August 2018

- PLA/CCP Summit: The PLA/CCP summit will focus on increasing female participation on construction projects. The summit will feature a panel of women in the construction industry, industry speakers including trade representatives, private employers and others to discuss female apprentices, challenges faced by female workers and best practices for increasing the retention rates of female workers.

Status: Pending approval of proposed dates of July 24, 2018 or August 14, 2018

Milestone: Host summit summer 2018

- Evening WINTER training classes: Staff met with the Women in Non-Traditional Employment Roles (WINTER) organization and researched the feasibility of subsidizing evening training programs for women seeking construction careers. The issue of women unable to participate in WINTER's construction training program since it requires daytime availability was discussed. WINTER has provided staff with draft schedules for three to four training sessions per year including the resource requirements. DEOD staff will continue to coordinate discussions with WINTER and enlist external partners to participate in the discussion in effort to identify resources that can be leveraged to subsidize the evening training courses.

Status: In progress

Milestone: In coordination with WINTER and other potential partners, finalize logistics to begin the training sessions by summer 2018

DEOD staff will continue to advance efforts for the implementation of the action plan, identify strategies to support the outreach and recruitment of women into the trades and, more specifically, on Metro's PLA/CCP construction projects. Recognizing the need to promote retention, professional development and career advancement, staff has begun to implement strategies to support retention

and development of female workers on Metro's construction projects. Such strategies include:

- Pre-apprenticeship training: Staff has encouraged the job coordinators to direct women candidates to pre-apprenticeship training programs that are recognized by the Building Trade's apprenticeship organizations such as MC3 curriculum based training programs.
- Worker retention best practices: Efforts have been initiated to identify and assess the available pre-apprenticeship training programs with focus on those with demonstrated success for candidate retention.
- Transition coordination: Staff is developing a formalized process to assist female workers transition to other active or upcoming Metro projects as projects near the end of construction. The draft formalized process consists of the following actions:
 - Communicate with prime contractors and jobs coordinators nearing 80% project completion regarding the female worker transition;
 - In coordination with the job coordinators identify female workers preparing for transition and available for work at least 30 days prior to project end date and/or worker assignment end date;
 - Provide female workers with a list of active job coordinators; and
 - Follow-up monthly/quarterly on recruitment and placement progress.

Recognizing the Non-Revenue Maintenance Building at Vernon Yard and the Bob Hope Airport Hollywood Way Station projects are at 86.40% and 89.01% completion, Metro staff will perform the following:

- Request jobs coordinators to identify the female workers on these two projects needing transition support by May 3, 2018.
- Request jobs coordinators to provide (upon granted permission) the female worker's contact information, occupation trade and date of availability by May 17, 2018.
- Metro staff will provide a list of the jobs coordinators to the female workers and notify the worker's availability to jobs coordinators working on active projects by May 20, 2018.
- Metro staff will follow up monthly and quarterly on the placement progress of the workers with jobs coordinators.

Furthermore, staff will continue to provide ongoing assessment of the female participation score card, monitoring of contractor's performance, and recognition of contractors that successfully meet or exceed the 6.9% goal or demonstrate highly commendable efforts in the recruitment, retention and/or professional development of women on Metro's construction projects. Contractors that consistently achieve the female participation goal will be recognized through a formal recognition program that includes: public recognition at Metro's Board meetings, public recognition in local, industry and trade publications including recognition on Metro's PLA/CCP website. Those that achieve the goal for four

consecutive quarters will be invited to a meeting with Metro's Chief Executive Officer, Metro Board Chair and/or others.

C. Pilot Local Hire Update

On October 6, 2017, the Federal Register published a notice from the USDOT announcing the withdrawal of the Pilot Local Hire program. Metro has three construction projects awarded subject to the USDOT Pilot Local Hire Initiative which include:

- C0991 Division 16 - Southwestern Yard (contract value of \$172M)
- C1120 Westside Purple Line Extension Project - Section 2 (contract value of \$1.3B)
- C1153 Purple Line Extension Section 3 - Advanced Utility Relocations (contract value of \$11M).

In addition, Metro has seven rolling stock contracts that contain the Local Employment Plan (LEP).

- A650-2015 Heavy Rail Vehicle Overhaul
- P2000 Light Rail Vehicle Overhaul
- HR400 Purchase of New Heavy Rail Vehicles
- OP28367-000 Forty Foot (40') Low Floor CNG Buses
- OP28367-001 Sixty Foot (60') Low Floor Zero Emission Buses
- OP28367-002 Forty Foot (40') Low Floor Zero Emission Buses
- OP28367-003 Sixty Foot (60') Low Floor CNG Buses.

These combined seven projects will create new jobs in Los Angeles County totaling over \$62.3 million in wages and benefits over the next seven years. The LEP is projected to create an estimated 217 new jobs for the base and option contract terms for the seven projects.

D. Outreach

In efforts to attain the highest percentages of Targeted, Apprentice and Disadvantaged Workers on PLA/CCP projects, DEOD staff continuously seeks opportunities to keep the community informed and engaged of construction career opportunities available through the PLA/CCP. Staff consistently collaborates with community based organizations and other partners including the contractors on outreach events, initiatives and activities. Staff participated in the following outreach events:

- Metro's "Women Build METRO LA" committee conducted another quarterly Apprenticeship Readiness Fair. The symposium introduced opportunities in the construction and transportation industry to women and men in attendance, on Saturday, April 21st at the Yaroslavy Family Support Center in Van Nuys (3rd District). This outreach effort focused on the many opportunities for women with focus on the construction trades and transportation industry. Women currently in the Trades, work for Prime Contractors or who work at Metro, explained their journey and discussed both the sacrifices and benefits associated with their chosen professions. A panel representing prime contractors discussed what they look for in successful candidates for sponsorship into a Union. Women in Non-Traditional Employment Careers (WINTER) arranged tours of Apprenticeship training sites which attendees could sign up for at the event. The PLA

signatory trades set up hands on experiences in the courtyard to help clarify the responsibilities of each Union. The next Fair will be scheduled in the 5th District.

- On April 11, 2018, Staff attended the Spring into Summer Job Fair, sponsored by County Supervisor Mark Ridley-Thomas Office, to inform the community of construction career opportunities available through the PLA/CCP.
- On April 18, 2018, Metro participated in the Construction Careers Awareness Day in partnership with LAUSD and the Los Angeles Trade Tech College. More than 2,000 LAUSD students in attendance and were informed of the various careers opportunities in the construction industry.

NEXT STEPS

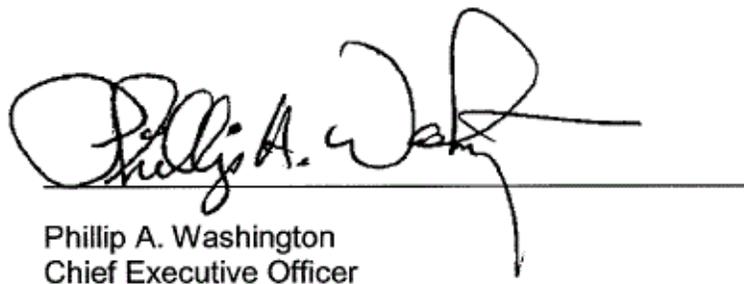
DEOD staff will continue to monitor contractor's hiring efforts and initiate the newly proposed and recurring activities as outlined. Staff will continue to identify initiatives and outreach efforts to promote awareness, engagement and participation in construction career opportunities.

ATTACHMENTS

- Attachment A - PLA/CCP Completed Projects
- Attachment B - Female Participation Action Plan
- Attachment C - PLA/CCP Report Data

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Phillip A. Washington
Chief Executive Officer

ATTACHMENT A

Completed Contracts:

Completed Projects:	Prime Contractor:	Targeted Worker Goal (40%)	Apprentice Worker Goal (20%)	Disadvantaged Worker Goal (10%)	Female Utilization Goal (6.90%)	*Percentage of Disadvantaged Workers that are in the Criminal Justice System Category
Crenshaw Advanced Utility Relocation Project	Metro Builders	61.41%	13.84%	21.08%	0.52%	2.90%
Westside Subway Extension Advanced Utility Relocation	Metro Builders	67.47%	11.12%	11.08%	7.48%	0.00%
Westside Subway Exploratory Shaft	Innovative Construction Solutions	50.88%	75.05%	11.23%	0.42%	96.23%
Regional Connector Transit Corridor Adv. Utility Relocation	Pulice Construction	51.61%	21.37%	22.83%	2.57%	28.39%
CNG Emergency Generator Division 7 & 8	Taft Electric	46.42%	25.51%	39.08%	4.68%	39.48%
Division 13 CNG Fueling Facility, Design/Build/Operate	Clean Energy	67.54%	20.17%	60.72%	1.69%	49.48%
Metro Blue Line Stations Refurbishments	S.J. Amoroso	56.01%	26.10%	13.62%	0.48%	28.03%
Westside Extension Project Advanced Utility Relocation (Fairfax Station)	WA Rasic	63.27%	20.61%	19.90%	2.78%	9.24%
Metro Rail Security Kiosks	Icon-West	45.90%	27.06%	20.17%	0.00%	100.00%
Westside Extension Project Advanced Utility Relocation (La Cienega Station)	Bubalo Construction	65.15%	21.76%	20.96%	0.57%	28.10%
MRL/MOL North Hollywood Station West Entrance	Skanska, USA	57.79%	24.28%	15.78%	7.44%	84.26%
Patsaouras Plaza POV Relocation, Pavers and Storm Drain Repair	AP Construction	76.46%	21.26%	42.56%	3.91%	6.48%
Universal City Pedestrian Bridge	Griffith Company	38.33%	27.49%	12.55%	1.57%	48.51%
MRL Pershing Square Canopy Addition and Escalator Replacements	Clark Construction, LLC	50.62%	33.68%	14.12%	1.46%	86.41%

Please refer to the attached PLA/CCP Data Report for additional information on each project.

Crenshaw Advanced Utility Relocation Project
Prime: Metro Builders

The Crenshaw Advanced Utility Relocation project is 100% complete as of September 2014. Final reporting shows the Targeted Worker attainment at 61.41%, Disadvantaged Worker attainment at 21.08% and the minority participation percentage goals were attained; however, the Contractor did not meet the 20% Apprentice Worker goal at 13.84% and the 6.90% Female Participation goal at 0.52%. The attainment for the 20% Apprentice worker goal is based on total apprenticeable hours. Metro staff met with the Contractor in January 2015 and executed liquidated damages for not meeting the apprentice goal for this project. The Contractor complied with Metro's liquidated damages and this issue is closed.

Westside Subway Extension Advanced Utility Relocation
Prime: Metro Builders

The Westside Subway Extension Advanced Utility Relocation project is 100% complete as of October 2014. Final reporting shows the Targeted Worker attainment at 67.47%, Disadvantaged Worker attainment at 11.08%, Female Participation attainment at 7.48% and the minority participation percentage goals were attained; however, the Contractor did not meet the 20% Apprentice Worker goal at 11.12%. The attainment for the 20% Apprentice worker goal is based on total apprenticeable hours. Metro staff met with the Contractor in January 2015 and executed liquidated damages for not meeting the apprentice goal for this project. The Contractor complied with Metro's liquidated damages and this issue is closed.

Westside Subway Exploratory Shaft
Prime: Innovative Construction Solutions (ICS)

The Westside Subway Extension Exploratory Shaft project is 100% complete as of October 2014. Final reporting shows the Targeted Worker attainment at 50.88%, Apprentice Worker attainment at 75.05%, Disadvantaged Worker attainment at 11.23% and the minority participation percentage goals were attained; however, the Contractor did not meet the 6.90% Female Participation goal at 0.42%. The attainment for the 20% Apprentice worker goal is based on total apprenticeable hours. No labor grievances occurred on this project.

Regional Connector Transit Corridor Advanced Utilities Relocation
Prime: Pulice Construction

The Regional Connector Transit Corridor Advanced Utilities Relocation project was terminated for convenience in April 2015 and is now closed. Final reporting shows the Targeted Worker attainment at 51.61%, Apprentice Worker attainment at 21.37%, Disadvantaged Worker attainment at 22.83% and the minority participation percentage goals were attained; however, the Contractor did not meet the 6.90% Female Participation goal at 2.57%.

CNG Emergency Generator Division 7 and 8
Prime: Taft Electric

The CNG Emergency Generator Division 7 and 8 project is 100% complete as of May 2015. Final reporting shows the Targeted Worker attainment at 46.42%, Apprentice Worker attainment at 25.51%, Disadvantaged Worker attainment at 39.08% and the minority percentage goals were attained; however, the Contractor did not meet the 6.90% Female Participation goal at 4.68%. The attainment for the 20% Apprentice worker goal is based on total apprenticeable hours. No labor grievances occurred on this project.

Division 13 CNG Fueling Facility, Design/Build/Operate
Prime: Clean Energy

The Division 13 CNG Fueling Facility, Design/Build/Operate project Contractor is 100% complete as of June 2015. Final reporting shows the Targeted Worker attainment at 67.54%, Apprentice Worker attainment at 20.17%, Disadvantaged Worker attainment at 60.72% and the minority percentage goals were attained; however, the Contractor did not meet the 6.90% Female Participation goal at 1.69%. The attainment for the 20% Apprentice worker goal is based on total apprenticeable hours. No labor grievances occurred on this project.

Metro Blue Line Station Refurbishments
Prime: S.J. Amoroso

The Metro Blue Line Station Refurbishments project Contractor is 100% complete as of August 2015. Final reporting shows the Targeted Worker attainment at 56.01%, Apprentice Worker attainment at 26.10%, Disadvantaged Worker attainment at 13.62% and the minority percentage goals were attained; however, the Contractor did not meet the 6.90% Female Participation goal at 0.48%. The attainment for the 20% Apprentice Worker goal is based on total apprenticeable hours.

Westside Subway Extension Advanced Utility Relocation (Fairfax Station)
Prime: W.A. Rasic

The Westside Subway Extension Advanced Utility Relocation – Fairfax Station project is 100% complete as of December 2015. Final reporting shows the Targeted Worker attainment at 63.27%, Apprentice Worker attainment at 20.61%, Disadvantaged Worker attainment at 19.90% and the minority percentage goals were attained; however, the Contractor did not meet the 6.90% Female Participation goal at 2.78%. The attainment for the 20% Apprentice Worker goal is based on total apprenticeable hours.

Metro Rail Security Kiosks
Prime: Icon-West

The Metro Rail Security Kiosks project is 100% complete as of March 2016. Final reporting shows the Targeted Worker attainment at 45.90%, Apprentice Worker

attainment at 27.06%, Disadvantaged Worker attainment at 20.17% and the minority percentage goals were attained; however, the Contractor did not meet the 6.90% Female Participation goal at 0.00%. The attainment for the 20% Apprentice Worker goal is based on total apprenticeable hours. No labor grievances occurred on this project.

Westside Extension Project Advanced Utility Relocation (La Cienega)
Prime: Bubalo Construction

The Westside Extension Project Advanced Utility Relocation project is 100% completed as of October 2016. Final reporting shows the Targeted Worker attainment at 65.15%, Apprentice Worker attainment at 21.76%, Disadvantaged Worker attainment at 20.96% and the minority percentage goals were attained; however, the Contractor did not meet the 6.90% Female Participation goal at 0.57%. The attainment for the 20% Apprentice Worker goal is based on total apprenticeable hours. No labor grievances occurred on this project.

Metro Red Line/Metro Orange Line (MRL/MOL) North Hollywood Station West Entrance
Prime: Skanska

The Metro Red Line/Metro Orange Line (MRL/MOL) North Hollywood Station West Entrance project is 100% completed as of November 2016. Final reporting shows the Targeted Worker attainment at 57.79%, Apprentice Worker attainment at 24.28%, Disadvantaged Worker attainment at 15.78%, Female Participation goal at 7.44% and the minority percentage goals were attained. The attainment for the 20% Apprentice Worker goal is based on total apprenticeable hours.

Patsaouras Plaza POV Relocation, Pavers and Storm Drain Repairs
Prime: AP Construction

The Patsaouras Plaza Privately-Owned-Vehicle Relocation, Pavers and Storm Drain Repairs project is 100% completed as of April 2017. Final reporting shows the Targeted Worker attainment at 76.46%, Apprentice Worker attainment at 21.26%, Disadvantaged Worker attainment at 42.56% and the minority percentage goals were attained; however, the Contractor did not meet the 6.90% Female Participation goal at 3.91%. The attainment for the 20% Apprentice Worker goal is based on total apprenticeable hours. No labor grievances occurred on this project.

Universal City Pedestrian Bridge
Prime: Griffith Company

The Universal City Pedestrian Bridge project is 100% completed as of June 2017. Final reporting shows the Apprentice Worker attainment at 27.49%, Disadvantaged Worker goal at 12.55% and the minority participation percentage goals were attained; however, the Contractor did not meet the 40% Targeted Worker goal at 38.33% and the 6.90% Female Participation goal at 1.57%. The attainment for the 20% Apprentice Worker goal is based on total apprenticeable hours. Staff executed liquidated damages for not meeting the Targeted Worker goal for this project. The assessed liquidated damages

were utilized during negotiations to offset the contractor's claimed additional costs and this issue is closed.

