

Mobility. Environment. Community. Economy. Technology



I-710 Corridor Project EIR/EIS

metro.net

Traffic Technical Studies Key Findings Briefing

TAC Committee
September 26, 2011



Traffic Studies Briefing Agenda

- Project Purpose and Need
- Alternatives Review
- Traffic Forecasting Assumptions
- Summary of Traffic Studies Objectives
- Traffic Studies Key Findings
- Mitigation Measures
- Next Steps

Project Purpose and Need

1. Improve air quality and public health
2. Improve traffic safety
3. Provide a modern design for the I-710
4. Address projected traffic volume increase
5. Address projected growth in population, employment and economic activity related to goods movement

Project Alternatives Review

No Build Improvements

- Planned and Committed Projects in 2008 RTIP
- Enhanced Goods Movement by Rail
- Clean Trucks Program
- Expanded Night Gate Ops at Ports
- I-710 Pavement Rehabilitation
- Traffic Signal coordination

TSM/TDM and ITS

- Ramp Metering
- Improved Arterial Signage
- Peak Period Parking Restrictions
- Increased Transit Service
- Upgraded Traffic Signals (ITS)

Arterial System Improvements

- Signal Timing Improvements
- Local Arterial Intersection Improvements at 42 Locations

I-710 Widening

- Widen the I-710 up to 10 Lanes
- Modernize Geometric Design of the Local I-710 Interchanges

Freight Corridor

- Separate Four-Lane Freight Corridor

Alternative 1

No Build Improvements



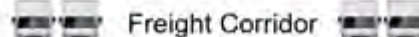
Alternative 5A



I-710 Widening

Modernize I-710 Geometrics
Arterial System Improvements
TSM/TDM & ITS
No Build Improvements

Alternative 6A

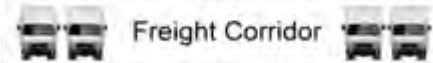


I-710 Widening

Modernize I-710 Geometrics
Arterial System Improvements
TSM/TDM & ITS
No Build Improvements

Alternative 6B

Zero Emissions Automated Guidance



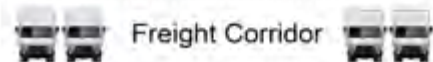
I-710 Widening

Modernize I-710 Geometrics
Arterial System Improvements
TSM/TDM & ITS
No Build Improvements

Alternative 6C

Tolling Feature

Zero Emissions Automated Guidance



I-710 Widening

Modernize I-710 Geometrics
Arterial System Improvements
TSM/TDM & ITS
No Build Improvements

Traffic Forecasting and Modeling

Traffic Forecasting Inputs and Assumptions

Key Modeling Input – Socio-Economic Factors

Population and Employment

| Socio-Economic Inputs | | Year 2008 | Year 2035 | Numeric Change | Percent Change |
|-----------------------|------------------|------------|------------|----------------|----------------|
| Population | Region-Wide | 18,905,000 | 24,050,000 | 5,145,000 | 27% |
| | I-710 Study Area | 1,487,000 | 1,653,000 | 166,000 | 11% |
| | | | | | |
| Employment | Region-Wide | 8,115,000 | 10,284,000 | 2,169,000 | 27% |
| | I-710 Study Area | 594,000 | 637,000 | 43,000 | 7% |

Source: Southern California Association of Governments (SCAG) Regional Travel Demand Forecast Model for Year 2035.

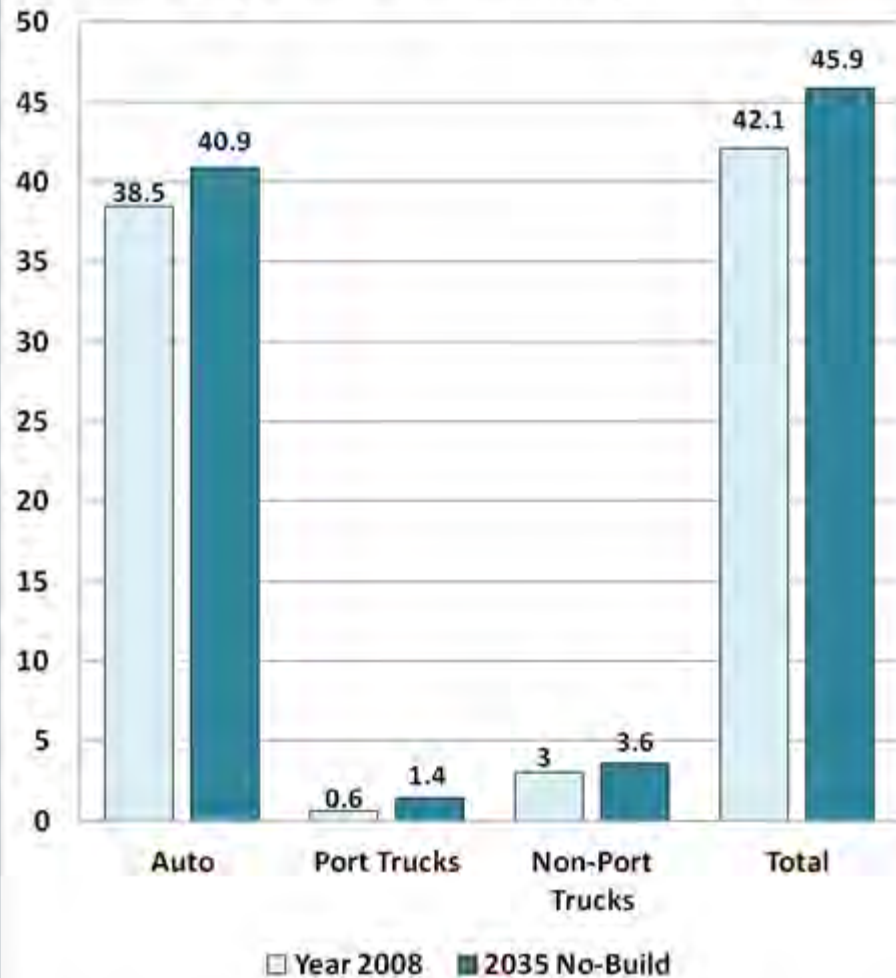
Key Growth Assumptions – Port Activity

- Cargo Growth and Railroad Mode Share
 - 43 Million Annual Twenty-Foot Equivalent Units (TEUs)
 - 40% Direct Intermodal Rail
 - 26% On-Dock Rail
 - No Near Dock Intermodal Yard Expansion (ICTF and SCIG)

Estimated Growth in I-710 Study Area VMT

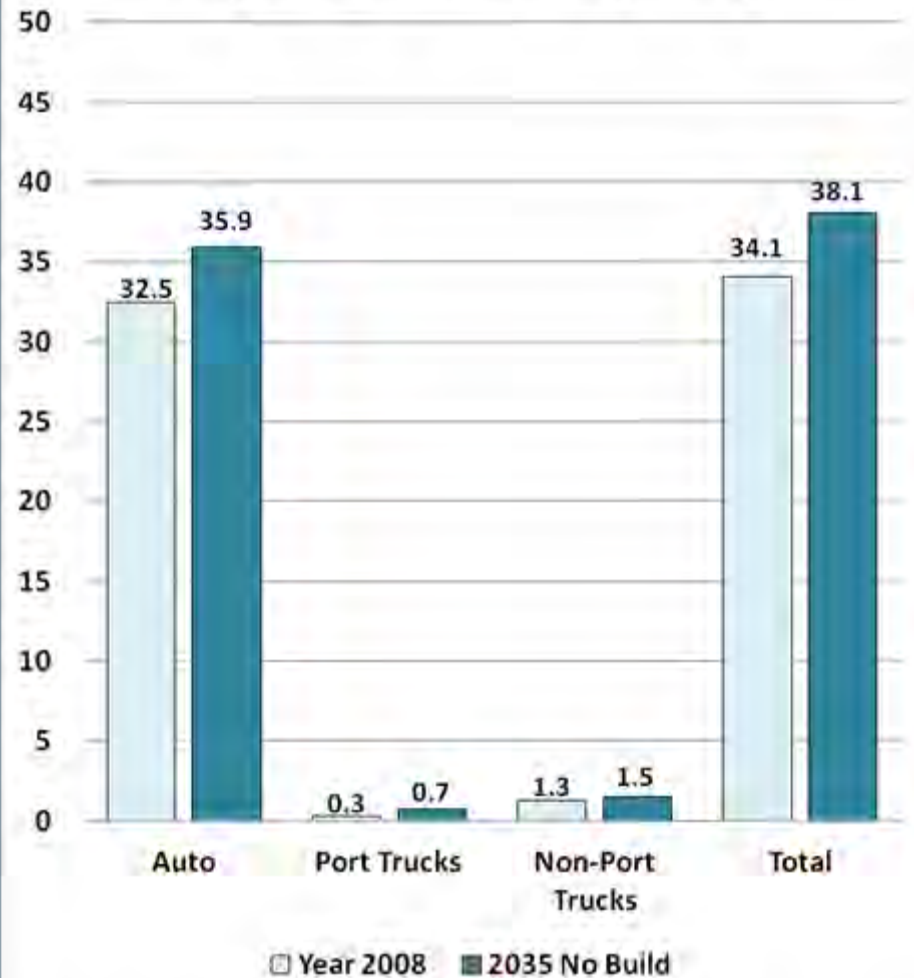
All Freeways

Daily Vehicle Miles Traveled (millions)



Arterials

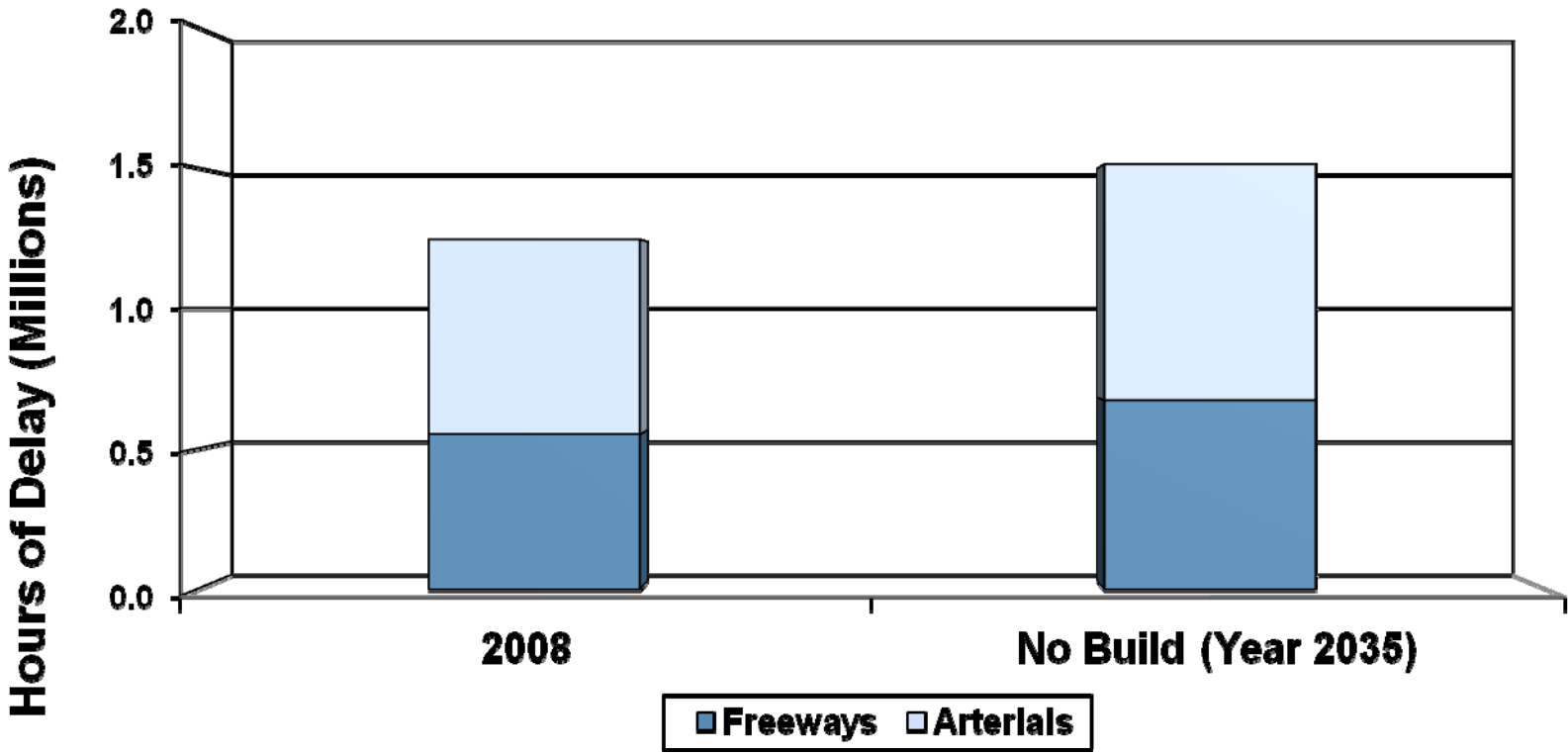
Daily Vehicle Miles Traveled (millions)



Estimated Growth - Study Area Hours of Delay

I-710 Study Area Increasing Congestion

Increase in Daily Hours of Delay on Freeway and Arterials from 2008 to 2035



Objectives of Traffic Technical Studies

- Multiple studies
 - ✓ Freeway traffic operations analysis
 - ✓ Arterial highways and intersections analysis
- Evaluate existing and future traffic conditions for all alternatives
- Compare the mobility benefits of alternatives
- Inform the environmental impact analyses of the alternatives: air quality, noise, energy
- Identify impacts and mitigation measures

Freeway Operations Analyses

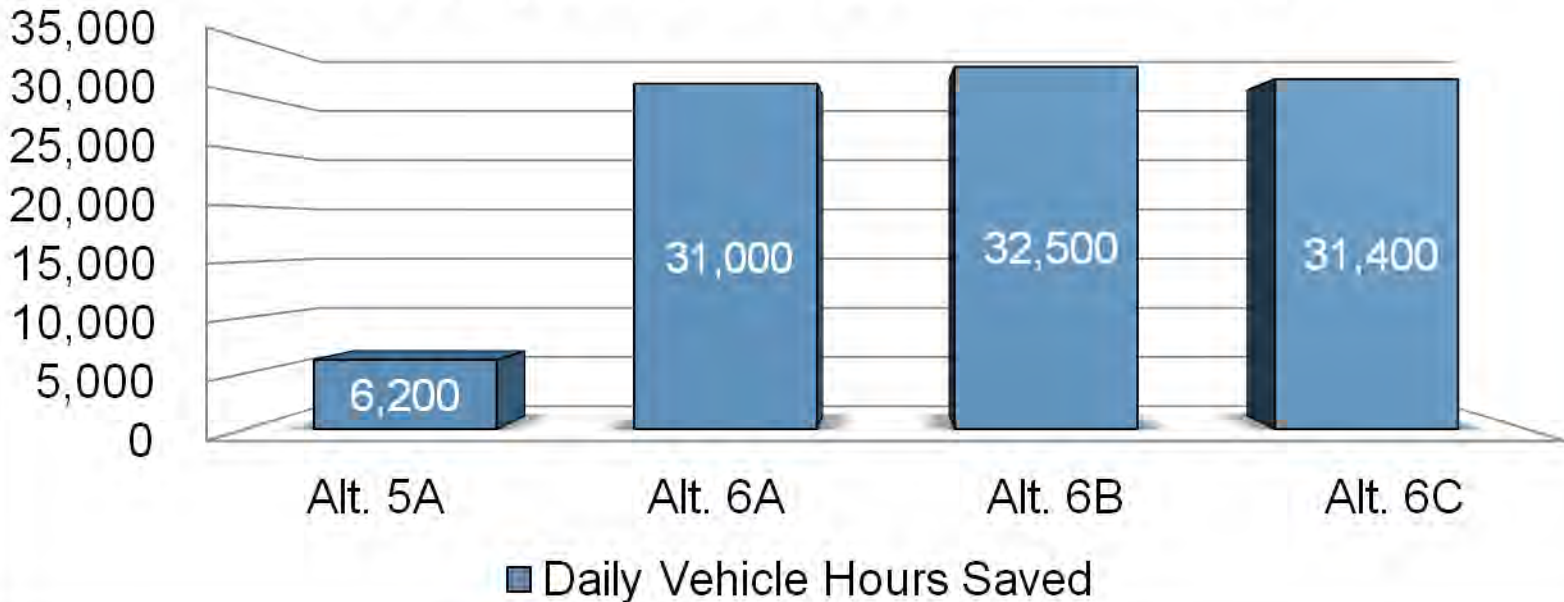
Traffic Operations Analysis Key Findings

Freeway Operations Key Findings





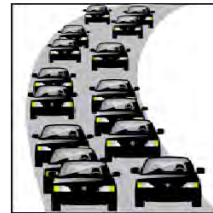

- Travel time savings realized on freeway with all Build Alternatives
- Measurable improvement in general purpose lanes flow and level of service with Build Alternatives
- Freight corridor alternatives shift truck traffic out of general purpose lanes
- Geometric improvements and separation of trucks and cars reduces accident rate

Finding: Freeway Travel Time Savings

**Study Area Freeway Travel Time Savings in 2035
(As Compared to No Build Alternative)**



Level of Service Criteria

| | LOS A | LOS B | LOS C |
|--|--|---|--|
| Freeway Traffic Density |  |  |  |
| Intersection Average Stopped Delay Per Vehicle | <10 sec. | 10.1 - 20.0 sec. | 20.1 - 35.0 sec. |
| | LOS D | LOS E | LOS F |
| Freeway Traffic Density |  |  |  |
| Intersection Average Stopped Delay Per Vehicle | 35.1 - 55.0 sec. | 55.1 - 80.0 sec. | >80.0 sec. |

Level of Service

I-710
General Purpose Lanes

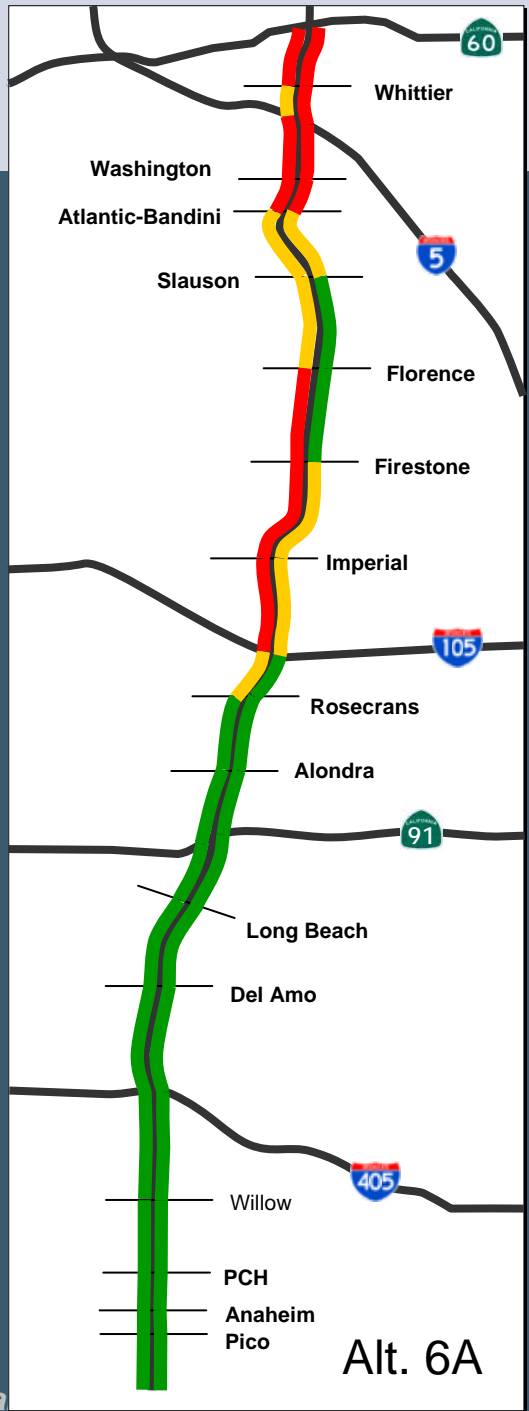
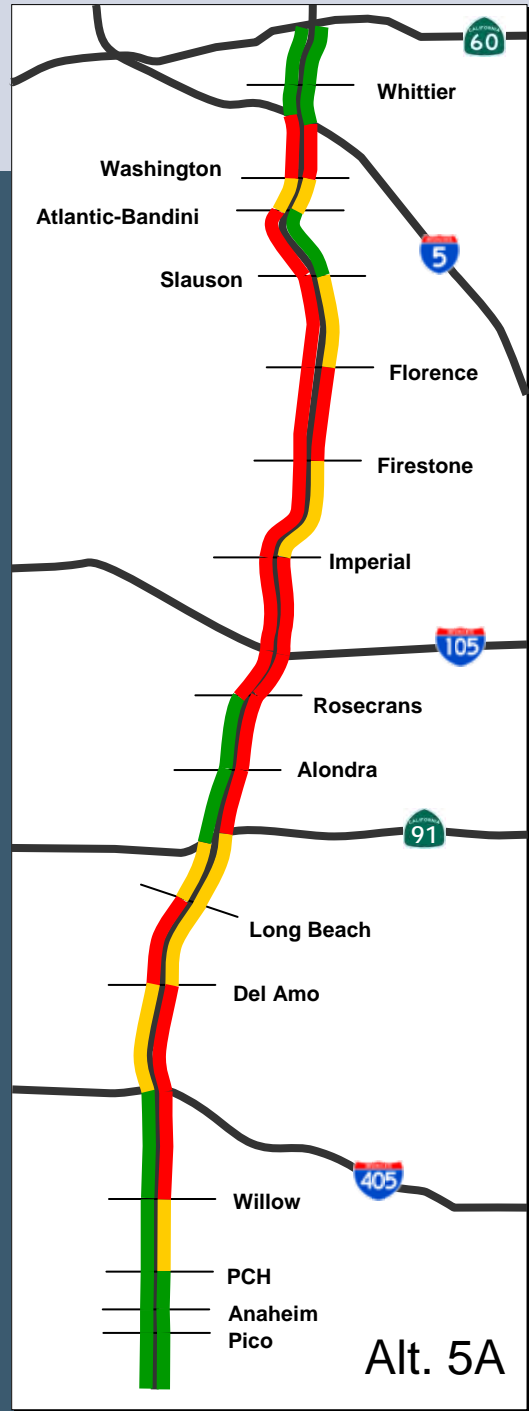
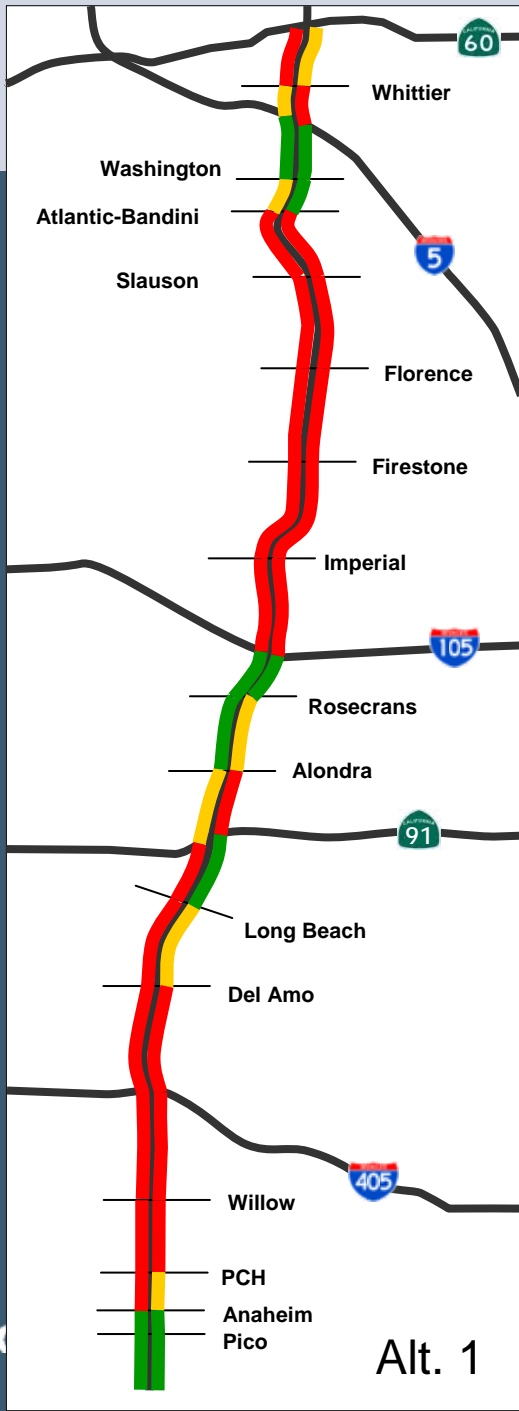
PM Peak Hour
2035

Level of Service

LOS D or Better 

LOS E 

LOS F 



Level of Service

I-710 General Purpose Lanes

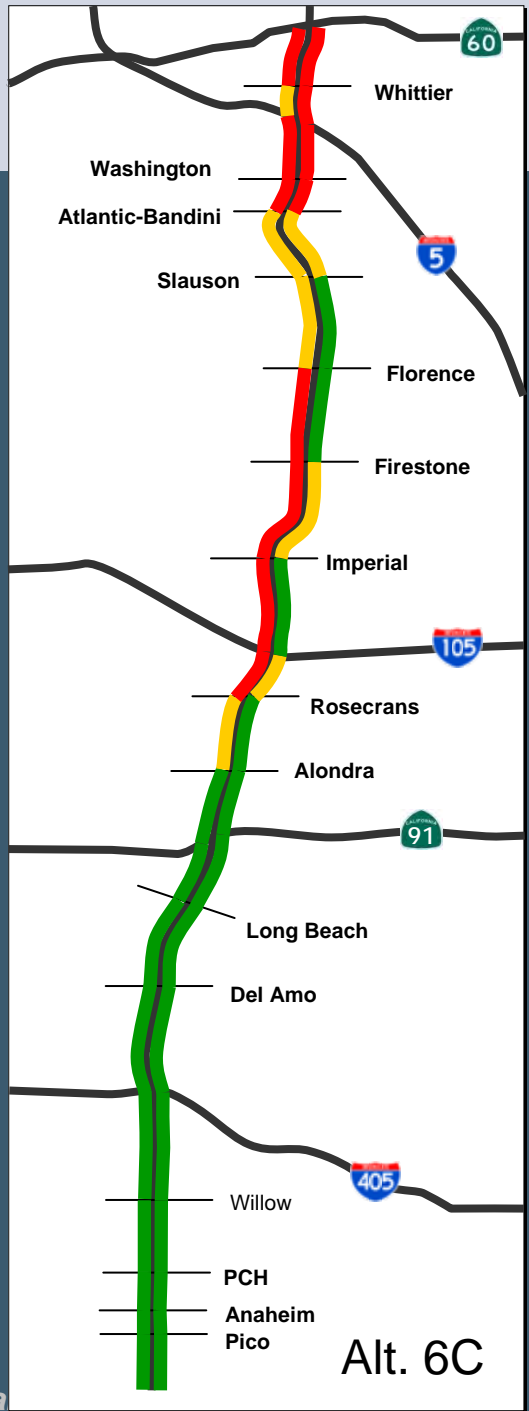
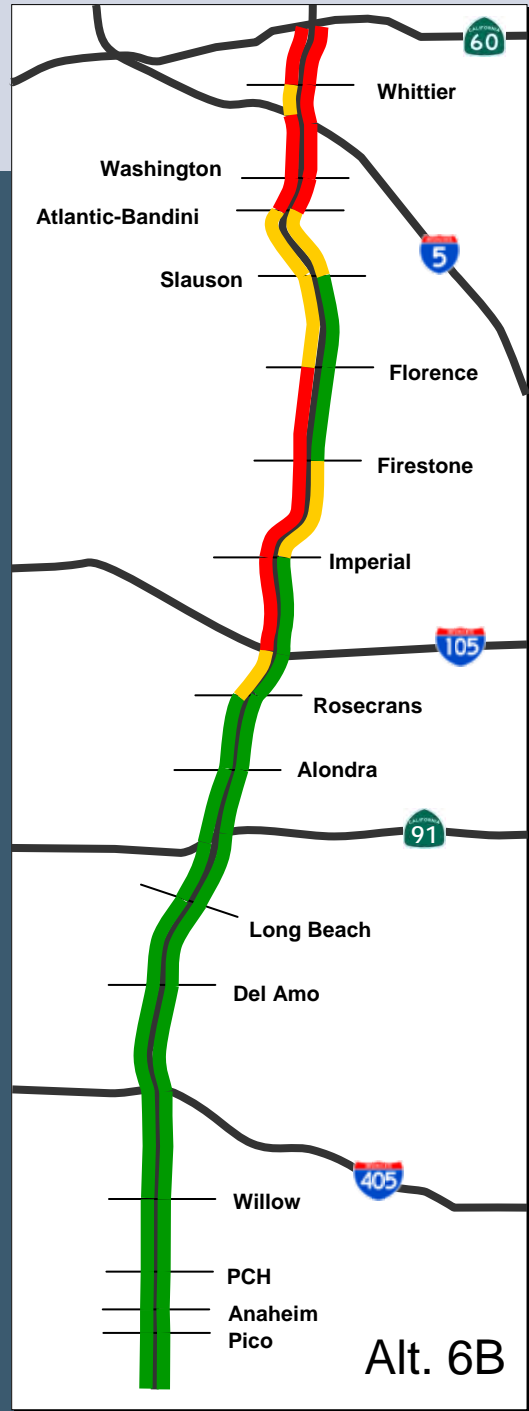
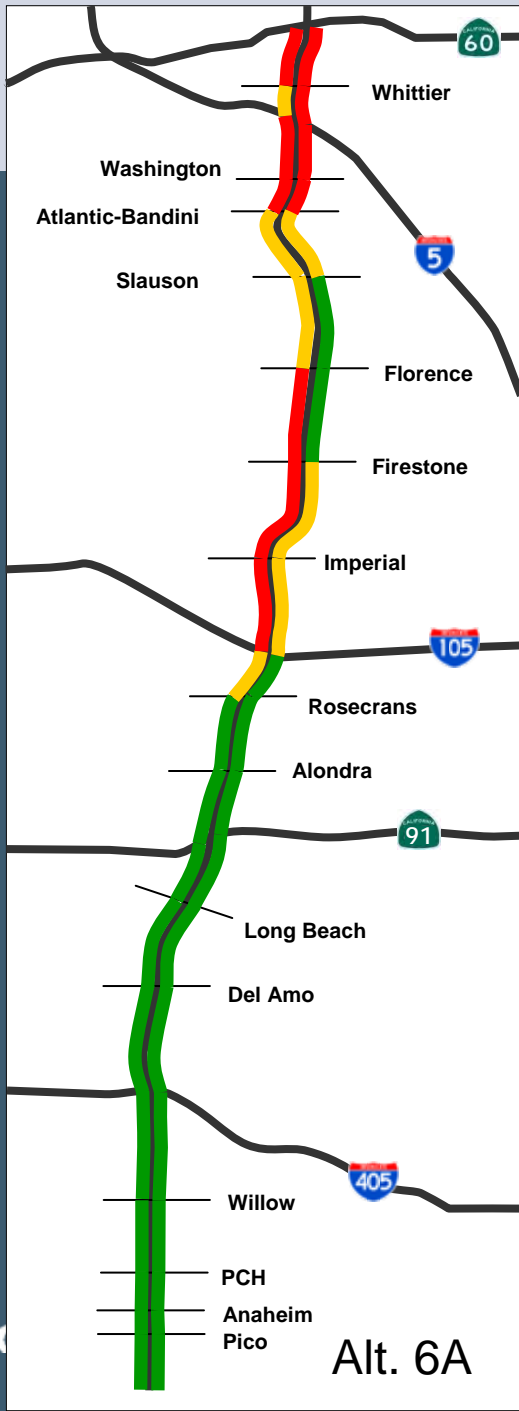
PM Peak Hour 2035

Level of Service

LOS D or Better 

LOS E 

LOS F 



Truck Traffic on I-710 GP by Alternatives

| Percent of Truck Traffic on General Purpose Lanes 2035 (Estimate for PM Peak Hour) | | | | | |
|---|---------------|----------------|----------------|----------------|----------------|
| Freeway Segment | Alternative 1 | Alternative 5A | Alternative 6A | Alternative 6B | Alternative 6C |
| South of I-405 | 29% | 23% | 8% | 6% | 7% |
| I-405 to SR 91 | 24% | 20% | 7% | 6% | 6% |
| SR 91 to I-105 | 19% | 17% | 6% | 5% | 5% |
| I-105 to Slauson | 16% | 13% | 6% | 5% | 5% |
| Slauson to SR-60 | 12% | 10% | 14% | 14% | 13% |

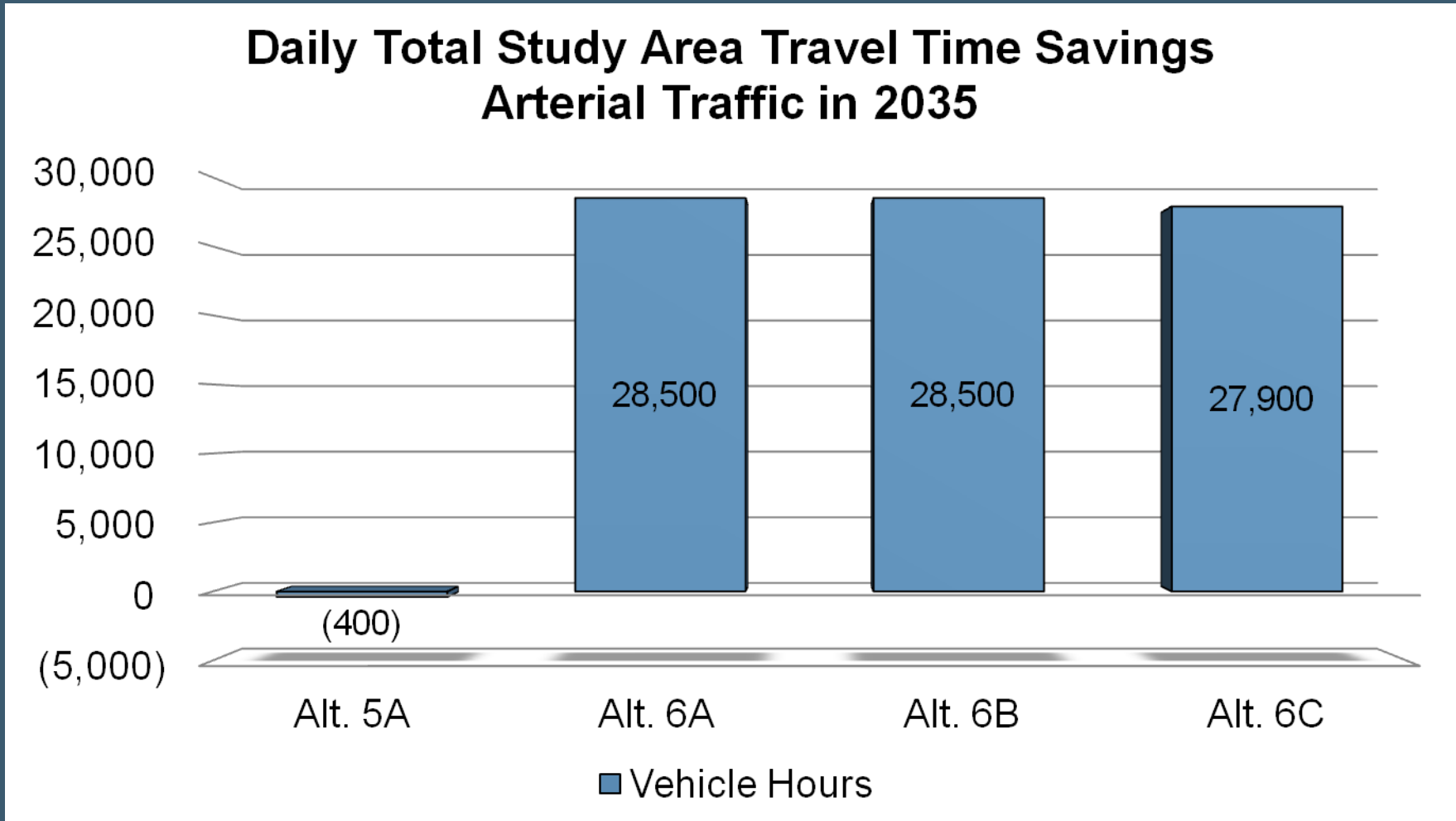
Arterial Highway and Intersection Analysis

Arterial Highway and Intersection Traffic Impact Analysis Key Findings

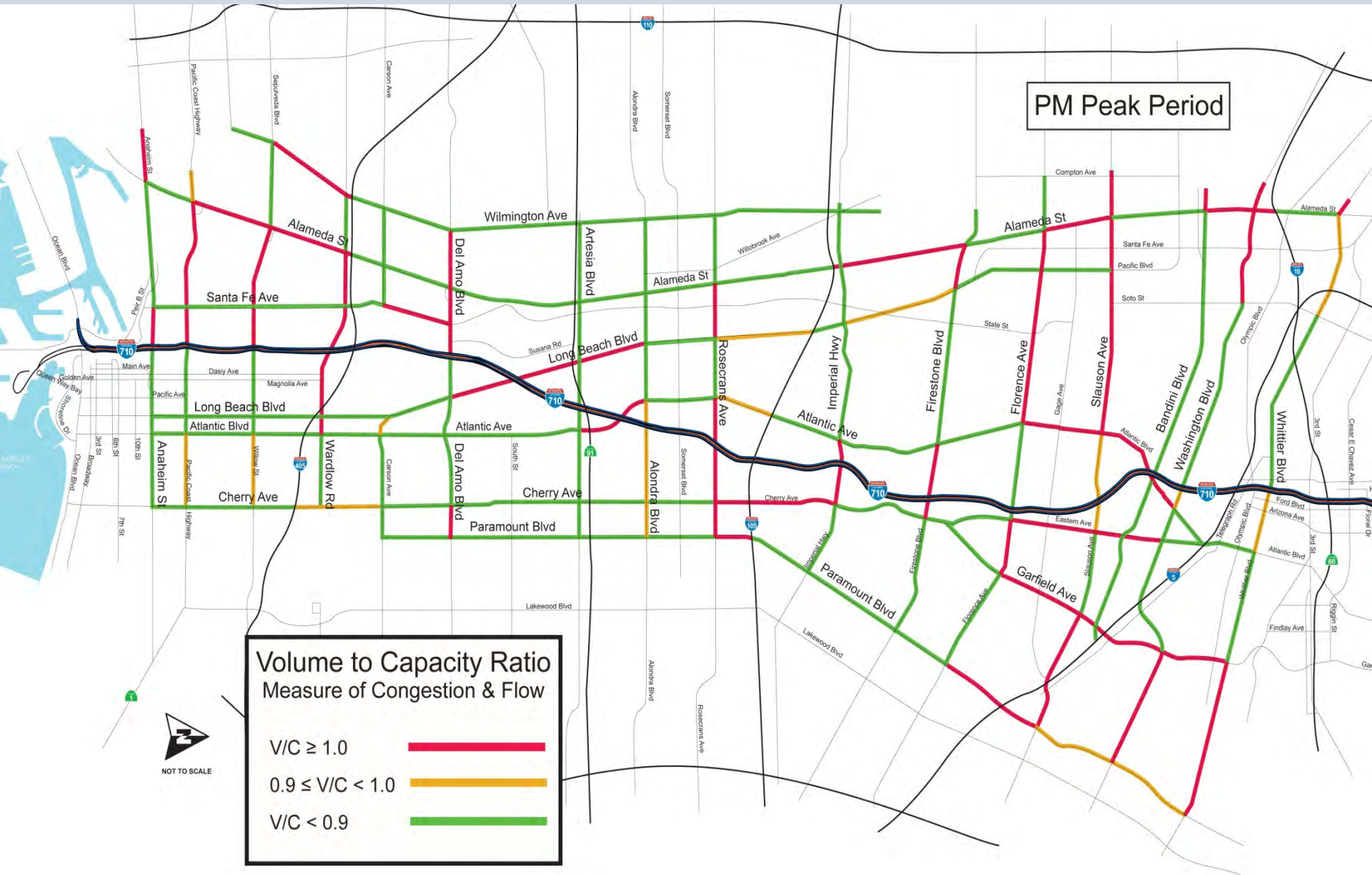
Arterials & Intersections Key Findings

- All Build Alternatives include improvements to 42 intersections
- Travel time savings on arterials with Freight Corridor build alternatives
- Project build alternatives shift truck traffic to I-710
- Project build alternatives have an impact and increase delay at 20 intersections
 - Mitigation measures improve all but 5 intersections to the No Build condition or better

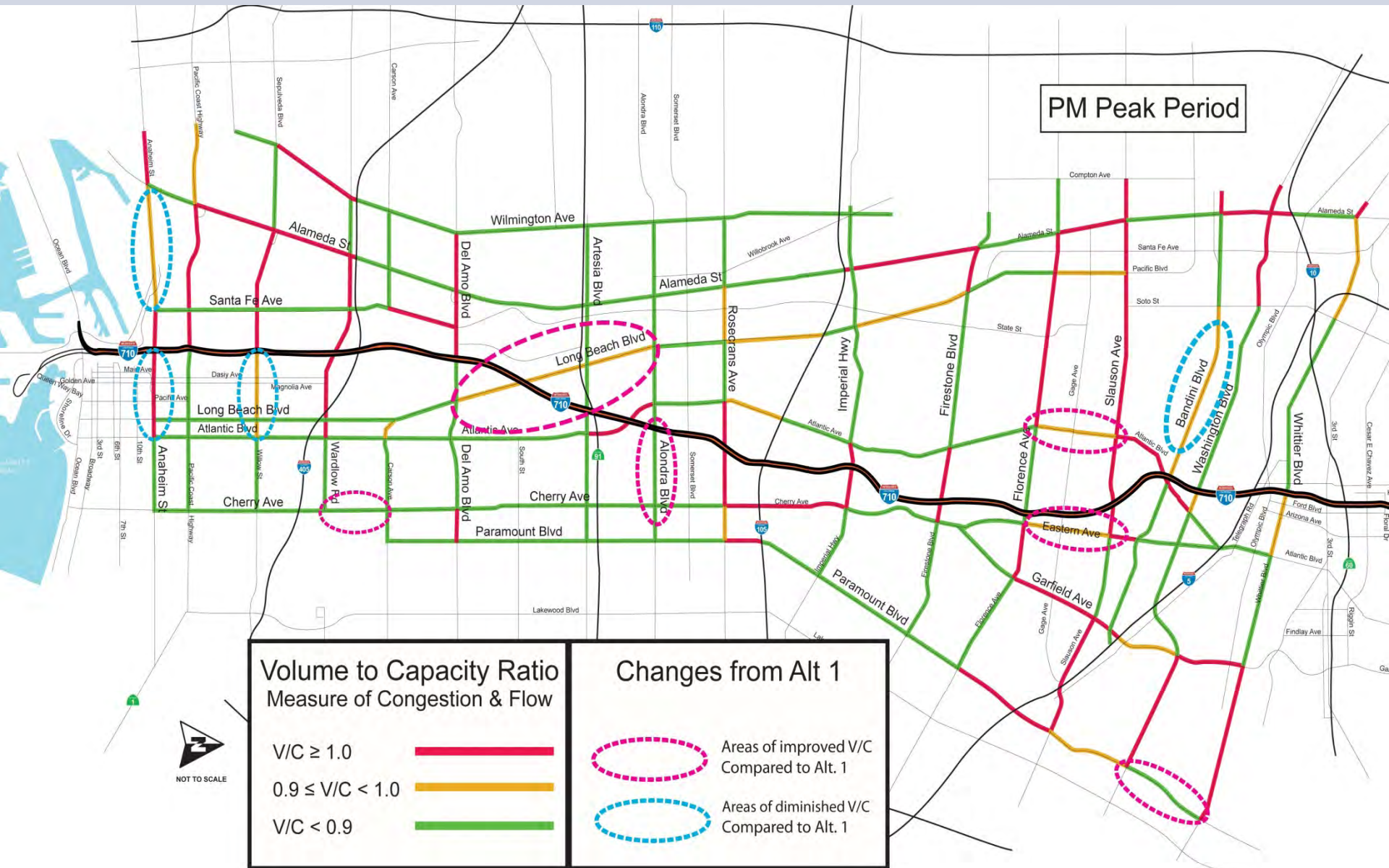
Study Area Arterial Travel Time Savings



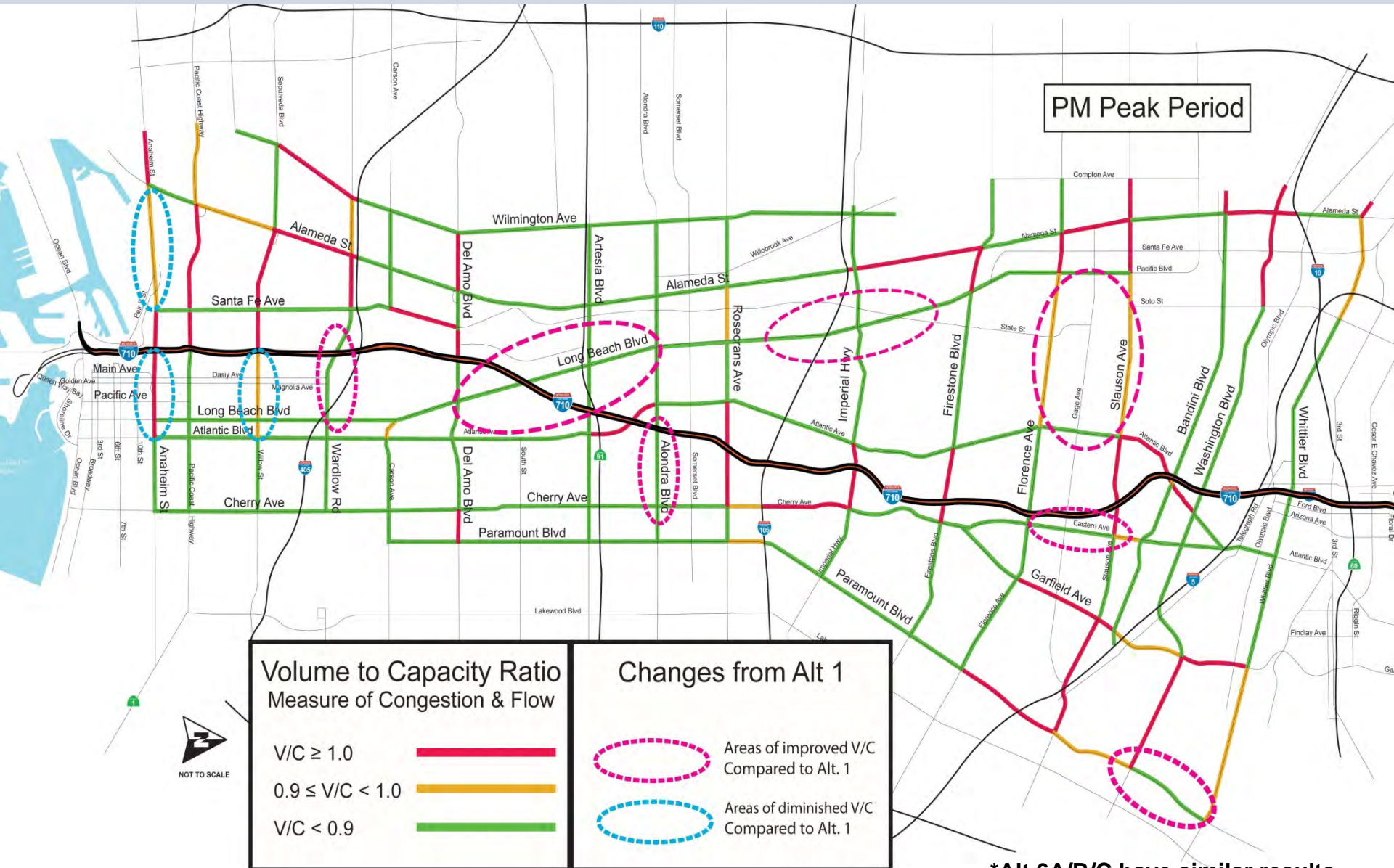
Arterial Traffic Congestion No Build Alternative



Arterial Traffic Congestion Alternative 5A



Arterial Traffic Congestion Alternative 6A*



*Alt 6A/B/C have similar results

Intersections Impacted by Project Build Alternatives

✳ Intersections with project related impacts that cannot be mitigated

■ Intersections with project related impacts that can be mitigated

| Intersection | City | Project-Related LOS Impacts | | | |
|-------------------------------------|-----------------------|-----------------------------|--------|--------|--------|
| | | Alt 5A | Alt 6A | Alt 6B | Alt 6C |
| Pico Ave/9th St | Long Beach | | ✳ | ✳ | ✳ |
| Anaheim St/Santa Fe Ave | Long Beach | ✳ | ✳ | ✳ | ✳ |
| PCH/Atlantic Ave | Long Beach | ✳ | ✳ | ✳ | ✳ |
| Willow St/Santa Fe Ave | Long Beach | ■ | | | |
| Del Amo Blvd/Santa Fe Ave | Carson | ■ | ■ | ■ | ■ |
| Alondra Blvd/Santa Fe Ave | Compton | ■ | ■ | ■ | ■ |
| Alondra Blvd/Long Beach Blvd | Compton | ■ | ■ | ■ | ■ |
| Alondra Blvd/Atlantic Ave | Compton | ■ | ■ | ■ | ■ |
| Alondra Blvd/Garfield Ave | Paramount | ■ | ■ | ■ | ■ |
| Alondra Blvd/Paramount Blvd | Paramount | ■ | ■ | ■ | ■ |
| Imperial Hwy/Garfield Ave | South Gate | | ■ | ■ | |
| Slauson Ave/Atlantic Blvd | Maywood | | ■ | ■ | ■ |
| Slauson Ave/Eastern Ave | Commerce | ■ | ■ | ■ | ■ |
| Garfield Ave Ave/Slauson Ave | Commerce | | ■ | ■ | ■ |
| I-710 NB Ramps/Long Beach Blvd | Long Beach | | | | ✳ |
| Eastern Ave-Ramona Blvd/I-10 | LA County | | ■ | ■ | ■ |
| Wardlow Ave/Cherry Ave | Long Beach | ■ | ■ | ■ | ■ |
| Wilmington Ave/223 rd St | Carson | | | ✳ | ✳ |
| Garfield Ave/Gage | Bell Gardens/Commerce | ■ | ■ | ■ | ■ |
| 38th St/Santa Fe Ave | Vernon | | ■ | ■ | ■ |

Potential Arterial Traffic Mitigation Measures

- Improve Intersections to the No Build condition or better
 - Impact: Any increase in delay over the No Build and the intersection operates at a poor LOS (E or F) in any Build Alternative
- Developed with input from staff of local cities
- Typical Mitigation Measures Include
 - Add new and extra left and right turn lanes
 - Add through lanes
 - Restripe lanes
 - Widen selected arterials
 - Remove on-street parking in selected areas

Next Steps

- Review technical studies key findings with I-710 committees Sept. 2011 – Jan. 2012
- Incorporate technical studies into DEIR/DEIS
- Draft EIR/EIS available for public and agency review and comment in Feb. 2012
- Formal public review and comment opportunities during circulation period