



# SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

## TECHNICAL WORKING GROUP (TWG)

Thursday, May 15<sup>th</sup> 2013: 10:00 a.m.

SCAG Offices  
818 West 7<sup>th</sup> Street, 12<sup>th</sup> Floor  
Board Room  
Los Angeles, CA 90017  
(213) 236-1800

Teleconferencing Information:  
Number: 1-888-808-6929

Adobe Connect Web PowerPoint Presentations: <http://scag.adobeconnect.com/twg/>

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### AGENDA

#### Introductions

#### Discussion Items

1. OCTA Draft Long Range Transportation Plan (Gregory Nord) 20 min.
2. System Preservation Update (Tarek Hatata) 20 min.
3. Staff Draft Paper on TOD Benefits, Challenges and Best Practices (Ping Chang) 20 min.

#### Technical Update Items

4. Active Transportation Program Update (Sarah Jepson) 10 min.
5. Local Input Survey Update (Ping Chang) 10 min.
6. MAP-21 Safety NPRM Comments (Naresh Amatya) 10 min.
7. CalEnviro Screen Tool Update
  - Workshop at SCAG on May 12<sup>th</sup> from 1:30pm – 3:30pm (videoconferencing available at SCAG regional offices)
8. Comments/Around the Table Discussion 5 min.



## TECHNICAL WORKING GROUP (TWG)

March 20, 2014

### **Meeting Summary**

Following is a summary of discussions of the Technical Working Group meeting of March 20, 2014.

### **Discussion Items**

#### **1. Modeling Tools and Dataset Overview**

Guoxiong Huang, SCAG staff, provided an overview of modeling tools and dataset. Mr. Huang noted the four pillars of modeling include 1) Scenario Planning Model, 2. Land Use/Growth Forecasting Models, 3. Transportation Models and 4. Air Quality Model. Mr. Huang noted the Scenario Planning Model is in development and its release is anticipated summer 2014. Further, the first set of the socioeconomic data has been collected for the Land Use/Growth Forecasting Models incorporating 11,267 Tier 2 zones in the region. Mr. Huang further noted two models feed into the Transportation Models, the Trip Based Model which was used for the 2012 RTP/SCS and the Activity Based Model which is being developed to be used in the 2016 RTP/SCS. Mr. Huang noted information and assistance in data collecting is welcome from the subregions and all stakeholders.

The working group discussed the modeling tools and datasets.

#### **2. Overview of Financial Plan and Assumptions**

Annie Nam, SCAG Staff, provided an overview of the financial plan and assumptions as reflected in the 2012 RTP/SCS. Ms. Nam noted the 2012 RTP/SCS includes \$525 billion with an approximate shortfall of \$220 billion. Ms. Nam reviewed local sales tax measures used to generate revenue as well as inflation and construction costs. Next, Ms. Nam reviewed the status of the Federal Highway Trust Fund indicating it is anticipated the HTF may have difficulty meeting all obligations during latter half of 2014 due to insolvency. It was further noted the financial plans are developed with county transportation commissions and transit operators and utilizes published data sources to evaluate historical trends and to augment locator forecasts as needed. Further potential new revenue sources were reviewed including mileage-based user fee, and private equity participation.

The working group discussed the financial plan.

### **Technical Update Items**

#### **3. MAP-21 Safety Performance Measures**

Margaret Lin, SCAG staff, provided an update on MAP-21 Safety Performance Measures. Ms. Lin noted on March 11, 2014, the Federal Highway Administration (FHWA) released the “National Performance Management Measures; Highway Safety Improvement Program” Notice of Proposed Rule Making (NPRM) and began soliciting formal comments. Comments are due by June 9, 2014. Further, this NPRM proposes performance measures for state DOTs to carry out the Highway Safety improvement Program (HSIP) and to assess serious injuries and fatalities as well as injuries and fatalities per vehicle mile traveled. The rules will not be implemented quickly enough to directly affect the 2016 RTP/SCS planning process although the work of setting state targets would occur while the 2016 RTP/SCS is being developed.

#### **4. Aviation Introduction**

Ryan Hall, SCAG staff, provided an introduction to the Aviation Program. It was noted there are 83 million annual air passengers (MAP) in the region and over 1,100 daily departures which generate ground traffic to and from the airports. As well the region is home to two of the nation’s top 15 cargo airports, LAX and Ontario. Other developments since 2012 include increased airline mergers as well as a 32% decline of general aviation. Mr. Hall noted policy considerations for the Aviation Element of the 2016-2040 RTP/SCS will be guided by the Aviation Task Force and the Transportation Committee with additional check and balances provided by the Aviation Technical Advisory Committee (ATAC) and SCAG Staff.

#### **Announcements**

Mark Butala, SCAG staff, announced that SCAG’s General Assembly will be May 1 and 2, 2014 and early bird registration is now available up to April 1, 2014.

The next meeting of the TWG will be Thursday, April 17, 2014.



**SOUTHERN CALIFORNIA  
ASSOCIATION of GOVERNMENTS**

Item 1 Attachment: OCTA Draft Long Range Transportation Plan



# Draft 2014 Long-Range Transportation Plan

## OUTLOOK 2035

Because Mobility Matters



# 2014 LRTP

- Transportation vision document
- Updated every four years
- Input for the RTP
- Must consider:
  - Stakeholder input
  - Socioeconomic forecasts
  - Revenue forecasts
  - Current commitments
  - State and federal mandates
  - Regional coordination
  - Technology developments

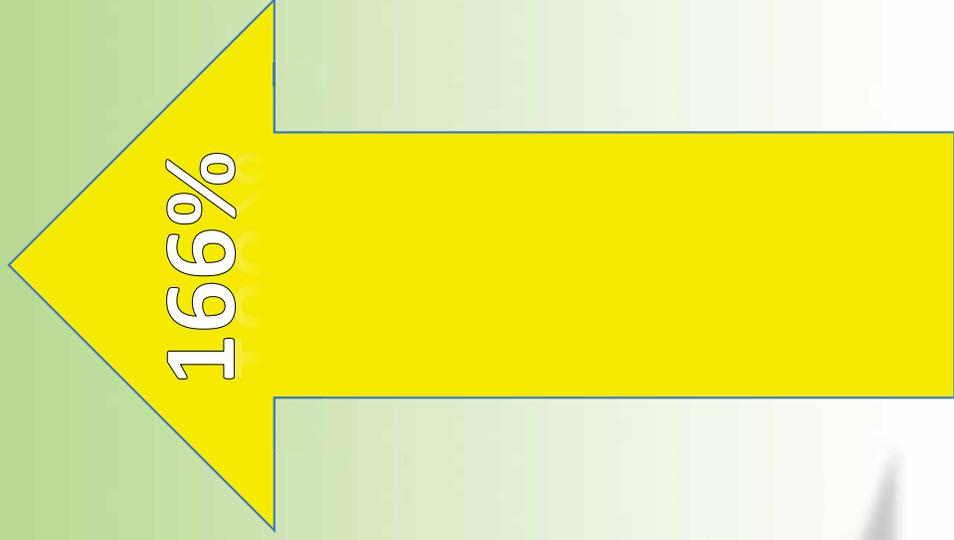
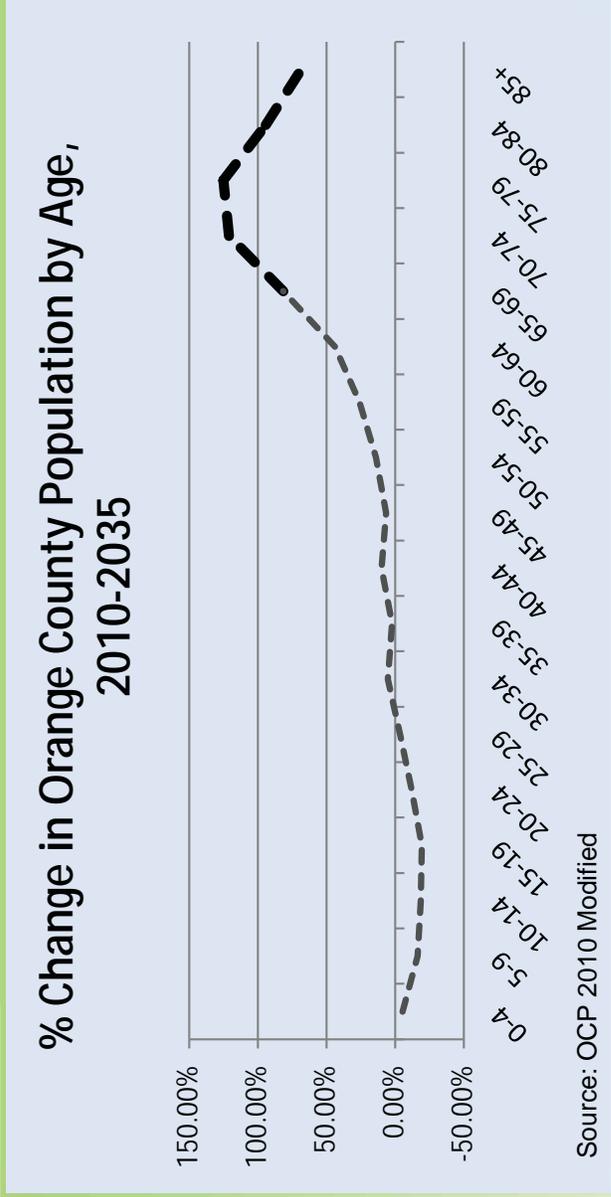


# 2035 Scenarios

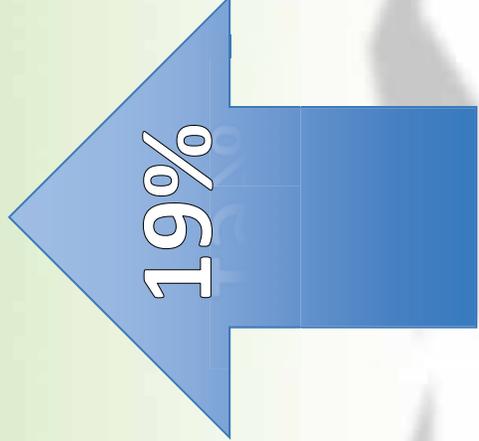
- **Baseline**
  - Existing transportation system
  - Fully programmed projects
- **Preferred**
  - Baseline projects
  - M2
  - Financially constrained discretionary projects
- **Conceptual**
  - Baseline and preferred projects
  - Financially unconstrained projects
    - Benefit the goals and objectives
    - Require additional revenues and/or study



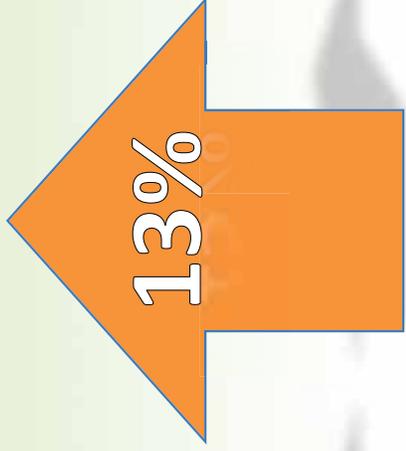
# Projections through 2035



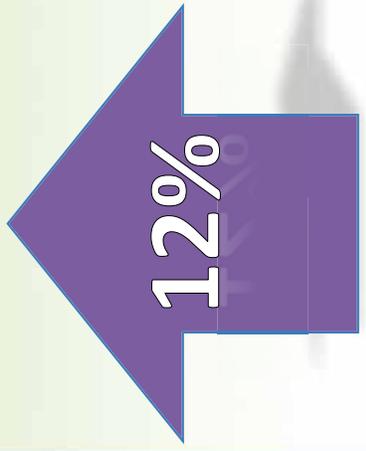
Total delay due to congestion



Employment



Population



Housing

# Overall Stakeholder Themes

1. **Optimize** transportation systems (signal synchronization, rapid bus, and managed lanes)
2. **Maintain** streets and highways
3. **Educate** the public about transportation alternatives, bicycle safety, and managed lane strategies
4. **Innovate** new transit strategies, especially rail, and provide real-time information
5. **Collaborate** on regional solutions, and work with local jurisdictions to link land use and transportation plans
6. **Explore** incentives for carpools on toll roads, expansion of bus service and the vanpool program, dedicated lanes for transit on streets and freeways, and potential for managed lanes

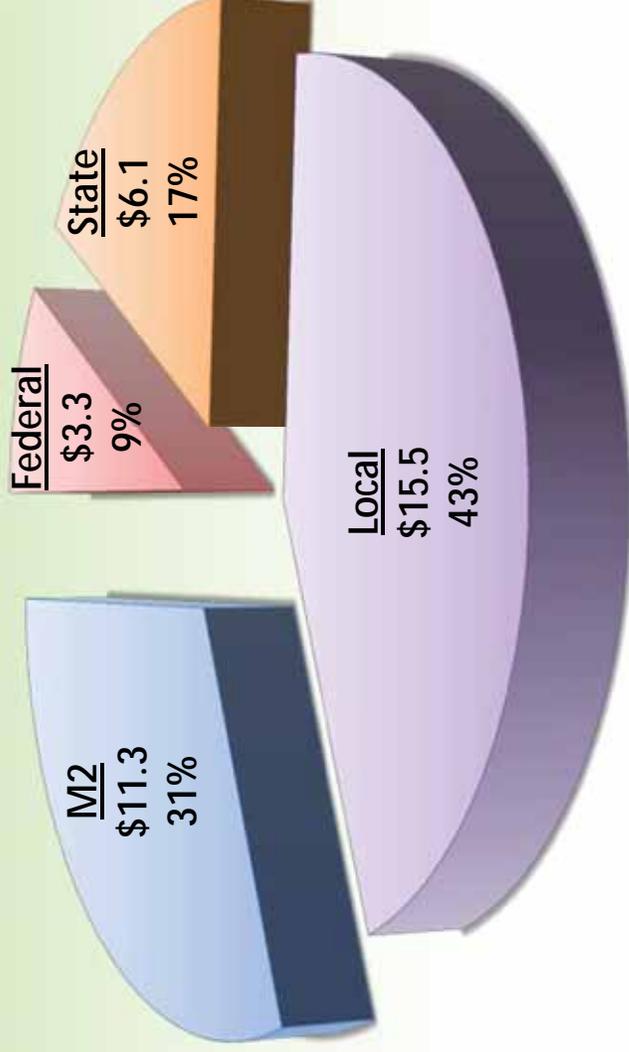
# Preferred Scenario

## Project Selection Factors

- Stakeholder Input
- Goals and Objectives
- Project Readiness
- Revenue Forecast

Draft 2014 LRTP – Fiscal Year 2015-35 Revenue Forecast  
(Billions)

Total Revenues = \$36.1 Billion

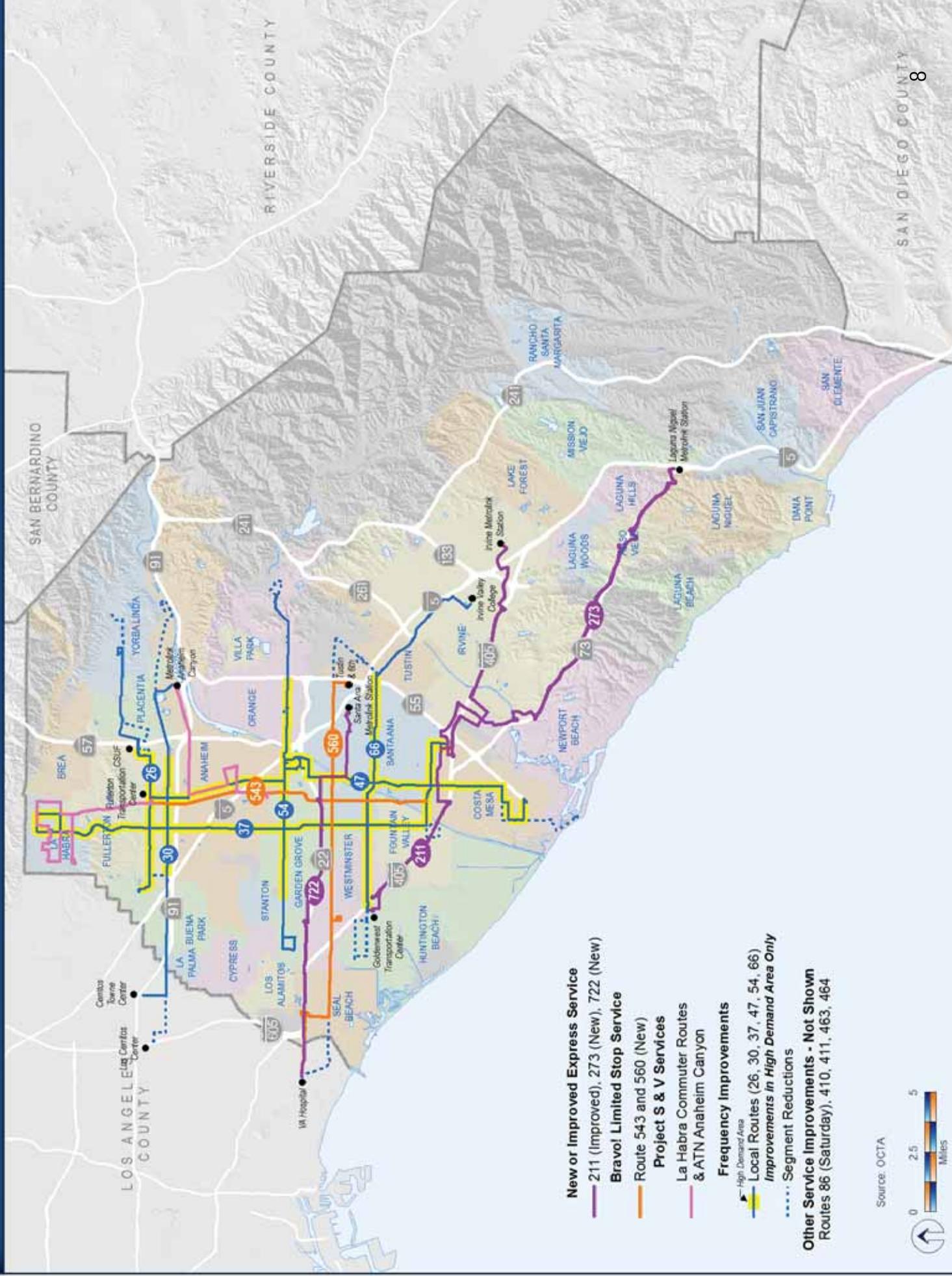


# Draft Preferred Scenario

- Proposed additions over 2010 Base Year:
  - New bus and streetcar service on high-demand corridors
  - Enhanced bus routes to maintain on-time performance
  - 20 new weekday Metrolink trains
  - 650 miles of bikeways
  - 820 lane miles on the Master Plan of Arterial Highways
  - 206 freeway/carpool lane miles
  - 236 tollway lane miles
  - 450 vanpools and station vans



# 2035 Bus Service Improvements



- New or Improved Express Service**
- 211 (Improved), 273 (New), 722 (New)
- Bravo! Limited Stop Service**
- Route 543 and 560 (New)
- Project S & V Services**
- La Habra Commuter Routes
  - & ATN Anaheim Canyon
- Frequency Improvements**
- Local Routes (26, 30, 37, 47, 54, 66)
  - Improvements in High Demand Area Only
  - ..... Segment Reductions
- Other Service Improvements - Not Shown**
- Routes 86 (Saturday), 410, 411, 463, 464

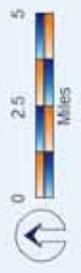
Source: OCTA



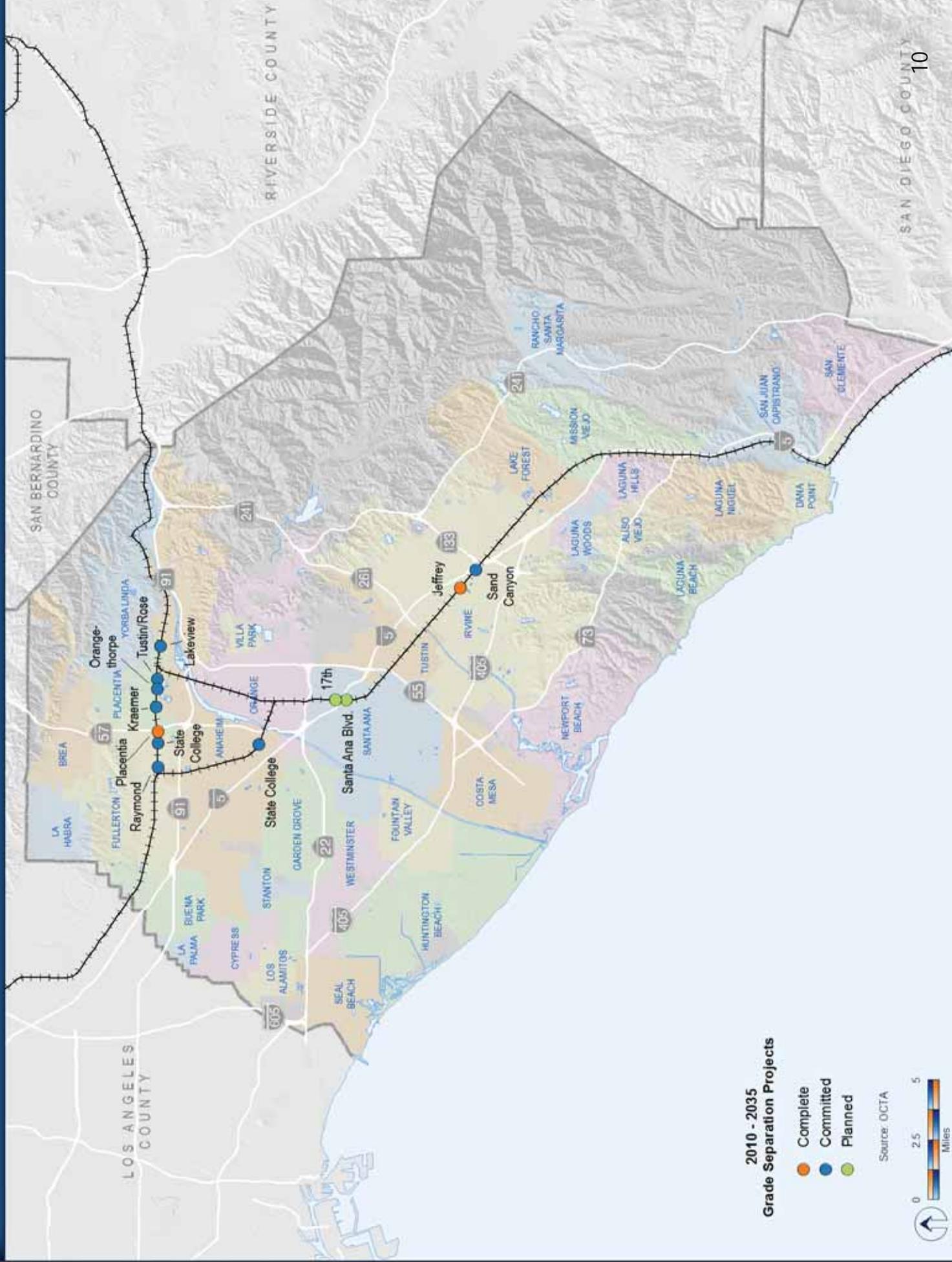
# 2035 Metrolink Service Expansion and Fixed Guideways



LOSSAN – Los Angeles-San Diego-San Luis Obispo Rail Corridor



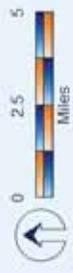
# 2010 - 2035 Grade Separation Projects



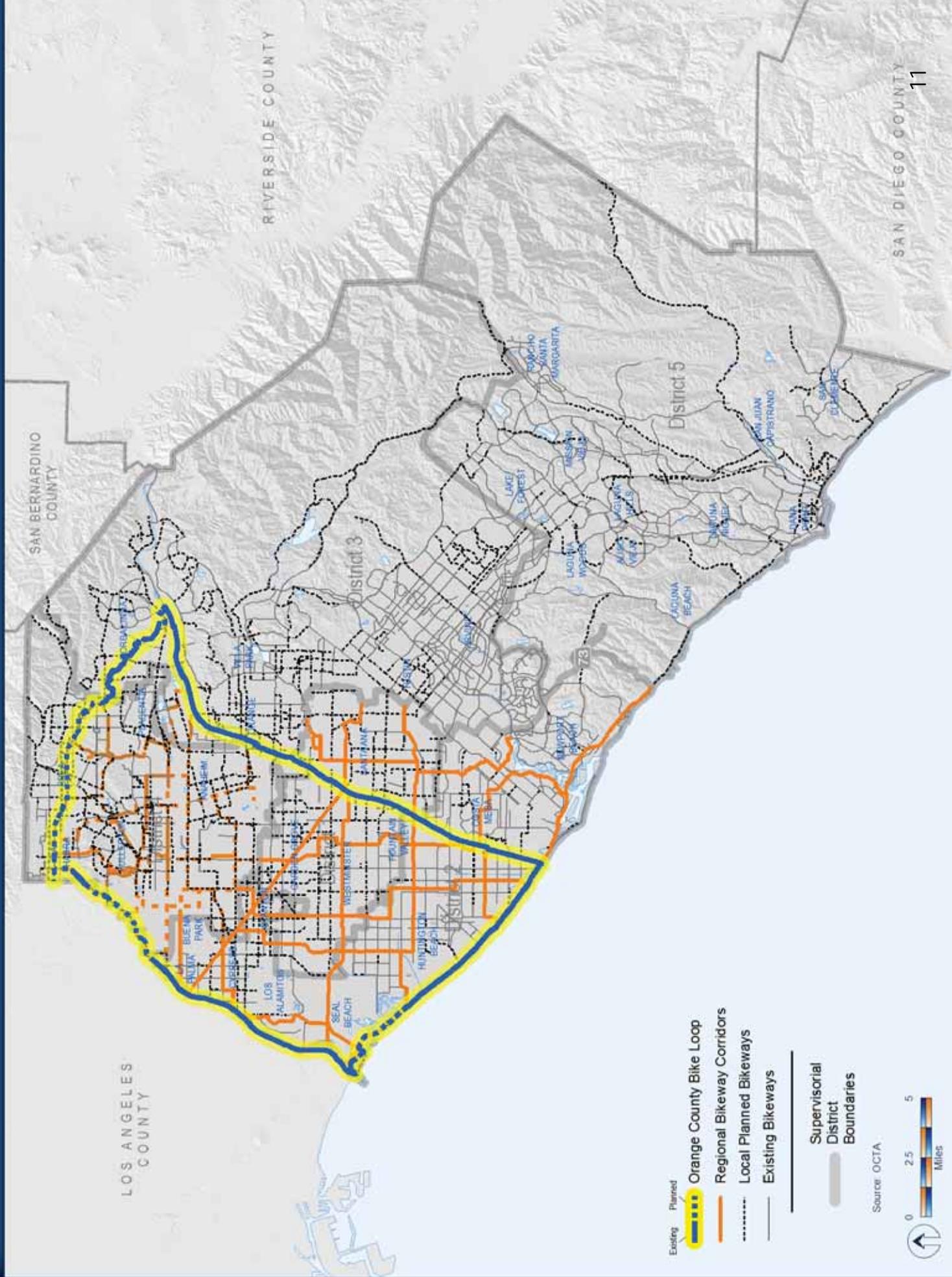
2010 - 2035  
Grade Separation Projects

- Complete
- Committed
- Planned

Source: OCTA



# Regional Bikeway Improvements



- Existing Planned
- Orange County Bike Loop
- Regional Bikeway Corridors
- Local Planned Bikeways
- Existing Bikeways
- Supervisorial District Boundaries

Source: OCTA





# 2035 Preferred Scenario Freeway, HOV, and Tollway Lane Addition Areas



### Lane Addition Areas

- General Purpose
- HOV
- TCA
- San Diego County Freeway Improvement Project
- Existing HOV Facilities
- No Planned Lane Additions
- Interchange Improvements

Source: OCTA



0 2.5 5 Miles

- SCAG – Southern California Association of Governments
- I-405 – Interstate 405
- HOV – High-occupancy vehicle
- TCA – Transportation Corridor Agency
- HOT – High-occupancy toll

8 General Purpose Lanes  
+ 4 HOT Lanes  
by 2050

8 General Purpose Lanes  
+ 2 HOV Lanes

# Systems Integration

- Efficiencies can be gained through integrated transportation systems
  - Shared infrastructure
  - Connectivity between modes
  - Access to key destinations
  - Improved travel times



# Draft Preferred Scenario

## Draft 2035 Preferred Scenario - Initial Model Results

|                                 | 2010<br>Base Year | 2035 Baseline | Draft 2035<br>Preferred | Percent Change from<br>2035 Baseline |
|---------------------------------|-------------------|---------------|-------------------------|--------------------------------------|
| Daily Transit Trips             | 133,469           | 165,219       | 189,426                 | 14.7% Increase                       |
| Total Vehicle Hours of Delay    | 274,646           | 729,432       | 506,142                 | 30.6% Decrease                       |
| Daily Vehicle Miles Traveled    | 63,404,082        | 81,112,113    | 81,750,024              | 0.8% Increase                        |
| Average Speed – Freeway GP Peak | 40.4              | 34.5          | 39.0                    | 13.2% Increase                       |
| Average Speed – HOV Peak        | 48.4              | 57.4          | 59.5                    | 3.6% Increase                        |
| Average Speed – Arterial Peak   | 30.3              | 22.7          | 27.2                    | 20.0% Increase                       |

GP – general purpose lanes

Note: HOV modeled with three-plus occupancy requirement in 2035.

Source: Orange County Transportation Analysis Model 3.4.1

● = desirable outcome

● = needs improvement

● = unacceptable outcome

# Beyond the Preferred Scenario

- Projects requiring additional funding and/or study:
  - Connect the planned Santa Ana/Garden Grove and Anaheim streetcar services
  - Eight new Bravo bus routes in high-demand areas
  - 36 new weekday Metrolink trains
  - Six LOSSAN grade separations
  - Operational freeway/carpool improvements
- 2016 RTP/SCS regional strategies
- Four-Year Action Plan



# 2014 LRTP Four-Year Action Plan

- Collaborate on inter-county connectivity
  - LOSSAN/Green Line connection
  - Gold Line Eastern Extension – Phase 2
  - I-405 Corridor Master Plan
  - San Diego's Interstate 5 HOT Lane Project
  - 91 Express Lanes extension into Riverside County
- Study intra-county opportunities
  - Regional active transportation planning
  - Guideway projects expansion
  - Sustainable transportation strategies
  - Coordinate with Caltrans, Toll Roads (TCAs), and local jurisdictions
  - Enhance transportation outreach and education
  - Active transportation safety
  - Transit use and trip planning
- Monitor emerging issues
  - State/federal funding opportunities
  - 2016 RTP/SCS
  - Technology advancements
    - Autonomous vehicles
    - Alternative fuels
    - Smart phone applications

# Next Steps

- Public review through June 20, 2014
- Final LRTP in September 2014
- Submit to SCAG by November 2014

# 2035 Travel Demand Impacts Over 2010 Conditions

|  | 2010<br>Base Year | 2035 Baseline Change<br>(to 2010) |      | 2035 Preferred Change<br>(to 2010) |      |
|--|-------------------|-----------------------------------|------|------------------------------------|------|
|  | Performance       | Travel Demand Impacts             |      | Travel Demand Impacts              |      |
| Daily Person Trips                             | 8,304,102         | +1,179,119                        | 14%  | +1,178,960                         | 14%  |
| Daily Transit Trips                            | 133,469           | +31,750                           | 24%  | +55,957                            | 42%  |
| Total Vehicle Hours of Delay                   | 274,646           | +454,786                          | 166% | +231,496                           | 84%  |
| Daily Vehicle Miles Traveled                   | 63,404,082        | +17,708,031                       | 28%  | +18,345,942                        | 29%  |
| Average Speed (mph) – Freeway<br>GP Lanes Peak | 40.4              | -6                                | -15% | -1                                 | -3%  |
| Average Speed (mph) – HOV Peak                 | 49                | +9                                | 19%  | +11                                | 23%  |
| Average Speed (mph) – Arterial<br>Peak         | 30.3              | -8                                | -26% | -3                                 | -10% |

GP – general purpose  
 HOV – high-occupancy vehicle  
 mph – miles per hour



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Item 2 Attachment: System Preservation Update



# SCAG Transportation Working Group

## Overview of Regional Needs Analysis

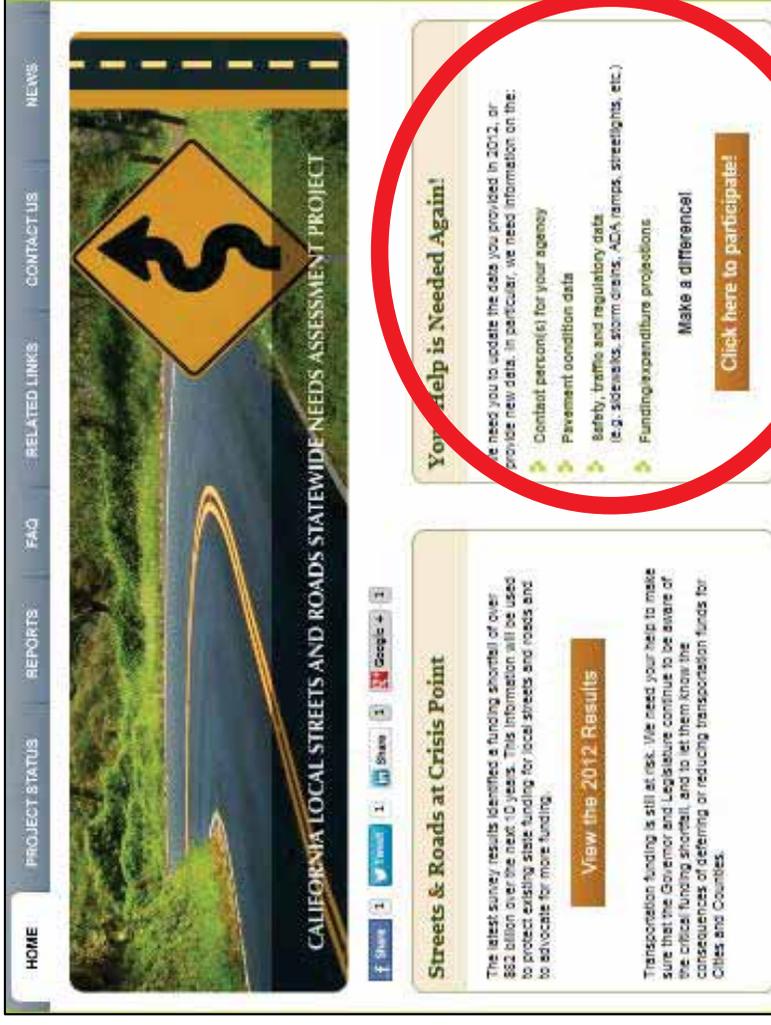
Presented by:  
Margot Yapp, PE  
NCE  
May 15, 2014



Collaboration. Commitment. Confidence.™

# 2014 Statewide Survey - Overview

- Survey open Jan 20 to April 7 for 539 agencies
- Responses initially slow
  - 40% responses by 3/31
  - NCE contacted ALL agencies in SCAG region
  - CSAC/League/RTPAs sent email blasts
  - NCE entered data for 28 agencies



# Responses by Agency (SCAG only)

| County         | Total Agencies | % of SCAG   | Final Submittal | % of SCAG  | Incomplete Submittal | % of SCAG  | No Response | % of SCAG  |
|----------------|----------------|-------------|-----------------|------------|----------------------|------------|-------------|------------|
| Imperial       | 8              | 4%          | 3               | 2%         | 1                    | 1%         | 4           | 2%         |
| Los Angeles    | 89             | 45%         | 46              | 23%        | 17                   | 9%         | 26          | 13%        |
| Orange         | 35             | 18%         | 28              | 14%        | 7                    | 4%         | 0           | 0%         |
| Riverside      | 29             | 15%         | 11              | 6%         | 4                    | 2%         | 14          | 7%         |
| San Bernardino | 25             | 13%         | 10              | 5%         | 8                    | 4%         | 7           | 4%         |
| Ventura        | 11             | 6%          | 7               | 4%         | 3                    | 2%         | 1           | 1%         |
| <b>Totals:</b> | <b>197</b>     | <b>100%</b> | <b>105</b>      | <b>53%</b> | <b>40</b>            | <b>20%</b> | <b>52</b>   | <b>26%</b> |

**Final response rate = 74%**

# Responses by Miles (SCAG only)

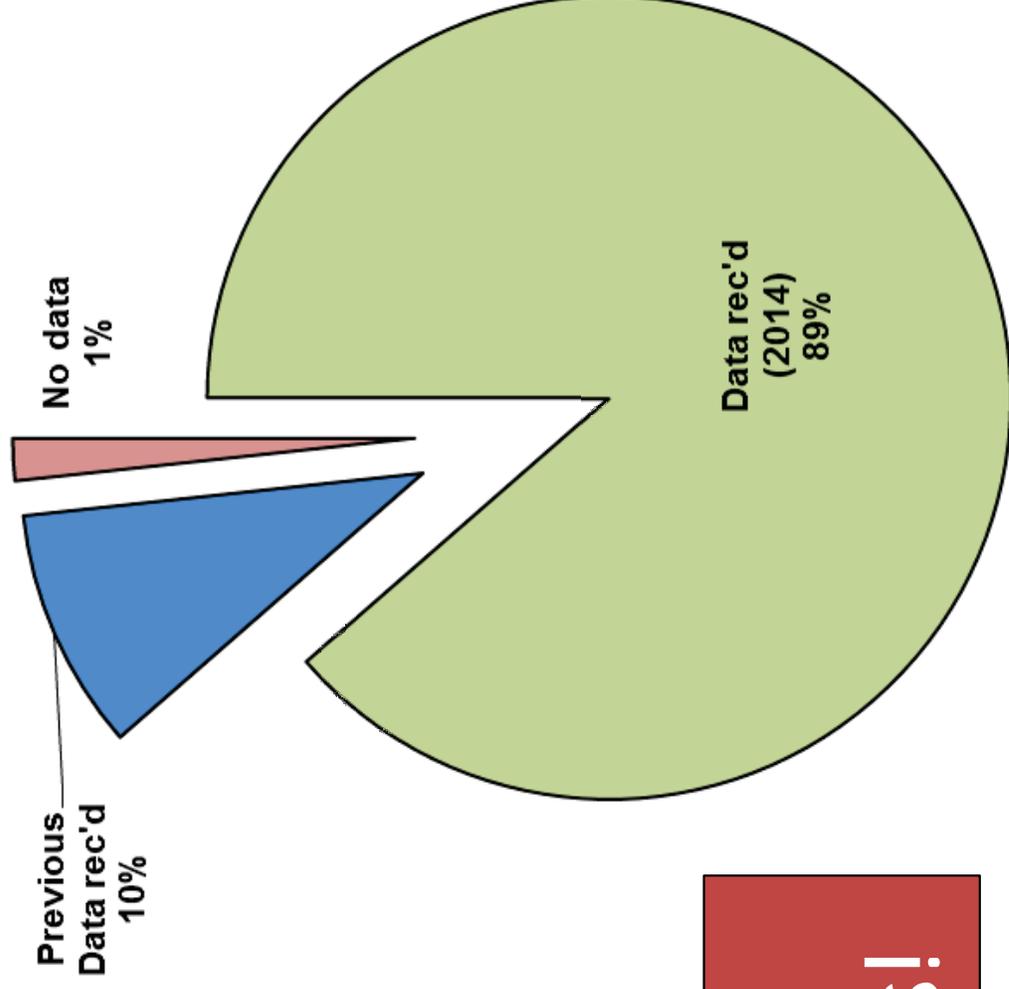
 145 responses

 52 no responses

– 3 have >200 miles

- Redlands (San Bernardino)
- Menifee (Riverside)
- Perris (Riverside)

– 29 have < 100 miles

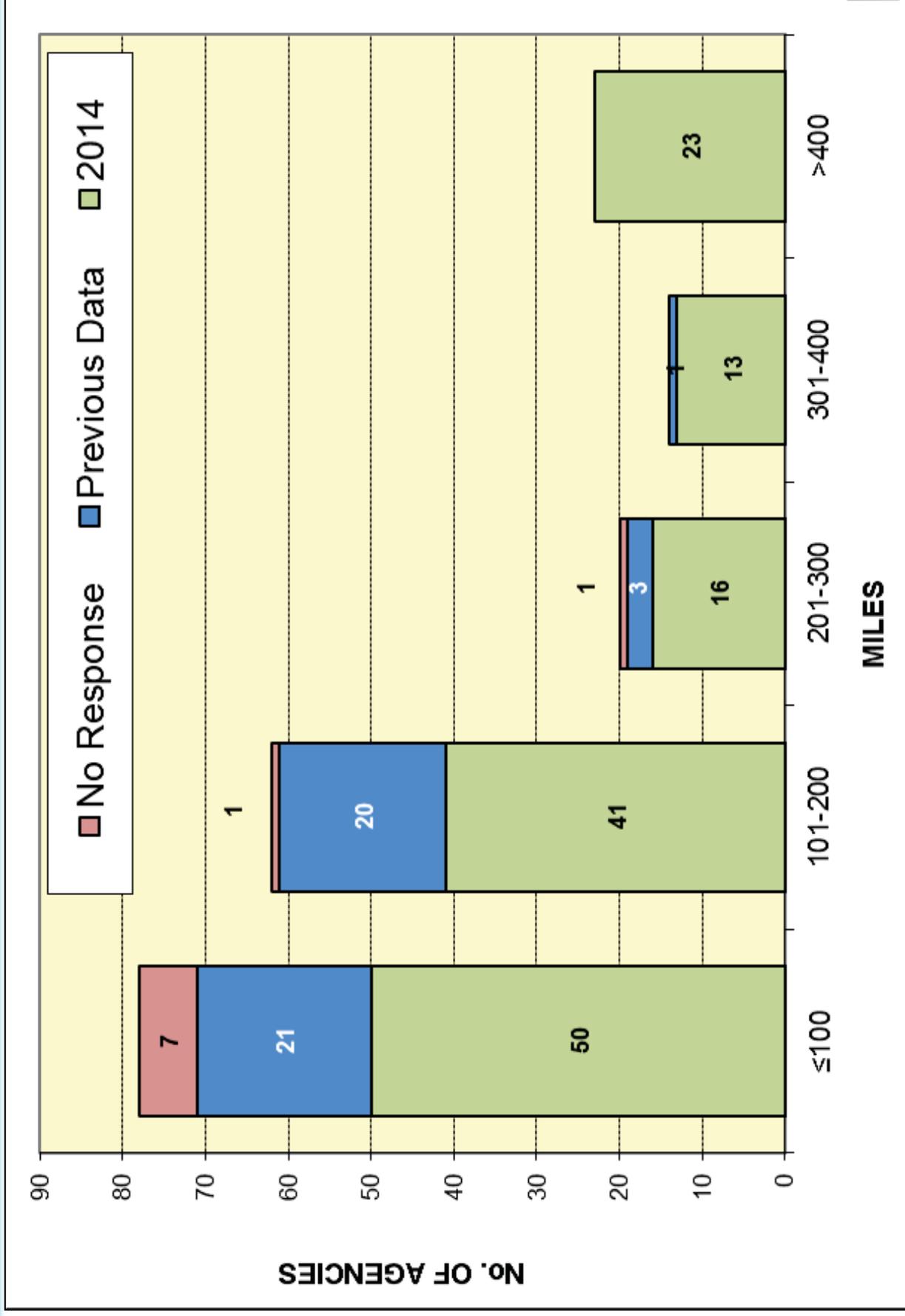


**We have data on  
89% of total miles!**

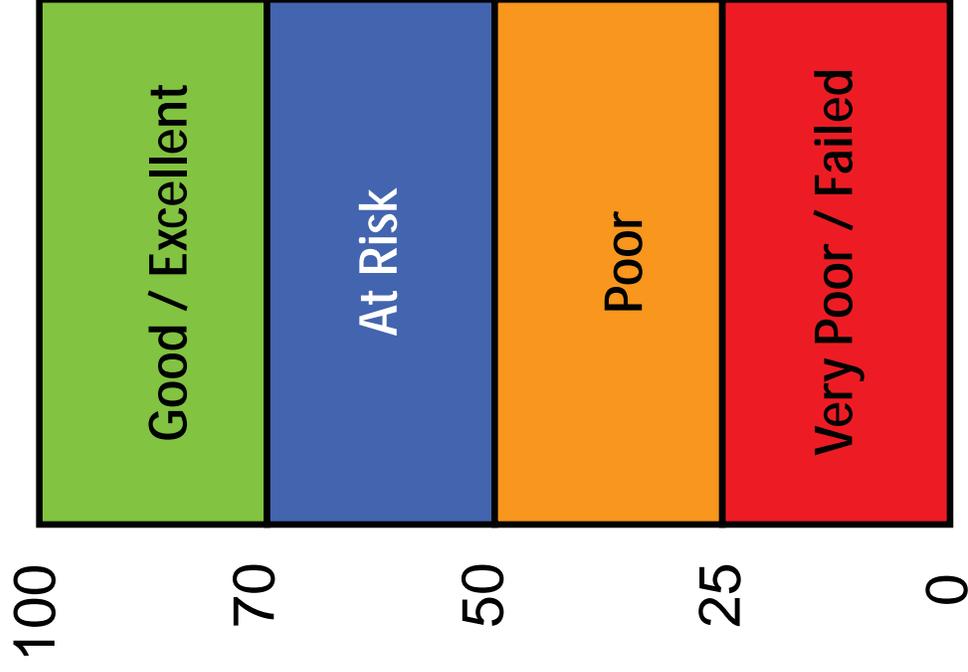
# Responses by Miles - 2014 (Breakdown by County)

| County         | Total Miles   | % Responded (miles) |
|----------------|---------------|---------------------|
| Imperial       | 3,000         | 92%                 |
| Los Angeles    | 21,297        | 91%                 |
| Orange         | 6,601         | 100%                |
| Riverside      | 7,511         | 71%                 |
| San Bernardino | 9,107         | 89%                 |
| Ventura        | 2,513         | 98%                 |
| <b>Totals</b>  | <b>50,028</b> | <b>89%</b>          |

# Are Data Representative?



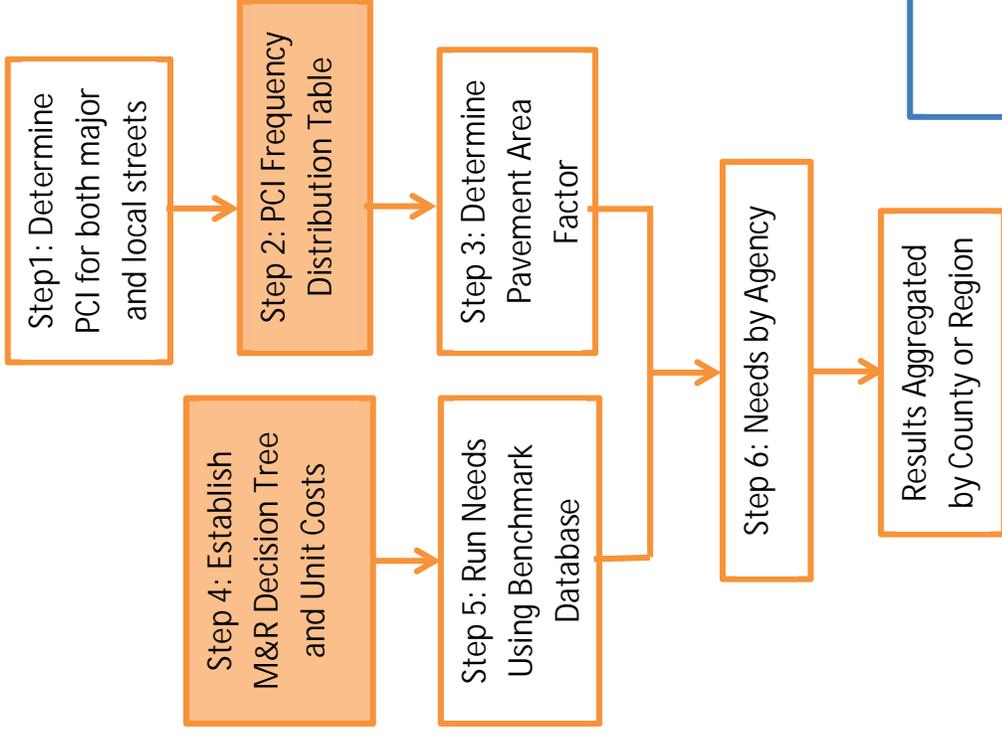
# What is Average PCI for SCAG?



?

**Still working on it!!**

# Needs Assessment Methodology



 Two questions to ask

 Are treatment costs different?

 Are characteristics of street networks different?

Note

| Condition Categories |                |
|----------------------|----------------|
| I                    | 70 < PCI < 100 |
| II/III               | 50 < PCI < 70  |
| IV                   | 25 < PCI < 50  |
| V                    | 0 < PCI < 25   |

# Step 1: PCI Data Submitted

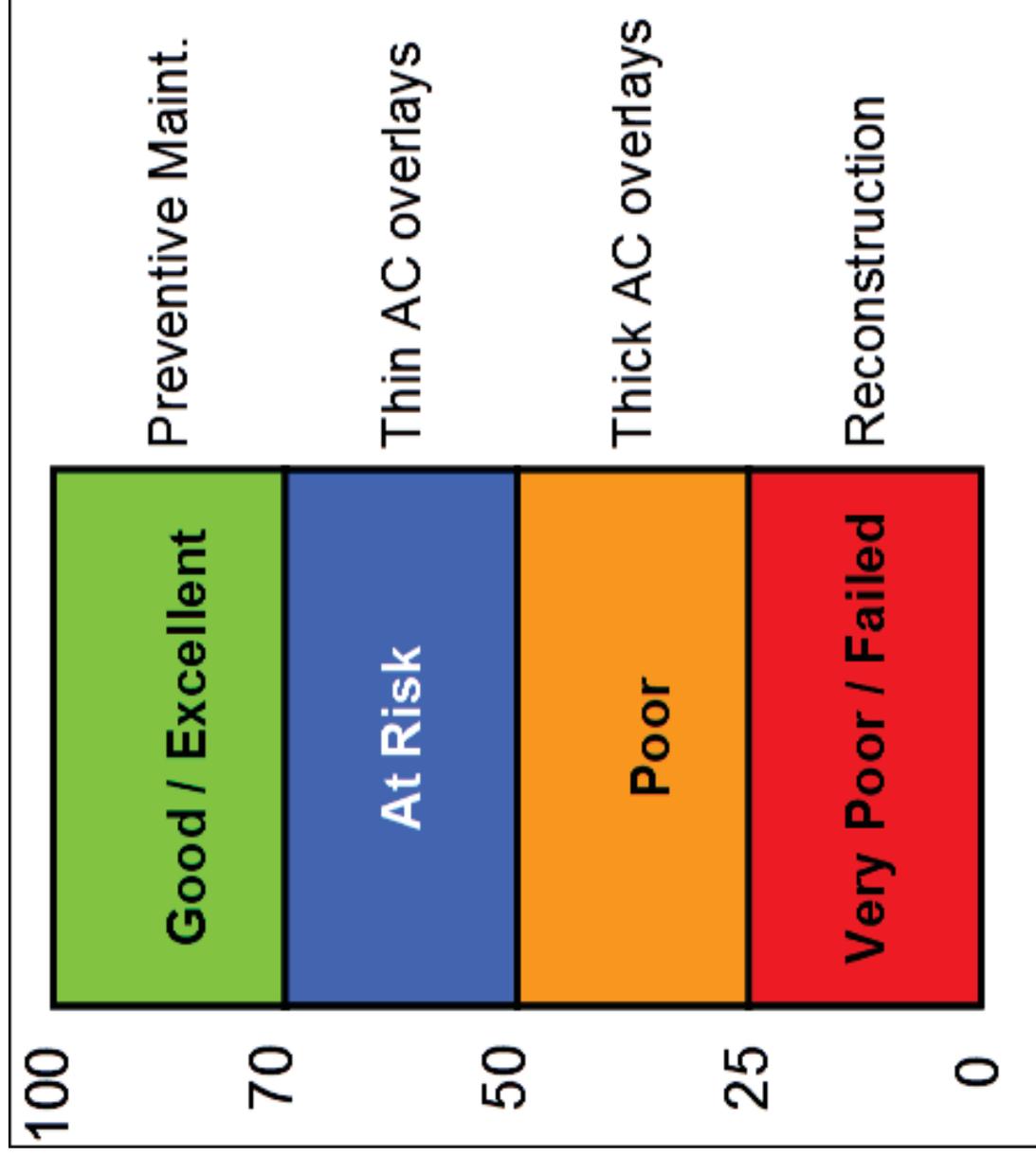
|     | C           | D           | E  | F                             | G                    | H     | I         |
|-----|-------------|-------------|----|-------------------------------|----------------------|-------|-----------|
| 1   | Agency      | County      | FC | FCName                        | Last Inspection Date | PCI   | InterLine |
| 269 | Lawndale    | Los Angeles | 3  | Rural Major Roads             |                      |       |           |
| 270 | Lawndale    | Los Angeles | 4  | Rural Residential/Local Roads |                      |       |           |
| 271 | Lawndale    | Los Angeles | 5  | Unpaved Roads                 |                      |       | 12        |
| 272 | Lomita      | Los Angeles | 1  | Urban Major Roads             |                      |       |           |
| 273 | Lomita      | Los Angeles | 2  | Urban Residential/Local Roads |                      |       |           |
| 274 | Lomita      | Los Angeles | 3  | Rural Major Roads             |                      |       |           |
| 275 | Lomita      | Los Angeles | 4  | Rural Residential/Local Roads |                      |       |           |
| 276 | Lomita      | Los Angeles | 5  | Unpaved Roads                 |                      |       |           |
| 277 | Long Beach  | Los Angeles | 1  | Urban Major Roads             | 2005                 | 72    | 261       |
| 278 | Long Beach  | Los Angeles | 2  | Urban Residential/Local Roads | 2007                 | 69    | 547       |
| 279 | Long Beach  | Los Angeles | 3  | Rural Major Roads             |                      |       |           |
| 280 | Long Beach  | Los Angeles | 4  | Rural Residential/Local Roads |                      |       |           |
| 281 | Long Beach  | Los Angeles | 5  | Unpaved Roads                 |                      |       |           |
| 282 | Los Angeles | Los Angeles | 1  | Urban Major Roads             | 2011                 | 63.54 | 2591.36   |
| 283 | Los Angeles | Los Angeles | 2  | Urban Residential/Local Roads | 2011                 | 61.62 | 3838.93   |
| 284 | Los Angeles | Los Angeles | 3  | Rural Major Roads             |                      |       |           |
| 285 | Los Angeles | Los Angeles | 4  | Rural Residential/Local Roads |                      |       |           |
| 286 | Los Angeles | Los Angeles | 5  | Unpaved Roads                 |                      |       |           |

# Step 2: Frequency Distribution Table

| PCI | Pavement Area (%)                     |                                       |  |                                      |       | Total |
|-----|---------------------------------------|---------------------------------------|--|--------------------------------------|-------|-------|
|     | Condition Category I (PCI: 70 to 100) | Condition Category II (PCI: 50 to 69) | Condition Category III (PCI: 25 to 49) | Condition Category IV (PCI: 0 to 24) |       |       |
| 69  | 61.8                                  | 20.6                                  | 13.2                                   | 4.4                                  | 100.0 |       |
| 70  | 63.6                                  | 20.2                                  | 12.3                                   | 3.9                                  | 100.0 |       |
| 71  | 65.5                                  | 19.7                                  | 11.4                                   | 3.4                                  | 100.0 |       |
| 72  | 67.3                                  | 19.2                                  | 10.6                                   | 2.9                                  | 100.0 |       |
| 73  | 69.2                                  | 18.6                                  | 9.7                                    | 2.5                                  | 100.0 |       |
| 74  | 71.1                                  | 18.0                                  | 8.8                                    | 2.1                                  | 100.0 |       |
| 75  | 73.1                                  | 17.3                                  | 7.8                                    | 1.8                                  | 100.0 |       |
| 76  | 75.0                                  | 16.6                                  | 6.9                                    | 1.5                                  | 100.0 |       |
| 77  | 77.0                                  | 15.9                                  | 5.9                                    | 1.2                                  | 100.0 |       |
| 78  | 79.0                                  | 15.1                                  | 4.9                                    | 1.0                                  | 100.0 |       |
| 79  | 81.0                                  | 14.2                                  | 4.0                                    | 0.8                                  | 100.0 |       |
| 80  | 83.2                                  | 13.3                                  | 2.9                                    | 0.6                                  | 100.0 |       |
| 81  | 85.3                                  | 12.3                                  | 1.9                                    | 0.5                                  | 100.0 |       |
| 82  | 87.4                                  | 11.3                                  | 0.9                                    | 0.4                                  | 100.0 |       |
| 83  | 89.3                                  | 10.3                                  | 0.0                                    | 0.4                                  | 100.0 |       |
| 84  | 91.4                                  | 9.3                                   | 0.0                                    | 0.4                                  | 100.0 |       |
| 85  | 93.5                                  | 8.3                                   | 0.0                                    | 0.4                                  | 100.0 |       |
| 86  | 95.6                                  | 7.3                                   | 0.0                                    | 0.4                                  | 100.0 |       |
| 87  | 97.7                                  | 6.3                                   | 0.0                                    | 0.4                                  | 100.0 |       |
| 88  | 93.5                                  | 6.5                                   | 0.0                                    | 0.0                                  | 100.0 |       |
| 89  | 94.1                                  | 5.9                                   | 0.0                                    | 0.0                                  | 100.0 |       |
| 90  | 94.6                                  | 5.4                                   | 0.0                                    | 0.0                                  | 100.0 |       |
| 91  | 95.2                                  | 4.8                                   | 0.0                                    | 0.0                                  | 100.0 |       |

This table characterizes the street network

# Step 4: Decision Tree





# Step 5: Benchmark Database Results

| Year         | Major Roads          |         |                       |           |                        |           |                       |           |                        |           |                       |           |
|--------------|----------------------|---------|-----------------------|-----------|------------------------|-----------|-----------------------|-----------|------------------------|-----------|-----------------------|-----------|
|              | Condition Category I |         | Condition Category II |           | Condition Category III |           | Condition Category IV |           | Condition Category III |           | Condition Category IV |           |
|              | Needs                | Backlog | Needs                 | Backlog   | Needs                  | Backlog   | Needs                 | Backlog   | Needs                  | Backlog   | Needs                 | Backlog   |
| 1            | \$8,232              | \$0     | \$40,250              | \$167,050 | \$75,924               | \$290,316 | \$93,144              | \$824,856 | \$75,924               | \$314,712 | \$93,144              | \$731,712 |
| 2            | \$8,232              | \$0     | \$40,250              | \$140,750 | \$75,924               | \$339,108 | \$93,144              | \$638,568 | \$75,924               | \$338,424 | \$93,144              | \$545,424 |
| 3            | \$8,232              | \$0     | \$40,250              | \$114,450 | \$75,924               | \$362,820 | \$93,144              | \$452,280 | \$75,924               | \$293,616 | \$93,144              | \$361,376 |
| 4            | \$8,232              | \$0     | \$40,250              | \$88,150  | \$75,924               | \$221,052 | \$93,144              | \$271,592 | \$75,924               | \$147,368 | \$93,144              | \$180,688 |
| 5            | \$8,232              | \$0     | \$40,250              | \$52,550  | \$75,924               | \$73,684  | \$93,144              | \$90,904  | \$75,924               | \$0       | \$93,144              | \$0       |
| 6            | \$8,232              | \$0     | \$40,250              | \$19,750  | \$75,924               | \$0       | \$93,144              | \$0       | \$75,924               | \$0       | \$93,144              | \$0       |
| 7            | \$8,232              | \$0     | \$40,250              | \$0       | \$75,924               | \$0       | \$93,144              | \$0       | \$75,924               | \$0       | \$93,144              | \$0       |
| 8            | \$8,232              | \$0     | \$40,250              | \$12,200  | \$75,924               | \$147,368 | \$93,144              | \$180,688 | \$75,924               | \$0       | \$93,144              | \$0       |
| 9            | \$8,232              | \$0     | \$40,250              | \$6,100   | \$75,924               | \$73,684  | \$93,144              | \$90,904  | \$75,924               | \$0       | \$93,144              | \$0       |
| 10           | \$8,232              | \$0     | \$40,250              | \$0       | \$75,924               | \$0       | \$93,144              | \$0       | \$75,924               | \$0       | \$93,144              | \$0       |
| <b>Total</b> | <b>\$82,320</b>      |         | <b>\$402,500</b>      |           | <b>\$759,240</b>       |           | <b>\$931,440</b>      |           | <b>\$759,240</b>       |           | <b>\$931,440</b>      |           |

M3 roads only

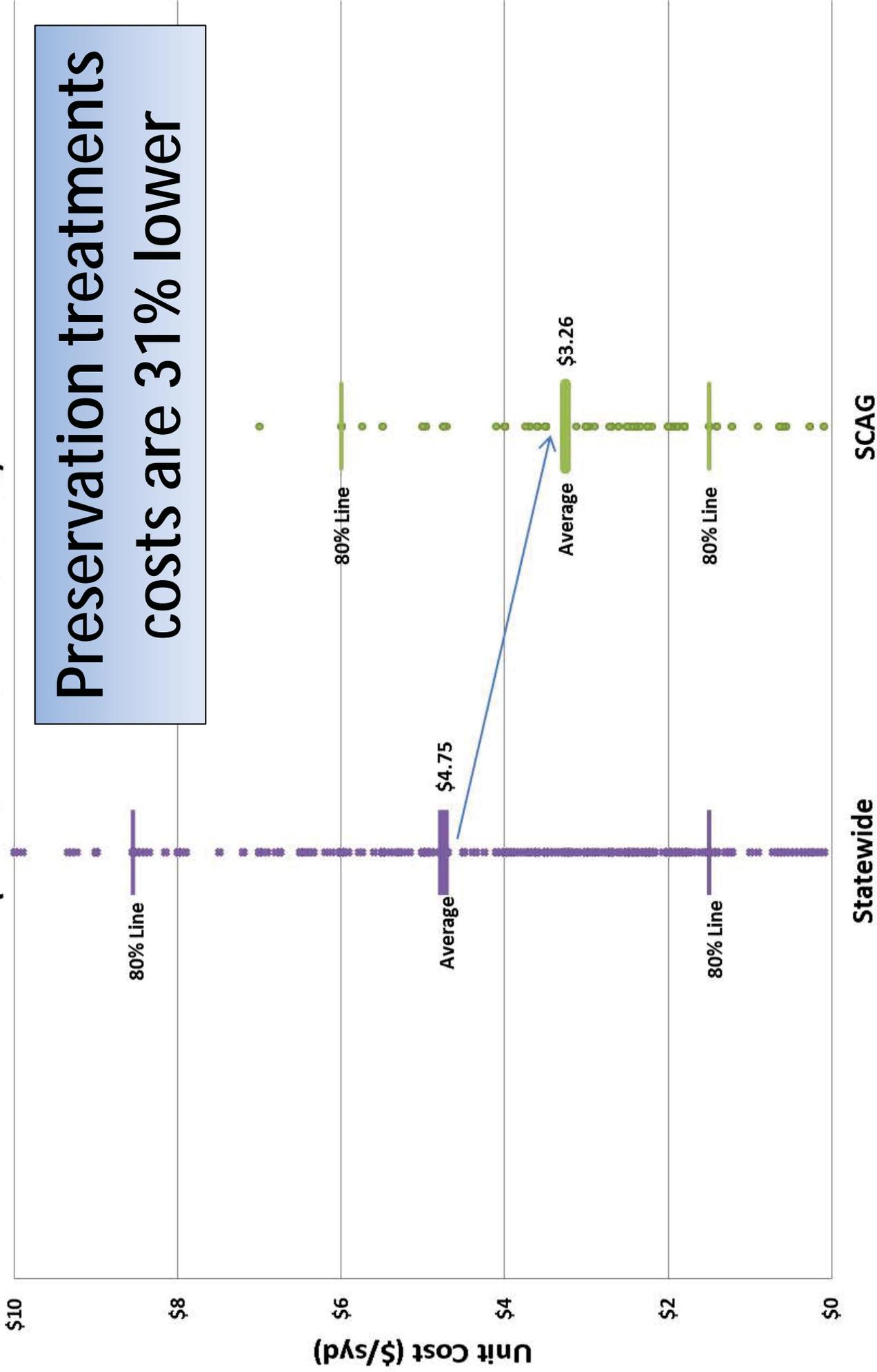


# Step 6: M3 Needs for Agency

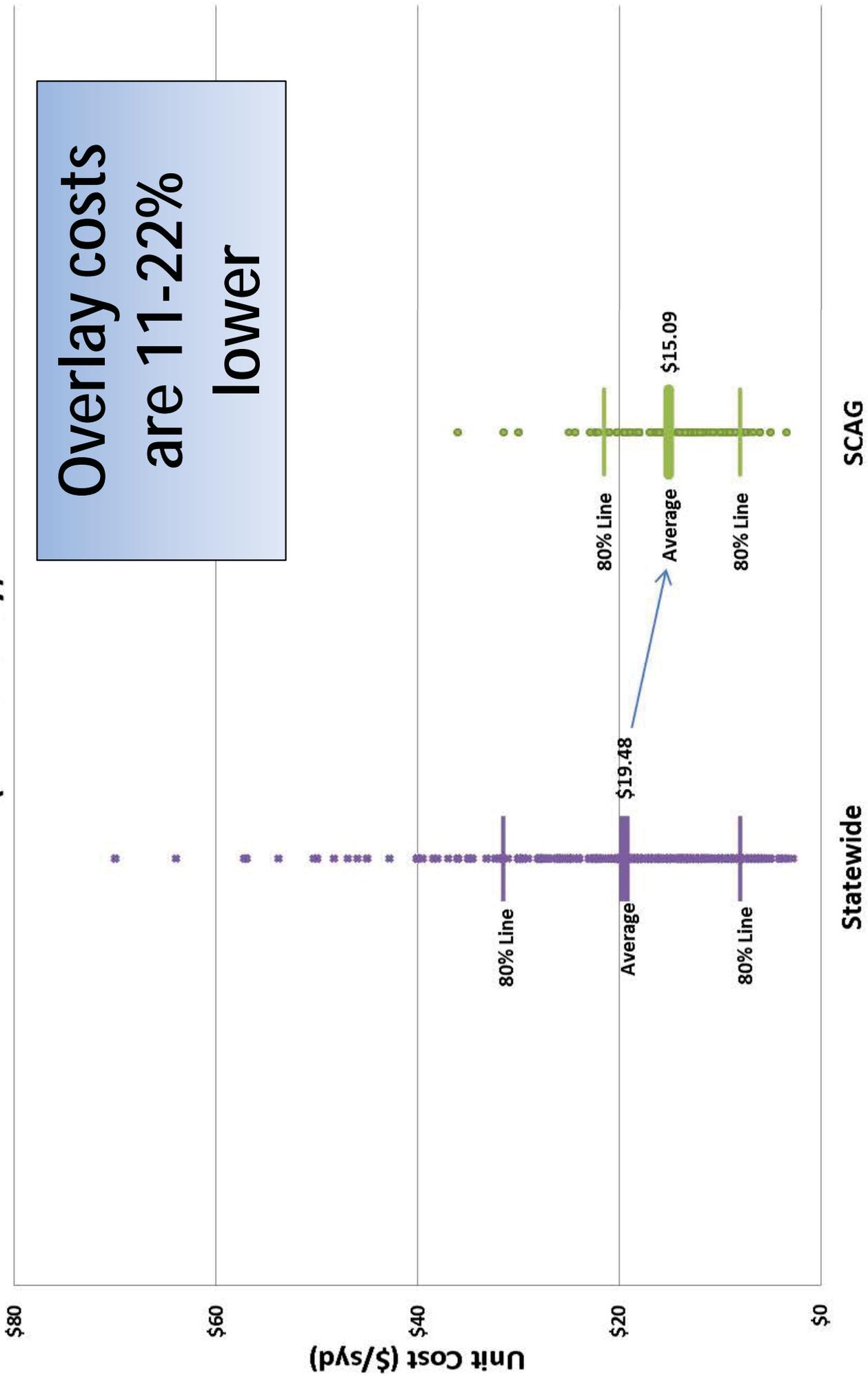
| Year         | Condition Category III |           |             |  |              |  |
|--------------|------------------------|-----------|-------------|--|--------------|--|
|              | from Benchmark Results |           | Area Factor | Actual (benchmark results x area factor) |              |  |
|              | Needs                  | Backlog   |             | Needs                                    | Backlog      |  |
| 1            | \$75,924               | \$290,316 | 117.60      | \$8,928,662                              | \$34,141,162 |  |
| 2            | \$75,924               | \$314,712 | 117.60      | \$8,928,662                              | \$37,010,131 |  |
| 3            | \$75,924               | \$339,108 | 117.60      | \$8,928,662                              | \$39,879,101 |  |
| 4            | \$75,924               | \$338,424 | 117.60      | \$8,928,662                              | \$39,798,662 |  |
| 5            | \$75,924               | \$362,820 | 117.60      | \$8,928,662                              | \$42,667,632 |  |
| 6            | \$75,924               | \$293,616 | 117.60      | \$8,928,662                              | \$34,529,242 |  |
| 7            | \$75,924               | \$221,052 | 117.60      | \$8,928,662                              | \$25,995,715 |  |
| 8            | \$75,924               | \$147,368 | 117.60      | \$8,928,662                              | \$17,330,477 |  |
| 9            | \$75,924               | \$73,684  | 117.60      | \$8,928,662                              | \$8,665,238  |  |
| 10           | \$75,924               | \$0       | 117.60      | \$8,928,662                              | \$0          |  |
| <b>Total</b> |                        |           |             | <b>\$89,286,624</b>                      |              |  |



# Statewide vs. SCAG 2014 Unit Cost Comparison (Preventative Maintenance)



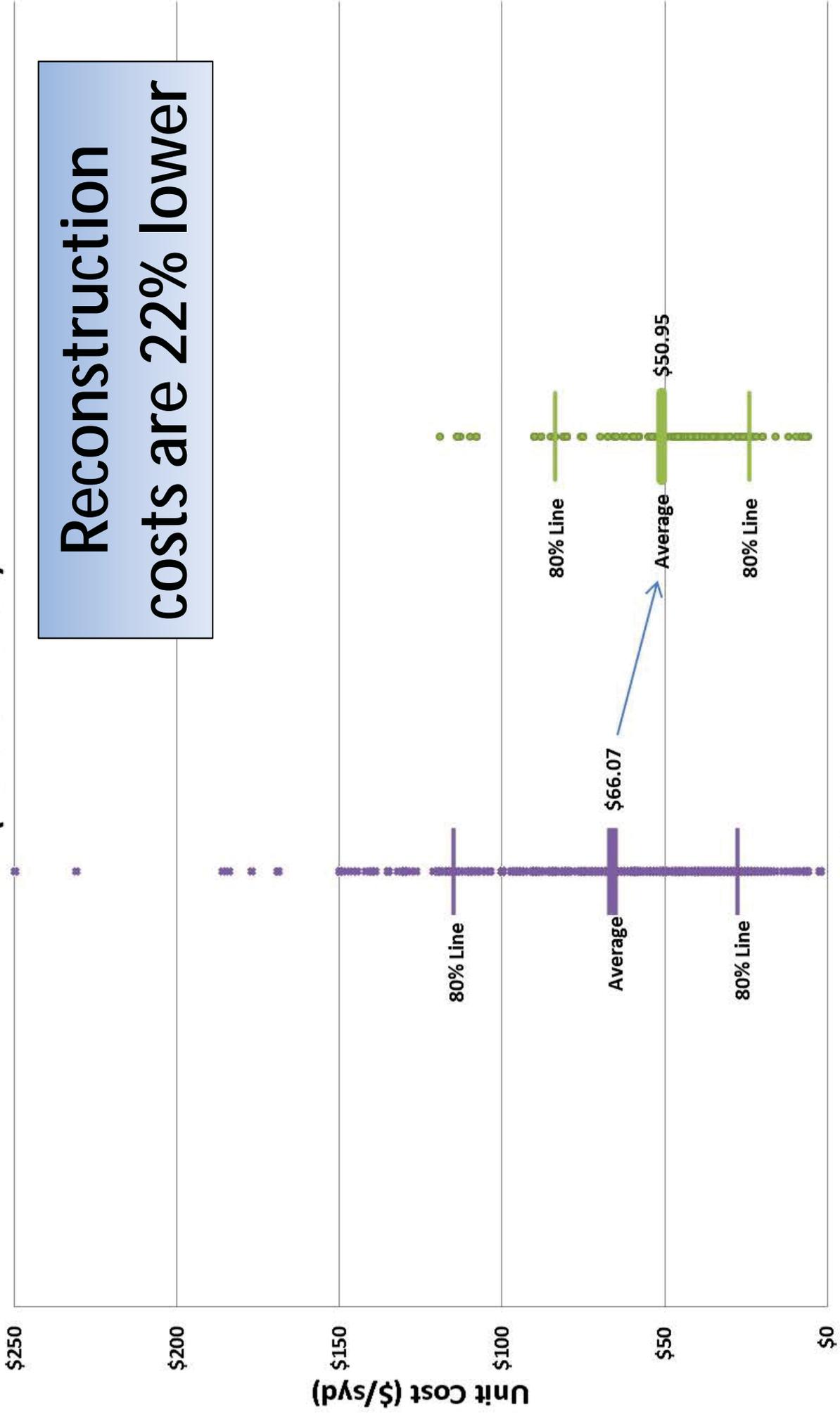
# Statewide vs. SCAG 2014 Unit Cost Comparison (Thin Overlay)



Overlay costs  
are 11-22%  
lower

# Statewide vs. SCAG 2014 Unit Cost Comparison (Reconstruction)

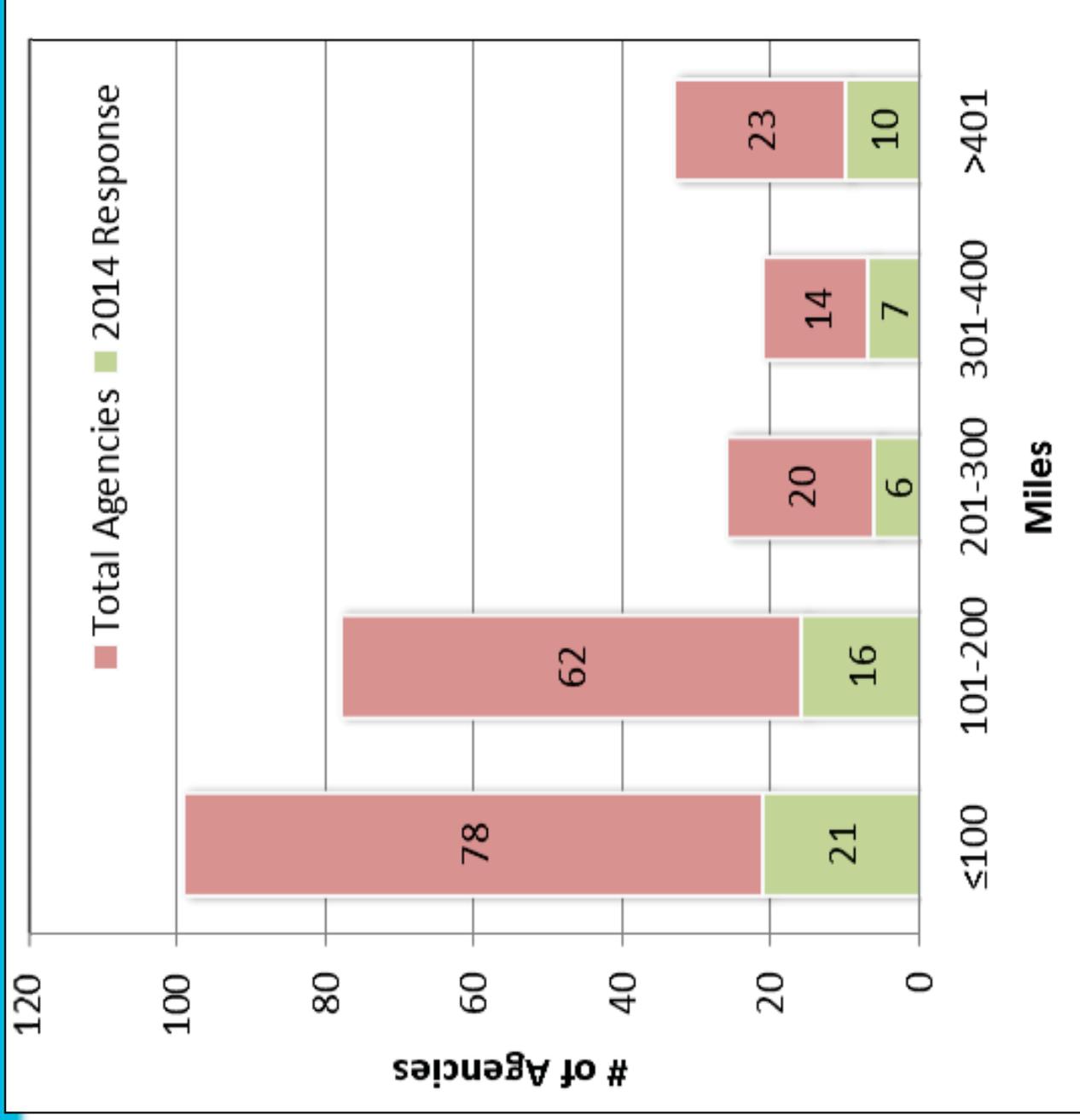
**Reconstruction  
costs are 22% lower**



Statewide

SCAG

# Are Costs Representative?



# Preliminary Conclusions

- Regional needs analysis
  - Data is sufficient to provide credible results using statewide models and assumptions
- Separate county by county analysis
  - Treatment cost data
    - Insufficient to support separate county needs analysis
  - Street network characterization
    - To be determined - analysis in progress



# Questions?



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**SOUTHERN CALIFORNIA  
ASSOCIATION of GOVERNMENTS**

Item 3 Attachment: Staff Draft Paper on TOD Benefits, Challenges and Best Practices

# Transit Oriented Developments in Southern California: Benefits, Challenges, and Best Practices for Success

Prepared by SCAG Staff, July 2013

## Executive Summary

Transit Oriented Development (TOD) has become an important part of the overall planning strategies in Southern California. For example, in the SCAG's 2012-2035 RTP/SCS, over half of the future growth in housing and employment focused in the High Quality Transit Areas (HQTAs), i.e. through TODs. In addition, about \$246 billion (47 %) of the total investment in the 2012 RTP/SCS are for transit. However, given the first light rail line in the SCAG region opened only in 1990, the region is still very much on the learning curve for TOD planning.

The objective of this paper is to provide a summary of key knowledge and information supportive of TOD planning for a wide range of partners and stakeholders, including local elected officials and planning staff. The paper focuses on the benefits, challenges, and best practices of TODs.

Key findings of the paper include the following:

- TODs can generate a broad range of benefits to individuals and communities encompassing transportation, economic, environmental and fiscal dimensions.
- Major challenges for developing TODs include higher risks and cost for developers and greater difficulty to obtain private financing.
- Key factors for successful TODs include favorable market conditions and supportive local policies including density and financial incentives.
- There are potential TOD opportunities along the proposed Crenshaw/LAX light rail line.

The paper also recommends a variety of best practices in the areas of TOD financing, land use regulation, equitable TODs, parking management, design and development guidelines and standards, natural resources management and conservation, environmental review and entitlement, innovative partnership, engagement and public education.

In addition to developing regional policies and plans supportive of TOD planning, SCAG has also been supporting TOD planning at the project level through its Sustainability Program.

## Introduction

Transit-oriented developments (TODs) are generally considered to be moderate- to high-density mixed-use developments located within walking distance (e.g., half a mile) from a major transit stop. TODs are an important component of the regional Sustainable Communities Strategy (SCS) to preserve its long-term livability and sustainability.

Given the increasing emphasis on TODs, policy makers and the planning communities are naturally interested in the questions on *whether* and *how* to promote TODs particularly in specific areas. While TOD implementation within an identified area requires a more focused study to tailor to the uniqueness of the study area, this paper provides a framework to address the questions related to *whether* and *how* to implement TODs in certain areas in Southern California. It assembles information on key dimensions of TODs: their benefits to communities and individuals, challenges to develop TODs, and factors for success of TODs in Southern California. The paper also helps to illuminate on questions on why TODs have taken place in certain parts of the region but not others.

This paper utilizes various sources of information including literature review, interviews with two TOD experts, case studies on two existing TODs in Los Angeles County, and related analysis all conducted by SCAG staff. The case studies include two TOD joint development projects at Wilshire/Vermont (Red Line) and at Del Mar (Gold Line). Both TODs were completed in 2007, and both project areas include the areas with  $\frac{1}{4}$  mile radius surrounding the rail stations.

## What are the TOD benefits?

The scope of TOD benefits may include the following:

- Increase transit use: TOD residents generally have higher rates of transit use than residents outside the TODs. For example, for both the Wilshire/Vermont and Del Mar TOD project areas, the share of transit to work increased by four to nine percentage points between 2000 and 2009 (see Attachment 5).
- Help to reduce per capita vehicle miles traveled (VMT) and associated greenhouse (GHG) emissions:  
For example, compared to non-TODs, TODs (with ¼ mile radius) along Red Line and Gold Line would reduce the VMT per capita per day by 44%, from 12 to 6.7 vehicle miles. It would also reduce the per capita CO2 by a similar level.
- Command higher premiums both in sales prices and rents
- More resilient to economic downturns and contribute to stabilizing the communities
- Generate other co-benefits such as reduced land consumption and other resource consumption (e.g., energy and water) due to the more compact development pattern
- Command higher return of investment for successful TODs
  - Successful TODs would command two to five percentage points higher internal rate of investment than typical residential investment (Please see Attachment 4 which includes an Overview of Financial Considerations for TODs Based on Literature Review).

Some of the TOD benefits may not be fixed but increase over time. For example, as the rail transit network is further expanded and as more jobs are placed closer to rail transit stations, higher percentages of the residents within the TOD may choose transit. This is particularly relevant in the SCAG region as the transit system is undergoing significant expansion in the next two decades.

It should also be noted that while TODs are important, they are not the only solution for sustainable development. Infill development, mixed-used development, and complete communities are a few other examples.

Attachment 1 includes additional information about TOD benefits.

## What are the challenges for TODs?

TOD developments face major challenges which, if not overcome, may limit their wider implementation in the region:

- Higher risk and cost for developers
  - Cost and uncertainties in land acquisition;
  - Cost, uncertainties and risk in the entitlement and environmental clearance processes;
  - Need for financial assistance with pre-development capitals; and

- Additional remediation costs.
- Greater difficulty to obtain private financing
  - Lenders typically have concerns about financing mixed use projects or those with lower parking rates (which are typical in TODs); and
  - Loss of the redevelopment funding including the associated public subsidy for affordable housing.
- Local zoning not transit friendly
- Local community concerns
  - Density
  - Traffic
  - Pedestrian/bicyclist injuries and fatalities

On the challenges to develop TODs, please see Attachment 2 for further information.

### **What are the key factors for successful TODs?**

In addition to resolving the challenges discussed above, successful TODs require favorable market conditions, supportive policy environment, and experienced development teams. With a favorable market condition, a supportive policy environment would enhance the prospects of TOD success. Attachment 3 contains additional information about factors of successful TODs.

### **Supportive Local Policies and Best Practices**

Policies and best practices supportive of TOD may make it feasible by creating a TOD-friendly environment. Local communities have developed and implemented policies and practices to overcome challenges that have been observed to limit TOD in practice over the last decade. They include, for instance, offering financial incentives, tailoring land use regulations, creating equitable TOD through density bonus, managing parking, adopting detailed and high-quality design and development guidelines and standards, managing and conserving natural resources in TOD, streamlining environmental review and entitlement, forming partnerships, TOD governance, establishing TOD through marketing, and community engagement and support through education.

Designing a set of solutions to meet TOD challenges that will work for a community requires a deep understanding of *what makes TOD work* and *what does not make TOD work* in that particular community. Since TOD-supportive policies and best practices vary geographically from one community to another, local policies and practices discussed here are merely illustrative examples of solutions that may have different effects in a different situation with different players involved for a different community at a different time. In addition, each policy and practice may have its unique spatial effects depending on the scale of its application. Hence, continuous monitoring and assessment on the performance of TOD tools implemented over time is necessary.

On the supportive local policies and best practices, please see Attachment 7 for further information.

In the SCAG region, there has been an uneven distribution of TOD development. Specifically, there are much more TOD activities along Red Line and Gold Line than along Blue Line and Green Line. The significant disparity in TOD development between the Blue Line and Gold Line can serve as an example to illustrate the key factors for successful TODs. Since the Blue Line opened in 1990, 13 years earlier than the Gold Line, it has triggered few TOD projects. In contrast, since 2003, the Gold Line has attracted significant development activities around some of its stations. Factors contributed to this disparity in TOD activities include the following:

- A more *favorable market conditions* for Gold Line than Blue Line
  - e.g., higher levels of poverty and unemployment for station adjacent areas for the Blue Line than the Gold Line
  - an abundance of contaminated sites along the Blue Line Corridor
- A more *supportive local policies and best practices* for Gold Line than Blue Line
  - general lack of pre-planning for TODs in anticipation of the Blue line, including:
    - land use and zoning incompatible for TODs
    - missed opportunities for land acquisition and joint development opportunities
  - performed pre-planning for TODs in anticipation of the Gold Line
    - developed specific plans to ensure compatible land use/zoning for TOD projects
    - developed various incentives for TODs including financial, density, and reduce parking requirements
    - utilized joint development opportunities

### **Next Steps**

The following steps are recommended to further monitor and assess the TOD performance and implementation.

1. Identify experts to review the methodology, parameters and findings of this paper
2. Analyze growth factors for South and South East Los Angeles County to identify Priority Development Areas and provide best practices in terms of outreach and stakeholder engagement
3. Identify new station locations along the Metro Crenshaw Line (and the far future Vermont Extension) (Please see Attachment 5 for examples for illustrative purposes)
4. Investigate TOD activities in North Hollywood station areas
5. Investigate and consult with experts regarding TOD opportunities along bus hubs including Rapid Bus Intersections identified in the South LA Transportation Study
6. Assemble team/consultants to develop the framework and capacity for land use planning around the refined High Quality Transit area (HQTA) concept for the 2016-40 RTP/SCS
7. Develop monitoring mechanisms for TOD success factors

- ATTACHMENT 1 - Summary of TOD Benefits
- ATTACHMENT 2 - Summary of Challenges to Develop TODs
- ATTACHMENT 3 - Summary of Factors for TOD Success
- ATTACHMENT 4 - Overview of Financial Considerations for TODs
- ATTACHMENT 5 - Summary of Opportunities and Challenges of Two Potential TOD Projects along  
Future Crenshaw/LAX Light Rail Line
- ATTACHMENT 6 - Summary Information of Two Existing TOD Case Studies
- ATTACHMENT 7 - Supportive Local Policies and Best Practices

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## ATTACHMENT 1

### Summary of TOD Benefits

There are primary and co-benefits from TODs. Primary benefits are direct benefits while co-benefits largely spin off from primary ones. This summary of TOD benefits is developed through the review of literature.

#### What Are the Primary Benefits from TODs?

##### Public Benefits

- Can increase transit use and provide increased transportation choices
  - TOD residents generally have higher rates of transit use than residents outside the TODs. TOD residents in California are about five times more likely to commute by transit as the average resident worker in the same city.
  - TOD office workers in California are more than 3.5 times as likely to commute by transit as the average worker in the same region.
  - Areas with more mature rail system and smart growth initiatives would support higher levels of transit use among TOD residents.
  - TOD residents are more likely to use transit if there is less of a time benefit traveling via car.
  - TOD provides important mobility options for young people, the elderly, people who prefer not to drive, and those who don't own cars.
- Help to reduce vehicle miles traveled (VMT) and associated greenhouse (GHG) emissions:
  - For example, compared to non-TODs, TODs (with ¼ mile radius) along Red Line and Gold Line would reduce the VMT per capita per day by 44%, from 12 to 6.7 vehicle miles. It would also reduce the per capita CO<sub>2</sub> by a similar level.
- Increase opportunities for active transportation
  - For example, for both the Wilshire/Vermont and Del Mar TOD project areas, the share of active transportation (walking or biking) to work increased by one to two percentage points between 2000 and 2009 (see Attachment 5).
- Can provide joint development opportunities
  - TOD can provide joint development opportunities for transit operators through enhanced revenue generation capacity (e.g., air rights or ground lease) and cost reduction opportunities (e.g., cost sharing of parking).
  - Joint development on Metro's land is the most common form of TODs in Los Angeles County, primarily because of the limited amount of readily developable land around transit stations.

- Revitalized Neighborhoods and Economic Development
  - TOD can be a catalyst for redevelopment and revitalization.
  - TOD can attract new investment and businesses
  - Examples include the following:
    - Red Line Hollywood/Vine, Hollywood/Highland and Vermont/Western Stations
    - Gold Line Del Mar Station
- Reduced Combined Housing and Transportation Costs
  - TOD provides an opportunity to reduce combined housing and transportation costs mainly because of its higher density and location efficiency for TOD residents and workers.
  - Studies show that households living in TODs can use fewer automobiles.

### **Private Sector Benefits**

- Higher Property Value
  - TOD's synergy of proximity, density, mixed use and pedestrian orientation can, under the right conditions, result in gains in property value and overall real-estate market performance.
  - Studies over the past two decades show that average housing premiums associated with being near a transit station have ranged from 6.4% in Philadelphia, 6.7% in Boston, 10.6% in Portland, 17% in San Diego, 20% in Chicago and 24% in Dallas.

### **What Are the Co-Benefits from TODs?**

#### **Public Benefits**

- Less traffic congestion and improved air quality at the regional level
- Increased local property and sales tax revenues
  - For example, it is estimated that both the Wilshire/Vermont and Del Mar TODs would generate an annual property tax of approximately \$1.3 million each.
- Reduced sprawl and conservation of open space
- Reduced energy consumption
- Reduced transportation and other infrastructure costs
- Increased physical activity through active transportation with associated health benefits

#### **Private Sector Benefits**

- Increased retail sales
- Increased access to labor pool

## ATTACHMENT 2

### Summary of Challenges to Develop TODs

1. There is generally a lack of assembled lots adequate for development.  
Note: Joint development with Metro has become almost a necessary condition for all successful TOD projects currently completed, under construction or consideration. While the process of joint development with Metro has been successful, it takes at least 36 months for a project to break ground.
2. Many station locations are not viable for TOD projects since Metro owned lands are for the purposes of transit development, without explicitly considering suitable development for housing/retail or mixed-use purposes.
3. Finance mechanisms are particularly difficult to arrange and to align with the project timeline, causing further delay since additional "expectations" are present, such as affordable housing for TOD projects on land owned by the Metro.
4. Developers consider as uncertain, the negotiations regarding permitting and environmental review processes, as well as parking requirements or density bonus, and may post risk and increase the costs of the TOD projects.
5. Assistance or loan guarantees at the pre-development stage of the TOD projects are identified as a major challenge. The capital required to address the entitlement costs run as high as 15-20% rate of return comparing with 7-8% construction loan from banks, and 4-5% long term returns once the projects are completed.
6. Infrastructure investment requirements around the station and TOD project areas
7. TOD development does not intrinsically result in gentrification, rather it is a result of the increased land and entitlement development costs.
8. Parking has been identified as a potential source of cost reduction, however, communities are apprehensive about reduced parking due to concerns of "spillover" into adjacent residential areas as well as concerns regarding ability to patronize local businesses.
9. Bicyclist and pedestrian safety around the TOD projects buffer areas may be a concern but can be addressed through complete street strategies (see Attachment 6 on pedestrian injuries and fatality analysis).

## ATTACHMENT 3

### Summary of Factors for TOD Success (Based on Case Studies)

Two TOD projects within the Los Angeles County were examined in-depth. They are the Del Mar Station (Gold Line) TOD project in the City of Pasadena and the Vermont/Wilshire Station (Red Line) TOD project in the City of Los Angeles. Since completion, both projects have demonstrated stellar performances and are being studied closely by developers, planners, and policy-makers. After an initial data analysis of topology in and around the station areas, SCAG staff believes that the following six factors set these two TOD projects apart from the rest TOD projects.

1. Strength of the Overall Economy and Real Estate Market
  - a. Both TOD projects were completed before the economic recession in 2008;
2. Capability of the selected developer
  - a. Both TOD projects were planned and built by a capable developer with a track record of quality who possesses the vision, experience, financial strength, and willingness to navigate through many political, community, financial, and technical hurdles of developing a complex TOD project on top of the transit station;
3. Ease of Land Assembly
  - a. Both TOD projects were TJD projects in a joint public-and-private partnership with Metro on Metro-owned lands at the transit stations;
4. Location
  - a. Just like any other real estate development, location plays a key role in the overall success rate of a TOD project. Both TOD projects are close to other modes of transportation in vibrant neighborhoods;
5. Design and Management during TOD's operation; and
6. Community/Neighborhood Outreach, Preference, and Acceptance of TOD projects

## ATTACHMENT 4

### Overview of Financial Considerations for TODs (Based on Literature Review)

#### Market Conditions Analysis

- Conduct a regional market analysis
  - A regional overview of demographics and employment growth trends that may influence the local market area in which a TOD is located
  - Common analysis factors include, for instance, population, age, income, expected job growth, and fastest growing job sectors
- Conduct a local market analysis of supply and demand
  - An overview of factors in a competitive market area that may influence the financial performance of a TOD during its operation
  - Identify the sphere of market influence (i.e. a three-mile market radius in an urbanized area)
  - Two types of local market analysis are conducted (i.e. Residential Market Analysis and Retail Market Analysis)
  - Common factors that may influence the market for residential and retail units include, for instance, occupancy rate, vacancy rate, rent growth, market rental rates, and retail sale activity
- Conduct a market capture analysis
  - A study of market capture rates for both residential and retail units in order to ensure an economically viable TOD

#### Common Sources of Costs and Revenues (Illustrative)

##### Sources of TOD Development Costs

TOD development costs include both hard and soft costs. Hard costs are direct construction costs for acquiring tangible assets and materials that are needed to complete the construction. In contrast, soft costs are not considered direct construction costs. They include, for instance, professional services fees (i.e. engineering, financing, and legal fees) that are required to design, develop, and build a TOD. Soft costs could run as high as 35 percent of hard costs for some TOD projects. Additionally, capitals are required to assemble suitable lands for a TOD<sup>1</sup> through either land acquisition or lease. To complete the entitlement and environmental clearance process, developers will likely encounter both hard costs (i.e. project permit application) and soft costs (i.e. environment and entitlement consultation fees).

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<sup>1</sup> A public-and-private partnership (PPP's) to jointly develop a TOD may improve the ease of land assembly, thereby reducing land cost (see Attachment 3).

## Sources of TOD Operational Revenues

Main sources of TOD operational revenues include incomes from leasing residential apartments and commercial or retail spaces. If a TOD includes public parking that is metered, parking could be another source of income during the operation of a TOD.

## Common Indicators of Financial Performance (Illustrative)

A set of indicators are used to evaluate a TOD's financial performance. These indicators calculate economic returns to determine whether a TOD's returns justify its perceived risks. This exercise is called financial feasibility analysis, and it is used to demonstrate a TOD's financial capacity to meet the minimum thresholds desired by investors.

Common indicators of financial performance for a TOD include the following.

- Internal rate of return (IRR)
  - IRR is a measurement used in capital budgeting to measure the profitability of an investment. The higher the IRR, the more profitable the investment will be.
  - IRR varies depends on the type of real estate projects.
  - Two types of IRR are considered.
    - Unleveraged IRR. It measures the required return on an investment when the investment is financed entirely by equity with no debt.
    - Leveraged IRR. It measures the required return on an investment when the investment is financed partially by debt, and this coupling of equity with debt increases the return on invested equity. Hence, leveraged IRR is a more accurate and realistic measure of expected return.
- Rate of return on equity investment (ROE)
  - ROE is the amount of net operating income (NOI) returned as a percentage of an investor's equity. Hence, it measures a TOD's profitability by revealing how much profit the TOD generates with the money an investor has invested.
- Rate of return on total development cost
  - Rate of return on total development cost is also called rate of return on investment (ROI), which measures the efficiency of a TOD investment. To calculate ROI, the net gains from the development are divided by the total development cost.
- Net operating income (NOI)
  - NOI, which is defined as a TOD's operating income after operating expenses are deducted, is viewed as a good measure of a TOD's financial performance.
  - NOI is escalated each year for a number of years (i.e. an annual 3-percent escalation for 10 years).
- Gross margin
  - Expressed in a percentage, gross margin reveals how much a TOD earns after taking into consideration of the development costs that it incurs.

- It divides NOI by gross operating revenue. The higher the percentage, the more a TOD retains as gross profit on each dollar of revenue generated.
- Capitalization rate (“cap rate”)
  - Cap rate is a rate of return on a real estate investment based on the expected income that the property will generate. It divides the income that a property will generate by the total value of the property.

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## ATTACHMENT 5

### Summary of Opportunities and Challenges of Two Potential TOD Projects along Future Crenshaw/LAX Light Rail Line (Based on Literature Review)

#### Crenshaw Center TOD Project

##### Opportunities

- The Crenshaw Center TOD project is in a prime location
  - Easy access to transit, including the upcoming Crenshaw/LAX Light Rail Line
  - Easy access to major freeways
  - Major employers in the area (LAX, Culver City, USC, Downtown)
- There is a potential market opportunity
  - A lack of new housing units in the area for over a decade, thereby making the Crenshaw Center TOD project one of its kind
  - Foot traffic that is being generated by an existing neighborhood retail center on the site
- There is a favorable policy environment
  - The land use and zoning requirements are compatible with a TOD project
  - The citywide plan and the specific plan promote combined residential and commercial development with workable residential density and parking requirements
- There is a sense of “a complete community” with neighborhood amenities
  - A number of public and private schools, an actively used park, and a regional park within a three-mile radius of the site
  - A wide choice of amenities, shops, and retails to provide personal services to the residents on site (i.e. a supermarket, a drugstore, beauty salon, dry cleaners, financial services, and, healthy food restaurants)
- There is a utilization of a “smart” design concept
  - A pedestrian- and resident-friendly design concept focuses on walkability, transparency, and aesthetic that will please pedestrians, commuters, and residents on site
  - Majority of the retail will face Crenshaw Boulevard where most of the foot traffic will take place while residential units will be furthest from the metro station
  - The promenade’s triangular shape will be the focal point of the site with a water fountain and open space
- There is a political support from stakeholders and community/neighborhood members

##### Challenges

- The Crenshaw Center TOD project may face potential financial challenges with respected to internal rate of return, rate of return on equipment investment, and rate of return on total development costs

## South Los Angeles – the Sankofa TOD Project

### Opportunities

- The Sankofa TOD project is in a prime location
  - Easy access to transit (i.e. a 10-minute walk to the proposed Leimert Park station on the proposed Crenshaw/LAX Light Rail Line)
  - Easy access to major freeways (i.e. all within 2 miles of the site)
  - Easy access to bus (i.e. 7 metro bus lines and 2 DASH line stops within a half-mile of the site)
  - Major job centers in the area (i.e. LAX, USC)
- The 1.8-acre project site that is currently being used as a parking lot by the City of Los Angeles
  - A relative ease with land assembly
  - An opportunity for joint development with the City
- There is a potential market opportunity
  - A lack of competition from similar TOD and mixed-used developments in the target area
  - A vibrant rental market in the area with an overall vacancy rate that is lower than the countywide average
  - Two main long-term office development opportunities near the site
  - A favorable demographics within the 3-mile market area (i.e. young adult population)
- There is a favorable policy environment
  - The land use and zoning requirements support TOD and mixed-used developments and lower the amount of parking the developer must provide
  - The specific plan and community plan allow combined retail, office, and high density residential with an emphasis on preserving cultural resources and promoting a high level of pedestrian activity
- There is a sense of “a complete community” with neighborhood amenities
  - A full-service grocery store, a café, three small retail spaces, and a community space on site
  - Close proximity to a park, two community centers, and a shopping center (i.e. within a mile)
- There is a utilization of a “smart” design concept
  - A resident-friendly design that allows natural light and fresh air to penetrate the building
  - A pedestrian-oriented planning that contains ample hallways and accessible means of egress in all directions and connects pedestrians and shoppers from the street to the parking lot
  - An open space connecting the project with the Leimert Park that is a five-minute walk away

## Challenges

- There is a co-existence of oppositions to and supports of the Sankofa TOD Project
- The project may face potential financial challenges with respect to rate of return on total development costs and gross margins

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**ATTACHMENT 6**

**Summary Information of Two Existing TOD Case Studies:  
Wilshire/Vermont and Del Mar TODs**

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| Transit Oriented Development (TOD) Projects Analysis Framework |  |                              | Surrounding TOD Development (Not on Metro-Owned Lots) |         |                                  |                                    |
|--|--|------------------------------|---|---------|----------------------------------|------------------------------------|
|  | Del Mar Station (Gold Line)*                           | Wilshire/Vermont Station     |   |         | 217 S. Marengo/238 S Arroyo Pkwa | The Vermont: 3150 Wilshire Blvd    |
| Overall Process (60-85 Months)                                 | Entitlement: (1-18 Months), Construction: 24-36 Months |                              |   |         |                                  |                                    |
| Planning (Metro Issues RFP)                                    | Pre 2000   | 2001                         |   |         |                                  |                                    |
| Start  | 2001   | 2004                         | 2010  | 2007    | 2013                             |                                    |
| Completion   | 2007   | 2007                         | 2011  | 2008    | Under construction               |                                    |
| Architect  | Moule & Polyzoïdes Urbanists                           | Arquitectonica               |   |         |                                  | The Jerde Partnership              |
|  | Nadel Architects                                       | ah'be'                       |   |         |                                  | Harley Ellis Devereaux Corporation |
|  | Melendrez  |                              | Unknown   | Unknown |                                  |                                    |
| Construction   | Keller Builders  | Taisei Construction          |   |         |                                  |                                    |
|  | Taisei Construction                                    |                              |   |         |                                  |                                    |
| Developer/Finance  | Urban Partners, LLC                                    | Urban Partners               |   |         |                                  | J H Snyder                         |
|  | Oaktree Capital Management                             | Real Estate Capital Partners |   |         |                                  | Washington Capital Management      |
|  | California National Bank                               | Polis Development            |   |         |                                  | MEPT                               |
|  | Archstone Smith  | California Urban Investment  | Unknown   | Unknown |                                  | Bentall Kennedy                    |
|  | METRO  | Partners (CalPERS)           |   |         |                                  | J.P. Morgan                        |
|  | Construction Authority                                 | Bank of America              |   |         |                                  | US Dept Housing & Urban Devp       |
|  |  |                              |   |         |                                  | LAC Redevelopment Agency           |

| Transit Oriented Development (TOD) Projects Analysis Framework |   | Surrounding TOD Development (Not on Metro-Owned Lots)  |  |
|--|---|--|--|
| Finance arrangement  | Private investment with city assistance* (Need verify)    | Project financing was arranged through MacFarlane Partners (on behalf of CalPERS), Bank of America and a \$135 million tax-exempt "low-floater" affordable housing bond issue which, at the time, was the largest in California history. | Private Funding<br>Private Funding<br>Private Funding                            |
| Projection description   | Del Mar Station (Gold Line)*<br>with Metro (Metro's Land) | Wilshire/Vermont Station<br>with Metro (Metro's Land)  | 155 Cordova Pasadena<br>n.a.   |
| Joint Development  | 77  | 136  | The Vermont: 3150 Wilshire Blvd<br>n.a.  |
| Project costs (\$million)*                                     | 3.4   | 3.24   | Moderate condos for sale++   |
| Land (Acre)  | 347   | 449  | 1.12   |
| Housing Units  | 326   | 359  | 97   |
| Market rates   | 21  | 90   | 97   |
| Affordable Units   | 102   | 139  | 0  |
| Density (units/acre)   | 11,000  | 36,486   | 87   |
| Retail/Commercial (sf)   | 1,190   | 668  | 6,730  |
| Parking  | 600   | n.a.   | tbd  |
| Transit parking  |   |  | n.a.   |
|  |   |  | HUD: \$12.5 million loan<br>LACRA: \$17.5 Million<br>Private Funding (see above) |

| Transit Oriented Development (TOD) Projects Analysis Framework |                              | Surrounding TOD Development (Not on Metro-Owned Lots) |  |
|--|------------------------------|---|--|
| Topology of the Project Area (1/4 mile)                        | Del Mar Station (Gold Line)* | Wilshire/Vermont Station                              |  |
| <b>Population</b>  |                              |   |  |
| 2000   | 1,453                        | 4,824   |  |
| 2010   | 2,215                        | 5,205   |  |
| Growth, %  | 52%                          | 8%  |  |
| <b>Household</b>   |                              |   |  |
| 2000   | 837                          | 1,930   |  |
| 2010   | 1,301                        | 2,391   |  |
| Growth, %  | 55%                          | 24%   |  |
| <b>Housing Units</b>   |                              |   |  |
| 2000   | 903                          | 1,977   |  |
| 2010   | 1,432                        | 2,587   |  |
| Growth, %  | 59%                          | 31%   |  |
| <b>Household Size</b>  |                              |   |  |
| 2000   | 1.74                         | 2.50  |  |
| 2010   | 1.70                         | 2.18  |  |
| Change (implications)**  | -0.03                        | -0.32   |  |
| <b>Median Household Income (\$2009)</b>                        |                              |   |  |
| 2000   | \$48,879                     | \$23,361  |  |
| 2009   | \$60,279                     | \$28,943  |  |
| Change % (implications)  | 23.3%                        | 23.9%   |  |
| <b>% of 0 or 1 Vehicle Household</b>                           |                              |   |  |
| 2000   | 76%                          | 87%   |  |
| 2009   | 69%                          | 82%   |  |
| Change (implications)  | -7%                          | -5%   |  |

| Transit Oriented Development (TOD) Projects Analysis Framework |          | Surrounding TOD Development (Not on Metro-Owned Lots) |  |
|--|----------|---|--|
| <b>Jobs</b>  |          |   |  |
| 2002   | 3,045    | 2,827   |  |
| 2007   | 3,288    | 3,402   |  |
| Growth, %  | 8%       | 20%   |  |
| <b>Workers</b>   |          |   |  |
| 2000   | 642      | 2,438   |  |
| 2009   | 871      | 3,720   |  |
| Growth, %  | 36%      | 53%   |  |
| <b>H + T Costs (in 2000, \$2009)</b>                           | \$20,632 | \$6,742   |  |
| % of AMI   | 42%      | 28.9%   |  |
| Housing Costs  | \$12,489 | \$3,621   |  |
| % of AMI   | 26%      | 16%   |  |
| Transportation Costs   | \$8,148  | \$3,119   |  |
| % of AMI   | 17%      | 13%   |  |
| <b>H + T Costs (in 2009, \$2009)</b>                           | \$34,377 | \$9,690   |  |
| % of AMI   | 57%      | 33%   |  |
| Housing Costs  | \$22,870 | \$5,470   |  |
| % of AMI   | 38%      | 19%   |  |
| Transportation Costs   | \$11,507 | \$4,220   |  |
| % of AMI   | 19%      | 15%   |  |
| <b>Mode of Transportation (2000)</b>                           |          |   |  |
| Public Transportation  | 6%       | 38%   |  |
| Walk or Bike   | 6%       | 5%  |  |
| Others   | 88%      | 57%   |  |

| Transit Oriented Development (TOD) Projects Analysis Framework |  | Surrounding TOD Development (Not on Metro-Owned Lots)  |  |
|--|--|--|--|
| Mode of Transportation (2009)                                  |  |  |  |
| Public Transportation  | 10%  | 47%  |  |
| Walk or Bike   | 8%   | 6%   |  |
| Others   | 82%  | 48%  |  |
| CEQA/Environmental Review                                      | Mitigated Negative Declaration (and license agreement) approved by City Council for temporary relocation of the historic transit depot building in July 2001. Variances approved on December 19, 2001 with certification of EIR. Final Design Review approved on June 10, 2002. Final Arts Plan approved on August 13, 2003. | 1. EIR completed in 1995 for high-rise office development<br>2. Wilshire Vermont leveraged existing EIR to expedite project approvals<br>3. LACRA acted as lead agency |  |
| <b>Economic Impact (Annual, on site)</b>                       |  |  |  |
| Total retail sales (\$Million)                                 | 3.30   | 10.95  |  |
| Retail jobs  | 12   | 38   |  |
| Rental income (\$Million)                                      | 11.14  | 13.47  |  |
| Local sales taxes, to city                                     | \$24,750   | \$82,094   |  |
| Property Taxes (1%, \$Million)                                 | 1.34   | 1.36   |  |
| <b>Transportation Impacts (Annual)</b>                         |  |  |  |
| VMT Savings vs. non-TOD  | 640,562  | 828,854  |  |
| Total jobs accessibility (% Change)                            | 27%  | 100%   |  |

| Transit Oriented Development (TOD) Projects Analysis Framework |                       | Surrounding TOD Development (Not on Metro-Owned Lots) |
|--|-----------------------|---|
| Auto accessibility (% Change)                                  | 39%                   | 94%   |
| Transit Accessibility (% Change)                               | 44%                   | 86%   |
| Active transportation trips (Walk + Bike)                      | 37,134                | 109,655   |
| Transit trips  | 34,639                | 355,803   |
| Co-Benefits (Annual)   |                       |   |
| CO <sub>2</sub> reduction (mt)                                 | 272                   | 352   |
| Pedestrian/Bike accidents/injuries                             | See attached analysis | See attached analysis                                 |
| Energy (tbd)   |                       |   |
| Water (tbd)  |                       |   |

**NOTES:**

+ Sale prices \$350,000 (600 sf) to \$715,000 (1,600 sf)

++Sale prices \$850,000 (1,900 sf), 1.35 million (2,250 sf), 2.45 million (3,840 sf)

+++ Luxury Apt, with rents over \$3,000/mo

\* The development was sold in December 2004 for \$134 million to Archstone-Smith, a real estate investment trust, after receiving an unsolicited offer

\*\* Implications: Consistent with demographic trends

**TOD Challenges:**

1. Available lots in TOD District or TOC
2. High costs and high risk/uncertainties associated with entitlement process
3. Assistance in pre-development costs
4. Affordable housing requirements need sizable subsidies, thereby making them significant challenges without RDA
5. Many transit routes are not suitable for TOD projects

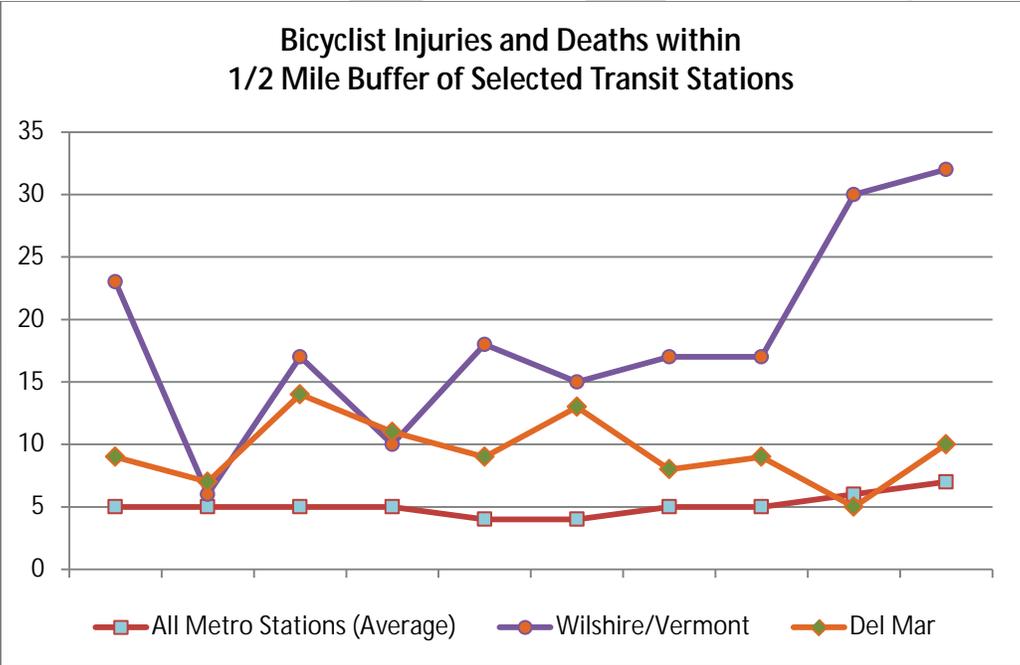
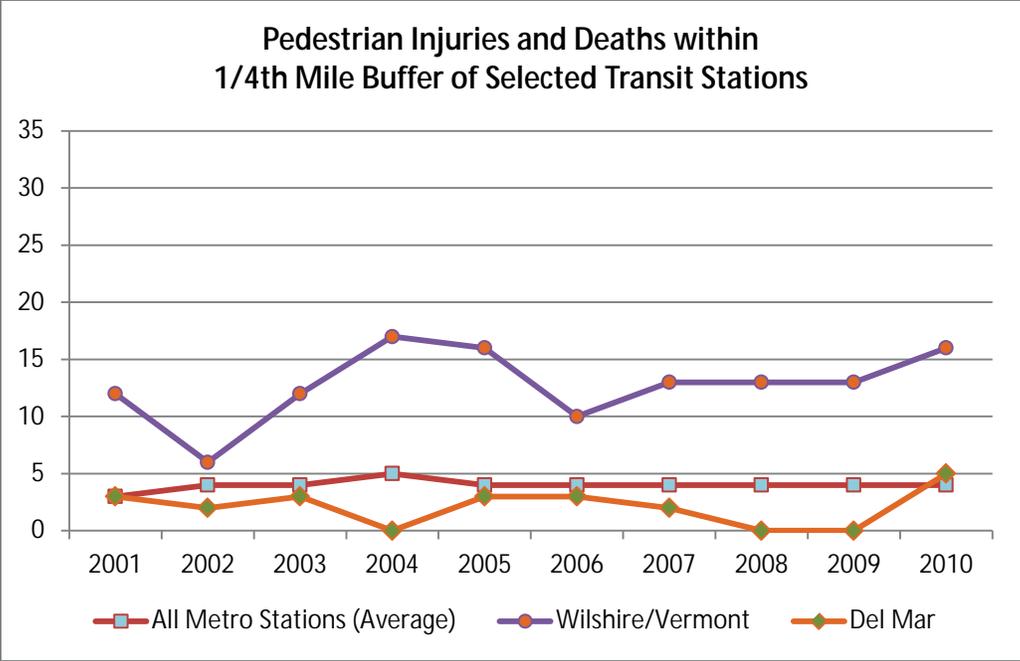
6. Joint development and PPP with the Metro are the ready development lots is always the plus
7. Commercial real estate loan guarantees" as an additional TOD challenge
8. Regional planning efforts should focus on monitoring TOD performance
9. Planning efforts should also look into Non-urban rail related TOD analysis and site identification
10. Given the constraints on available lots and location/market consideration, should study the TOD development in North Hollywood area and develop the strategic regional TOD development policy around following principles:
  - a) Identify regional TOD development centers/clusters
  - b) Compile guidebook for TOD development, starting with lots assembly and identification, in particular lots between 1/3 (?) to 1/2 acres?
  - c) Collaborate with local jurisdictions to streamline entitlement process, reduce uncertainties and high risk/costs associated with the process
  - d) Complete street and near-by infrastructure investment and funding

## Pedestrian/Bicycle Accidents/Injuries Analysis

- The numbers of fatalities/injuries within each area are small enough that any variations over time appear as significant.
- Del Mar has a lower pedestrian fatality/injury than the average for all Metro stations.
- Wilshire Vermont has a higher pedestrian fatality/injury than the average for all Metro stations.
- Del Mar has had a declining trend in fatal/injury bicycle accidents towards the average with a slight uptick in 2010.
- Wilshire Western has a climbing trend in fatal/injury accidents with a significant increase in 2009 and 2010.
- Both bicycling and walking fatalities/injuries for Wilshire/Vermont are higher than the average and do not appear to be decreasing.
- This suggests that mitigation may be necessary. However, additional analysis would be required. Follow up with jurisdictions on the complete street/streetscape surrounding the station areas
- The more urban areas have higher walking and biking rates, which does translate into higher accident rates
- Anecdotal evidence regarding bicycles indicates that although accident rates increase, they usually increase at a slower rate than the increase in growth in bicyclists once infrastructure is in place. (e.g. 10% growth in accidents, but a 50% growth in bicycling).

| <b>Pedestrian Injuries and Deaths</b> | <b>2001</b> | <b>2002</b> | <b>2003</b> | <b>2004</b> | <b>2005</b> | <b>2006</b> | <b>2007</b> | <b>2008</b> | <b>2009</b> | <b>2010</b> |
|---------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>[0.25 Miles]</b>                   |             |             |             |             |             |             |             |             |             |             |
| Del Mar                               | 3           | 2           | 3           | 0           | 3           | 3           | 2           | 0           | 0           | 5           |
| Wilshire/Vermont                      | 12          | 6           | 12          | 17          | 16          | 10          | 13          | 13          | 13          | 16          |
| Average Metro Stations                | 3           | 4           | 4           | 5           | 4           | 4           | 4           | 4           | 4           | 4           |

| <b>Bicycle Injuries and Deaths</b> | <b>2001</b> | <b>2002</b> | <b>2003</b> | <b>2004</b> | <b>2005</b> | <b>2006</b> | <b>2007</b> | <b>2008</b> | <b>2009</b> | <b>2010</b> |
|------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>[0.5 Miles]</b>                 |             |             |             |             |             |             |             |             |             |             |
| Del Mar                            | 9           | 7           | 14          | 11          | 9           | 13          | 8           | 9           | 5           | 10          |
| Wilshire/Vermont                   | 23          | 6           | 17          | 10          | 18          | 15          | 17          | 17          | 30          | 32          |
| Average Metro Stations             | 5           | 5           | 5           | 5           | 4           | 4           | 5           | 5           | 6           | 7           |



## ATTACHMENT 7

### SUPPORTIVE LOCAL POLICIES AND BEST PRACTICES

#### Introduction

Policies and best practices supportive of transit-oriented development (TOD) may make TOD feasible by creating a TOD-friendly environment. While TOD has gained popularity among planners, engineers, developers, and community leaders over the last decade, it remains limited in practice. A review of literature and interviews with two TOD experts conducted by SCAG staff revealed several challenges faced, including, but not limited to, high financial risk to developers, high initial investment costs, great difficulty to obtain funding, unsupportive regulatory framework, and community resistance.

Local communities have taken a notice of these challenges. They develop and implement solutions to overcome these challenges. A review of literature identified a list of TOD-supportive policies and best practices that have gradually emerged over the last decade. Many of the policies and best practices discussed here are communities' approaches to becoming TOD-friendly. They include, for instance, offering financial incentives, tailoring land use regulations, creating equitable TOD through density bonus, managing parking, adopting detailed and high-quality design and development guidelines and standards, managing and conserving natural resources in TOD, streamlining environmental review and entitlement, forming partnerships, TOD governance, establishing TOD through marketing, and community engagement and support through education.

Designing a set of solutions to meet TOD challenges that will work for a community requires a deep understanding of *what makes TOD work* and *what does not make TOD work* in that particular community. Since TOD-supportive policies and best practices vary geographically from one community to another due to factors such as local market economy and demographics, the policies and best practices discussed here are merely illustrative examples of solutions. While TOD may not be feasible at all locations or in all communities, there are things communities can do to gradually mix in the needed ingredients for TOD, thereby expanding the existing real estate development portfolio to include TOD, alongside single-family development, multifamily development, and so on.

Although the policies and best practices discussed here offer some inspiration, they are merely a set of good tools in a toolkit. Each has particular effects in a particular situation for a particular community at a particular time, and each also has its unique spatial effects depending on the scale of its application. TOD-supportive tools can and should be mixed, matched, modified, or replaced to fit the needs of a particular community. In addition, good design, selection, and implementation of TOD-supportive tools are a process that requires a continuous monitoring and assessment on the performance of TOD tools implemented over time. Hence, the concept of "supportive local policies and best practices" is a function of space, scale, and time.

## TOD Financing

TOD is perceived to entail higher risks and costs than typical suburban development. Communities can demonstrate support for TOD by providing financial incentives to entice developers to engage in TOD investment decisions.

### *TOD Financing*

TOD financing comes in different sizes, shapes, styles, and scales. Financing mechanisms include the following examples.

1. Property tax exemption
2. Tax abatement to underwrite the development costs
3. Tax increment financing around major transit stations, even if they are located outside redevelopment areas
4. Grants
5. Location efficient mortgage (LEM) to increase demand for TOD by allowing households with lower transportation expenses to qualify for larger mortgage loan amounts and lower down payments
6. Subsidies (i.e. HUD's multiple-family housing mortgage guarantee program; extra floor subsidy to stimulate higher densities)
7. Credits (i.e. transportation impact fee credits)
8. Local development or impact fees or taxes waiver, reduction, or deferral
9. Bonds (i.e. tax-exempt housing revenue bond financing)
10. General development funds
11. State or federal transportation funding based on the rationale that land use influences transportation; therefore, transportation funding could be used to support TOD investments

### *TOD Infrastructure Financing*

A typical TOD has two components – the physical structure above the ground and the infrastructure below the ground. TOD researchers sometimes associate these two components with a color scheme – a gold-and-gray color combination. The gold represents the physical TOD structures while the gray represents the infrastructure.

Just like TOD financing, TOD infrastructure financing comes in at different sizes, shapes, styles, and scales. TOD infrastructure strategies can be applied at different geographic scales.<sup>2</sup> The following information on TOD infrastructure financing at different geographic scales is collected from a recent report on TOD infrastructure financing by the U.S. EPA.

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<sup>2</sup> United States Environmental Protection Agency, Office of Sustainable Communities, Smart Growth Program. January 2013. *Infrastructure Financing Options for Transit-Oriented Development*. Available at: <http://www.epa.gov/smartgrowth/pdf/2013-0122-TOD-infrastructure-financing-report.pdf>

1. Station and station-area infrastructure financing strategies. Case studies include West Dublin BART Station (Dublin, California), New York Avenue-Florida Avenue-Gallaudet University Metrorail Station (Washington, D.C.), and Denver Union Station (Denver, Colorado).
2. District and downtown infrastructure financing strategies. Case studies include Downtown Stamford (Stamford, Connecticut), New Quincy Center (Quincy, Massachusetts), and White Flint Sector Plan (Montgomery County, Maryland).
3. Transit corridor infrastructure financing strategies. Case studies include Dallas Tax Increment Financing for TOD (Dallas, Texas) and Atlanta Beltline (Atlanta, Georgia).
4. Regional TOD infrastructure initiatives. Examples include the San Francisco Bay Area's Transportation for Livable Communities and Transit-Oriented Affordable Housing Acquisition Fund. An example of the regional TOD investment framework is Twin Cities' Central Corridor Light Rail and the Central Corridor Funders Collaborative.

Financing TOD infrastructure is challenging. To meet this challenge, communities use a number of creative financing methods, and they generally fall into six categories.<sup>3</sup>

#### Category 1: Direct Fees

Direct fees charge people at a rate for using public infrastructure or goods. There are two types: 1) user fees and transportation utility fees and 2) congestion pricing. The former sets a rate for the use of public infrastructure or goods such as water or wastewater systems. Local governments or utilities might be able to issue bonds backed by user fee revenue to pay for new or improved infrastructure. Such fees and rates are typically set to cover a system's yearly operating and capital expenses, including annual debt service for improvements to the system. Congestion pricing manages demand for services by adjusting prices depending on the time of day or level of use.

#### Category 2: Debt

Debt tools are mechanisms for borrowing money to finance infrastructure. Local governments can access credit through private financial institutions (i.e. bank-owned private debt), the bond market (i.e. general obligation bonds, revenue bonds, or private activity bonds), or specialized mechanisms (i.e. state infrastructure banks or grant anticipation revenue vehicle bonds<sup>4,5</sup>) that the federal government and states have established for financing particular types of infrastructure.

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<sup>3</sup> Ibid.

<sup>4</sup> Ibid.

<sup>5</sup> Grant anticipation revenue vehicle (GARVEE) bonds "are federally tax-exempt debt mechanisms backed by federal appropriations for transportation projects that are not expected to generate revenue." "Most commonly used for highway construction, GARVEE bonds can also be used for transit and other transportation projects funded by other federal grant programs [...]. Local governments must work with [metropolitan planning organizations] and state departments of transportation to access GARVEE bonds, which also must be approved by the U.S. Department of Transportation (DOT)."

### Category 3: Credit Assistance

Credit assistance improves a borrower's creditworthiness by providing a mechanism that reduces the chances of a default. Federal and state agencies have developed a variety of financial tools to help communities access credit to expedite infrastructure projects. However, this tool requires some source of revenue to pay back debt, and its use does not depend on the strength of the local real estate market.

### Category 4: Equity

Equity tools allow private entities to invest (i.e., take an ownership stake) in infrastructure in expectation of a return. Unless communities are willing to directly pay the private partner for constructing, financing, operating, and/or maintaining a facility, equity sources are typically available only for infrastructure that generates a significant return, such as parking facilities. Infrastructure investment funds are pools of funds collected from many investors for the purpose of investing in infrastructure, often in the form of a public-private partnership. These funds are typically repaid through user fees.

### Category 5: Value Capture

Value capture tools capture a portion of the increased value or savings resulting from publicly funded infrastructure. Depending on the tool, value capture can entail the creation of a new assessment, tax, or fee (i.e.: a special tax or development impact fee); the diversion of new revenue generated by an existing tax (i.e.: tax-increment financing); or a revenue-sharing agreement that allows a government agency to share some of the revenue generated by developing publicly owned land (i.e.: joint development). Value capture tools are generally most applicable to strong real estate markets because they depend on new development or property value appreciation to generate revenue. Tax increment financing, waiver of development or impact fees, and joint development are examples of the value capture tools.

### Category 6: Grants

Grants are funds that do not need to be paid back and are typically provided by a higher level of government to a lower level of government. Both federal and state grants for TOD infrastructure exist. At the federal level, there are transportation grants and community and economic development grants (i.e.: Economic Development Administration Grants) that can be used for TOD infrastructure. Besides grants, there are philanthropic funding sources. Foundations, including private foundations and public charities, are nongovernmental organizations that make grants with a charitable purpose.

### *TOD Green Infrastructure Financing*

TOD creates opportunities to incorporate green infrastructure and gradually change the infrastructure color from gray to green. Green infrastructure incentive programs share the similar

financing mechanisms in size, style, and scale with those used for TOD financing and TOD infrastructure financing. To encourage green infrastructure development, communities use expedited permitting, decreased fees, zoning upgrades, reduced stormwater requirements, grants, rebates, installation financing, and impact fees discounts (i.e. stormwater fee discount for customers who reduce impervious cover with green infrastructure practice). In addition, through joint development, communities or public agencies could encourage green infrastructure by splitting or sharing its construction costs with developers and recovering the costs from the revenue generated during TOD operation.

### **Land Use Regulations in Planning Documents**

Transit investment does not consistently lead to significant land use changes. The land use changes that do occur are facilitated by a TOD-complementary regulatory framework. When zoning and land use policies are conducive to TOD, they are tailored to suit TOD needs. However, land use policies and zoning alone are not enough to identify, preserve, enhance, or create TOD opportunities. They need to be planned and used together with other TOD-supportive policies and practices.

#### *Land Use Regulations*

Because zoning codes control, manage, and enforce land uses, they have the ability to affect the prospect of TOD projects. Zoning codes are part of local communities' planning efforts and programs. Those that promote TOD projects include, but not limited to, waiver of floor-area ratio (FAR), waiver of height restrictions, density bonus, inclusionary zoning (to encourage mixed-uses), and floating or overlay zoning (to allow flexibility in areas where desired uses are permitted). Ideally, communities should consider amending and adopting TOD-friendly zoning codes while reviewing and correcting other code provisions that discourage TOD projects before a developer applies for a zoning change. Not only could this proactive approach provide more flexibility for areas that are suitable for TOD projects, but it could also help streamline the entitlement process and allow communities lead rather than follow TOD projects.

The first method of tailoring land use regulation is to amend existing zoning codes. The purpose of the amendment is to allow high-density development in a proximity to transit stations (i.e. within 1.25 miles in radius). For instance, the existing zoning code that allows a height of 15 feet or one building story and an FAR of 2.5 can be amended to allow for a mixed-use, high-density TOD project that is 50 feet in height, three to four stories, and that has a total FAR of 4.0. The Del Mar Gold Line Station TOD project in the City of Pasadena, California is with the City's Central District (CD). This zoning district has a primary purpose, which is to provide for a diverse mix of land uses with an emphasis on a higher density, mixed-use environment. It emphasizes the concept of a higher density, mixed-use environment that will support transit- and pedestrian-oriented mobility strategies.<sup>6</sup> The maximum building height for the area in which the Del mar TOD project is located is 60 feet with an

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<sup>6</sup> City of Pasadena. Accessed 13 June 2013. *Article 3 – Specific Plan Standards*. Available at: <http://ww2.cityofpasadena.net/zoning/P-3.html#figure3-6>

additional 15 feet in height permitted utilizing a height average, and the maximum FAR permitted for the area is 2.25.<sup>7,8</sup>

The second method of tailoring land use regulation is to create floating or overlay zoning. An overlay zoning applies supplemental zoning provisions to a specific area without disturbing requirements of the basic use district. Because it allows development flexibility in places where higher density development is desirable, and because it addresses zoning conflicts by going with the stricter requirements, communities such as the City of Seattle use this method to promote TODs. The City of Seattle passed its Station Area Overlay legislation in 2001, which created Station Area Overlay Districts around eight future light rail stations.<sup>9</sup> The provisions included in such Districts aimed at encouraging housing development and discouraging automobile oriented development. As another example, the City of Pasadena passed its North Lake Specific Plan Overlay District. The purposes of this District are, among others, to 1) provide an environment that encourages people to walk by creating spaces for pedestrian activity, 2) minimize vehicle intrusions into pedestrian areas and by limiting total number of uses involving automobiles, and 3) support development that is oriented to use the light-rail station (Metro Gold Line) at Lake Avenue.<sup>10</sup>

Creating new zoning classifications is another technique. Unlike the floating or overlaying zoning, new zoning classifications have the advantage of creating zoning districts that are totally new and specifically customized to achieve TOD goals and objects. For example, the City of Riverside, County of Riverside, has mixed-use zones of three types: mixed-use neighborhood, mixed-use village, and mixed-use urban.<sup>11</sup> The three mixed-use zones were established to provide development opportunities for integrated, complementary residential and commercial development on the same parcel or a contiguous group of parcels. In addition, providing opportunities for TOD was another purpose explicitly listed for the mixed-use zones. Outside the SCAG region, in Gresham, Oregon, four new zones were created around a light rail station, and they allowed an intermixing of land uses that must be in compliance with transit-supportive development standards.<sup>12</sup>

### *Citywide Planning Documents*

Communities can express their supports for TOD projects in or near transit investment locations in their planning documents. In any citywide planning documents such as general plans, communities

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<sup>7</sup> City of Pasadena. Accessed 13 June 2013. *Figure 3-8 – Central District Maximum Height*. Available at: [http://ww2.cityofpasadena.net/zoning/images/UpdatedJPG\\_PDF\\_maps/3-8.pdf](http://ww2.cityofpasadena.net/zoning/images/UpdatedJPG_PDF_maps/3-8.pdf)

<sup>8</sup> City of Pasadena. Accessed 13 June 2013. *Figure 3-9 – Central District Maximum Floor Area Ratio*. Available at: [http://ww2.cityofpasadena.net/zoning/images/UpdatedJPG\\_PDF\\_maps/3-9.pdf](http://ww2.cityofpasadena.net/zoning/images/UpdatedJPG_PDF_maps/3-9.pdf)

<sup>9</sup> Goodwill and Hendricks. November 2002. *Building Transit Oriented Development in Established Communities*. Center for Urban Transportation Research. Tampa, Florida.

<sup>10</sup> City of Pasadena. Accessed 13 June 2013. *Chapter 17.34 – North Lake Specific Plan*. Available at: <http://ww2.cityofpasadena.net/zoning/P-3.html#17.34.020>

<sup>11</sup> Riverside Municipal Code. Riverside, California. *Chapter 19.120 Mixed-Use Zones (MU-N, MU-V, MU-U)*. Available at: <http://www.riversideca.gov/municode/pdf/19/article-5/19-120.pdf>

<sup>12</sup> Goodwill and Hendricks. November 2002. *Building Transit Oriented Development in Established Communities*. Center for Urban Transportation Research. Tampa, Florida.

can outline their goals, objectives, and policies, holistically, to promote TOD-feasible areas. High-level planning documents for a large area such as general plans set forth development tones and envision the future that could be either TOD- friendly or TOD- antagonistic. The planning efforts and programs for each topic area (i.e. open space and conservation, housing, and education) within general plans, though they may appear irrelevant to TOD planning efforts on the surface, have the potential to indirectly improve or limit TOD opportunities and affect the qualities of such opportunities around transit stations and feeder bus routes. For instance, under the Education Element in its General Plan 2025, the City of Riverside adopts policies to provide a bicycle network, using the complete-street approach.<sup>13</sup> To support safe routes to schools, the City develops a policy to recommend locating transit facilities near education facilities.<sup>14</sup>

#### *Specific Plan, Neighborhood or Community Plan, Transit Area Plan*

Communities can facilitate TOD projects by creating a policy environment that is conducive to a particular area at a small scale. Through procedures, policies, plans, and programs that are more tailored to and focused on the uniqueness of a particular area than large-scale planning documents (i.e. general plans), planning documents at a smaller geographic scale are more effective at respecting and enhancing the existing local conditions and characteristics. Because these planning documents are more responsive to the local economy, real estate market, community characters, and neighborhood needs, they provide additional opportunities for communities to adopt TOD-supportive land use.

Planning documents with a zoomed-in focus include specific plans, neighborhood or community plans, and transit area plans. In these parcel-level planning documents, planners can, for instance, create zoning codes that are more responsive to the local housing demand, allow increased density in appropriate areas, provide public improvements that are just right for each development area, and develop customized marketing and community outreach strategies for immediate implementation.

Instead of treating parcel-level planning documents as cookie cutters, customize them so that they are TOD-descriptive, not TOD-prescriptive. For planning documents with a zoomed-in focus, identify and rank TOD sites by their readiness for an immediate development within a planning area – for instance, TOD-priority sites, TOD-ready sites, and TOD-potential sites – if the entire planning area is not a transit area. As examples, the Central District Specific Plan of the City of Pasadena and the Magnolia Avenue Specific Plan of the City of Riverside were adopted to promote a diverse mix of land uses and establish a community node with public spaces and pedestrian-oriented features.<sup>15,16</sup>

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<sup>13</sup> City of Riverside. Adopted November 2007. *Riverside General Plan 2025. Education Element*. Available at: [http://www.riversideca.gov/planning/gp2025program/GP/09\\_Education\\_Element.pdf](http://www.riversideca.gov/planning/gp2025program/GP/09_Education_Element.pdf)

<sup>14</sup> Ibid.

<sup>15</sup> City of Riverside. Adopted 10 November 2009. *Magnolia Avenue Specific Plan*. Available at: <http://www.riversideca.gov/planning/pdf/SpecificPlans/Magnolia-Avenue/Final-Adopted-MASP.pdf>

These documents can inform planners of economic challenges and neighborhood movement of a planning area so that the best development combinations that work for that area will be implemented.

Not only can planning documents with a much more zoomed-in focus help control land uses at a greater level of detail, but they also create opportunities for incorporating and mandating any specific TOD supportive tools. Enlist goals and objectives to support TOD projects in details. For each identified goal and objective, provide practicable and feasible tools for implementation. Adopted in June 2009, the Eastside Neighborhood Plan of the City of Riverside designated mixed-use areas, and for each objective that promotes this designation, the plan enlisted a set of tools, responsible agency, and approximate time frame. One of the tools to pursue development opportunities on land owned by the transit agency is to establish a working relationship with Riverside County Transportation Commission (RCTC) by the development housing division, and the required time frame is six years and more.<sup>17</sup>

### **Equitable TOD**

Offering a broad range of housing options allows residents at all income levels to freely choose where they want to live. Creating and preserving affordable housing allow residents at moderate to low income levels to live near employment, neighborhood amenities and services, and public transportation. Equitable TOD helps minimize displacement and preserve the social threads and fabrics of existing communities that gentrification will likely unweave.

#### *Creating Affordable Housing through Density Bonus*

One of the commonly used zoning incentives to create equitable TOD and build affordable housing is through the use of density bonus. Density bonus is granted for projects for which developers agree to include a certain number or percentage of affordable housing units for residents with a moderate income, a low income, and/or a very low income. For every one affordable housing unit built, construction of a greater number of market rate units would be allowed than otherwise. Density bonus varies geographically from one community to another, and it also varies from TOD to TOD even in the same community. Typically, it does not exceed a particular threshold, for instance, 20 percent of the normal density determined by local zoning codes.

The City of Pasadena has a provision that allocates density bonus allowance, and it applies only to multi-family development projects consisting of five or more dwelling units.<sup>18</sup> The Del Mar Gold Line TOD project has a total of 347 housing units, and 21 of them are affordable units. Similar to the use

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<sup>16</sup> City of Pasadena. Accessed 24 June 2013. *Chapter 17.30 – Central District Specific Plan*. Available at: <http://ww2.cityofpasadena.net/zoning/P-3.html#17.30.010>

<sup>17</sup> City of Riverside. Adopted 16 June 2009 per Resolution 21841. *Eastside Neighborhood Plan*. Available at: <http://www.riversideca.gov/planning/pdf/Neighborhood-Plans/eastside/Eastside-Neighborhood-Plan-Final.pdf>

<sup>18</sup> City of Pasadena. Accessed 13 June 2013. *Chapter 17.43 – Density Bonus, Waivers and Incentives*. Available at: <http://ww2.cityofpasadena.net/zoning/P-4.html#17.43.040>

of density bonus to encourage affordable housing, consider using this incentive to encourage provision of community services that are important to the residents on site (i.e. child day-care facility). For instance, the City of Pasadena allows floor area bonus and concessions for child day-care facility for a development project if such a project complies with the density bonus requirement and includes a child day-care center that will be located on the premises of, as part of, or adjacent to, the project.<sup>19</sup> As another example, the City of Riverside provides density bonus or concession for a childcare facility if childcare facilities are determined inadequate for the subject area.<sup>20</sup>

Another example of density bonus in practice is the County of San Diego's four density bonus policies that target residents from different environmental justice categories (i.e. income and age). Although not all of these policies apply to TOD, communities could draw some inspiration from them and design the density bonus policies that work the best for them. "The State Density Bonus Law allows a 25% increase in the number of housing units with the requirement that for the next 30 years, at least 10% of total units be reserved for very low-income households, or 20% of total units be reserved for low-income households, or 50% of total units be reserved for qualifying senior citizens" while "[t]he Affordable Housing for the Elderly Program targets senior citizens [...]."<sup>21</sup> In addition, the Mobile-Home Park Density Bonus targets mobile home park development, and the Housing for Lower Income Families Program "allows the development of low-income housing with up to 20 units per acre in designated areas, provided that all of the units are affordable to low-income families."<sup>22</sup>

To ensure a full compliance with the density bonus allowance, communities should consider elevating the density bonus request to a legal agreement with interested developer(s) and subsequently recording the agreement. Make the development condition (i.e. affordability or provision of community facilities) run with the land so that it will be binding upon developer(s) and any of their heir, successor, or assignee. In its Bonus Density section, the City of Riverside explicitly requires a recorded Affordable Housing Agreement, which requires that "[a]n applicant shall agree to continued affordability of all low- income, very low- income and senior citizen housing developments with density bonus units for at least thirty (30) years."<sup>23</sup>

### *Preserving Affordable Housing*

Use tools to preserve existing affordable housing while building new affordable units helps expand the affordability. Generally, preserving affordability requires fewer resources than new construction,

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<sup>19</sup> Ibid.

<sup>20</sup> Riverside Municipal Code. Riverside, California. *Article VIII: Site Planning and General Development Provisions Chapter 19.545. Density Bonus*. Available at: <http://www.riversideca.gov/municode/pdf/19/article-8/19-545.pdf>

<sup>21</sup> Washington Area Housing Partnership. Accessed 27 June 2013. *Density Bonuses*. Available at: <http://www.wahpdc.org/densitybonus.html>

<sup>22</sup> Ibid.

<sup>23</sup> Riverside Municipal Code. Riverside, California. *Article VIII: Site Planning and General Development Provisions Chapter 19.545. Density Bonus*. Available at: <http://www.riversideca.gov/municode/pdf/19/article-8/19-545.pdf>

and preservation allows current residents to stay in their homes. “[T]ools like deed restrictions, housing trust funds, rehabilitation assistance, and Low-Income Housing Tax Credits can maintain housing choices and access to opportunities for low-and moderate-income families in revitalizing areas and catalyze investment in struggling neighborhoods.”<sup>24</sup> In California, the California Housing Partnership provides expertise in affordable housing preservation.<sup>25,26</sup> Additionally, the National Housing Law Project, the National Housing Trust, and National Alliance of HUD Tenants provide technical assistance on preserving privately-owned subsidized affordable housing.<sup>27</sup>

### **Parking Management**

Develop a good and workable parking program for the transit station areas with flexible parking standards that are just right for the circumstances and needs of each individual TOD site. Parking programs can sometimes tip the balance toward making conditions more favorable to transit and less favorable to automobile travel. Illustrative strategies include implementing a flexible parking program to relax parking requirements, restricting the availability of parking, and raising the cost of parking to the extent that is politically and economically feasible. The San Francisco Municipal Railway developed a parking program around the 3<sup>rd</sup> Street light rail project that provides more on-street and shared parking.<sup>28</sup> In Portland, Oregon, parking maximums in the downtown area replace minimum parking requirements and allow less parking near its light rail stations.<sup>29</sup> In Florida, the City of Orlando sets the maximum number of parking spaces for retail at four spaces per 1000 square feet of gross floor area and has a lower than normal minimum parking requirement of 2.5 spaces per 1000 square feet of gross floor area.<sup>30</sup>

In its peer reviewed report on parking pricing and management, the Denver Regional Council of Governments identified a set of best approaches to parking pricing that are being implemented by three other transportation agencies. Each approach is tailored to a segmented sub-market for access to transit (i.e. short-term parkers, commuters seeking guaranteed reserved station parking, occasional daily commuters traveling at peak hours, park-shop-and-ride travelers, and long-term parkers such as those using transit to get to the airport or intercity train station). The best approaches include 1) daily parking fees by the Bay Area Rapid Transit (BART) at four stations along the San Francisco International Airport/Millbrae extension; 2) premium, monthly reserved parking by

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<sup>24</sup> United States Environmental Protection Agency, Office of Sustainable Communities, Office of Environmental Justice. February 2013. *Creating Equitable, Healthy, and Sustainable Communities: Strategies for Advancing Smart Growth, Environmental Justice, and Equitable Development*. Available at: <http://www.epa.gov/smartgrowth/pdf/equitable-dev/equitable-development-report-508-011713b.pdf>

<sup>25</sup> California Housing Partnership Corporation. Accessed 27 June 2013. Available at: <http://www.chpc.net/>

<sup>26</sup> PolicyLink. Accessed 27 June 2013. *Affordable Housing Development*. Available at: [http://www.policylink.org/site/c.lkIXLbMNJrE/b.5137223/k.9AAB/Goals\\_To\\_Tools.htm#6](http://www.policylink.org/site/c.lkIXLbMNJrE/b.5137223/k.9AAB/Goals_To_Tools.htm#6)

<sup>27</sup> Ibid.

<sup>28</sup> Goodwill and Hendricks. November 2002. *Building Transit Oriented Development in Established Communities*. Center for Urban Transportation Research. Tampa, Florida.

<sup>29</sup> Ibid.

<sup>30</sup> Ibid.

the Washington Metropolitan Area Transit Authority (WMATA) and the BART at \$55 and \$30-\$115 per month, respectively; 3) short-term metered parking by TriMet at \$0.50 per hour with a five-hour time limit in the Portland area; 4) long-term or multi-day parking by the BART at a rate of \$5.00-\$6.00 per day.<sup>31</sup>

To complement the reduction of parking supply in TOD, communities in California could take advantage of the State's Parking Cash-Out Program. Authorized as the agency for interpreting and administering the Parking Cash-Out Program, the California Air Resources Board (CARB) determines that employers with over 50 employees in an air basin designated nonattainment for any state air quality standard must offer a parking cash-out program to those employees who have the availability of subsidized parking that meet certain criteria.<sup>32</sup> This program is a result of the 1998 amendments to the Internal Revenue Code by the federal Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21). Under this strategy, a qualified employer offers to provide a cash allowance to an employee equivalent to the parking subsidy that the employer would otherwise pay to provide the employee with a parking space.

### **Design and Development Guidelines and Standards**

TOD supportive design and development guidelines and standards are another proactive approach that communities are undertaking to promote TOD in suitable areas. It includes TOD-supportive and -compatible structural design feature, complete street, and livable communities. Because TOD design is multidimensional, comprehensive, and holistic, it would require expertise and experience from an interdisciplinary team.

#### *TOD Structural Design Features*

Treat design guidelines and standards as an opportunity to promote TOD projects. TOD-supportive and -compatible structural design features include, but not limited to, adding new indoor or outdoor public spaces, mandating a provision for bicycle parking spaces in residential and commercial development in the vicinity of transit stations, providing neighborhood amenities and open and green spaces, and supporting social functions and community services. While developing design guidelines and standards, consider languages to encourage, enhance, and require, if desired, green building design codes, preference for using green building materials, and onsite installation of green infrastructure. There is no limitation or boundary when it comes to what can go into the design guidelines; however, the key is to have as detailed and high-quality design guidelines and standards as possible for all users. Because the overall appearance and character of TOD structures are difficult

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<sup>31</sup> Nelson | Nygaard Consulting Associates. May 2010. *Denver Regional Council of Governments Transit Agency Parking Pricing and Management Practices Peer Review*. Available at: [http://tod.drcog.org/sites/default/files/documents/Transit%20Agency%20Parking%20Pricing%20and%20Management%20Practices\\_%20Peer%20Review.pdf](http://tod.drcog.org/sites/default/files/documents/Transit%20Agency%20Parking%20Pricing%20and%20Management%20Practices_%20Peer%20Review.pdf)

<sup>32</sup> California Environmental Protection Agency Air Resources Board. August 2009. *California's Parking Cash-Out Program, An Informational Guide for Employers*. Available at: [http://www.arb.ca.gov/planning/tsaq/cashout/cashout\\_guide\\_0809.pdf](http://www.arb.ca.gov/planning/tsaq/cashout/cashout_guide_0809.pdf)

to quantify and standardize, it is recommended to create a design review board or a similar group to review compliance with TOD-supportive and –compatible structural design features.

To create a place-making – creating a livable and dynamic TOD as a place instead of a space, good design is a process of assessing, selecting, reselecting, and implementing a wide variety of TOD-supportive and –compatible design features. During this process, planners should not leave everything to chance or to developers. