

# **Fiscal Year 2017 Program Management Annual Program Evaluation (APE)**



# Presentation Overview

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- APE Purpose and Process
- Metro Capital Program Status
- Metro Capital Program Cost
- Adjustments for FY2017 APE
- Summary
- Next Steps



# APE Purpose

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- Annual evaluation of Metro's capital program
- Reporting to the Board any project budget and schedule changes, and reasons for the changes
- A project management tool bringing greater consistency, transparency, and discipline
- Facilitates financial planning



# APE Process

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- A review of project costs and schedule
- Update project capital cost estimates to current conditions, including price trends and changes
- Focus on budget to complete current project phase/milestone
- Include APE results in future fiscal year annual budget review and adoption by the Board

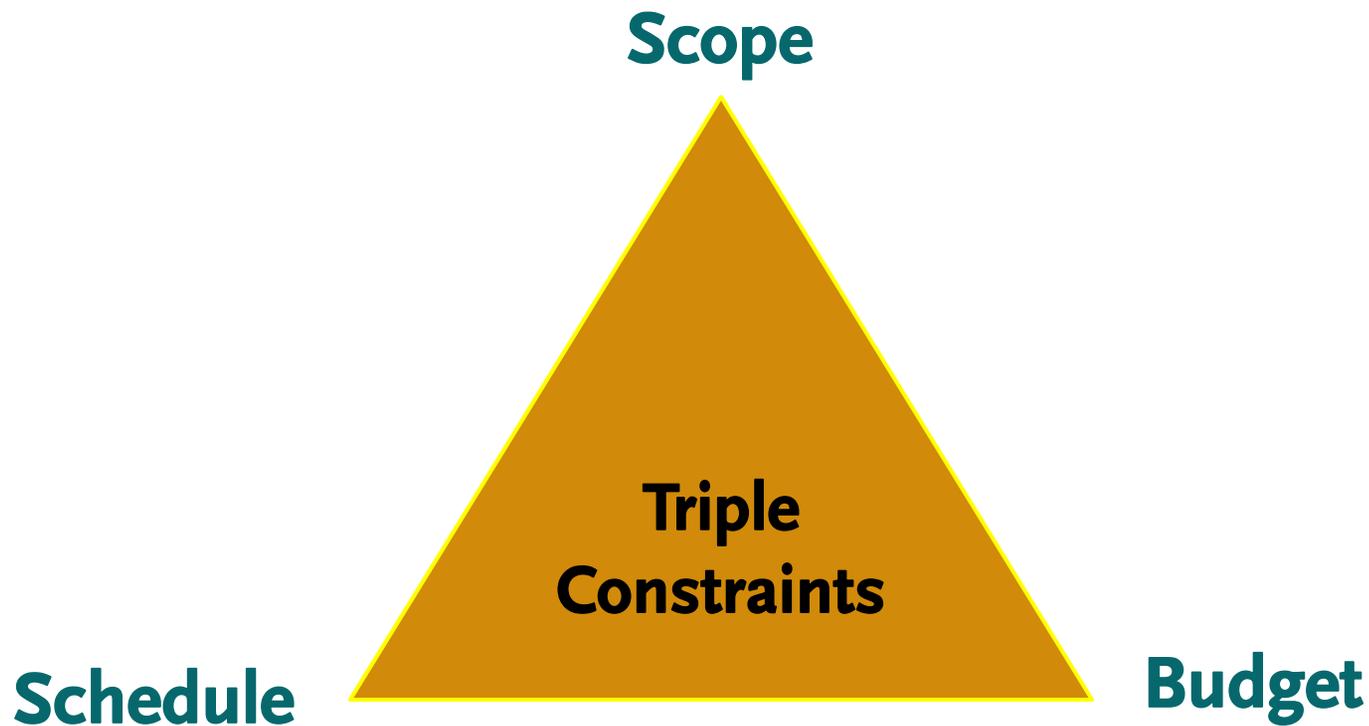


# Project Management

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One side of the triangle cannot be changed without affecting the others:



# FY17 APE Scope

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- Focus on 61 capital projects with total project cost greater than \$5M being managed by Program Management:
  - Major Transit Construction Projects – 5 projects
  - Other Transit Capital Projects – 24 projects
  - Regional Rail Projects – 7 projects
  - Highway Program – 25 projects
- Project budgets in the APE focus on authorized funding project amount



## FY17 APE Scope

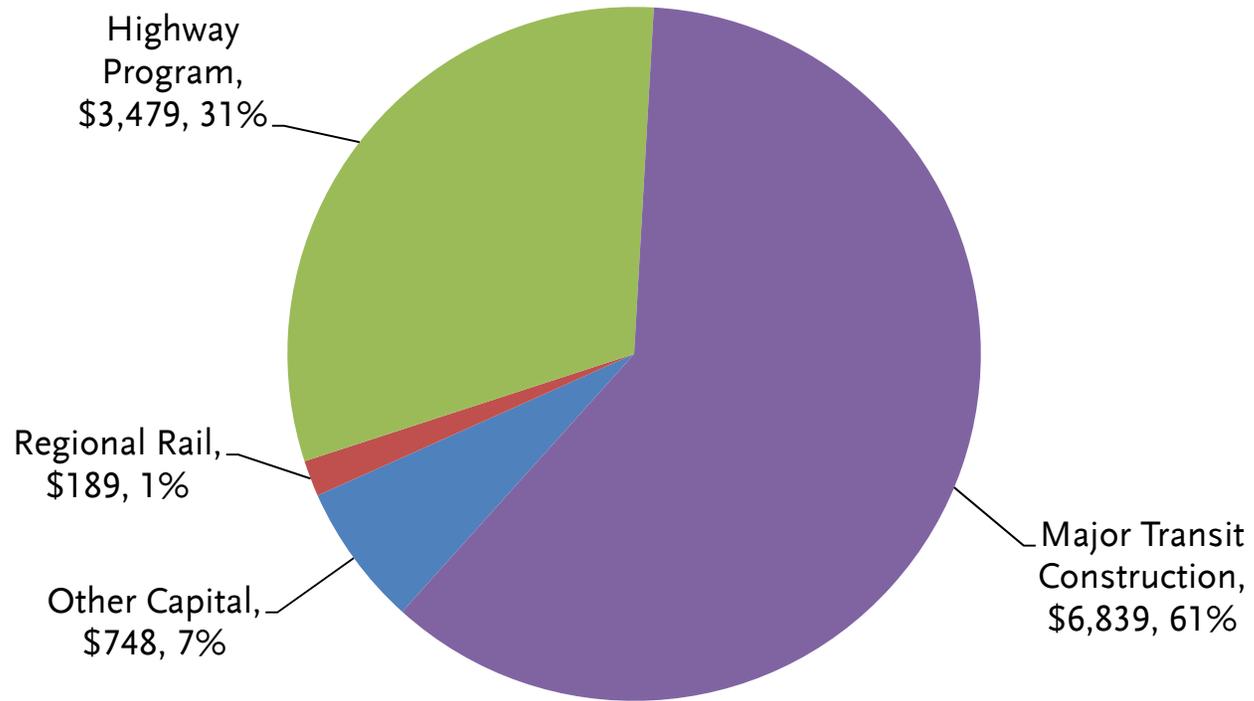
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- In addition to the projects in APE, Program Management also manages/oversees an additional 100+ projects
- In total, Program Management manages a volume of 160+ projects with a total authorized value at approximately \$12B
- Approximately \$11B projects are included in the FY17 APE review



# FY17 APE Current Program: \$11 B

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# Metro Transit Program



# Metro Transit Capital Projects

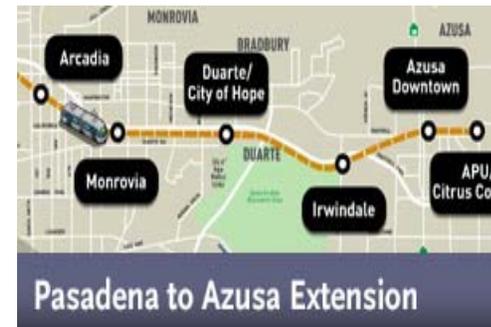
| Type                                 | Project Budget | # of Projects |
|--------------------------------------|----------------|---------------|
| Major Transit Construction           | \$6,839        | 5             |
| Other Transit Capital                | \$748          | 24            |
| Rail Facilities Improvements         | \$229          | 6             |
| Bus Facilities Improvements          | \$218          | 10            |
| Wayside System                       | \$124          | 2             |
| Security/Safety                      | \$124          | 2             |
| Misc. Capital Projects               | \$53           | 4             |
| <b>Total Transit Capital Program</b> | <b>\$7,587</b> | <b>29</b>     |



# Metro Transit Capital Program Status

## 6 Projects Completed in FY2016

- Metro Blue Line Station Enhancements Project – December 2015
- Division 13 Bus Operation & Maintenance Facility – January 2016
- Metro Rail Security Kiosks – March 2016
- Metro Gold Line Foothill Extension – March 2016
- Metro Red Line Universal City Pedestrian Bridge – April 2016
- Exposition Blvd Light Rail Transit Phase 2 – May 2016



# Metro Transit Capital Program Status Con't

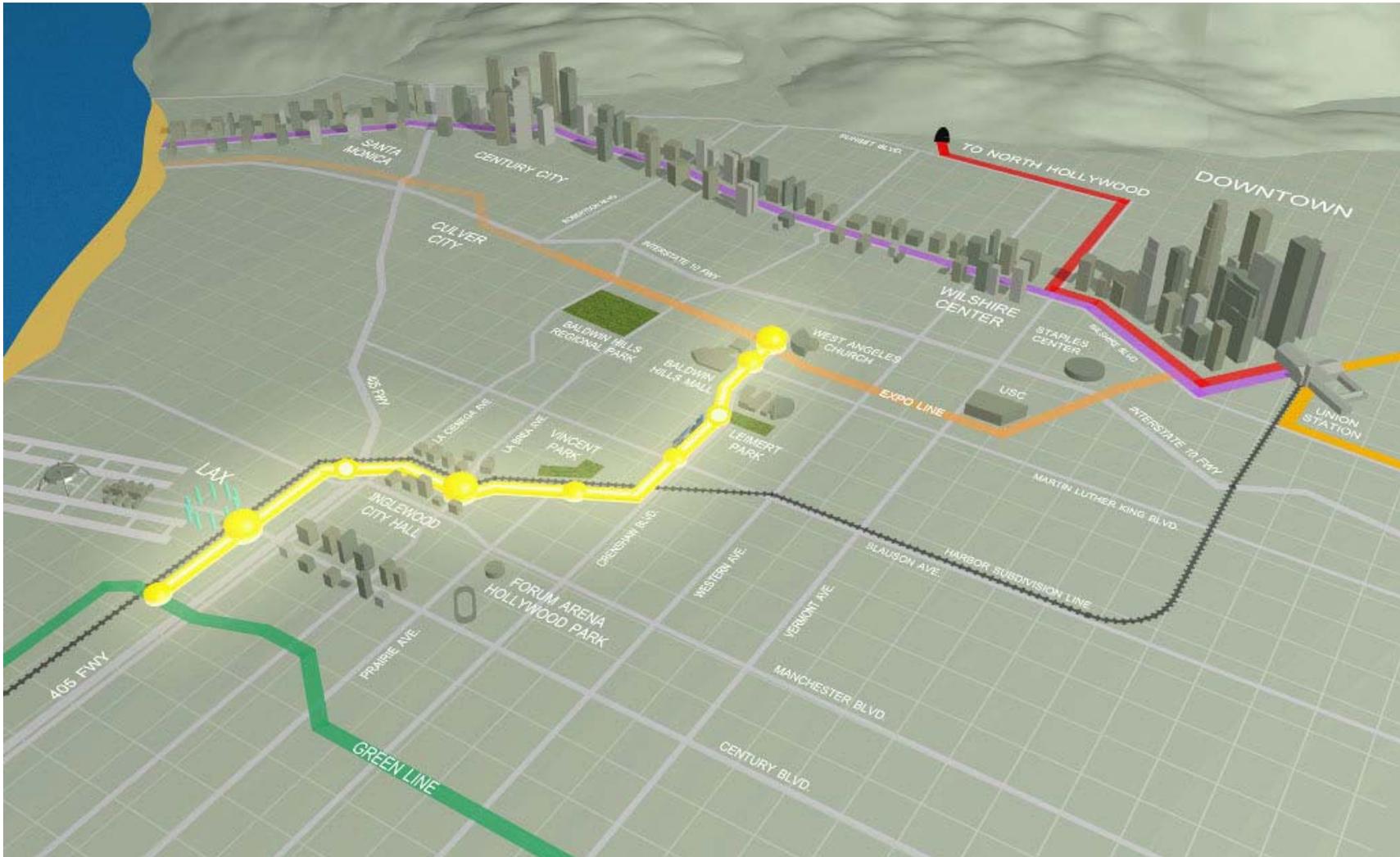
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## 4 Projects Planned to Be Completed in FY17

- Metro Red Line to Orange Line Underpass at North Hollywood Station – July 2016
- Division 3 Master Plan Phase II-IV – June 2017
- Fuel Storage Tank System Enhancements (FY15 - FY17) – June 2017
- Bus Facility Maintenance Improvements & Enhancements Phase I – June 2017



# Crenshaw/LAX Transit Project



# Crenshaw/LAX Transit Project

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Project Budget: \$2,058M

Project Completion: October 2019

% Project Complete: 52%

## Accomplishments:

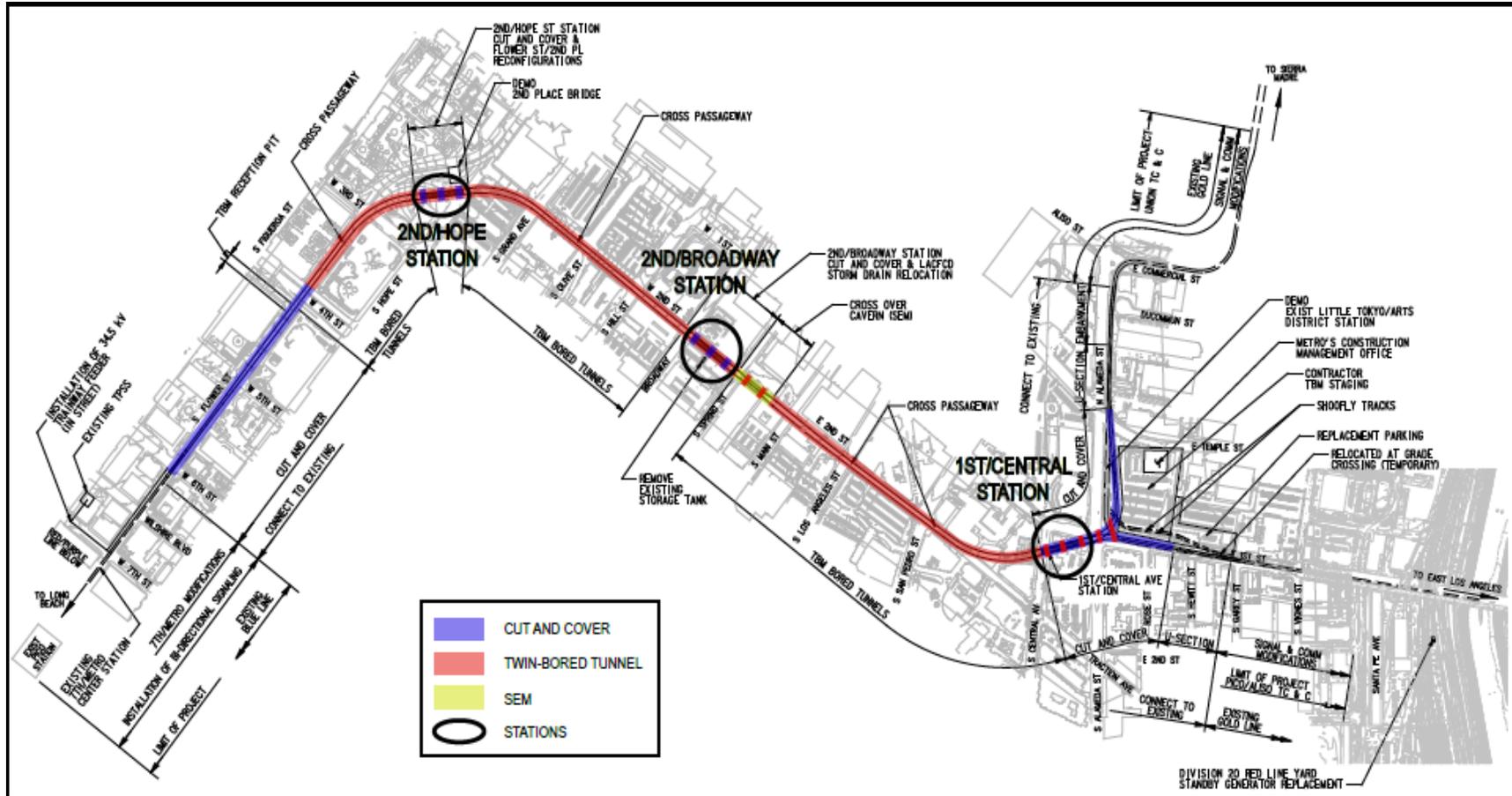
- Project at halfway mark
- Final design of base work is complete with only design continuing for change work
- Critical tunneling work commenced in late April and has entered the MLK Expo/Crenshaw Station site

## Challenges / Risks:

- Track alignment changes to incorporate accommodations to not preclude a future LRT station at 96<sup>th</sup> Street results in changes to base scope, budget, and schedule
- Contractor's ability to meet the tunneling productivity level
- Timely resolution of merit and quantum for valid contractor claims
- Submittal and approval of a revised contractor's baseline schedule
- Resolution of potential betterments being considered by the City of LA
- Continuous efforts to meet community expectations



# Regional Connector Transit Project



# Regional Connector Transit Project

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**Project Budget: \$1,551.8 M**

\*Excludes planning and finance costs

**Project Completion: July 2021**

**% Project Complete: 23%**

## Accomplishments:

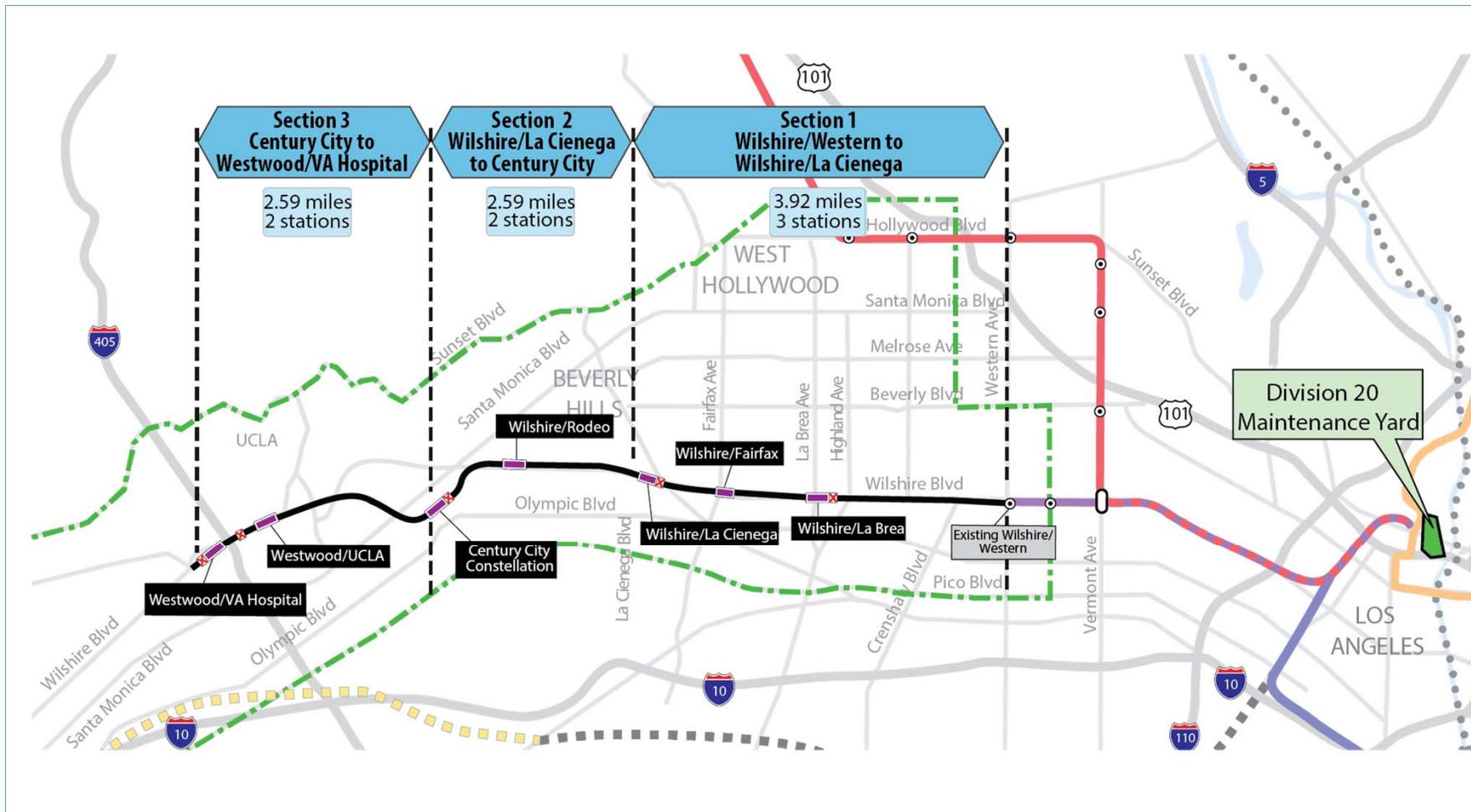
- 1<sup>st</sup>/Alameda Shoofly work completed on schedule
- 1<sup>st</sup>/Central Station Box fully excavated; permanent works now underway

## Challenges/Risks:

- Obtaining continued City of LA support for, and approval of, the necessary traffic control and extended work hour permits to effectively work in a dense urban setting
- Continue to redefine schedule options to the extent possible as a result of early experienced delays due to utility relocation issues
- Conclusion of contractor negotiations on schedule recovery measures related to delayed utility relocations
- Safely prosecute underground construction across Alameda Street to facilitate placement, and launching of tunnel boring machine (TBM) and the timely excavation of the related TBM recovery shaft on Flower Street
- Defining current and projected cost trends into a revised cost at completion forecast; seek budget adjustments accordingly. This action is expected to be guided upon completion of FTA risk assessments



# Westside Purple Line Extension Project



# Westside Purple Line Extension Section 1

**Project Budget: \$2,778.9M**

(Excludes finance costs)

**Project Completion: November 2023**

**% Project Complete: 12%**

## Accomplishments:

### FY16

- Awarded and Issued NTP for Design-Build Contract of Division 20 Maintenance-of-Way and Non-Revenue Vehicle Building 61S.
- AUR Contract Wilshire/Fairfax achieved substantial completion, ahead of schedule and within budget (second of three AUR contracts to have been completed).
- Completed all environmental property abatement/remediation along the Project alignment and gave access to all properties to the Tunnels, Stations, Trackwork, Systems and Testing Contractor.
- The planned 22-weekend closures began on June 10, 2016 for the installation of deck beams and concrete deck panels prior to the Wilshire/La Brea Station excavation under the temporary street decking.

### FY17

- Complete final design on Division 20 Maintenance-of-Way and Non-Revenue Vehicle Building 61S and Westside Purple Line Extension Section 1 Design-Build contracts
- Wilshire/La Brea and Wilshire/Fairfax Stations installation of deck beams and concrete deck panels are planned to be completed. Wilshire/Fairfax Station excavation is planned to begin and Wilshire/La Brea Station excavation will near completion
- Site preparation work and construction mobilization activities have begun at the Wilshire/La Cienega Station. Installation of station piles are planned to begin and will near completion
- AUR Contract Wilshire/La Cienega is planned to achieve substantial completion, ahead of schedule and within budget (last of the three AUR contracts to complete)



# Westside Purple Line Extension Section 2

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Approved Budget through FY17: \$ 358.5 M

Project Completion: August 2025

Working Project Estimate: \$ 2,410.5 M

(Excludes planning and finance costs)

## Accomplishments:

- Received Proposals for Contract Management Support Services (CMSS) contract in April 2016, currently under evaluation, award anticipated October 2016
- Received Proposals for Design-Build contract in June 2016, currently under evaluation, award anticipated January 2017
- Began design of advanced relocation of utilities
- Construction of the telecom joint trench at Century City Constellation has begun
- Real Estate certifications and acquisitions are underway
- In August 2016, U.S. District Court issued final remedy ruling in the NEPA lawsuits brought by Beverly Hills. The judge declined to vacate FTA's approval of the project; FTA can execute an FFGA with Metro for the project. The judge is requiring that FTA prepare a Supplemental Environmental Impact Statement (FFGA), which Metro is preparing with FTA's guidance for completion in Spring 2017

## Challenges/Risks:

- Receive a FFGA and a Transportation Infrastructure Finance and Innovation Act (TIFIA) Loan



# Westside Purple Line Extension Section 3

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Projected Budget through FY17: \$51.5M  
Working Project Estimate: TBD

Project Completion: TBD

## Accomplishment:

- Advanced preliminary engineering and design of advanced relocation of utilities to advance the project delivery under Operation Shovel Ready Program of Projects

## Challenge/Risk:

- Project funding commitment



# Patsaouras Plaza Busway Station

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Project Budget: \$ 39.7 M

Project Completion: December 2017

## Accomplishments:

- Completed final design

## Challenges/Risks:

- Maintain Third Party cooperation review/approval, including Caltrans, to be consistent with project schedule
- DWP vault and conduit relocation
- Utility relocation must be completed by August 2016 to avoid conflicts with foundation construction
- Budget impacts due to design changes or unforeseen underground conditions



# Metro Blue Line Signal Rehabilitation Project

Project Budget: \$ 93.6 M      Project Completion: August 2020

## Accomplishments:

- Solicitation released in March 2016, design-build proposals due October 2016
- Secured additional funding from State Cap & Trade Transit and Intercity Rail Capital Program (TIRCP) for \$38.5 million

## Challenges/Risks:

- Track allocations coordination with other projects/maintenance on Metro Blue Line
- Existing aged ductbank/conduits may require replacement
- Additional right-of-way needed for new Slauson Interlocking bungalow near 51<sup>st</sup> Street
- Meet December 2016 Cap & Trade deadline for funding
- Receiving technically acceptable competitive proposals



New train control



Project adds 6 Crossovers



# Metro Red Line to Metro Orange Line North Hollywood Station West Entrance

Project Budget      \$ 23M

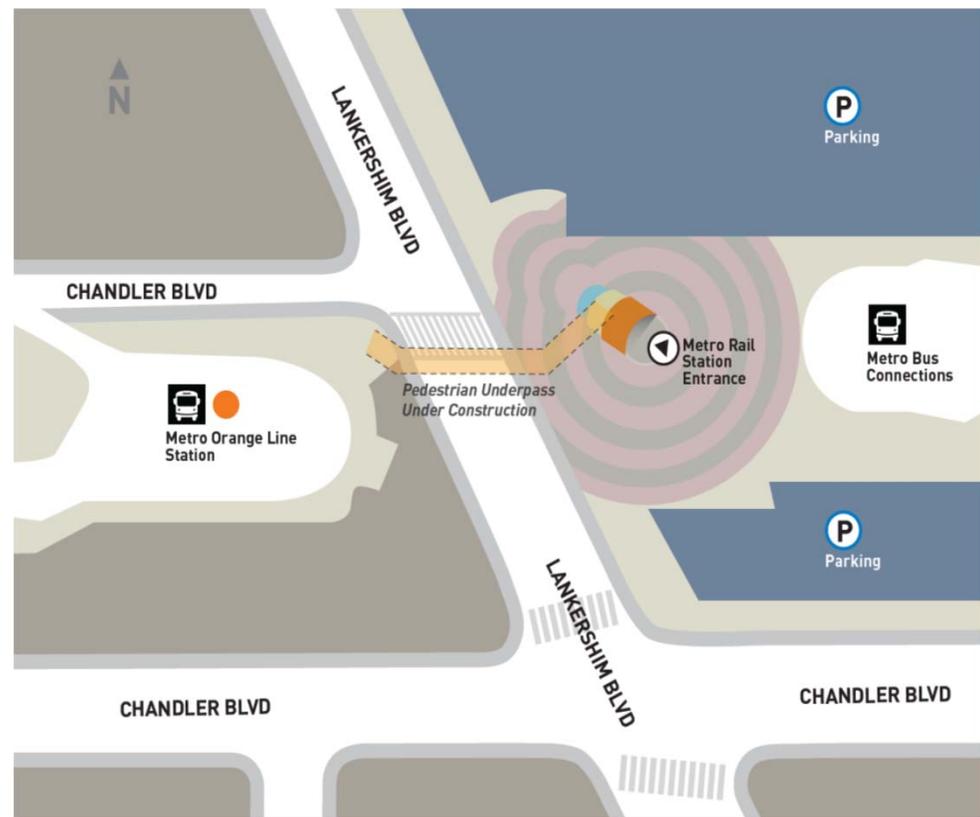
Project Completion: August 2016

## Accomplishment:

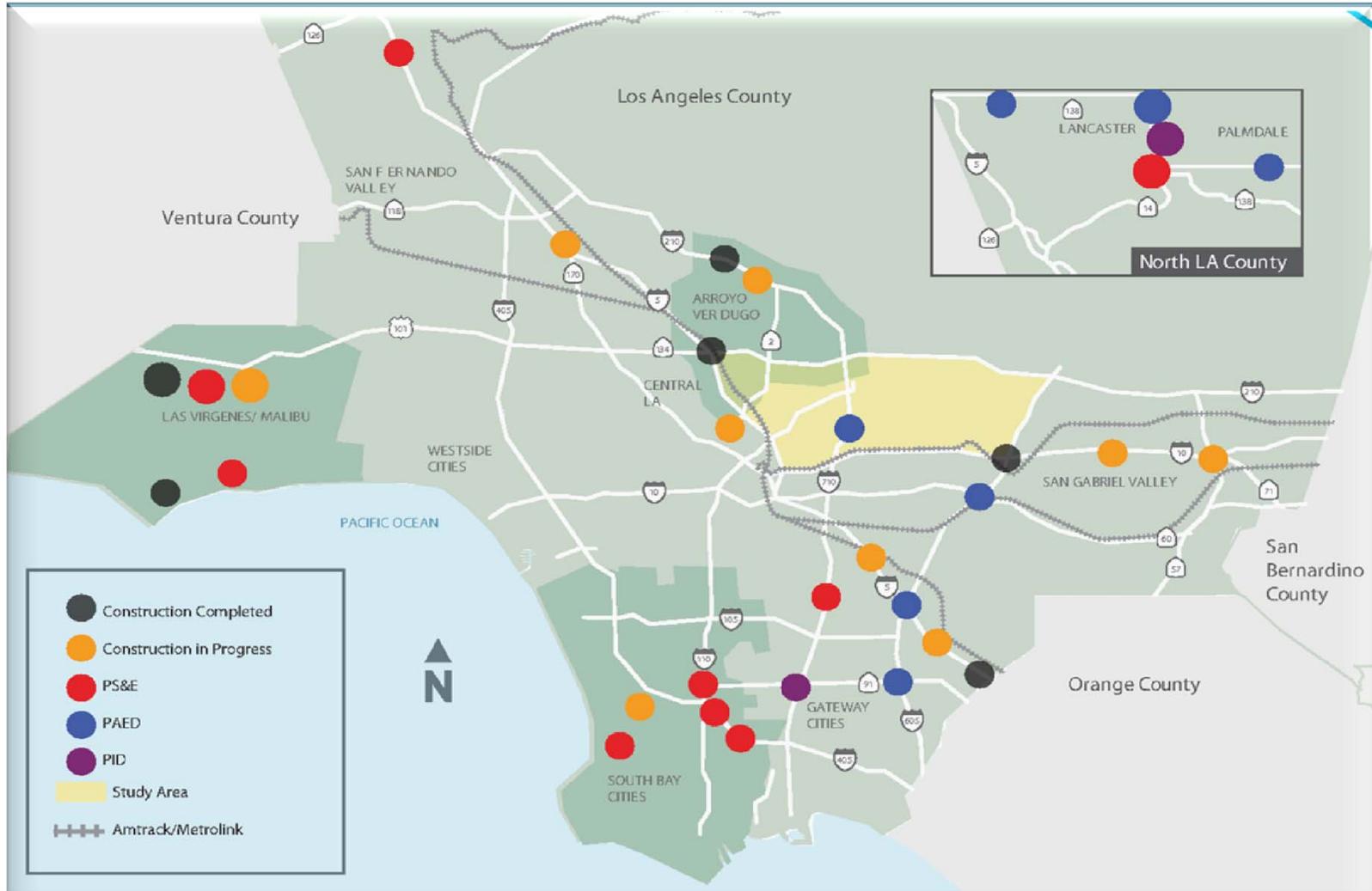
- Project substantial completion in August 2016

## Challenge:

- Timely contract close-out



# Highway Program





# Highway Program Status Summary (Measure R Funded)

| #  | Project  | Current Phase | Estimated Cost of Current Phase (\$mil.) | Phase Completion |
|----|--|---------------|--|------------------|
| 1  | I-5 South - Alondra  | Construction  | \$114.07                                 | Completed        |
| 2  | I-5 South – Valley View Interchange                        | Construction  | \$631.12                                 | Feb 2020         |
| 3  | I-5 South – Shoemaker, Rosecrans, Bloomfield               | Construction  | \$188.22                                 | Aug 2017         |
| 4  | I-5 South – San Antonio, Imperial Hwy and Orr Day          | Construction  | \$323.29                                 | May 2018         |
| 5  | I-5 South – Florence                                       | Construction  | \$211.67                                 | Sep 2019         |
| 6  | I-5 South - Carmenita Interchange                          | Construction  | \$419.88                                 | Dec 2018         |
| 7  | I-5 North - HOV from SR 118 to SR 170                      | Construction  | \$219.49                                 | Completed        |
| 8  | I-5 North - HOV from SR 170 to North of Buena Vista        | Construction  | \$94.72                                  | Completed        |
| 9  | I-5 North – North of Buena Vista to South of Magnolia Blvd | Construction  | \$402.38                                 | Jan 2020         |
| 10 | I-5 North - Magnolia Blvd to SR 134                        | Construction  | \$137.37                                 | Dec 2018         |



# Highway Program Status Summary (Measure R Funded)

| #   | Project   | Current Phase  | Estimated Cost of Current Phase (\$mil.) | Phase Completion |
|---|---|--|--|------------------|
| 11  | I-5 North HOV Project SR 14 to Parker Road                              | Plan, Specification & Estimate (PS&E)                        | \$31.0                                   | Jul 2018         |
| 12  | Interstate 605 Corridor Hot Spots – I-605/I-5 Interchange Improvement   | Project Approval / Environmental Document (PAED)             | \$20.84                                  | Mar 2019         |
| 13  | Interstate 605 Corridor Hot Spots – I-605/SR 60 Interchange Improvement | PAED   | \$30.0                                   | Feb 2020         |
| 14  | Interstate 605 Corridor Hot Spots – I-605/SR 91 Interchange Improvement | PAED   | \$7.8                                    | May 2019         |
| 15  | Interstate 605 Corridor Hot Spots – I-710/SR 91 Interchange Improvement | Project Study Report / Project Development Support (PSR/PDS) | \$2.6                                    | June 2017        |
| 16  | Interstate 405 Crenshaw Blvd On and Off Ramp Improvements               | PS&E   | \$10.3                                   | Aug 2016         |
| 17  | Interstate 405 and I-110 Aux Lane from SR 91 to Torrance Blvd           | PS&E   | \$9.0                                    | Jul 2017         |
| 18  | SR 138 I-5 to SR 14   | PAED   | \$25.0                                   | Apr 2017         |
| 19  | I-710 South   | PAED   | \$91.0                                   | Sep 2018         |
| 20  | I-710 South Early Action Projects - Soundwall Projects (3 locations)    | PS&E   | \$12.7                                   | Nov 2017         |
| <b>Subtotal Measure R Highway Project</b> |   |  | <b>\$2,982.45</b>                        |                  |



# Highway Program Status Summary (Non-Measure R Funded)

| #   | Project   | Current Phase | Estimated Cost of Current Phase (\$mil.) | Phase Completion |
|---|---|---------------|--|------------------|
| 21  | I-10 HOV from Citrus Avenue to SR 57  | Construction  | \$264.4                                  | Nov 2021         |
| 22  | I-10 HOV from Puente Avenue to Citrus Avenue  | Construction  | \$195.6                                  | Apr 2019         |
| 23  | SR 57 and SR 60 Mixed Flow Interchange **<br>(Eastbound and Westbound flyover off-ramp to Grand Ave, Eastbound on-ramp SR-60) | PS&E          | \$13.0*                                  | Dec 2019         |
| 24  | SR 71: Interstate 10 to Mission Blvd **   | PS&E          | \$11.0*                                  | Nov 2026         |
| 25  | SR 71: Mission Blvd to Rio Rancho Road **   | PS&E          | \$13.0*                                  | Dec 2019         |
| <b>Subtotal Non-Measure R Funded Highway Projects</b> |   |               | <b>\$497</b>                             |                  |
| <b>Total Highway Program</b>                          |   |               | <b>\$3,479.45</b>                        |                  |

\* Initial Budget Estimate is through completion of Design

\*\* These are projects with completed PAED and in Approved 2009 LRTP and 2014 SRTP



# I-605 “Hot Spots”

Approved budget: \$61.24 M

Estimated Cost to Complete Phase: \$61.24 M

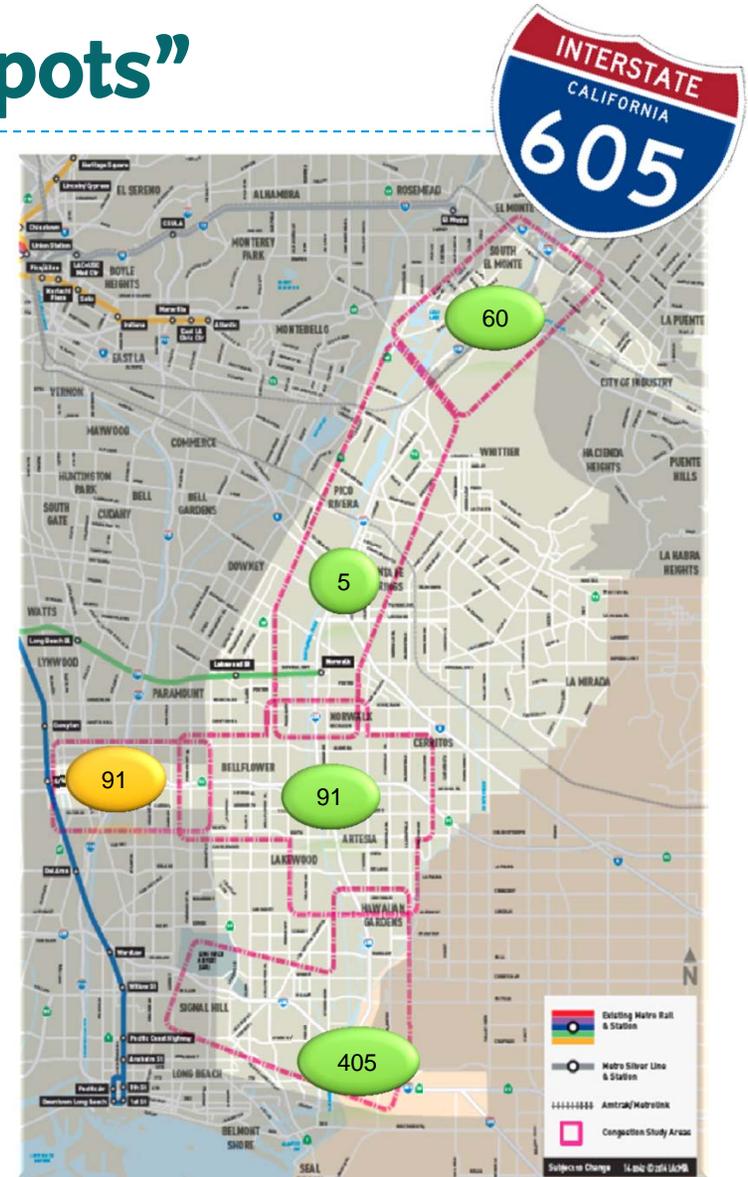
## Accomplishments:

- Aggressive contract starts:
  - 605/5 PAED awarded December 2015
  - 710/91 PSR-PDS awarded December 2015
  - 605/91 PAED awarded May 2016
  - 605/60 PAED awarded June 2016
- Effective coordination of all contracts

## Challenges/Risks:

- Funding to advance projects to design and construction
- Strategy to resolve: Considering breaking down the mega projects to smaller fundable projects with independent utility and sustainability

Note: Project costs, schedules, milestones, and delivery plans are on project-by-project basis.



# I-710 South

Approved Budget: \$91.0 million

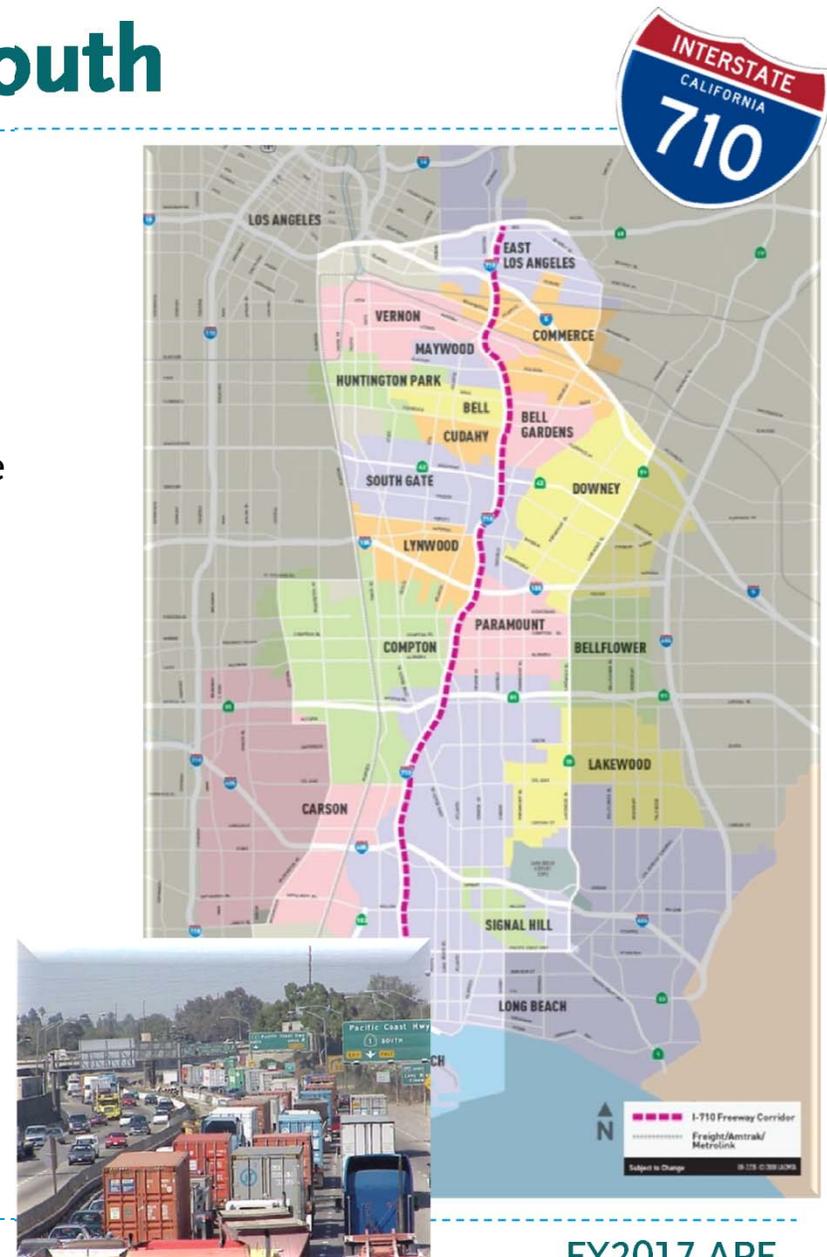
Estimated Cost to Complete Phase: \$91.0 mil

## Accomplishments:

- On schedule
- Conducting additional studies as directed by the Board
- Strong collaborative work with the local agencies, communities, and Metro Board members in addressing community concerns
- Pursuing early action projects during the development of the corridor environmental documents

## Challenges/Risks:

- Funding to pursue design and construction of the proposed improvements
- Strategy to resolve: Pursuing implementation of early action projects with independent utility and sustainability.



# I-5 North HOV: SR 14 to Parker Road



Approved Budget: \$31.4 M  
Estimated Cost to Complete Design: \$31 M

## Accomplishments:

- Award of consultant services contract in May 2016 to complete final design
- Agreement with the consultant to complete final design in 30 months

## Challenges/Risks:

- Funding for construction
- Coordination with Caltrans pavement rehabilitation project.



I-5 Corridor  
Construction  
Projects Managed  
by Caltrans





# I-5 South: Orange County Line to I-605



Project Managed by Caltrans :

- Approved budget: \$1,888.25 M
- Estimated Cost to Complete Construction: TBD

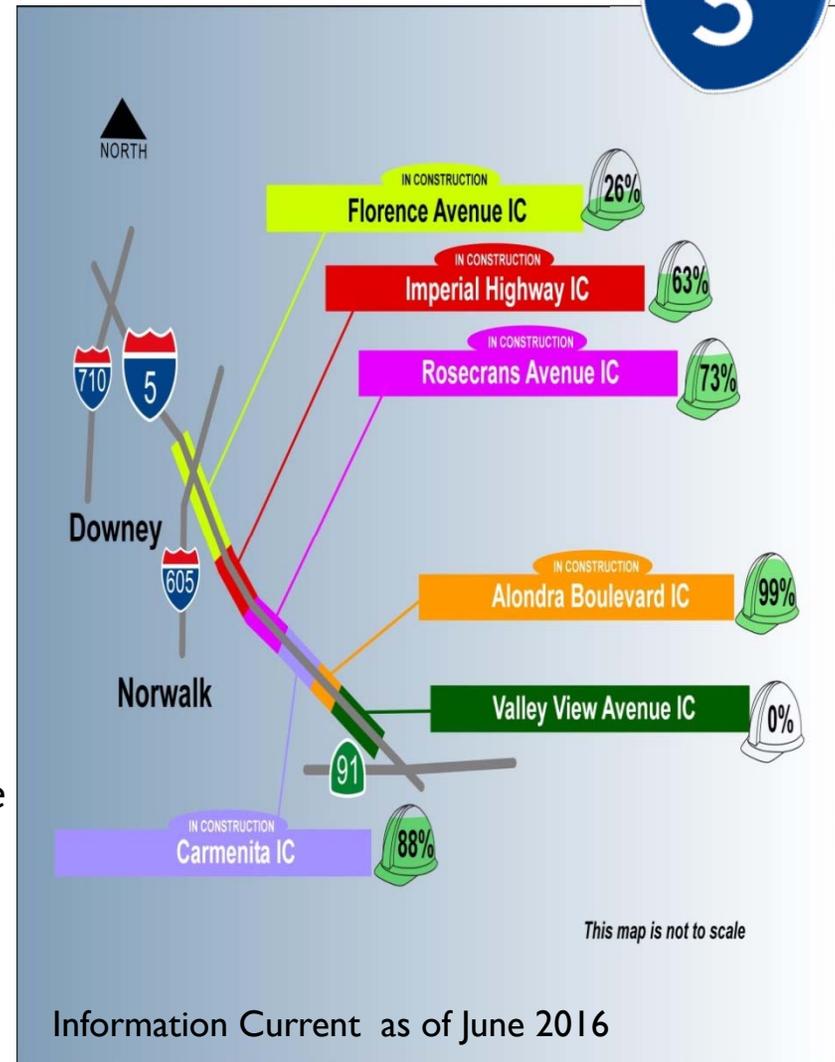
## Accomplishments:

Effective coordination of all contracts:

- Alondra Blvd – Completed and Open to traffic
- Valley View Avenue – Construction begin summer 2016
- Rosecrans Avenue – Construction in progress
- Imperial Highway – Construction in progress
- Florence Avenue – Construction in progress
- Carmenita Interchange – Construction in progress

## Challenges/Risks:

- Extensive utility and ROW relocation
- Different soil condition encountered on site for the piles
- Railroad work
- Working proactively with Caltrans to manage contingency





# I-5 North: SR 118 to SR 134



## Project Managed by Caltrans :

- Approved budget: \$853.96 M
- Estimated Cost to Complete Construction: TBD

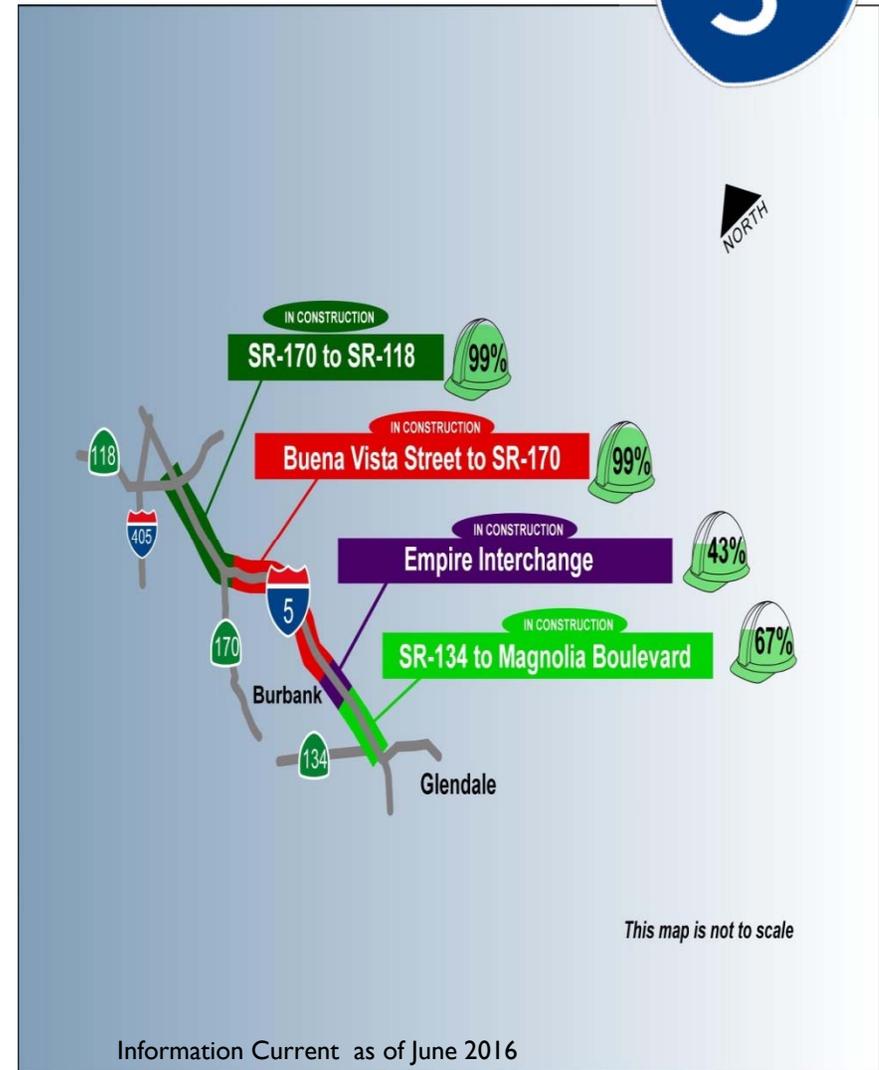
## Accomplishments:

### Effective coordination of all contracts

- SR118 to SR170 – Completed and Open to traffic
- SR170 to North of Buena Vista – Completed and Open to traffic
- North of Buena Vista to Magnolia Blvd including Empire Blvd Interchange – Construction in progress
- Magnolia Blvd to SR 134 – Construction in progress

## Challenges/Risks:

- Girder manufacturing delay (Segment 4)
- Utility relocation/ Railroad work changes (Seg. 3)
- Survey work related to roadway and structures (Seg.4)
- LA River Bridge construction requires significant changes to avoid working on the River bed. (Seg. 4)
- Working proactively with Caltrans to manage contingency



# Regional Rail Program



# Regional Rail Program Summary

| # | Project   | Current Phase  | Estimated Cost of Current Phase (\$mil.) | Phase Completion                           |
|---|---|--|--|--|
| 1 | LINK Union Station<br>(Southern California Regional Interconnector Project) | Environmental & PE   | \$55                                     | March 2018                                 |
| 2 | Bob Hope Airport Metrolink Station Pedestrian Bridge Project                | Environmental & 90% Design   | \$4                                      | June 2017                                  |
| 3 | Bob Hope Airport/Hollywood Way Metrolink Station Project                    | Construction   | \$15                                     | Anticipated Construction to begin Nov 2016 |
| 4 | Doran Street and Broadway/Brazil Safety and Access Project                  | Environmental/100% PE Design   | \$10                                     | December 2018                              |
| 5 | Brighton to Roxford Double Track Project                                    | Environmental;<br>Plan, Specification & Estimate                       | \$15                                     | October 2018                               |
| 6 | Rosecrans/Marquardt Grade Separation Project                                | Environmental; Plan, Specification & Estimate; Real Estate Acquisition | \$85                                     | June 2019                                  |
| 7 | Lone Hill to CP White Double Track Project                                  | Environmental & 30% PE   | \$5                                      | June 2017                                  |
|   |   | <b>Total Regional Rail Program</b>                                     | <b>\$189</b>                             |  |

# Bob Hope Airport/ Hollywood Way Metrolink Station

Project Budget: \$15M

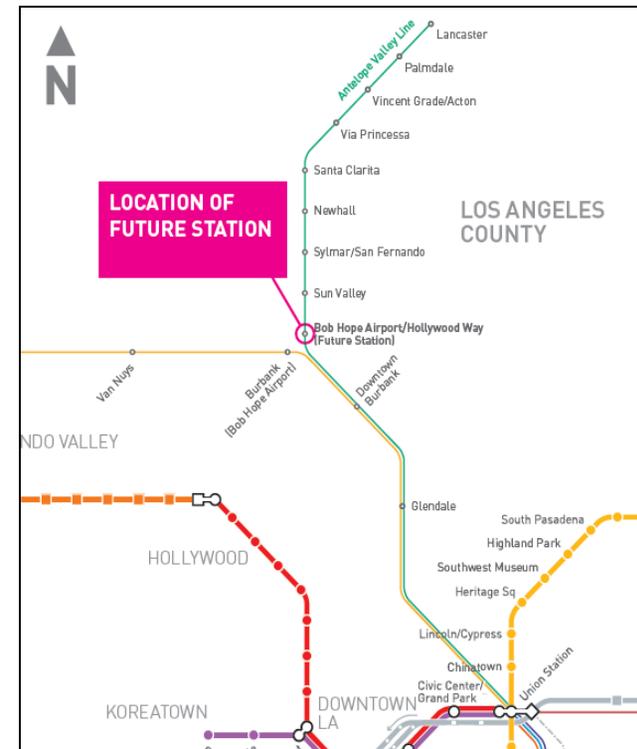
Project Schedule: Anticipate Construction  
to begin November 2016

## Accomplishments:

- 100% design complete
- Airport committed to providing courtesy shuttle service between Station and Airport
- Invitation for bids for construction was issued in August 2016

## Challenges/Risks:

- To arrange short term, long term parking solution with the City of Burbank
- To establish Operating & Maintenance (O&M) Plan with the Bob Hope Airport, City of Burbank, and City of Los Angeles
- City of Burbank requested design revisions to accomplish a more cost-effective O&M
- Potential closure of Sun Valley Station (within 2 miles of Bob Hope Station) to be determined



# Rosecrans/Marquardt Grade Separation Project

Estimated Cost: \$85 M

- Environmental/PS&E: \$12M
- Real Estate Acquisition, Third Party: \$73M
- Construction: TBD

Phase Completion: June 2019

## Accomplishments:

- Alternative #2 Offset overpass with connector roads was approved by Santa Fe Springs City Council and the Metro Board
- Environmental documentation obtained CEQA clearance
- Completed 35% Design

## Challenges/Risks:

- Multi-agencies cooperation and approval process
- Minimize traffic impacts during construction
- Constraints at Coyote Creek
- Diagonal rail crossing at a busy intersection may be a potential risk
- Securing multi-agency funding for construction



# Link Union Station (US)

Estimated Cost to Complete Environmental/PE:

\$55M

Environmental/PE Completion Date:

March 2018

## Accomplishments:

- Commitment of \$15M California High Speed Rail funding
- Environmental Design accommodated High Speed Rail and integrated passenger concourse

## Challenges/Risks:

- Securing funding for construction
- Interface with High Speed Rail



# FY17 APE Summary

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- New Project with Planned Adoption of Life-of-Project Budget
  - Westside Purple Line Extension Section 2 Project (separate board action)
- Existing Project with Planned Adjustments to Approved Budget
  - Div. 20 Portal Widening and Turnback Facility Design (separate board action)
- Existing Projects with Potential Adjustments to LOP Budget
  - Regional Connector Transit Project
  - Crenshaw/LAX Transit Project
  - ~~▪ I-5 South: Orange County Line to I-605~~
  - ~~▪ I-5 North: SR 118 to SR 134~~



# Next Steps

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- Project Managers to manage project scope, budget, and schedule for quality, on-time and within budget delivery
- To present project-specific LOP budget for Board review/adoption
- Seek additional revenue sources needed to fulfill funding commitment required to build and deliver projects
- Begin FY18 Program Management APE process in Fall 2016 and report to the Board in Spring 2017



# Appendix: Project Listing by Type

| TRANSIT CAPITAL PROJECTS WITH TOTAL PROJECT COSTS > \$5 M |  | TYPE                               | LOP BUDGET (\$ MIL.) |
|---|--|------------------------------------|----------------------|
| 1   | BRT Freeway Station Sound Enclosure                                  | Bus Facilities Improvements        | \$5.8                |
| 2   | Fuel Storage Tank System Enhancements (FY15 - FY17)                  | Bus Facilities Improvements        | \$6.5                |
| 3   | Metro Silver Line Improvements & Upgrades                            | Bus Facilities Improvements        | \$7.8                |
| 4   | Division 3 Master Plan Phases II-IV                                  | Bus Facilities Improvements        | \$13.2               |
| 5   | Division 1 Improvements  | Bus Facilities Improvements        | \$20.9               |
| 6   | Bus Facility Maintenance Improvements & Enhancements Phase II        | Bus Facilities Improvements        | \$20.9               |
| 7   | Bus Facility Maintenance Improvements & Enhancements Phase I         | Bus Facilities Improvements        | \$21.2               |
| 8   | Bus Facilities Maintenance & Improvement - Phase III                 | Bus Facilities Improvements        | \$21.7               |
| 9   | Patsaouras Plaza Bus Station Construction                            | Bus Facilities Improvements        | \$39.8               |
| 10  | El Monte Busway & Transit Center Expansion                           | Bus Facilities Improvements        | \$60.1               |
|   |  | Bus Facilities Improvements Total  | \$217.8              |
| 11  | Westside Purple Line Extension Section 1 Project                     | Major Construction                 | \$2,778.9            |
| 12  | Westside Purple Line Extension Section 2 Project                     | Major Construction                 | \$395.3*             |
| 13  | Westside Purple Line Extension Section 3 Project                     | Major Construction                 | \$55.5**             |
| 14  | Regional Connector: Construction                                     | Major Construction                 | \$1,551.8            |
| 15  | Crenshaw/LAX Light Rail Transit: Construction                        | Major Construction                 | \$2,058.0            |
|   |  | Major Construction Total           | \$6,839.5            |
| 16  | Patsaouras Bus Plaza Paver Retrofit                                  | Misc. Capital Projects             | \$9.1                |
| 17  | Division 20 Portal Widening Turnback Facility Design                 | Misc. Capital Projects             | \$3.5***             |
| 18  | Division 22 Paint And Body Shop                                      | Misc. Capital Projects             | \$11.0               |
| 19  | Metro Red Line University City Pedestrian Bridge                     | Misc. Capital Projects             | \$29.6               |
|   |  | Misc. Capital Projects Total       | \$53.2               |
| 20  | Southwestern Maintenance Yard  | Rail Facilities Improvements       | \$157.0              |
| 21  | Systemwide Elevator Installations (Vertical Systems)                 | Rail Facilities Improvements       | \$8.0                |
| 22  | LRT Freeway Stations Sound Enclosures                                | Rail Facilities Improvements       | \$8.6                |
| 23  | Metro Red Line Civic Center Station Escalator/Elevator Modernization | Rail Facilities Improvements       | \$12.0               |
| 24  | Metro Red Line Escalator Replacement/Modernization                   | Rail Facilities Improvements       | \$20.8               |
| 25  | Metro Red Line to Orange Line North Hollywood Station West Entrance  | Rail Facilities Improvements       | \$23.1               |
|   |  | Rail Facilities Improvements Total | \$229.5              |
| 26  | Metro Gold Line I-210 Barrier Replacement Phase I                    | Security/Safety                    | \$11.1****           |
| 27  | Metro Emergency Security Operations Center                           | Security/Safety                    | \$112.7              |
|   |  | Security/Safety Total              | \$123.8              |
| 28  | Metro Blue Line Pedestrian Safety Enhancement at Grade Crossings     | Wayside Systems                    | \$30.2               |
| 29  | Metro Blue Line Signal System Rehabilitation                         | Wayside Systems                    | \$93.6               |
|   |  | Wayside Systems Total              | \$123.8              |
|   |  | <b>TRANSIT CAPITAL TOTAL</b>       | <b>\$7,587</b>       |

\* Based on FY17 approved budget, LOP to be established

\*\* Based on projected budget through FY17 non-accelerated schedule

\*\*\* This is the approved budget to complete preliminary engineering. A separate report to the Board later this calendar year is planned to request budget adjustment.

\*\*\*\* Design LOP budget approved for risk assessment study, environmental clearance and final design

# Appendix: Project Listing by Type

|    | HIGHWAY   | TYPE                                   | CURRENT ESTIMATE<br>(\$ MIL.) |
|----|---|--|-------------------------------|
| 1  | I-5 South – Alondra   | Measure R Highway Capital Project      | \$114.1                       |
| 2  | I-5 South – Valley View Interchange                                     | Measure R Highway Capital Project      | \$631.1                       |
| 3  | I-5 South – Shoemaker, Rosecrans, Bloomfield                            | Measure R Highway Capital Project      | \$188.2                       |
| 4  | I-5 South – San Antonio, Imperial Hwy and Orr Day                       | Measure R Highway Capital Project      | \$323.3                       |
| 5  | I-5 South – Florence  | Measure R Highway Capital Project      | \$211.7                       |
| 6  | I-5 South – Carmenita Interchange                                       | Measure R Highway Capital Project      | \$419.9                       |
| 7  | I-5 North – HOV from SR 118 to SR 170                                   | Measure R Highway Capital Project      | \$219.5                       |
| 8  | I-5 North – HOV from SR 170 to North of Buena Vista                     | Measure R Highway Capital Project      | \$94.7                        |
| 9  | I-5 North – North of Buena Vista to South of Magnolia Blvd              | Measure R Highway Capital Project      | \$402.4                       |
| 10 | I-5 North – Magnolia Blvd to SR 134                                     | Measure R Highway Capital Project      | \$137.4                       |
| 11 | I-5 North HOV Project   | Measure R Highway Capital Project      | \$31.0                        |
| 12 | Interstate 605 Corridor Hot Spots – I-605/I-5 Interchange Improvement   | Measure R Highway Capital Project      | \$20.8                        |
| 13 | Interstate 605 Corridor Hot Spots – I-605/SR 60 Interchange Improvement | Measure R Highway Capital Project      | \$30.0                        |
| 14 | Interstate 605 Corridor Hot Spots – I-605/SR 91 Interchange Improvement | Measure R Highway Capital Project      | \$7.8                         |
| 15 | Interstate 605 Corridor Hot Spots – I-710/SR 91 Interchange Improvement | Measure R Highway Capital Project      | \$2.6                         |
| 16 | Interstate 405 Crenshaw Blvd On and Off Ramp Improvements               | Measure R Highway Capital Project      | \$10.3                        |
| 17 | Interstate 405 and I-110 Aux Lane from SR 91 to Torrance Blvd           | Measure R Highway Capital Project      | \$9.0                         |
| 18 | SR 138 I-5 to SR 14   | Measure R Highway Capital Project      | \$25.0                        |
| 19 | I-710 South   | Measure R Highway Capital Project      | \$91.0                        |
| 20 | I-710 South Early Action Projects - Soundwall Projects (3 locations)    | Measure R Highway Capital Project      | \$12.7                        |
|    |   | <b>Measure R Highway Total</b>         | <b>\$2,982.5</b>              |
| 21 | I-10 HOV from Citrus Avenue to SR 57                                    | Other Highway Projects                 | \$264.4                       |
| 22 | I-10 HOV from Puente Avenue to Citrus Avenue                            | Other Highway Projects                 | \$195.6                       |
| 23 | SR 57 and SR 60 Mixed Flow Interchange                                  | Other Highway Projects                 | \$13.0                        |
| 24 | SR 71: Interstate 10 to Mission Blvd                                    | Other Highway Projects                 | \$11.0                        |
| 25 | SR 71: Mission Blvd to Rio Rancho Road                                  | Other Highway Projects                 | \$13.0                        |
|    |   | <b>Other Highway Total</b>             | <b>\$497.0</b>                |
|    |   | <b>HIGHWAY PROGRAM TOTAL</b>           | <b>\$3,479.4</b>              |
|    |   |  |                               |
|    | REGIONAL RAIL   | TYPE                                   | CURRENT ESTIMATE<br>(\$ MIL.) |
| 1  | Link Union Station  | Regional Rail                          | \$55                          |
| 2  | Bob Hope Airport Metrolink Station                                      | Regional Rail                          | \$15                          |
| 3  | Bob Hope Airport Pedestrian Bridge                                      | Regional Rail                          | \$4                           |
| 4  | Brighton to Roxford Double Track  | Regional Rail                          | \$15                          |
| 5  | Doran St Grade Separation   | Regional Rail                          | \$10                          |
| 6  | Lone Hill to White - Env & 30 % Design                                  | Regional Rail                          | \$5                           |
| 7  | Rosecrans Marquardt Grade Separation                                    | Regional Rail                          | \$85                          |
|    |   | <b>REGIONAL RAIL PROGRAM<br/>TOTAL</b> | <b>\$189</b>                  |