MRL Pershing Square Canopy Addition and Escalator Replacement
Prime: Clark Construction, LLP

The MRL Pershing Square Canopy Addition and Escalator Replacement project Contractor is 100% completed as of August 2017. Final reporting shows the Targeted Worker attainment at 50.62%, Apprentice Worker attainment at 33.68%, Disadvantaged Worker attainment at 14.12% and the minority percentage goals were attained; however, the Contractor did not meet the 6.90% Female Participation goal at 1.46%. The attainment for the 20% Apprentice Worker goal is based on total apprenticeable hours. No labor grievances occurred on this project.

ATTACHMENT B

FEMALE PARTICIPATION ACTION PLAN STATUS

Timeline	Action	Status
30-60 Days	Develop Female Participation Tool Kit	In progress
	Issue Regional Construction Industry Workforce Disparity Study	Completed
	Implemented solicitation language requiring female action plans in EHPs	Completed
60-90 Days	Conduct PLA/CCP summit focusing on increasing female participation	On Schedule
	Research feasibility of subsidizing evening WINTER classes for women	On Schedule
	Hosted Jobs Coordinator group meeting to discuss female hiring initiatives	Completed
90-120 Days	Award Regional Construction Industry Workforce Disparity contract	On Schedule
Ongoing	Refer applicants to union recognized MC3 pre-apprenticeship programs	Ongoing
	Identify and assess successful pre-apprenticeship training programs	Ongoing
	Develop process to transition workers to increase retention	Ongoing
	Monitor Contractor's female participation during contract (25%-50%-75%)	Ongoing
	Recognize Contractor's exceeding female goal for 4 consecutive months	Ongoing
	Advance outreach efforts through WINTER, WGGC, and organizations	Ongoing
	Identify support through WIN-LA partners for women on construction paths	Ongoing

ATTACHMENT C

Project Labor Agreement (PLA) / Construction Careers Policy (CCP) Update

**Report Data Through
March 2018 Reporting Period**



Crenshaw/LAX Transit Corridor Project

PLA Targeted Worker Attainment: Prime: Walsh/Shea

Report Data Through March 2018

No. of Work Hours*	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
4,608,980.48	59.78%	23.02% Based on Total Apprenticable Work Hours	12.21%

Percentage Project Complete Based on Worker Hours: 87.38% (rounded)

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
4,608,980.48	12.21%	1.23%	21.86%	61.14%	1.19%	2.36%	75.77%	3.57%



*Cumulative Hours Through End of Noted Reporting Period – as Reported by Prime Contractor. Data subject to change to reflect updates or audits.

Regional Connector Transit Corridor Project

PLA Targeted Worker Attainment: Prime: R.C.C., Joint Venture

Report Data Through March 2018

No. of Work Hours*	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
1,285,657.22	58.84%	16.35% Based on Total Apprenticesable Work Hours	7.29%

Percentage Project Complete Based on Worker Hours: 39.14% (rounded)

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
1,285,657.22	7.48%	0.57%	27.35%	58.98%	0.74%	4.87%	67.77%	2.59%



*Cumulative Hours Through End of Noted Reporting Period – as Reported by Prime Contractor. Data subject to change to reflect updates or audits.

Westside Subway Extension Project, Section 1 – D/B

PLA Targeted Worker Attainment: Prime: S.T.S., Joint Venture

Report Data Through March 2018

No. of Work Hours*	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
1,023,641.04	65.29%	16.65% Based on Total Apprenticeable Work Hours	9.40%

Percentage Project Complete Based on Worker Hours: 31.43% (rounded)

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/ Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
1,023,641.04	10.62%	1.55%	19.83%	63.23%	0.32%	4.46%	75.72%	4.26%



*Cumulative Hours Through End of Noted Reporting Period – as Reported by Prime Contractor. Data subject to change to reflect updates or audits.

Metro Blue Line Pedestrian & Swing Gates

PLA Targeted Worker Attainment: Prime: Icon-West

Report Data Through March 2018

No. of Work Hours*	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
53,650.05	63.69%	23.36% <small>Based on Total Apprenticeable Work Hours</small>	11.75%

Percentage Project Complete Based on Worker Hours: 94.94% (rounded)

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
53,650.05	4.00%	0.02%	13.26%	78.24%	0.00%	4.49%	82.26%	0.84%



*Cumulative Hours Through End of Noted Reporting Period – as Reported by Prime Contractor. Data subject to change to reflect updates or audits.

Division 16: Southwestern Yard

PLA Targeted Worker Attainment: Prime: Hensel Phelps/Herzog, JV

Report Data Through March 2018

No. of Work Hours*	Local Targeted Economically Disadvantaged Worker Utilization(%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
267,586.90	51.76%	26.40% Based on Total Apprenticesable Work Hours	9.12%

Percentage Project Complete Based on Worker Hours: 76.56% (rounded)

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
267,586.90	8.01%	1.00%	23.30%	55.13%	0.30%	12.26%	64.44%	4.26%



*Cumulative Hours Through End of Noted Reporting Period – as Reported by Prime Contractor. Data subject to change to reflect updates or audits.

Patsaouras Plaza Busway Station

PLA Targeted Worker Attainment: Prime: OHL-USA, Inc.

Report Data Through March 2018

No. of Work Hours*	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
55,599.75	60.13%	11.49% <small>Based on Total Apprenticesable Work Hours</small>	3.69%

Percentage Project Complete Based on Worker Hours: 65.41% (rounded)

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
55,599.75	1.58%	3.90%	17.54%	73.60%	0.22%	3.16%	79.30%	1.55%



*Cumulative Hours Through End of Noted Reporting Period – as Reported by Prime Contractor. Data subject to change to reflect updates or audits.

Bob Hope Airport/Hollywood Way Station

PLA Targeted Worker Attainment: Prime: C.A. Rasmussen, Inc.

Report Data Through March 2018

No. of Work Hours*	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
19,256.14	44.45%	22.73% <small>Based on Total Apprenticesable Work Hours</small>	13.03%

Percentage Project Complete Based on Worker Hours: 89.01% (rounded)

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
19,256.14	3.08%	0.02%	9.66%	72.44%	0.04%	14.76%	75.58%	0.89%



*Cumulative Hours Through End of Noted Reporting Period – as Reported by Prime Contractor. Data subject to change to reflect updates or audits.

Non-Revenue Maintenance Bldg. at Vernon Yard

PLA Targeted Worker Attainment: Prime: Access Pacific, Inc.

Report Data Through March 2018

No. of Work Hours*	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
9,547.47	54.67%	20.36% <small>Based on Total Apprenticesable Work Hours</small>	10.85%

Percentage Project Complete Based on Worker Hours: 86.40% (rounded)

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
9,547.47	0.17%	0.00%	11.90%	80.93%	0.68%	6.33%	81.78%	6.51%



*Cumulative Hours Through End of Noted Reporting Period – as Reported by Prime Contractor. Data subject to change to reflect updates or audits.

New Maintenance of Way/Non-Revenue Bldg 61S

PLA Targeted Worker Attainment: Prime: Clark Construction, Inc.

Report Data Through March 2018

No. of Work Hours*	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
22,770.08	55.84%	15.35% Based on Total Apprenticeable Work Hours	0.07

Percentage Project Complete Based on Worker Hours: 15.80% (rounded)

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
22,770.08	0.13%	1.20%	16.78%	74.22%	0.00%	7.67%	75.55%	0.04%



*Cumulative Hours Through End of Noted Reporting Period – as Reported by Prime Contractor. Data subject to change to reflect updates or audits.

Crenshaw/LAX Advanced Utilities Relocations

PLA Targeted Worker Attainment: Prime: Metrobuilders

Report Data Through Oct 31, 2014 **(FINAL)**

No. of Work Hours	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
61,708.26*	61.41%		21.08%
43,277.52**		13.84%	

Percentage Project Complete Based on Worker Hours: 100%

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
61,708.26	11.66%	0.01%	22.02%	66.29%	0.01%	0.00%	77.97%	0.52%



* Total Cumulative Project Hours as Reported by Prime Contractor.

** Total Apprenticeable Cumulative Hours as Reported by Prime Contractor.

Westside Subway Extension Advanced Utilities

PLA Targeted Worker Attainment: Prime: Metrobuilders

Report Data Through November 2014 **(FINAL)**

No. of Work Hours*	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
37,731.76	67.47%	11.12%	11.08%

Percentage Project Complete Based on Worker Hours: 100%

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
37,731.76	3.92%	0.00%	12.76%	76.87%	0.00%	6.45%	80.79%	7.48%



*Cumulative Hours Through End of Noted Reporting Period – as Reported by Prime Contractor. Data subject to change to reflect updates or audits.

Westside Subway Extension Exploratory Shaft

PLA Targeted Worker Attainment: Prime: Innovative Constructive Solutions

Report Data Through October 2014 **(FINAL)**

No. of Work Hours	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
*18,049.25	50.88%		11.23%
**238.50		75.05%	

Percentage Project Complete Based on Worker Hours: 100%

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
18,049.25	11.40%	0.00%	22.71%	33.18%	1.19%	31.52%	45.77%	0.42%



* Total Cumulative Project Hours as Reported by Prime Contractor.

** Total Apprenticeable Cumulative Hours as Reported by Prime Contractor.

Regional Connector Advanced Utility Relocations

PLA Targeted Worker Attainment: Prime: Pulice

Report Data Through May 2015 **(FINAL)**

No. of Work Hours*	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
58,903.00	51.61%	21.37% Contractor Reported Based on Total Work Hours	22.83%

Percentage Project Complete Based on Worker Hours: 100.00% (rounded)

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
58,903.00	1.36%	0.41%	17.43%	80.30%	0.00%	0.50%	82.07%	2.57%



*Cumulative Hours Through End of Noted Reporting Period – as Reported by Prime Contractor. Data subject to change to reflect updates or audits.

CNG Emergency Generator Division 7 and 8

PLA Targeted Worker Attainment: Prime: Taft Electric Company

Report Data Through May 2015 **(FINAL)**

No. of Work Hours*	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
3,289.50	46.42%	25.51% Based on Total Apprenticeable Work Hours	39.08%

Percentage Project Complete Based on Worker Hours: 100.00% (rounded)

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
3,289.50	14.47%	1.92%	38.21%	45.40%	0.00%	0.00%	61.79%	4.68%



*Cumulative Hours Through End of Noted Reporting Period – as Reported by Prime Contractor. Data subject to change to reflect updates or audits.

Division 13 CNG Fueling Facility, Design/Build/Operate

PLA Targeted Worker Attainment: Prime: Clean Energy

Report Data Through June 2015 **(FINAL)**

No. of Work Hours*	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
11,496.00	67.54%	20.17% <small>Based on Total Apprenticesable Work Hours</small>	60.72%

Percentage Project Complete Based on Worker Hours: 100.00% (rounded)

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
11,496.00	31.21%	3.03%	26.54%	39.23%	0.00%	0.00%	73.47%	1.69%



*Cumulative Hours Through End of Noted Reporting Period – as Reported by Prime Contractor. Data subject to change to reflect updates or audits.

Metro Blue Line Station Refurbishments

PLA Targeted Worker Attainment: Prime: S.J. Amoroso

Report Data Through June 2015 (FINAL)

No. of Work Hours*	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
41,274.75	56.01%	26.10% Based on Total Apprenticiable Work Hours	13.62%

Percentage Project Complete Based on Worker Hours: 100.00% (rounded)

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
41,274.75	16.59%	1.55%	20.72%	61.14%	0.00%	0.00%	79.28%	0.48%



*Cumulative Hours Through End of Noted Reporting Period – as Reported by Prime Contractor. Data subject to change to reflect updates or audits.

Westside Subway Extension Project AUR (Fairfax Station)

PLA Targeted Worker Attainment: Prime: W.A. Rasic

Report Data Through December 2015 (FINAL)

No. of Work Hours*	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
37,510.00	63.27%	20.61% <small>Based on Total Apprenticesable Work Hours</small>	19.90%

Percentage Project Complete Based on Worker Hours: 100.00% (rounded)

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
37,510.00	9.44%	0.01%	13.39%	77.08%	0.00%	0.09%	86.53%	2.78%



*Cumulative Hours Through End of Noted Reporting Period – as Reported by Prime Contractor. Data subject to change to reflect updates or audits.

Metro Rail Security Kiosks

PLA Targeted Worker Attainment: Prime: Icon-West

Report Data Through March 2016 (FINAL)

No. of Work Hours*	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
7,281.75	45.90%	27.06% <small>Based on Total Apprenticesable Work Hours</small>	20.17%

Percentage Project Complete Based on Worker Hours: 100.00% (rounded)

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
7,281.75	48.19%	0.27%	15.16%	34.78%	0.87%	0.72%	84.11%	0.00%



*Cumulative Hours Through End of Noted Reporting Period – as Reported by Prime Contractor. Data subject to change to reflect updates or audits.

Westside Extension Project AUR (La Cienega Station)

PLA Targeted Worker Attainment: Prime: Bubalo Construction

Report Data Through October 2016 **(FINAL)**

No. of Work Hours*	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
52,043.60	65.15%	21.76% <small>Based on Total Apprenticesable Work Hours</small>	20.96%

Percentage Project Complete Based on Worker Hours: 100% (rounded)

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
52,043.60	4.84%	0.00%	7.52%	87.64%	0.00%	0.00%	92.48%	0.57%



*Cumulative Hours Through End of Noted Reporting Period – as Reported by Prime Contractor. Data subject to change to reflect updates or audits.

MRL/MOL North Hollywood Station West Entrance

PLA Targeted Worker Attainment: Prime: Skanska

Report Data Through November 2016 **(FINAL)**

No. of Work Hours*	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
85,105.00	57.79%	24.28% <small>Based on Total Apprenticesable Work Hours</small>	15.78%

Percentage Project Complete Based on Worker Hours: 100% (rounded)

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
85,105.00	11.06%	0.40%	27.47%	56.58%	1.04%	3.45%	69.08%	7.44%



*Cumulative Hours Through End of Noted Reporting Period – as Reported by Prime Contractor. Data subject to change to reflect updates or audits.

Patsaouras Plaza POV Relocation, Pavers & Storm Drain PLA Targeted Worker Attainment: Prime: AP Construction

Report Data Through April 2017 **(FINAL)**

No. of Work Hours*	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
18,173.00	76.46%	21.26% <small>Based on Total Apprenticesable Work Hours</small>	42.56%

Percentage Project Complete Based on Worker Hours: 100% (rounded)

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
18,173.00	6.96%	0.35%	3.31%	89.06%	0.00%	0.33%	96.37%	3.91%



*Cumulative Hours Through End of Noted Reporting Period – as Reported by Prime Contractor. Data subject to change to reflect updates or audits.

Universal City Pedestrian Bridge

PLA Targeted Worker Attainment: Prime: Griffith Company

Report Data Through June 2017 **(FINAL)**

No. of Work Hours*	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
109,020.00	38.33%	27.49% <small>Based on total Apprenticeable Work hours</small>	12.55%

Percentage Project Complete Based on Worker Hours: 100% (rounded)

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/ Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
109,020.00	8.50%	4.11%	22.25%	61.79%	0.62%	2.83%	75.02%	1.57%



*Cumulative Hours Through End of Noted Reporting Period – as Reported by Prime Contractor. Data subject to change to reflect updates or audits.

MRL Pershing Square Canopy & Escalator Replacement

PLA Targeted Worker Attainment: Prime: Clark Construction, LLP

Report Data Through June 2017 (FINAL)

No. of Work Hours*	Targeted Economically Disadvantaged Worker Utilization (%) Goal: 40%	Apprentice Utilization (%) Goal: 20%	Disadvantaged Worker Utilization (%) Goal: 10%
22,562.00	50.62%	33.68% <small>Based on Total Apprenticesable Work Hours</small>	14.12%

Percentage Project Complete Based on Worker Hours: 100% (rounded)

Executive Order 11246 Demographic Summary

No. of Work Hours*	African American Utilization	Asian/Pacific Islander Utilization	Caucasian Utilization	Hispanic Utilization	Native American Utilization	Other/Declined to state	Minority Utilization Goal: 28.3% (rounded)	Female Utilization Goal: 6.9%
22,562.00	6.13%	1.91%	41.21%	46.93%	1.15%	2.67%	56.12%	1.46%



*Cumulative Hours Through End of Noted Reporting Period – as Reported by Prime Contractor. Data subject to change to reflect updates or audits.



Project Labor Agreement (PLA)/
Construction Careers Policy (CCP) Report
Construction Committee Item # _____
May 17, 2018

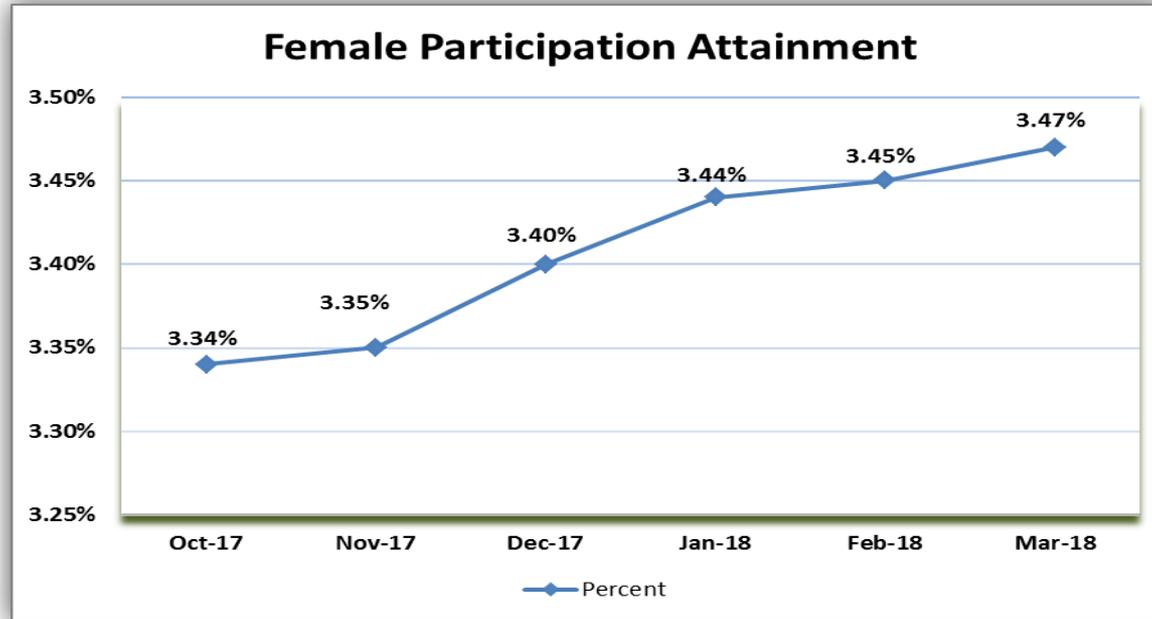
PLA/CCP Program Achievements

- Attainment
 - 59.87% Economically Disadvantaged
 - 21.12% Apprentice
 - 11.30% Disadvantaged
- >\$153 Million paid to Targeted Workers *
 - \$28 Million paid to Disadvantaged Workers *
 - \$39 Million paid to Apprentice Workers**
- Exceeded Targeted/Apprentice/Disadvantaged Worker goals
- No work stoppages or lockouts



(*Based on the lowest laborers rate as of June 2017)
(**Based on the lowest apprentice rate as of January 2017)
(Workers may fall into multiple categories)

Female Participation Attainment



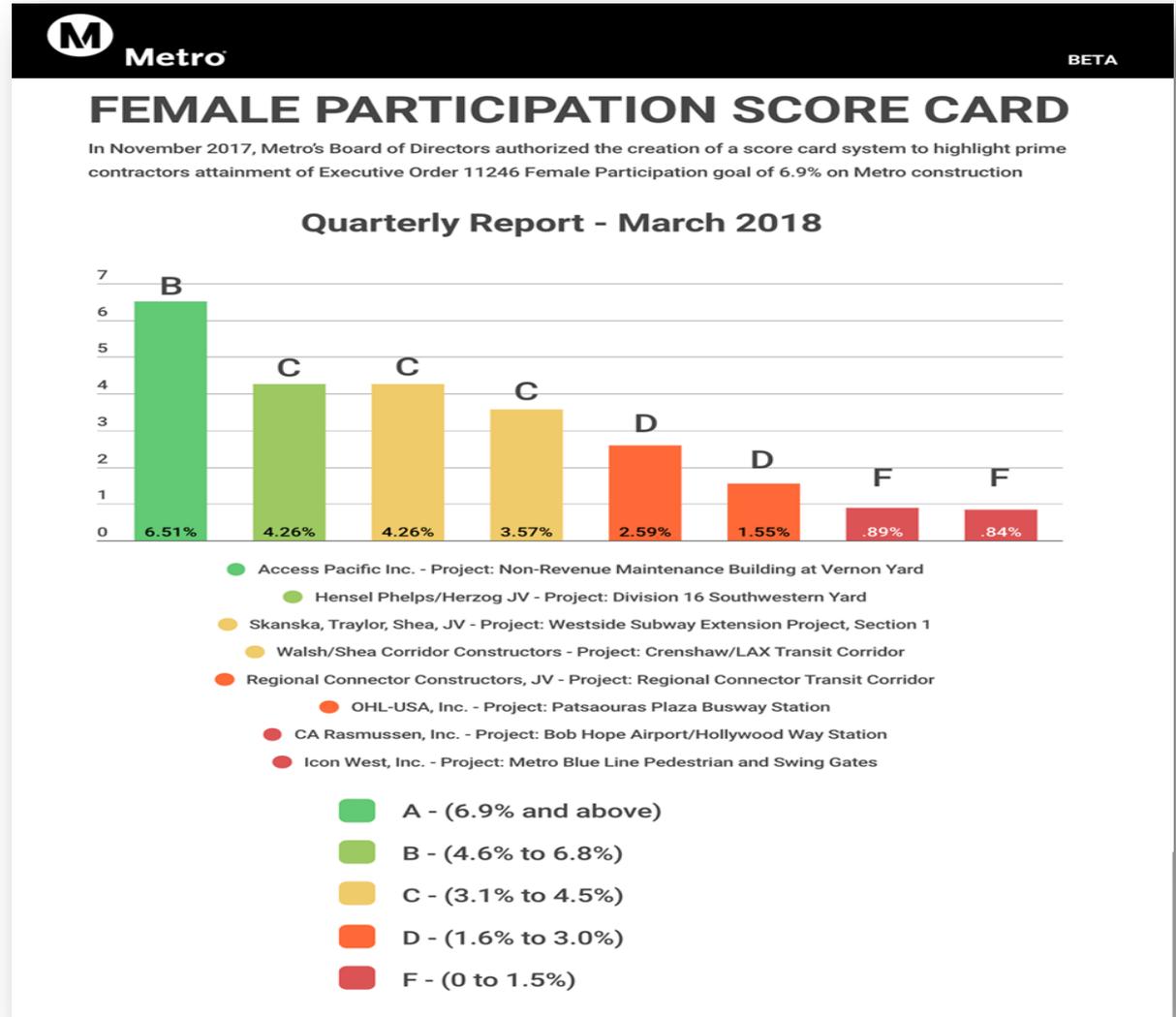
- Metro's female participation attainment is trending upward
- 71 female workers were hired on all active construction projects within the past six months



Metro

Female Participation Score Card

- Overall female participation attainment is 3.47%
- Highest rating as of Q4 reporting is B grade



Action Plan Highlights

- Issued solicitation for the regional construction industry workforce disparity study
- Continued implementation of internal compliance procedures to reinforce EO 11246 goals with contractors
- Established process to transition female workers from closing to active projects to increase retention
- Develop process to recognize Contractors that meet or exceed the female goal for four consecutive quarters

Outreach and Engagement Activities

- Hosted Metro's Women Build-LA event on April 2018 which was held in Van Nuys (3rd District)
- Advanced efforts for the PLA/CCP summit to be hosted in summer 2018; focused on women in the trades and employment on infrastructure projects
- Advanced efforts to collaborate with Metro's Women & Girls Governing Council and Metro's Communication department to develop an aspirational theme for the female participation action plan initiatives and the upcoming summit



Metro



Thank you



Metro



Board Report

File #: 2018-0086, **File Type:** Informational Report

Agenda Number: 32.

CONSTRUCTION COMMITTEE MAY 17, 2018

SUBJECT: 2018 LOS ANGELES CONSTRUCTION MARKET ANALYSIS

ACTION: RECEIVE AND FILE

RECOMMENDATION

RECEIVE AND FILE the 2018 Los Angeles Construction Market Analysis report.

ISSUE

The construction market in the Southern California region has been growing rapidly. Metro alone has a \$16.8 billion (and growing) capital program underway. Other major construction initiatives are being done by Los Angeles World Airports (LAWA), Caltrans, the City of Los Angeles, Los Angeles County, the 2028 Olympics, Metropolitan Water District and numerous private sector initiatives.

To better understand the factors influencing construction bid prices and Metro's ability to deliver the largest transportation construction program in the country, a construction market analysis was conducted. Current and future market conditions were assessed to identify factors influencing construction bidding activities and our ability to deliver Metro's capital program, including projects approved as part of Measure M and the 28 by 2028 initiative.

DISCUSSION

The 2018 Los Angeles Construction Market Analysis report was a comprehensive analysis of the construction market factors and trends since the last report that was completed and presented to the Board in September 2015. The construction market analysis objectives were to gather information to evaluate the global, national, regional, and local economy as it relates to construction cost and bidding trends, the current and future amount of construction activities in the region and measure its impact on the proposed work in the region, the macroeconomic employment trends and skilled labor availability, the current trends in bid prices versus engineer's estimates, the number of bidders in the region, and gather feedback from contractors in regards to Metro specific contracts, processes, and procedures that may influence construction bid prices.

The desired outcome of the report is to continue our understanding of the factors influencing construction costs in the Los Angeles market, develop pricing projections for future forecasts, and determine potential solutions to mitigate rising bid prices to better ensure our ability to deliver Metro's

capital projects within existing project budgets. Also, the Report conducts a review of other peer transit agencies and their approaches to construction contracting and recommends how Metro can become an “Owner of Choice” in the region.

Results of the Analysis

KKCS/Triunity Joint Venture, in association with subconsultant CH2M, performed the Los Angeles Construction Market Analysis and completed the report in May 2018. The report discussed factors that would influence future construction bid prices at Metro and how they would impact our ability to deliver Metro’s capital program on-time and within budget.

- The market indicators in the construction industry forecasts a construction labor shortage, low unemployment, and large amount of on-going and planned work in the region.
- The inflation projection shows a rise in construction costs. The budget development for multiyear projects must adequately account for escalation, increasing wages, materials, and rising margins.
- The number of mega projects bidding within a short time will reduce competition which will cause an upward trend in the prices.
- As market demand increases, contractors will be increasingly selective in deciding which projects to pursue, dependent on the owner, and the amount of risk an owner places on the contractor.
- Metro and other agencies will compete for qualified contractors, subcontractors, and skilled workers in the robust construction marketplace.
- The projected construction market demand will impact the availability of qualified DBE/SBE firms.

Report Recommendations

The 2018 Los Angeles Construction Market Analysis report included the following recommendations:

- Reduce time and cost to propose on Metro’s projects
- Reduce and standardize contract templates to avoid ambiguity
- Evaluate contract language that might result in a less attractive bidding climate
- Open the bidding process to more firms/teams through less prescriptive proposer evaluation requirements
- Reduce processing time required to resolve changes by delegating more authority at the project manager level
- Develop a joint committee to develop skillsets relevant to the construction market
- Develop a joint committee to innovate and create affordable housing to temporarily attract labor from outside region and to house unemployed local labor who have the capability for job retraining
- Identify projects that could utilize the design-bid-build delivery method to increase bidding competition by smaller and certified firms and to increase DBE/SBE participation
- Maintain competitive posture to attract limited available resources, including onboarding qualified candidates before the actual need arises

- Develop estimates that are consistent with the current market trends
- Develop contract language to allow for addressing cost increases for projects to limit the risk to both Metro and contractors
- Institute active engagement with contracting community, including one-on-one meetings with potential bidders, to jointly identify balanced risk sharing
- Conduct regular discussions with contractors on lessons learned
- Consider an ombudsman to interface with contractors
- Assess methodologies to objectively and accurately evaluate contractors' performance and capabilities

NEXT STEPS

Metro staff will implement the recommendations summarized in Attachment A as applicable. Staff will also continue to develop strategies how to best address the factors impacting Metro's ability to successfully deliver projects on-time and within budget.

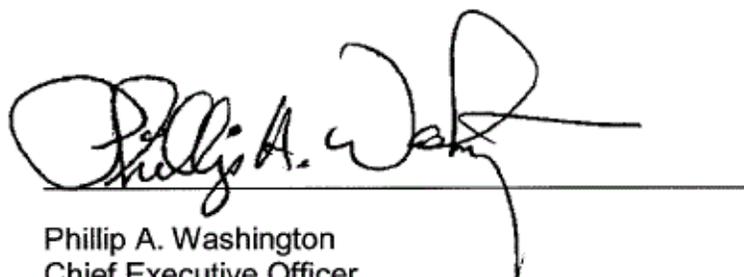
ATTACHMENTS

Attachment A - 2018 LA Construction Market Analysis Presentation

Attachment B - 2018 LA Construction Market Analysis Executive Summary

Prepared by: Brian Boudreau, Sr. Executive Officer, Program Control; 213-922-2474

Reviewed by: Richard F. Clarke, Chief Program Management Officer; 213-922-7557



Phillip A. Washington
Chief Executive Officer



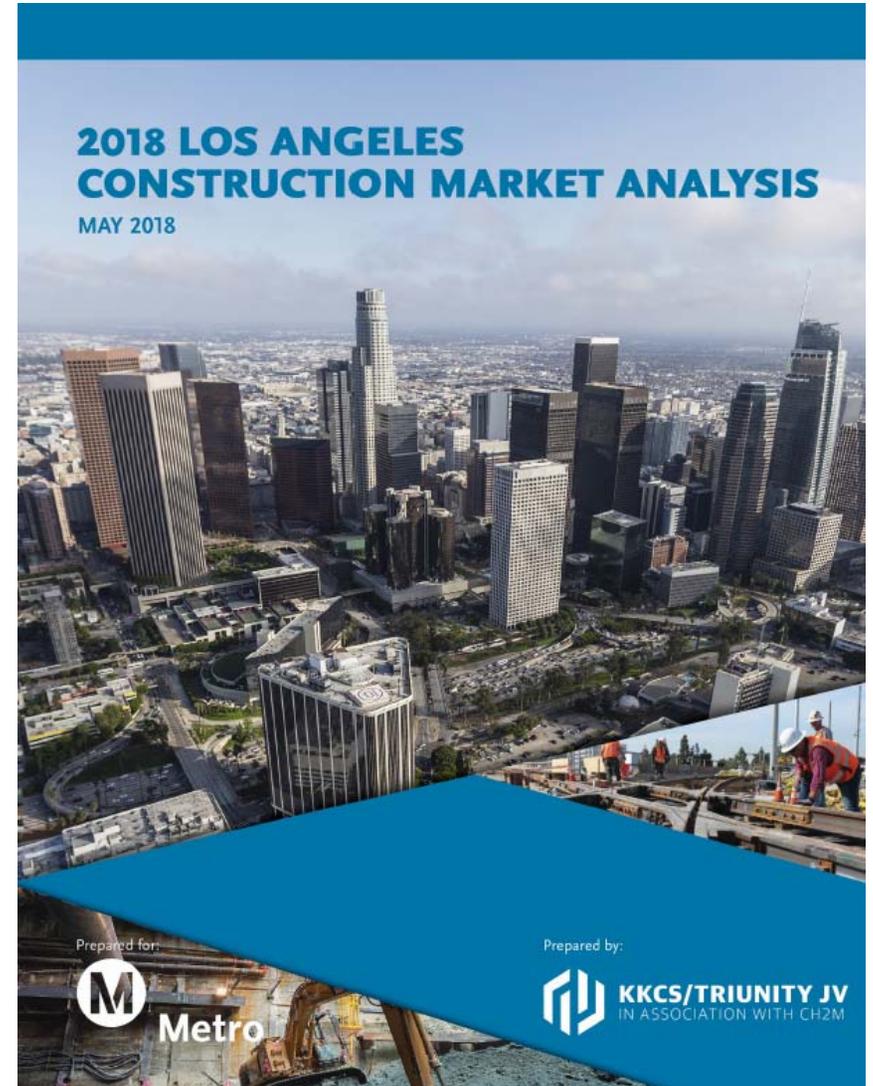
2018 Los Angeles Construction Market Analysis Report

May 2018



Background

- 2015 Los Angeles Construction Market Analysis was reported to the Board in September 2015
- 2018 Los Angeles Construction Market Analysis:
 - Program Management
 - Vendor/Contract Management
 - KKCS/Triunity Joint Venture in association with CH2M



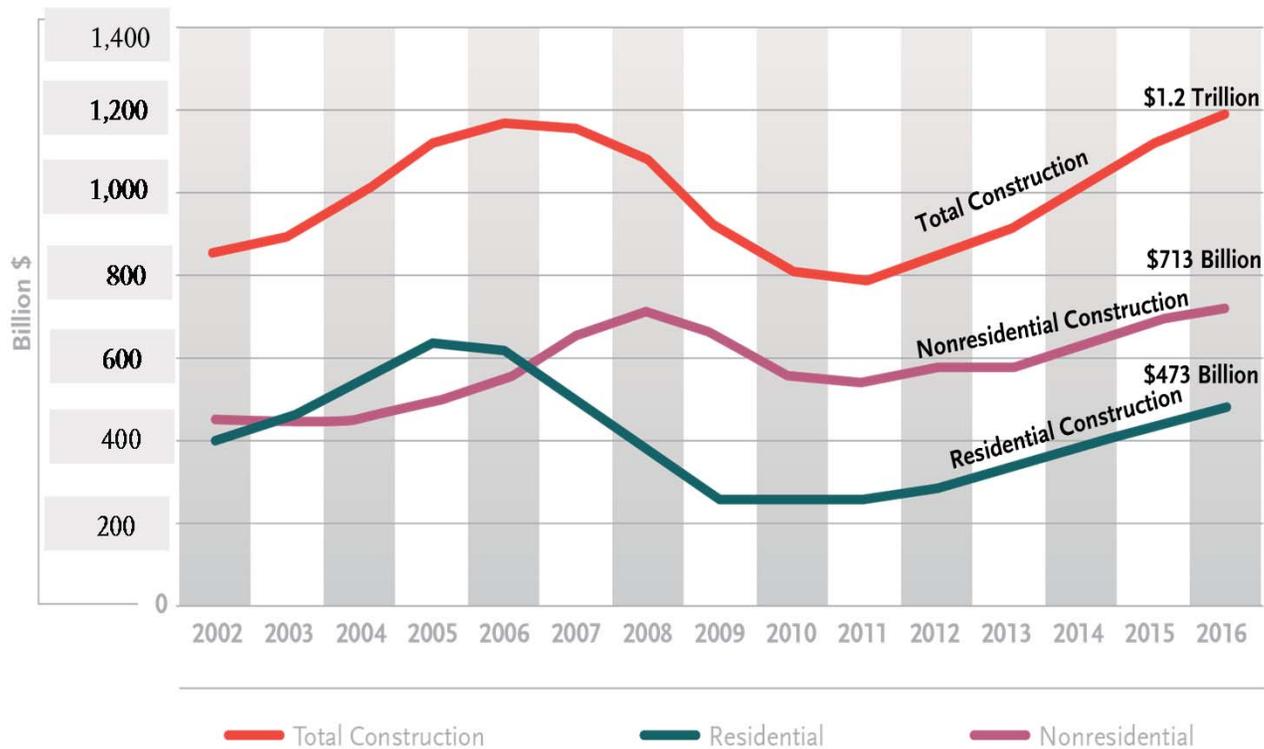
Objectives

- Analyze economic conditions and identify potential impacts to Metro's construction program
- Survey contractors for input on market trends and their decisions to pursue Metro contracts, or not
- Compare Metro's program to others in the region
- Survey peer transit agencies for best practices
- Provide recommendations on how Metro can be an "Owner of Choice"



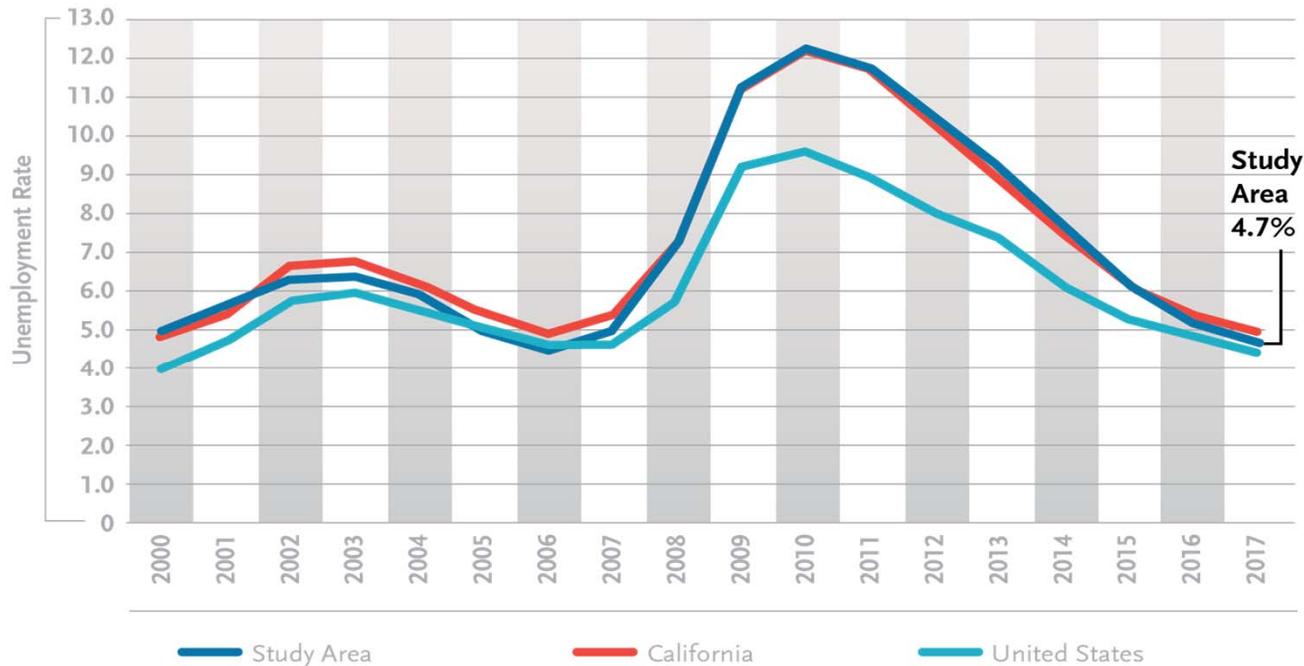
National Construction Spending

National construction spending has been steadily increasing since the lows of 2009-2010.



Employment Outlook

The regional unemployment rate has decreased from 9.5% in 2010 to 4.5% in January 2018, with state and national averages showing even greater improvement.

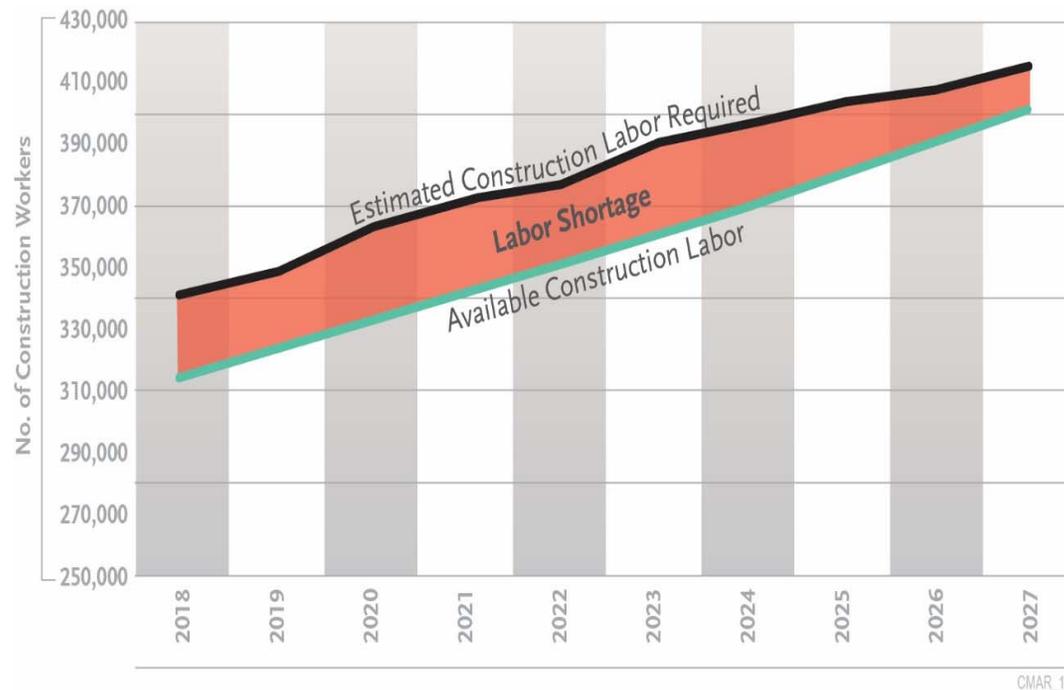


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Regional Construction Labor Projections

Analysis shows a projected labor shortage through the next decade that is required to support the level of construction activity in the region.



Data Points

- Economic Data
- Dodge Construction Data
- State of California EDD
- Contractor Interviews

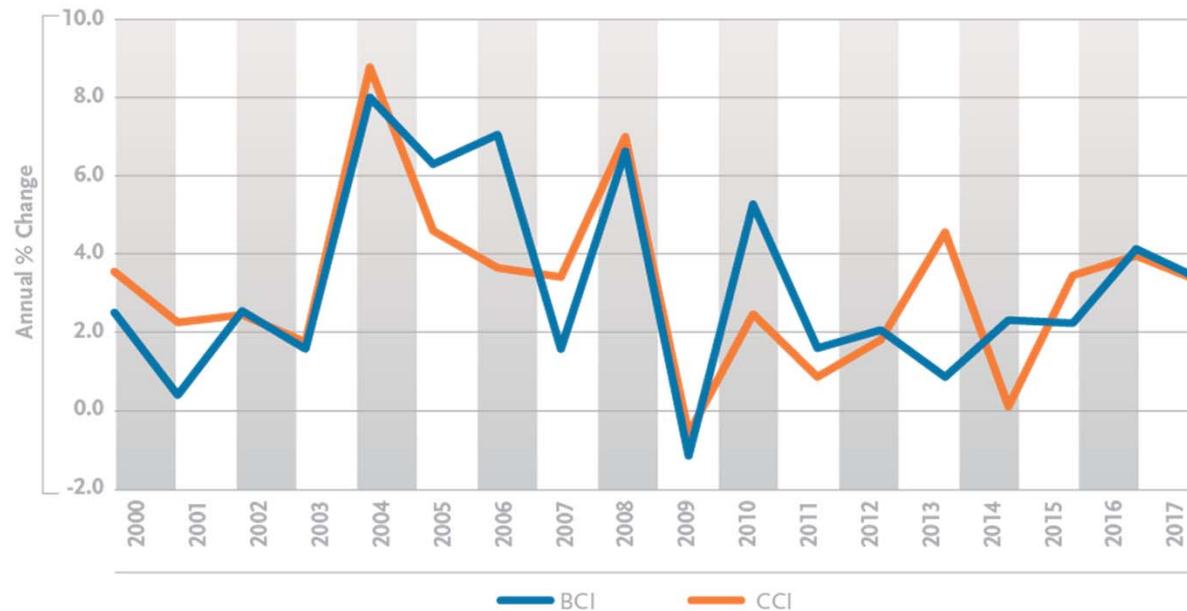
Factors to Consider

- Fluctuation in Spending/Pricing
- Economic Volatility
- Unforeseen Events



Construction Cost Trends

- Construction Cost Index (CCI) and Building Cost Index (BCI) annual growth rate averaged 3.2% between 2000 to 2017
- Recent rise in prices for fuel oil, steel, and aluminum; higher interest rates; plus a historically low unemployment rate
- These increases may be reflected in the contract bids on future projects



Contractors Surveys

- In depth one-on-one contractor interviews with 24 of ENR's top 100 design-build contractors
- Online survey to the Associated General Contractors of America (AGC) membership
- Metro Construction Industry Forum Survey completed by 144 respondents that represented small, medium, and large construction firms
- Surveys and interviews focused on three topics:
 - Construction market conditions
 - Areas of improvement, for those currently working with Metro
 - Barriers that impede participation, for those not working with Metro



Contractors Insight

- 88%-100% anticipate there will be issues in the next 5 years with labor market and resource availability
- 75% perceive Metro's allotted window for proposal submission is too short
- 72% perceive Metro's provisions to be unclear and ambiguous
- 71% believe the change order and claims processes require improvement
- 64% anticipate increased escalation over the next several years
- 55%-80% anticipate inadequate DBE/SBE local resources to achieve participation requirements



Contractors Insight

Contractors noted additional areas requiring improvements:

- Risk sharing
- Partnering with construction management consultant team
- Timely document processing
- Short-listing of contractors through a qualification process
- Additional contractor outreach

Top issues listed by smaller firms hindering them from pursuing work at Metro are:

- Cash flow
- Bonding capacity
- Bid sizes



Best Practices from Peer Transit Agencies

- Conducting one-on-one discussions with contractors during design build procurements
- Evaluating each project to determine the best delivery method
- Sizing projects appropriately to draw in contractors to the market
- Utilizing Construction Manager/General Contractor (CM/GC) as a delivery method
- Streamlining and modifying contract provisions
- Conducting direct monthly discussions with contractors
- Focusing staff on solving problems raised by contractors fairly and consistently
- Instituting a robust Lessons Learned program
- Implementing an ombudsman to meet with contractors and resolve issues



Recommendations (1 of 3)

- Reduce time/cost to propose on Metro projects by:
 - Standardizing bid forms (Agree, Efforts Underway)
 - Allowing e-submissions of forms, certificates, and licenses (Further Assess Feasibility)
 - Only requiring submission of the cost proposal once short listed firms have been selected (Further Assess Feasibility)
 - Limiting the number of short listed firms to three (Further Assess Feasibility)
- Reduce and standardize contract templates to avoid ambiguity (Agree, To Implement)
- Evaluate contract language that might result in a less attractive bidding climate (Agree, To Implement)
- Open the bidding process to more firms/teams through less prescriptive proposer evaluation requirements (Agree, To Implement)



Recommendations (2 of 3)

- Reduce processing time required to resolve changes by delegating more authority at the project manager level (Agree, Efforts Underway)
- Develop a joint committee to develop curriculum promoting skillsets relevant to the construction market (Agree, To Implement)
- Develop a joint committee to innovate and create affordable housing to temporarily attract labor from outside region and to house unemployed local labor who have the capability for job retraining (Agree, To Implement)
- Identify projects that could utilize the design-bid-build delivery method to increase bidding competition by smaller and certified firms and to increase DBE/SBE participation (Agree, Efforts Underway)
- Maintain competitive posture to attract limited available resources, including onboarding qualified candidates before the actual need arises (Further Assess Feasibility)



Recommendations (3 of 3)

- Develop estimates that are consistent with the current market trends (Agree, Efforts Underway)
- Develop contract language to allow for addressing cost increases for projects to limit the risk to both Metro and contractors (Agree, To Implement)
- Institute active engagement with contracting community, including one-on-one meetings with potential bidders, to jointly identify balanced risk sharing (Agree, To Implement)
- Conduct regular discussions with contractors on lessons learned (Agree, Efforts Underway)
- Institute an ombudsman to interface with contractors (Agree, To Implement)
- Assess methodologies to objectively and accurately evaluate contractors' performance and capabilities (Agree, To Implement)



Action Plan

- Continue increased efforts to manage contractors to deliver projects on-time and within budgets
- Address recent trends involving complex related schedule issues
- Establish a program-wide contingency fund to address adjustments to project budgets due to current market trends



2018 LOS ANGELES CONSTRUCTION MARKET ANALYSIS

MAY 2018



Prepared for:



Metro

Prepared by:



KKCS/TRIUNITY JV
IN ASSOCIATION WITH CH2M

Executive Summary

Goals and Objectives

The purpose of this analysis is to assess near and long-term construction market conditions in the Los Angeles region. The assessment takes on considerable importance because market conditions and resource availability will affect Los Angeles County Metropolitan Transportation Authority's (Metro's) ability to deliver the Measure R, Measure M, and State of Good Repair programs over the next 10 years (2018 to 2028), including the Twenty-Eight by '28 projects targeted for completion in time for the 2028 Summer Olympic Games. The goals and objectives for this study are as follows:

- Perform a market analysis showing the current and projected construction activity in California, Southern California, and in the Los Angeles region, with emphasis on Los Angeles, Orange, Riverside, and San Bernardino counties.
- Analyze the qualified contractor and skilled labor availability in the region, including the number of potential bidders and employment trends in the construction industry.
- Query contractors to determine key factors leading to their decisions to bid or not bid on Metro contract opportunities.
- Provide recommendations as to how Metro can become an “Owner of Choice” in the region through comparison with other successful transit agencies, interviews with the contracting community, and continued implementation of best management practices.

Summary

For this analysis, the KKCS/Triunity Joint Venture (KTJV)—in association with CH2M—researched available data; conducted discussions and surveys with contractors; and interviewed subject matter experts. The research concludes that there is a robust economic environment with a growing construction market in the four-county area. In addition, there will be more construction projects than workers and firms available to complete the work, which means that Metro will need to compete with other agencies in a tightening marketplace. This conclusion is based on:

4. Economic outlook per the Gross Domestic Product (GDP) and anticipated construction value of planned projects
5. Employment outlook per the projected unemployment rate versus anticipated employment requirements in construction
6. Construction cost trends including building costs and inflation

Economic Outlook

The economic outlook is strong and includes a GDP that is generally holding steady and a construction industry that is generally trending upward. The GDP rates appear to be stabilizing and there is no indication of large swings in the value, indicating a healthy economy that is much improved from the lows of the 2007 to 2009 timeframe (see Figure ES-1 on page ES-2).

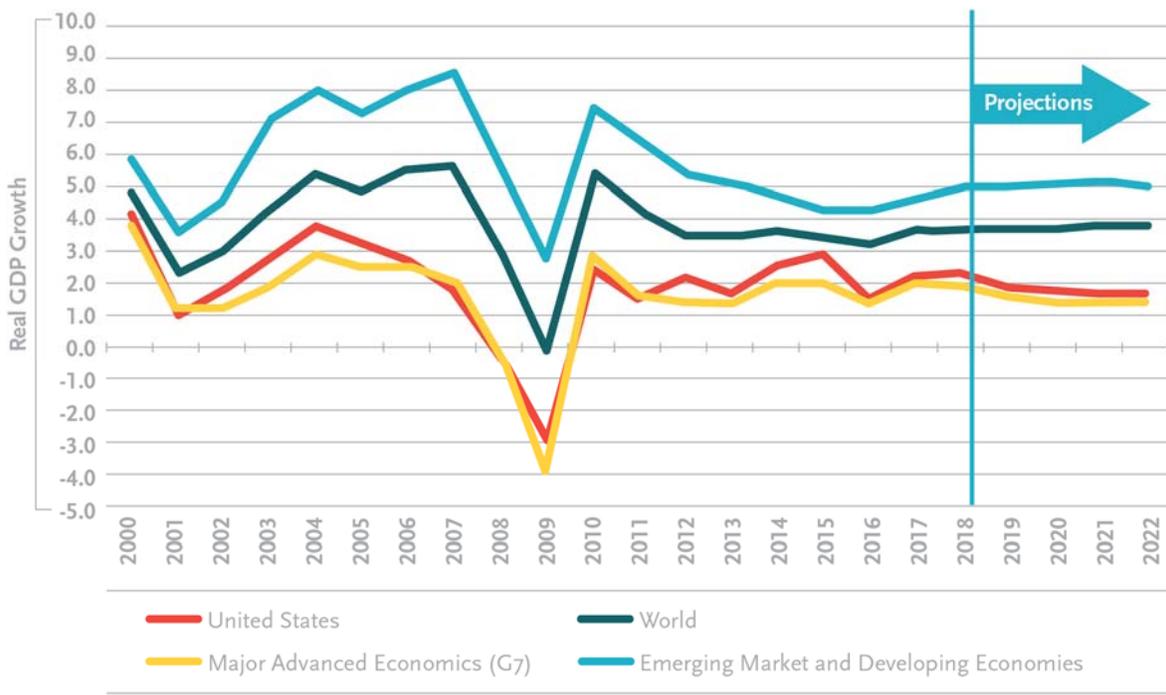


Figure ES-1. Real Gross Domestic Product 2000 to 2022
Source: IMF, 2017

The improvement of the GDP from the lows of 2009 is also evident in the construction industry, with increased construction spending (see Figure ES-2). Construction peaked between 2005 and 2008 and then bottomed between 2009 and 2012. The industry has seen steady growth since 2011, with total construction growing 2.6 percent from December 2016 to December 2017. During this same one-year period, residential construction performed at an even higher 6.2 percent rate of growth.

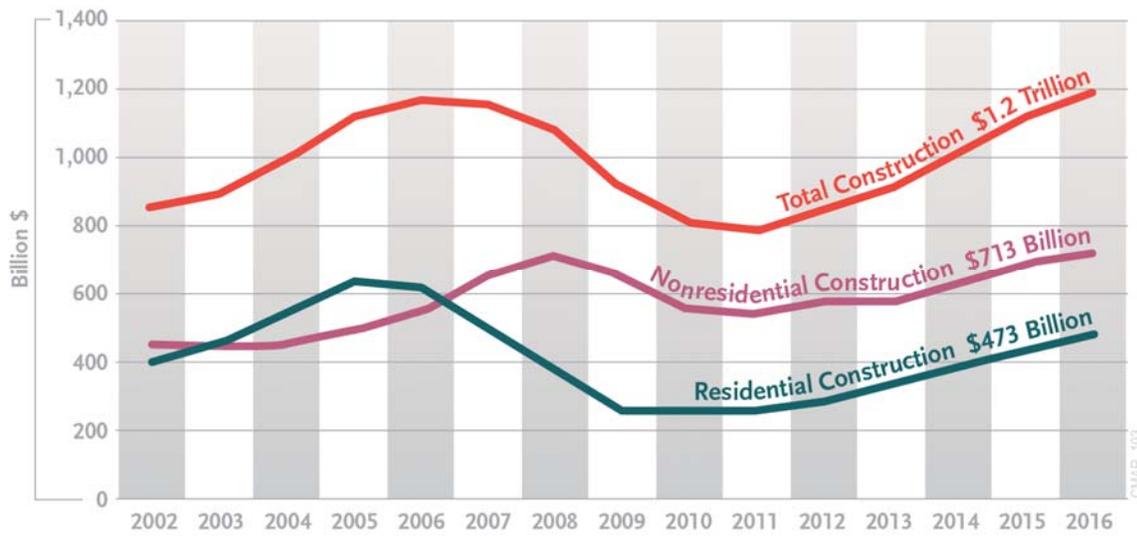


Figure ES-2. Annual Value of National Construction Put in Place, 2002-2016
Source: US Census Bureau, 2017a and 2017b

“The Infrastructure market looks to be improving considerably; therefore, staff and labor will begin to tighten along with available subcontractors and suppliers.”

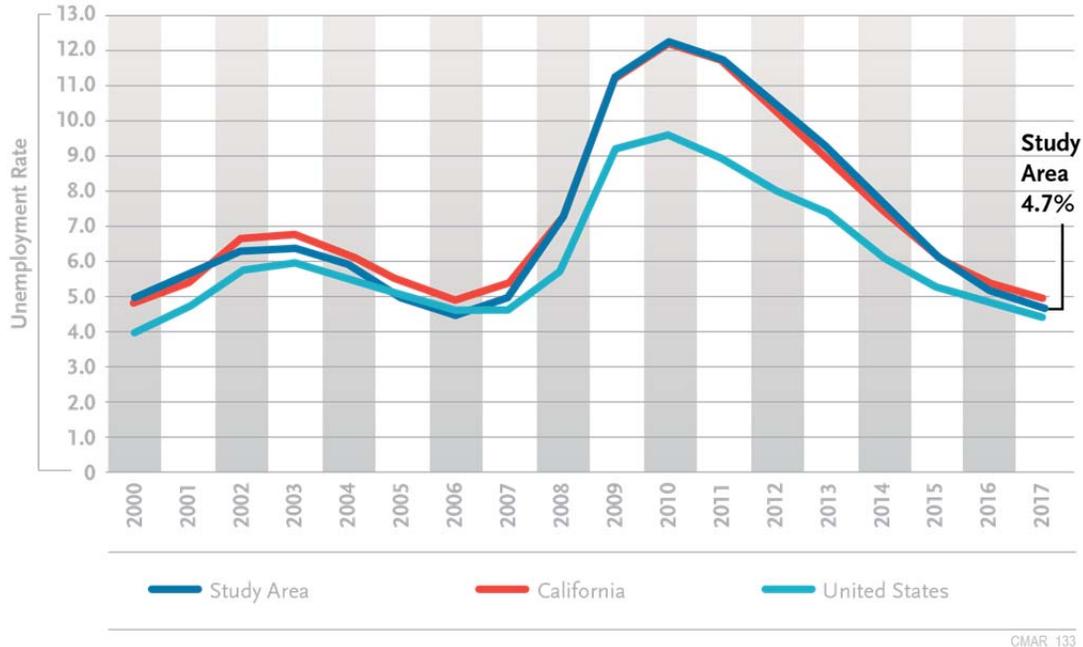
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The Los Angeles - Long Beach - Anaheim metropolitan areas are examples of growth in the region, where in 2017 building permits were issued for privately owned housing units valued at \$7.8 billion, representing a 23.7 percent increase from the 2014 level of \$5.9 billion. Another

example is the February 1, 2018 US Census Bureau Monthly Construction Spending Report indicating the value of total construction for transportation (one element of the total construction value shown on Figure ES-2) increased by 12.9 percent from December 2016 to November 2017, while construction for highways and streets increased 1.5 percent for the same period.

Employment Outlook

A “perfect storm” of conditions is occurring in the construction industry with a construction labor shortage, low unemployment, and large amount of ongoing and planned work in the region. The regional unemployment rate has dropped from the high of 9.5 percent in 2010 to 4.5 percent in January 2018, with state and national averages showing even greater improvement (see Figure ES-3).



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Figure ES-3. Unemployment Rate for US, State of California, and Study Area

Source: US Bureau of Labor Statistics, 2017

Note: Data for 2017 is through October

Specific to the four-county focus area in this study, the unemployment rate is 4.3 percent in Los Angeles County, 2.8 percent in Orange County, 4.3 percent in Riverside County, and 3.9 percent in San Bernardino County. These unemployment statistics will be further affected by the construction growth rate projected in the range of 1.4 percent to 3.4 percent depending on the job classification and the county location, per the State of California Employment Development Department (EDD).

In an interview, one contractor stated that the labor shortage is exacerbated because construction workers are retiring and there is a lower supply of experienced workers to fill the void. Additionally, one source in this study indicated that as many as 1.7 million workers left the construction labor force after the housing collapse in 2008 to seek alternate employment, and almost 1.5 million have still not returned to the construction labor force as of 2016 (NAHB, 2018a).

Responding to a regional labor shortage would typically involve outreach beyond the study area or even outside of California to draw-in external labor to the local market. As shown on Figure ES-4, most of the western states are also seeing growth in construction employment, which will make outreach to a broader employment base more difficult.

“Big shortages now getting worse. Have to pay premium over scale for best trades.”

“Labor shortage will drive up the cost of work and lengthen the duration to complete projects.”

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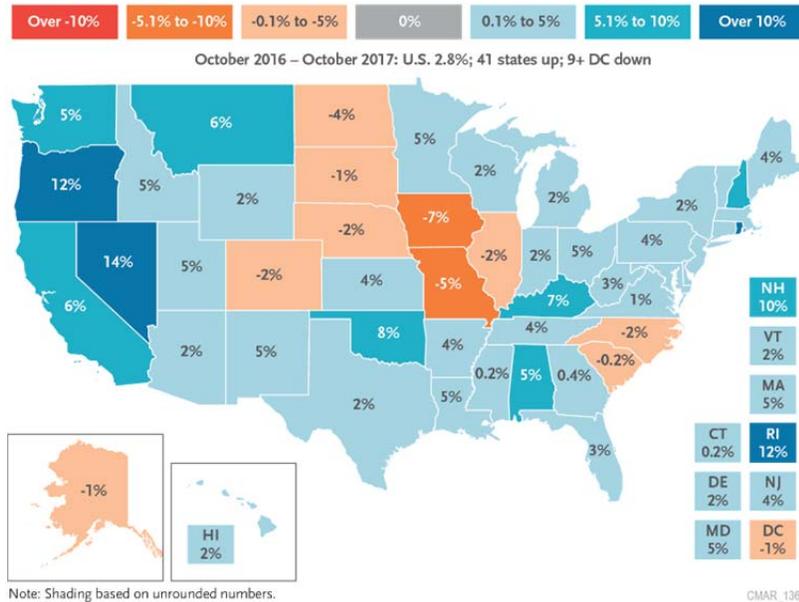


Figure ES-4. State Construction Employment Change
Source: AGC, 2017

Even recruiting from states projecting negative construction growth may be difficult given the cost of living differential compared to California. For example, a labor force being recruited from North Dakota’s shrinking construction market to the Los Angeles-Long Beach area would face a 139 percent increase in housing costs, 26 percent more for utilities, and 22 percent more for transportation. One option used in the construction industry has been to establish local dormitory-style housing to attract out-of-state construction labor; this concept is further discussed in the body of this report, but would need to be reviewed for compliance with Project Labor Agreements and local hiring requirements.

One of the best methods to address the labor shortage may be to develop a local labor force, including a joint effort with school districts and colleges to re-invigorate curriculum related to the construction industry, implement Metro’s initiative to establish a vocational school, and identify unemployed persons living in Los Angeles County Measure H housing who are capable of re-training for the construction industry. Metro’s Workforce Initiative Now-Los Angeles (WIN-LA) Program, currently under implementation, will focus on the development of construction labor and be expanded and tied to the unions to train those interested in construction. It may be worth exploring if WIN-LA can become a broader umbrella organization that supports workforce development, education/training, homeless/housing, and Science, Technology, Engineering, and Math (STEM) career development goals for the entire region.

“The U.S. is busy. The Southern CA market is extremely busy with many mega projects. The skilled workforce is tapped, and there are not many others coming from out of town due to their home markets being busy.”

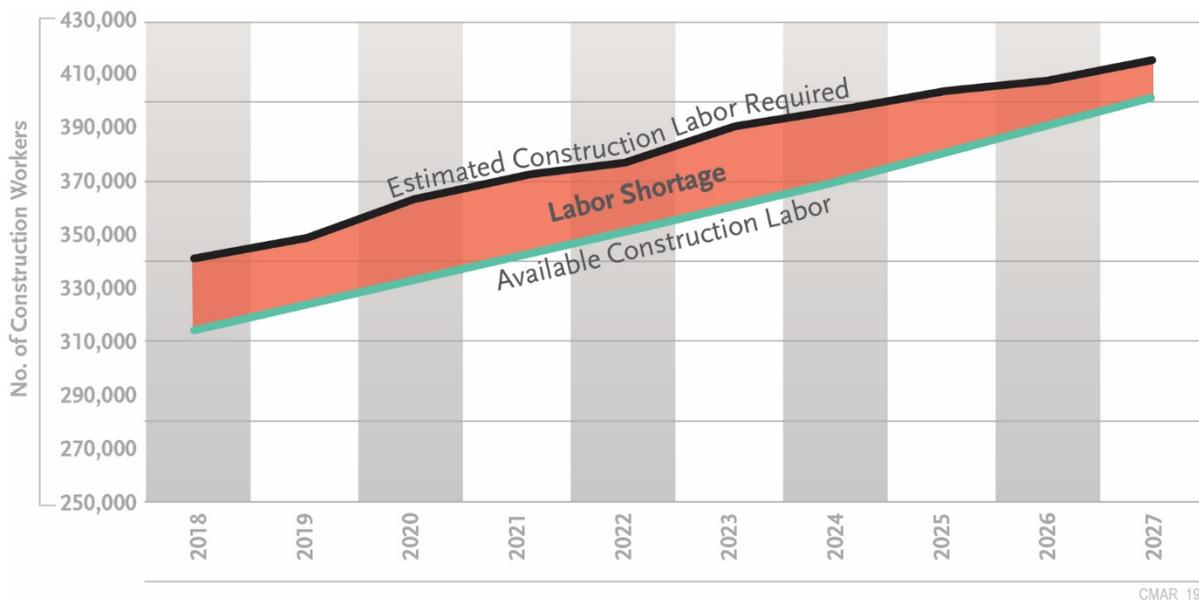
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Labor Shortage

The average annual construction spending is estimated to be \$35 billion to \$42 billion per year from 2018 to 2028 in the four-county area (study area).¹ The unemployment rate currently ranges from 4.3 percent to 2.8 percent, depending on county, and it is expected to decrease further; this decrease presents challenges to Metro not only in accessing available resources but in addressing inflationary pressures.

Economic modeling was used to identify the number of construction jobs that will be generated from construction activity for comparison to the currently available construction labor force. The modeling resulted in a range of potential jobs from high to low, which is detailed in Section 7 of the report. The construction labor required, as generated from the economic modeling, was compared to the available construction labor as determined by EDD. These projections were not in line with comments and assessments made by contractors during the interviews and surveys. To address the disconnect, an in-depth review and analysis of the data were performed and compared to trending data, based on historical values and information provided by the contractor interviews and surveys. This analysis is graphically depicted on Figure ES-5, Construction Labor Projections, showing a projected labor shortage through 2027. The data presented on Figure ES-5 is highly variable and will be affected by various events, including:

- Fluctuations in construction spending and pricing
- Economic volatility
- Unforeseen events (like a dramatic national policy decision)
- Natural and environmental disasters
- Immigration and emigration to the State of California



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Figure ES-5. Construction Labor Projections
Study Area

¹ Construction spending is based on regional agency/city data in addition to data and analytics provided by Dodge Data and Analytics. Some agency/city data required linear projections beyond 2018 and Dodge data beyond 2022. These projections will fluctuate because of economic and geopolitical influences and should be updated periodically.

As noted during the interview with the AGC's chief economist, projections beyond one-year can vary widely because of various conditions, including those listed above. Therefore, the data presented on Figure ES-5 may change, and it is recommended that the data be reviewed on an annual basis to determine if the labor supply and demand is trending as projected.

These summary results are discussed in the following pages, with expanded discussion throughout the report. Additionally, the study addresses how Metro can be competitive in its procurements based on contractor interviews and surveys, including contractors who currently do not bid Metro work; as well as Metro and peer transit agency comparisons, including discussions with Dallas Area Rapid Transit (DART) and Seattle Sound Transit primarily related to best management practices.

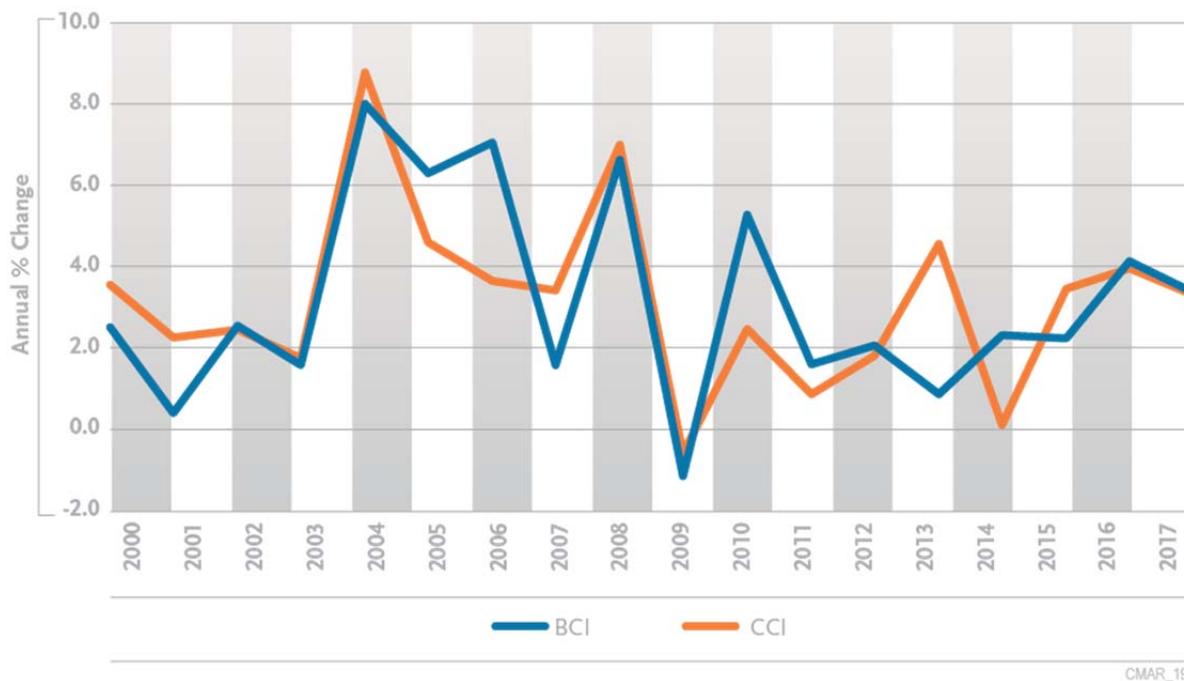
Construction Cost Trends

The inflation projection is based on information contained in Engineering News-Record's (ENR) Building and Construction Costs Indices (CCI), which allow for a forecast to be developed based on historical experience. The annual percentage change in the CCI and Building Cost Indices (BCI) are trending upward from the values seen in 2013 and 2014. This indicates a rise in construction and

"We see construction prices rising in the next 5 years. Currently, the market is at the end of the downturn cycle and the prices are starting to reflect a more robust market. Number of mega projects bidding within a short time will reduce competition, as well as anticipated skilled labor shortage will cause an upward trend in the prices."

CMAR_205

building costs as shown on Figure ES-6. Importantly, this historical information that is used to develop the forecast inflation does not account for factors that will be unique to the forecast period and are already evident, including mercurial commodity pricing that is trending upward overall, a significant rise in fuel oil prices, a likely significant rise in steel prices, labor cost increases that will result from a historically low unemployment rate, and an anticipated rise in interest rates that will drive inflationary pressures. These factors will increase projected escalation well beyond the historical trends and for that reason, the KTVJ team believes that escalation factors will be under-reported if based only on past experience.



CMAR_191

Figure ES-6. Construction Cost and Building Cost Indices, 2000-2017

Source: ENR, 2017

Contractor Interviews and Surveys

Potential bidders are most likely to pursue work with agencies that have a positive reputation in the contracting community. The amount of work and tightening labor pool will allow potential bidders to focus on owners that are consistent in the administration of procurements and the contracting process and are perceived to treat contractors fairly, especially in terms of cost and schedule issues that arise over the course of a project.

The KTJV team conducted two separate efforts to gain insight from contractors, (1) one-on-one interviews with 24 of ENR's top 100 design-build contractors; and (2) an online survey made available to the Associated General Contractors of America (AGC) membership. Additionally, Metro conducted its own outreach to the contracting community at a Construction Industry Forum, also included in this report. The questions and conversations were designed to extract opinions focused on three topics:

- Construction market conditions
- Areas of improvement, for those currently working with Metro
- Barriers that impede participation, for those not working with Metro

One-on-One Interviews

Details on the interview questions and responses are included in this report. In summary:

- 100 percent of those responding perceive there will be issues in the next 5 years with the labor market and resource availability.

“The availability of qualified professional and craft workers is declining, combined with increased compliance requirements, listed personnel requirements, and a general lack of interest in the hard work, long and often unusual hours required by construction.”

CMAR_226
- 75 percent of those responding who work or have worked with Metro perceive Metro's allotted window for proposal submission to be inadequate especially for design-build.
- 72 percent of those responding who work or have worked with Metro perceive Metro's Contract Specifications and General Requirements to be unclear and ambiguous.
- 71 percent of those responding who work or have worked with Metro perceive that Metro's change order and claims processes require improvement.
- 55 percent of those responding perceive there will be inadequate Disadvantage Business Enterprises (DBE)/Small Business Enterprises (SBE) local resources to achieve utilization requirements.

“Need to recruit and develop more DBE or vastly decrease the requirements. Also need to recruit and develop more trade help.”

CMAR_230

Additionally, the KTJV team noted the following consistencies among the respondents who provided expanded input as a part of the survey:

- **Risk Sharing.** Contractors noted the importance of sharing risk equally, and recommended working together with Metro prior to bid package advertisement to better define how risk can be most appropriately shared. This approach may also have a positive effect on bid pricing.

“If the risk is not well-defined contractors will price it into the work and it will result in higher bid prices.”

CMAR_207
- **Partnering.** A common comment was to have true partnering on a project and to approach the work as a team, with some recommended re-emphasis on improving relationships between contractors and construction management consultants.

“Work to improve the use of partnering in the true sense and support partnering from the top down.”

CMAR_208
- **Timely Document Processing.** The contractors noted that progress payments and change orders were reviewed and approved quickly at the field level, where field teams are empowered to make decisions. There is, however, a contractor perception that when documents are forwarded outside of the field office for further processing, timeliness suffers.

“Timely processing of payments/changes in the finance/accounting team.”

CMAR_209
- **Short List/Qualification Selection Process.** Contractors stated that for them to pursue work with Metro, the selection of the contractor must have a short-listing qualification process, further indicating that if the selection is solely based on low bid, they will not participate.

For contractors not working in the region and/or not working with Metro, many of the respondents were not familiar with Metro or at least not aware that Metro was no longer doing business as its predecessor agencies had, including recent implementation of new best management practices. There is also a perception among respondents falling into this category that Metro has preferred companies in mind with whom to do business, placing the others at a disadvantage. In both cases, additional contractor outreach may be in order.

“The politics and the relationship development is a barrier to pursuing projects in LA in general.”

CMAR_212

AGC Questionnaires

In addition to the one-on-one interviews already discussed, a 13-question online survey was developed and issued to the AGC Southern California membership. The survey reached out to both large and small companies, and focused more on resource availability and less on doing business with Metro.

The most noteworthy of the 25 contractor responses received are:

- 88 percent anticipate labor shortages over the next 5 years.
- 80 percent anticipate difficulty fulfilling DBE/SBE utilization requirements in the next 5 years.
- 64 percent anticipate increased escalation over the next several years.

“The market continues to tighten, and union benches are already empty for certain trades. As the market gets busier, it will become increasingly more challenging to find qualified labor.”

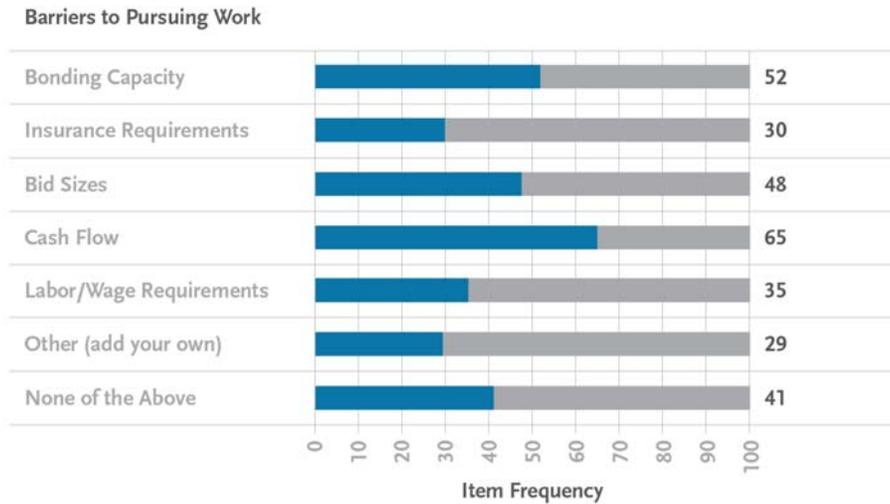
CMAR_216

“There are not enough qualified DBE/SBE firms that specialize in the work that needs to get done at the size of the projects and how slow the owner payment process is.”

CMAR_217

Metro Construction Industry Forum Survey

Additional information was provided to the KTJV team from a survey conducted by Metro during a Construction Industry Forum at Metro Gateway in September 2017. This industry survey was completed by 144 respondents that represented small, medium and large construction firms, and covered the breadth of contractor skillsets. The survey was focused on six barriers impeding companies from pursuing work at Metro. The results are graphically depicted on Figure ES-7.



CMAR_189

Figure ES-7. Graphical View of Metro Construction Industry Forum Survey Results

Source: Metro, 2017

Based on this analysis, the top three issues hindering contractors from pursuing work at Metro were related to smaller firms:

- Cash Flow.** Metro is currently assessing changes in the contract language to address contractor cash flow considerations, including methodologies to expedite payment to DBE/SBE firms. Other strategies were discussed with the survey respondents, including working with contractors and lending institutions to establish improved cash flow financing.
- Bonding Capacity.** Lack of bonding capacity often limits DBE/SBE firms that are otherwise capable of performing work. Survey respondents noted that lowering bonding capacity requirements in the contract would likely result in additional bidding participation, and some of the DBE/SBE firms may benefit with additional training on the Small Business Administration (SBA) Surety Bond Program. Metro is currently implementing a pilot bonding assistance program that may help alleviate this issue. Once the program is implemented and had an opportunity to run for six months, then a follow-up survey should be issued to determine if the program has addressed the issue and removed this barrier.
- Bid Sizes.** Smaller firms have difficulty forming large mega-teams for design-build projects, and would be better positioned to participate in Metro procurements on small and medium-sized design-bid-build packages or larger packages as a joint venture partner.

“Finding DBE/SBE that are CAPABLE of performing significant work. Bonding and Insurance are issues for many...”

CMAR_220

Peer Transit Agency Comparisons

DART and Sound Transit are peer transit agencies that have seen improved contractor bidding participation in recent years. The KTJV team contacted these agencies for insight into lessons learned and processes currently in place designed to remove barriers to pursuing work with each agency, with emphasis on:

- Contract Provisions
- Outreach Program
- Contract Type
- Project Sizing
- Improving Participation
- Risk Management/Risk Allocation
- Delegation of Authority

DART

In August 2016 Metro conducted interviews with DART staff to gain insight into the agency's ability to transition itself to be an "Agency of Choice" with the local contracting community. DART representatives indicated the following changes were implemented, many of which coincidentally relate to feedback received from contractors in the Los Angeles region that were interviewed for this report:

- Streamlining and modifying Contract Provisions
 - Simplified the terms and conditions
 - Simplified the submittal requirements
 - Incorporated cost sharing agreements and cost and schedule incentives for performance
 - Incorporated aggressive forecasting and trend analysis for variances
- Conducting direct monthly discussions with the contractors
- Focusing DART staff on fair and consistent resolution of problems raised by the contractors
- Instituting a robust Lessons Learned program
- Implementing an ombudsman to meet with the contractors, channel communications, and help coordinate issue resolution

By implementing these comprehensive changes, DART was able to also change how it was perceived in the contracting community. The result was increased bidder participation as well as elimination of the "DART factor" bid markup as high as 40-percent for perceived risk.

Sound Transit

Sound Transit indicated it had not made any specific changes to improve contractor bidding and participation in its procurements, but had made modifications to contract documents to incorporate lessons learned, industry best practices, and updated state and federal regulatory requirements. Sound Transit utilizes similar contract types as Metro, but also includes General Contractor/Construction Manager (GC/CM), which is similar to Construction Manager at Risk (CMAR) and Construction Manager/General Contractor (CMGC). The State of Washington has specific legislation and regulations for implementation of GC/CM.

Sound Transit individually evaluates each project to determine which delivery method is best for any particular project and that it can successfully meet the project goals along with addressing the constraints. For each procurement, Sound Transit holds a contract packaging workshop that is modeled on the Transit Cooperative Research Program (TCRP) Report 131, *A Guidebook for the Evaluation of Project Delivery Methods*. Additionally, it holds one-on-one meetings with contractors for DB procurement during the procurement phase to review the Request for Qualifications (RFQ), project requirements, and address any questions the contractors might have.

Use of GC/CM and one-on-one discussion with DB contractors may be two of the reasons why Sound Transit has not reported lack of competition in its procurement processes. Compared to the Los Angeles region, it was noted by several regional contractors in the interviews conducted for this study that there is also interest in CM/GC contracting, as well as more one-on-one interface between Metro and potential DB bidders.

Conclusions

Over the next 5- to 10-year period there will be more construction work than workers and firms available to do the work and at a reasonable cost; Metro's Twenty-Eight by '28 program will be affected by this lack of resources. Metro's recent initiatives to implement best management practices and to initiate innovative approaches to developing local talent and resources are steps in the right direction to attract bidders and to expand available industry resources in a tightening and competitive marketplace.

Metro's access to resources can be improved by initiating an expedited and more bidder-friendly Request for Proposal (RFP) process, attracting companies outside of the region to participate in Metro procurements, building the craft labor base in the region, revisiting personnel qualifications requirements to strengthen the number of qualified candidates available, and structuring procurement packages to attract a greater range of responding firms.

As market demand increases, contractors will be increasingly selective in deciding which projects to pursue, dependent on the owner and the amount of risk an owner places on the contractor. Contract language that is perceived by contractors to be difficult, punitive, subject to interpretation, or inconsistent with other processes or procedures is viewed to be a source of conflict, uncertainty, and inefficiency, and can be a source of claims.

Recommendations

Building on Metro's recent initiatives, this study provides specific recommendations designed to increase the number of firms and depth of craft and management resources available to build Metro projects; and make Metro an "Owner of Choice" as potential bidders select where proposal preparation dollars are best invested in the region. These recommendations are discussed in detail in the body of this report. The primary recommendations are highlighted in summary below.

- Reduce the time and cost to propose on Metro projects by (1) requiring standard bid forms be prepared outside of the proposal process where they are done once, placed on file at Metro, and remain in force until there is a change in the information, (2) allowing for electronic submission of forms, certificates, and licenses, (3) not requiring the submission of a cost proposal as part of the qualification process, only requiring submission once the short listed firms have been selected, and (4) considering a limit on the number of short-listed bidders to three firms due to the high cost for the contractors to develop a detailed cost estimate.
- Open the bidding process to more firms/teams through less prescriptive RFP requirements. For example, "Describe experience working on similar projects with the same team" limits accessing resources from outside of the region and structuring differing combinations of teams, and excludes firms that may otherwise be capable; Key Personnel Qualifications often require high levels of experience that further limit the ability for bidders to be responsive and can result in higher bids for firms that can respond.
- Develop a joint committee to include Metro, Los Angeles County Office of Education, Los Angeles Community College District, and educators from trade schools to develop curriculum promoting skillsets applicable to the construction market. These efforts would bolster Metro's existing initiatives to develop its own vocational training center and develop talent through the WIN-LA program.

- Develop a joint committee to include Metro, representation from the Mayor's Office, and representatives of the AGC to innovate ways to create affordable housing to attract labor from outside of the region, including construction of dormitory-style housing that could serve the dual purpose of housing unemployed persons with capability for job retraining into the construction field.
- Identify projects that lend themselves to design-bid-build method so firms that are otherwise not able to assemble mega design-build teams can respond. There would also be the added benefit of providing more DBE/SBE participation, as many medium-size firms are also smaller and/or disadvantaged businesses.
- Maintain an aggressive posture competing with other agencies for limited available resources, including onboarding project management staff when qualified candidates are identified and available, even if prior to actual need arising.
- Evaluate contract language that might result in a less-attractive bidding climate to proposers and at higher cost.
- Reduce and simplify the number of contracting templates; check for inconsistencies; standardize the General Conditions and related contract provisions across all projects; and assess contract language for ambiguity that may lead to differences in interpretation. Then, assure contracts are administered exactly as written.
- Conduct one-on-one meetings with proposers during the RFP process to evaluate where there may be risk transfer to contractors, but with little or no commensurate value to Metro, and how to best achieve balanced risk sharing; and incorporate appropriate changes to the contract through RFP addenda.
- Reduce the time required to reach change order resolution by delegating more authority at the Project Manager level and assuring clear assignment of single-point change order responsibility.
- Due to the variable nature in material price increases and considering the recent tariffs and potential trade war, re-evaluate cost estimates for future planned projects to ensure that unit rates assumed in the estimate are in line with the current market trends.
- Due to construction costs trending upwards and becoming volatile with the trend for multiple cost increases per month for some items, perform a review of the escalation percentages utilized by Metro in the development of engineer's estimates.
- Develop contract language to allow for addressing likely cost increases for projects that have long durations to limit the risk to both Metro and the contractors.
- In addition to the one-on-one meetings prior to the RFP process, institute active engagement with the contracting community through monthly meetings with contractor executives to discuss successful project delivery. The intent of the meetings is to develop relationships between Metro and contractors, and to market the agency and its projects.
- Conduct regular discussions with the contractors to identify lessons learned, including what went well, what challenges there were, and areas for improvement.
- Institute an ombudsman to interface with the contractors to address issues and work to seek resolutions.
- Assess methodologies to objectively and accurately evaluate contractors' performance and capabilities.

**Board Report**

File #: 2018-0191, **File Type:** Informational Report**Agenda Number:** 33.

**CONSTRUCTION COMMITTEE
MAY 17, 2018****SUBJECT: OFFICE OF THE INSPECTOR GENERAL CHANGE
ORDER/MODIFICATION CONSTRUCTION SPOT
CHECKS****ACTION: RECEIVE AND FILE****RECOMMENDATION**

RECEIVE AND FILE this Office of the Inspector General report on Change Order/Modification Construction Spot Checks for the period ending February 28, 2018.

ISSUE

On January 25, 2018, the Metro Board directed Office of Inspector General ("OIG") to conduct random spot checks on the projects listed in the quarterly program management report to ensure that the delegation of authority to approve construction change orders policy is performing in the manner desired by the Board of Directors.

BACKGROUND**I. SUMMARY**

The OIG made four Spot Checks of approved Change Orders/Modifications exceeding \$1 million each from four major transit construction projects: Crenshaw/LAX, Regional Connector, Westside Purple Line Extension Section 1, and Westside Purple Line Extension Section 2. We found that these Changes Orders were approved/executed on average 31.5 workdays (14, 35, 37, and 40 days) faster than the former Board approval process would have taken. In addition, the negotiated cost for each Change Order appears reasonable:

- First Spot Check - approved negotiated amount was \$4,925 or 0.38% over Metro's independent cost estimate (ICE),
- Second Spot Check - approved negotiated amount was the same as the ICE,
- Third Spot Check - approved negotiated amount was \$222,174 or 9.2% under the ICE, and
- Fourth Spot Check - issued a unilateral change that notified the Contractor to commence work while cost is being negotiated.

For the Change Orders/Modifications the OIG reviewed, some of the Spot Checks have shown that the delegation of authority has, in certain cases, resulted in:

- Minimizing/reducing delay costs,
- a negotiated amount that was reasonable for the work to be done; and
- Minimizing construction delays.

This report also describes the new OIG program developed for the Construction Change Order Spot Checks and documents lessons learned that might be used to avoid future Change Orders.

II. OIG Program Description

The Program Management Department's quarterly report identifies pending and approved construction project related change orders and modifications (collectively "Change Order(s)") greater than \$500,000. The OIG has designed a spot check program ("Spot Checks") which primarily focuses on approved change orders and modifications that exceed \$1 million. This program is accomplished by:

- a. Reviewing a sample of Change Orders for a specified period identified in the Program Management Department's Program Management Information System (PMIS), and Metro and Contractor documentation supporting execution of the change order;
- b. Reviewing the Program Management Department's Monthly Project Status Report (PSR);
- c. Interviewing Project Managers, Program Controllers, and Procurement Officers with knowledge of the selected Change Order; and
- d. Reviewing the Project Budget and Specifications or related documentation

For the selected Change Orders, the OIG Spot Checks focus on:

- i. Scope of Work - matters such as:
 - a. Is the Change Order warranted?
 - b. Is it within the specifications?
 - c. Who is responsible for the cost of the change?
 - d. Are there any lessons learned?
 - e. Could the Change Order have been avoided?
 - f. Does the Change Order enhance safety?
 - g. Does the Change Order comply with applicable standards, rules, and regulations?
- ii. Budget - matters such as:
 - a. Is the dollar amount of the Change Order within the Life of Project Budget?
 - b. Is the negotiated amount near Metro's independent cost estimate (ICE)?
- iii. Time to Execute Change Order - matters such as:
 - a. How many days did it take to execute the Change Order using the "new delegation" process? versus
 - b. How many days would it have taken to execute the Change Order using the former

method of the Board approving the Change Order? This Change Order processing time is predicated upon the Board report submission deadline to the Vendor/Contract Management department.

The OIG will periodically report to the Board on Spot Checks performed.

DISCUSSION

III. Spot Checks Performed in this Quarter

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

This OIG Spot Check report concerns the Crenshaw/LAX Transit Project (Contract C0988), Modification (MOD-00345). It was selected from the April Program Management Major Project Status Report (Board Item 32), covering December 2017, January 2018, and February 2018, of approved Change Orders greater than \$1 million dollars.

Sources Reviewed

The information for this Spot Check was collected from the Program Management Department's PMIS. Also, in-person and telephonic interviews were conducted with Crenshaw Program Management, Project Control, and Procurement staff.

Facts

<u>Description of Modification C0988-MOD-00345:</u> Oil Water Separator at Underground (UG) Stations – The sump pump discharge from the UG Stations required treatment to meet discharge limits of the City of Los Angeles Department of Public Works Bureau of Sanitation Industrial Waste Management Division.	
<u>Change Order Dates:</u>	
i. Change Order Initiated	December 11, 2017
ii. Modification Executed	February 8, 2018
<u>Elapsed Time for Executing Change Order:</u>	
iii. Using new delegated process	42 work days
iv. Estimate using former Board approval process	56 work days
<u>Cost of Change Order:</u>	
v. Metro independent cost estimate (ICE)	\$1,295,000
vi. Contractor's proposed cost	\$1,678,678
vii. Negotiated amount	\$1,299,925
viii. Negotiated amount over/(under) ICE	\$4,925
ix. Percentage of negotiated amount over ICE	0.38%

Conclusion

Scope of Work - In the original scope of work, the three Oil Water Separators (OWS) were to be located in the escalator pits for three underground stations (Expo, MLK, and Vernon). During the review period, the Public Works Bureau of Sanitation Industrial Waste, City of Los Angeles, requested LA Metro to provide calculations for the capacity of the OWS. The design criteria of the OWS to handle the combined load for the underground station track drain, elevators, and escalators was not clearly stated in LA Metro's original design requirements. When this matter was discovered, the concrete foundation for the three stations had already been poured; therefore, the contractor was unable to install a pit for the OWS as required by the City. The agreed upon solution was to install the OWS "at grade" and have the oil and water mixture pumped up to the OWS.

Budget - The cost associated with this change order consists of: (1) designing and constructing an OWS for each of the three underground stations, (2) sizing an OWS large enough to hold the amount of water entering the station from a 1 hour rain event with 2 inch/hour rain intensity, and (3) designing calculations for drainage OWS outfall and the sewer outfall. The Contractor's proposed cost for this change was \$1,678,678. The Procurement team negotiated a reduction from the contractor's proposal to \$1,299,925, a reduction of \$378,753. The final total cost of \$1,299,995 for all three underground stations is \$4,925, or 0.38%, higher than Metro's ICE amount of \$1,295,000.

Schedule - The new delegation process allowed this change order to be initiated, processed, approved, and executed in a total elapsed time of 42 work days. The previous Board approval process would have required at least 56 work days. Using the former process, the earliest that this Change Order, submitted on December 11, 2017, could have been approved by the Board was the meeting on March 1, 2018 (February Board cycle). Thus, the new delegation process was 14 days quicker than the former process.

Recommendation

The Metro rail design criteria (MRDC) was updated on October 31, 2017, to reflect the addition of the elevator, escalator pit drain and underground station track drains to be processed through a clarifier to remove oil, grease, and sand. Metro management should:

1. Update the “Lessons Learned” files regarding the OWS change to the MRDC and communicate the lesson to other Project Managers working major transit construction projects (This is consistent with recommendation 51 and 89p in the OIG’s Construction Management Best Practices Study.).
2. Investigate this change to determine:
 - a. If the scope of work of other major transit construction projects require this design update for the OWS.
 - b. If the Regional Connector and the Westside Purple Line Extension sections 1, 2, and 3 should be amended for the same OWS omission to reduce additional change orders and costs.
 - c. When should have the City been provided this information and reviewed construction plans prior to the cement being poured to avoid redesign costs.

B. Spot Check#2 - Regional Connector Transit Project

This Spot Check report concerns the Regional Connector Transit Corridor Project (Contract C0980). Change Notice (CN-00166) was selected from the April Program Management Major Project Status Report (Board Item 32), covering December 2017, January 2018, and February 2018, of Change Orders greater than \$1 million. This Change Order has now been approved and is identified as Modification (C0980-MOD-00111).

Sources Reviewed

The information for this Spot Check was collected from the PMIS program. Also, in-person and telephonic interviews were conducted with Regional Connector Program Management, Project Control, and Procurement staff.

Facts

<u>Description of Modification C0980-MOD-00111: Left Tunnel Boring Machine Differing Site Conditions: Resolution of all impacts due to Differing Site Conditions experienced during mining of the Left Tunnel.</u>	
<u>Change Order Dates:</u>	
i. Metro initiated Change Order	February 23, 2018
ii. Modification Executed	March 30, 2018
<u>Elapsed Time for Executing Change Order:</u>	
iii. Using new delegated process	29 work days
iv. Estimate using former Board approval process	64 work days
<u>Cost of Change Order:</u>	
v. Metro independent cost estimate (ICE)	\$7,062,237
vi. Contractor's proposed cost	\$7,603,491
vii. Negotiated amount	\$7,062,237
viii. Negotiated amount over/(under) ICE	\$0
ix. Percentage of negotiated amount over ICE	0%

Conclusion

Scope of Work - During mining of the left tunnel, the Tunnel Boring Machine (TBM) struck an unforeseen steel object (I-beam) buried in its path. This encounter damaged the TBM, which required repairs after new parts (3 large screws and 17 other components) were procured. The scope of this modification includes: (1) engineering analysis of the broken screw, (2) repairs to the TBM, (3) a 32 calendar-day time extension for excusable/compensable delay (at \$99,779 per calendar day), (4) mining delays and inefficiencies, (5) TBM - 24-hour acceleration, and (6) Flower Street surface heave repairs. As mentioned above, the construction schedule was extended by 32 calendar days.

Budget - The cost associated with this Modification include excusable and compensable delays and repairs. The Procurement team negotiated a \$541,254 reduction from the contractor's proposal of \$7,603,491. The final total cost for the Modification is \$7,062,237, which is the same amount as in Metro's ICE.

Schedule - The new delegation process allowed this Modification to be initiated, processed, approved, and executed in a total elapsed time of 29 work days. Under the previous Board approval process, the earliest that this Modification could have been completed was 64 work days, since the Metro Board could not have approved the Modification until the May 24, 2018 Board Meeting (February 23, 2018 was the Metro initiated Change Order date. The field Vendor\Contract

Management staff deadline date for receipt of the change order request, was one (1) working day later on February 26, 2018. Staff said they would not be able to perform their work and process the necessary paperwork that quickly, which would force the Change Order to the next Board meeting in May.). Thus, the new delegation process was 35 work days faster than the former process.

Recommendation

None

C. Spot Check#3 - Westside Purple Line Extensions - Section 1 Transit Project

The purpose of this report is to perform a Spot Check on the Westside Purple Line Extension - Section 1 Transit Project (Contract C1078). The Change Notice (CN-11) was selected from the April Program Management Major Project Status Report (Board Item 32), covering December 2017, January 2018, and February 2018, of Change Orders greater than \$1 million. This Change Order has been approved and is a Modification (C1078-MOD-00011).

Sources Reviewed

The information for this Spot Check was collected from the PMIS program. Also, in-person and telephonic interviews were conducted with Westside Purple Line - Section 1 Program Management, Project Control, and Procurement staff.

Facts

Description of Modification C1078-MOD-00011: Schedule Impacts from Arcadis Work (includes Chalmers Impacts): Change to accommodate construction schedule extension due to site impacts.	
Change Order Dates:	
i. Metro initiated Change Order	February 9, 2018
ii. Modification Executed	March 6, 2018
Elapsed Time for Executing Change Order:	
iii. Using new delegated process	18 work days
iv. Estimate using former Board approval process	55 work days
Cost of Change Order:	
v. Metro independent cost estimate (ICE)	\$2,409,650
vi. Contractor's proposed cost	\$2,408,228
vii. Negotiated amount	\$2,187,476
viii. Negotiated amount over/(under) ICE	(\$222,174)
ix. Percentage of negotiated amount under ICE	(9.2%)

Conclusion

Scope of Work - During the hazardous material investigation by Metro's environmental remediation contractor, multiple underground storage tanks and buried reinforced concrete slabs were discovered. The abatement remediation contractor had to remove these items and excavate all contaminated soil. The hazmat abatement plan caused a schedule extension of an additional 253 unplanned days, which affected the Design-Builder's critical path schedule. Modification of the Scope of Work includes: compensation to the Design-Builder for all costs and schedule impacts for 253 calendar days at (\$8,646 per calendar day). The contract was extended a total of 253 days.

Budget - The cost associated with this Modification resulted in contractor compensation and time extension that were found excusable and compensable. Metro's ICE for this Modification was \$2,409,650, and the Contractor's proposal was \$2,408,228. The Procurement team negotiated a \$220,752 reduction from the contractor's proposal. The final cost for this Modification is \$2,187,476 or 9.2%, less than Metro's ICE amount of \$2,409,650.

Schedule - The new Delegation process allowed this Change Order to be initiated, processed, approved, and executed in a total elapsed time of 18 work days. The previous Board approval process would have required at least 55 work days. Using the prior process, the earliest that this Change Order, submitted on February 9, 2018, could have been approved by the Board was April 26, 2018. Thus, the new process was 37 work days faster than the former process.

Recommendation

All Environmental Site Assessments were performed prior to excavation. No record of underground tanks or buried reinforced concrete slabs were found by the Department of Conservation and Division of Oil, Gas, and Geothermal Resources (DOGGR). However, based on lessons learned from this site, Metro management should:

1. Conduct Ultrasonic Soil Examinations at future questionable sites to attempt to avoid unidentified hazards. This is consistent with recommendations (88b, 88c, and 88d) in the OIG's report on Capital Project Construction Management Best Practices Study (February 29, 2016).
2. Perform research to determine who could have installed the tanks and buried reinforced concrete slabs, and provide this information to the LA Metro Legal department for consideration of possible legal action to recover the cost of remediation under the Comprehensive Environmental Response, Compensations and Liability Act of 1980 (CERCLA).
3. Perform an assessment of the schedule to determine if any recovery of time is possible.

D. Spot Check#4 - Westside Purple Line Extension - Section 2 Transit Project

The purpose of this Spot Check report concerns the Westside Purple Line Extension - Section 2 Transit Project. The Change Order (CO-00002) was selected from the April Program Management Major Project Status Report (Board Item 32), covering December 2017, January 2018, and February 2018, of Change Orders greater than \$1 million.

Sources Reviewed

The information for this Spot Check was collected from the PMIS program. Also, in-person and telephonic interviews were conducted with Westside Purple Line Extension - Section 2 Program Management, Project Control, and Procurement staff.

Facts

<u>Description of Modification CO-00002: Worksite Traffic Control for SCG & AT&T Advanced Utility Relocations (AUR):</u> Southern California Gas (SCG) and AT&T are scheduled to perform AUR at the same time within close proximity of each other. The project master schedule assumes each utility would provide their own traffic control. However, the overlap in traffic control area can cause conflicts, and both utilities are concerned that one utility's traffic control efforts may interfere with the other's work. To mitigate this and expedite the work, both utilities have agreed to allow the C1120 Contractor (TPOG) to provide the overall traffic control. WSP has designed the traffic control plans and obtained City of Beverly Hills approval, and TPOG will implement the traffic control plans per WSP's design. Metro issued this unilateral change to formally direct the contractor to commence work and invoice for work performed while both parties continue evaluating the Scope of Work and continue negotiations. Once the Scope of Work and pricing is agreed upon, Metro intends to issue a contract modification.	
<u>Change Order Dates:</u>	
i. Metro initiated Change Notice	December 6, 2017
ii. Change Order Executed	January 24, 2018
<u>Elapsed Time for Executing Change Order:</u>	
iii. Using new delegated process	34 work days
iv. Estimate using former Board approval process	74 work days
<u>Cost of Change Order:</u>	
v. Metro independent cost estimate (ICE)	-
vi. Contractor's proposed cost	\$3,931,001
vii. Unilateral Change Award amount	\$2,242,400
viii. Negotiated amount over/(under) ICE	TBD
ix. Percentage of negotiated amount under ICE	TBD

Conclusion

Scope of Work - The Master Schedule assumes each utility would provide their own traffic control plans. Southern California Gas (SCG) and AT&T are scheduled to perform Advanced Utility Relocation (AUR) at the same time within close proximity of each other. To mitigate potential work and schedule conflicts, both utilities have agreed to allow the Design Build Contractor to perform the overall traffic control.

Budget - This Change Order is a unilateral contract change by Metro. The Change Order allows the Contractor to commence work and invoice for work performed while a final modification is negotiated. Only a portion of the ICE has been issued to the contractor; negotiations have not been established at the time this report was written.

Schedule - The new Delegation of Authority process allowed this unilateral change to be initiated, processed, approved, and executed in an elapsed time of 34 work days. Under the previous Board approval process, the earliest that this could have been completed was 74 work days, since the Metro Board could not have approved the change until the March 22, 2018 Board Meeting. Thus, the new delegation process was 40 work days faster than the former process.

Recommendation

Metro management should:

1. Establish a single party to serve as a “clearinghouse” for all utilities relocations during construction. The “clearinghouse” could be assumed by the Metro group, Third Party Administration. (This is consistent with recommendations 80, 88, 89, 89j, 89n, and 89v in the OIG’s report on Capital Project Construction Management Best Practices Study.)
2. Utilize the “clearinghouse” process to improve the Advance Utility Relocations. (Consistent with recommendations 79, 83, 87, 89b, 89c, 89d, 89g, 89h, 89s, and 89t in the Best Practices Study.)
3. Create “Lessons Learned” for the establishment of a single clearinghouse in the initial scope of work for the Design Build Contractor to avoid future costly change orders. (This is consistent with recommendation 89p in the Best Practices Study.)

NEXT STEPS

The Office of Inspector General will continue reporting to the Board the results of Construction Change Order Spot Checks selected from the Program Management Major Project Status Quarterly Report. The next OIG Construction Spot Check report will be in July.

Prepared by: Suzanna Sterling, Construction Specialist Investigator, (213) 244-7368

Reviewed by: Karen Gorman, Inspector General, (213) 244-7337

Office Of Inspector General Construction Change Order Spot Check Report

Presented By

Karen Gorman
Inspector General

Construction Spot Check Program

The Metro Board directed the OIG to perform spot checks on change orders

OIG Program Description

The OIG Spot Check program focuses on approved change orders that exceed \$1 million. It includes:

- Review sampling of change orders
- Review of Program Management's Project Status Report
- Interview Project Managers, Program Controllers, and Procurement Officers
- Review project budget, specifications, any related documentation

OIG Spot Checks focus on:

- Scope of Work
- Budget
- Schedule impacts
- Making recommendations

Construction Spot Check Items

Summary of spot checks from April 2018 Program Management report

Four OIG spot checks of change orders / 4 major construction projects show:

- Negotiated amounts appear reasonable
- Some change orders processed have positive schedule impacts,
- Where there are positive schedule impacts, delay costs are saved, and
- Staff time is saved

PROJECT	NEW Delegated Process (workdays)	Former Board Approval Process (workdays)	Time Saved (workdays)
CRENSHAW/LAX	42	56	14
REGIONAL CONNECTOR	29	64	35
WESTSIDE PURPLE LINE SECT 1	18	55	37
WESTSIDE PURPLE LINE SECT 2	34	74	40

Some OIG recommendations made might avoid future change orders.

EXAMPLE

Crenshaw/LAX Transit Project

Change Activity

APPROVED MODIFICATIONS/CHANGES GREATER THAN \$500K IN THIS REPORTING PERIOD (December 1, 2017 - February 28, 2018)				
MOD/CHANGE #	DESCRIPTION	Submission Date	Approval Date	Amount
DESIGN BUILD CONTRACT C0988				
MOD-00345	Oil Water Separator at UG Stations: The sump pump discharge from the Underground Stations requires treatment to meet the City of Los Angeles Department of Public Works Bureau of Sanitation Industrial Waste Management Division discharge limits.	1/12/2018	2/8/2018	\$1,299,995
CO-00153.1	Radio System - Additional Head-end Equipment: Relocate the Uplink above ground antennas from their original proposed location at the TFS#8 site to their new location above ground at the CLAX Exposition Station. Provide all of the necessary detailed design, material, equipment, and labor for a complete installation.	2/5/2018	2/16/2018	\$862,138
CO-00176.1	Underground Station Emergency Vent: This change order is issued to clarify to WSCC and its subcontractors exactly which elements of the three (3) underground stations' emergency ventilation fan and damper work Metro believes to be impacted by the UL 2196 delisting and includes authorization to begin procurement of materials and immediate construction thereof.	2/2/2018	2/15/2018	\$800,000



Board Report

File #: 2018-0186, **File Type:** Contract

Agenda Number: 59.

REGULAR BOARD MEETING JUNE 28, 2018

SUBJECT: DIVISION 20 PORTAL WIDENING TURNBACK PROJECT

ACTION: AWARD CONTRACT

RECOMMENDATION

CONSIDER:

- A. AUTHORIZING the Chief Executive Officer to execute a 5-year cost-plus fixed fee Contract No. AE48636MC074 with DHS Consulting, Inc. to provide Construction Management Support Services for the Division 20 Portal Widening Turnback Project, in an amount not-to-exceed \$13,029,957.91;
- B. APPROVE Contract Modification Authority in the amount of \$2,605,991.82 or 20% of the not-to-exceed contract award value and authorize the CEO to execute individual Contract Modifications within the Board approved Contract Modification Authority.

ISSUE

Construction Management Support Services (CMSS) are required to assist Metro Project staff in management oversight for construction of the Division 20 Portal Widening Turnback Project. Services will be provided from final design through pre-construction activities, construction, and contract close out.

The recommended Board action will provide funding through FY24 when construction of Project must be complete and ready for the Westside Purple Line Extension Section 1 to begin revenue service.

DISCUSSION

On March 23, 2017, the Metro Board of Directors approved the award of a design contract for the Division 20 Portal Widening Turnback Project (DIV 20). The project is required to support four-minute service on the Westside Purple Line Extension (WPLE) in accordance with the project's Full Funding Grant Agreement. DIV 20 will be constructed within an active rail yard while maintaining

operations on the Red and Purple Lines. Construction activities in the yard, particularly at the portal, will need to be phased and coordinated with concurrent projects including the new Emergency Security Operations Center.

DIV 20 is a design-bid-build project. As such, it is beneficial to have additional technical reviews of the bid documents by a construction management consultant team to minimize risks to Metro during construction. The CMSS consultant will provide constructability review of the bid documents, administration, inspection services and technical support during final design, the bid period, construction, and close out phases of the project. The CMSS consultant will provide skilled individuals to assist Metro with the construction management of the project. The consultant team will reside in an integrated project field office with the construction contractor and Metro staff. The CMSS contract work scope is planned and funded on an annual basis until the Life of Project Budget is established.

DETERMINATION OF SAFETY IMPACT

Approval of this item will have no impact on safety.

FINANCIAL IMPACT

This project is funded on a fiscal year basis under Project number 865519 Division 20 Portal Widening Turnback Facility, cost center 8510, under various accounts including Professional/Technical Services and ROW acquisitions. This is a multi-year project requiring expenditure authorizations in fiscal year increments until a Board Authorized Life of Project Budget is adopted. It is the responsibility of the Project Manager and Chief Program Management Officer to budget for this project in future fiscal years.

Impact to Budget

Through FY18, the sources of funds for the recommended actions are Measure R 35% and Cap & Trade Transit and Intercity Rail Capital Program (TIRCP). FY19 funding will use similar sources as FY18. Due to the underground nature of the project work scope, Proposition A or Proposition C funds were not considered and are not included in this authorization request. There is no impact to Operations eligible funding. No other funds were considered.

ALTERNATIVES CONSIDERED

The Board could direct Metro staff to perform construction management tasks with current in-house resources. This alternative would require Metro to divert resources from on-going projects and/or hire multiple full time personnel that are not immediately available or funded.

NEXT STEPS

After Board approval of the recommended action, staff will complete the process to award and execute Contract No. AE48636MC074.

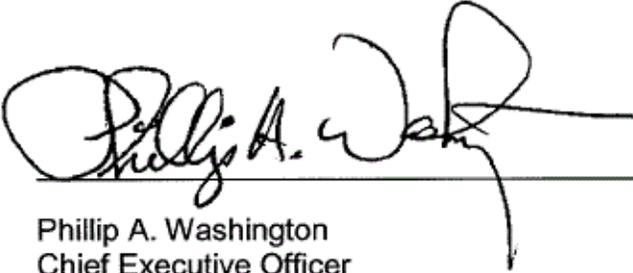
ATTACHMENTS

Attachment A - Procurement Summary

Attachment B - DEOD Summary

Prepared by: Rick Meade, Sr. Executive Officer, Transit Project Delivery (213) 922-7917
Bruce Warrensford, Sr. Director, Contract Administration (213) 922-27338

Reviewed by: Richard Clarke, Chief Program Management Officer (213) 922-7557
Debra Avila, Chief Vendor/Contract Management Officer (213) 418-3051



Phillip A. Washington
Chief Executive Officer

PROCUREMENT SUMMARY

DIVISION 20 PORTAL WIDENING TURNBACK CMSS / AE48636MC074

1.	Contract Number: AE48636MC074	
2.	Recommended Vendor: DHS Consulting, Inc.	
3.	Type of Procurement (check one): <input type="checkbox"/> IFB <input type="checkbox"/> RFP <input checked="" type="checkbox"/> RFP-A&E <input type="checkbox"/> Non-Competitive <input type="checkbox"/> Modification <input type="checkbox"/> Task Order	
4.	Procurement Dates:	
	A. Issued: December 7, 2017	
	B. Advertised/Publicized: December 6, 2017	
	C. Pre-Proposal Conference: December 19, 2017	
	D. Proposals Due: January 24, 2018	
	E. Pre-Qualification Completed: April 4, 2018	
	F. Conflict of Interest Form Submitted to Ethics: April 9, 2018	
	G. Protest Period End Date: May 19, 2018	
5.	Solicitations Picked up/Downloaded: 25	Proposals Received: 7
6.	Contract Administrator: Diana Dai-Tsang	Telephone Number: 213.418.3310
7.	Project Manager: June Susilo	Telephone Number: 213.922.5232

A. Procurement Background

This Board Action is to approve Contract No. AE48636MC074 issued in support of Division 20 Portal Widening Turnback project. The scope of work for the Construction Management Support Services (CMSS) consultant consists of resident engineering, inspection services, project controls, and other construction management administrative support services as required. The consultant's team shall become part of a fully integrated construction management team working with Metro in the project field office pursuant to the annual work plan, under the direction of Metro. Board approval of contract awards are subject to resolution of any properly submitted protest.

The Request for Proposal (RFP) was issued in accordance with Metro's Procurement Policies and Procedures, and California Government Code §4525-4529.5 for Architectural and Engineering (A&E) services to select the most qualified firm. The contract type is a Cost Plus Fixed Fee (CPFF) and will be a multi-year contract with a term of six years.

Two amendments were issued during the solicitation phase of this RFP:

- Amendment No. 1, issued on December 22, 2017, clarified the proposal due date and submittal requirements;
- Amendment No. 2, issued on January 8, 2018, clarified the proposal due date, Statement of Work and submittal requirements;

A total of seven proposals were received on January 24, 2018.

B. Evaluation of Proposals

A Proposal Evaluation Team (PET) consisting of staff from Metro's Construction Management Department was convened and conducted a comprehensive evaluation of the proposals received.

The proposals were evaluated based on the following evaluation criteria and associated weightings:

- Experience and Qualifications of the Firms on the Team (35%)
- Skill and Experience of Project Personnel (30%)
- Project Understanding and Approach (35%)

The evaluation criteria are appropriate and consistent with criteria developed for other, similar A&E procurements. Several factors, in order of their relative degree of important, were considered when developing the weightings. Since this is an A&E, qualifications based on procurement to select the most qualified firm, price could not and cannot be used as an evaluation factor pursuant to the state and federal law.

Seven proposals were received from the following firms listed below in alphabetical order:

1. AECOM
2. Arts District Railworks, a Joint Venture (ADR) – (Ramos Consulting Services; Arcadis; Destination Enterprise, Inc.)
3. C2PM
4. DHS Consulting, Inc.
5. Hill Morgner Alliance Group, a Joint Venture – (Hill International; Morgner Construction Management Corp.; The Alliance Group Enterprise, Inc.)
6. PreScience Corporation
7. RailPros, Inc.

During the month of February 2018, the PET team reviewed seven written qualification proposals. Metro met with four proposers for oral presentations on February 28, 2018. The four firms were given the opportunity to present on understandings and approach to CMSS for this project; and skills, qualifications and experience of the management team.

The proposing firms had the opportunity to present their proposed project managers, resident engineer and some of their key members, as well as respond to the PET's questions. In general, each proposer's presentation addressed the requirements of the RFP, experience with all aspects of the required and anticipated tasks, and stressed each proposer's commitment to the success of the project. Each proposing team was asked questions relative to each firm's previous experience performing

work of a similar nature to the Scope of Work presented in the RFP. Sealed cost proposals were received at the time of oral presentations.

After the recommendation of the most qualified proposer was approved by the Executive Officer, Vendor/Contract Management (V/CM), the recommended most qualified proposer's cost proposal was opened. V/CM completed its cost analysis and engaged in negotiations with the recommended proposer.

Qualifications Summary of Recommended Firm:

The final scoring was based on evaluation of the written proposals as supported by oral presentations and clarifications received from the Proposers. The PET ranked the proposals and assessed major strengths, weaknesses and associated risks of each of the Proposers to determine the most qualified firm. The results of the final scoring are shown below:

1	Firm	Average Score	Factor Weight	Weighted Average Score	Rank
2	DHS Consulting				
3	Experience and Qualifications of Firms on the Team	90.48	35%	31.67	
4	Skill and Experience of Project Personnel	96.66	30%	29.00	
5	Project Understanding and Approach	90.48	35%	31.67	
7	Total		100%	92.34	1
8	RailPro				
9	Experience and Qualifications of Firms on the Team	87.63	35%	30.67	
10	Skill and Experience of Project Personnel	77.23	30%	23.17	
11	Project Understanding and Approach	95.23	35%	33.33	
13	Total		100%	87.17	2
14	Arts District Railworks				
15	Experience and Qualifications of Firms on the Team	83.80	35%	29.33	
16	Skill and Experience of Project Personnel	86.66	30%	26.00	
17	Project Understanding and Approach	90.48	35%	31.67	
19	Total		100%	87.00	3
20	AECOM				
21	Experience and Qualifications of Firms on the Team	80.00	35%	28.00	

22	Skill and Experience of Project Personnel	80.00	30%	24.00	
23	Project Understanding and Approach	81.91	35%	28.67	
25	Total		100%	80.67	4

All Scores rounded to the second decimal.

The evaluation performed by the PET determined DHS Consulting Inc. as the most qualified firm to provide Construction Management Support Services, as provided in the RFP Scope of Services. DHS Consulting Inc. demonstrated, through their written proposal and oral presentation, that their team has excellent and extensive technical experience managing construction projects required for this Contract. DHS Consulting, Inc. also demonstrated an exceptional, thorough and comprehensive understanding of the project requirements. The team is highly experienced in similar projects and very familiar with the project context, potential issues and mitigations, which are critical to the project's success.

Members of the team providing services to Metro under other contracts may not be eligible to perform certain tasks under this Contract, if their performance would result in a conflict in accordance with Metro's Organizational Conflict of Interest policy.

C. Cost/Price Analysis

The recommended amount has been determined to be fair and reasonable based upon a cost analysis, performed in accordance with Metro procurement policies and procedures, of labor rates, indirect rates and other direct costs. The analysis included, among other things, an independent cost estimate, a comparison with similar firms, an analysis of rates and factors for labor, and other direct costs upon which the consultant will base its billings. In order to prevent any unnecessary delay in contract award, Metro negotiated and established provisional indirect (overhead) rates, plus a fixed fee based on the total estimated cost during the contract term to compensate the consultant.

Audits will be completed, where required, for those firms without a current applicable audit of their indirect cost rates and exclusion of unallowable costs, in accordance with Federal Acquisition Regulations (FAR Part 31). In accordance with FTA Circular 4220.1.f, when an audit has been performed by any other cognizant agency within the last twelve month period, Metro will receive and accept that audit report for the above purposes rather than perform another audit.

Proposer Name	Proposal Amount	Metro ICE	Negotiated or NTE amount
DHS Consulting Inc.	\$11,006,287.88	\$10,060,293.00	\$13,029957.91 *

*Level of effort for this Contract was revised based on the Scope of Work (SOW) requirements resulting in the increase from the original proposal amount and ICE.

D. Background on Recommended Contractor

The recommended firm, DHS Consulting Inc., a certified DBE Program/Construction Management focused firm, has grown from three to 80 employees over the last five years. DHS has provided program/construction management services to Metro over each of the past five years on the Regional Connectors Project and recently on the Information Technology Project Management Support Services as a prime consultant. Their experience extends to other large projects and clients in California including California High Speed Rail, SANDAG, San Diego MTS trolley, San Bernardino County Transportation Authority, Caltrans, Southern California Edison, Counties and Cities in Southern California.

4.	Ghirardelli Associates, Inc.	Construction Management Support Services	541330 - Engineering Services 541611 - Administrative Management and General Management Consulting 541690 - Other Scientific and Technical Consulting Services	Caucasian Female	3.38%
5.	NSI Engineering, Inc.	Quality Management Services	541611 - Administrative Management and General Management Consulting 541614 - Process, Physical Distribution, and Logistics Consulting Services 541618 - Other Management Consulting Services	Caucasian Female	2.68%
Total Commitment					53.81%

B. Prevailing Wage Applicability

Prevailing Wage requirements are applicable to this project. DEOD will monitor contractors' compliance with the State of California Department of Industrial Relations (DIR), California Labor Code, and, if federally funded, the U S Department of Labor (DOL) Davis Bacon and Related Acts (DBRA). Trades that may be covered include: surveying, potholing, field, soils and materials testing, building construction inspection, construction management and other support trades.

C. Living Wage Service Contract Worker Retention Policy Applicability

Living Wage Service Contract Worker Retention is not applicable to this contract.

D. Project Labor Agreement/Construction Careers Policy

Project Labor Agreement/Construction Careers Policy is not applicable to this contract.

The CMSS is a professional service contract, therefore PLA/CCP is not applicable. Metro's PLA/CCP is with the Los Angeles/Orange Counties Building and Construction Trades Council and is enforceable on construction contracts in value of \$2.5M and above.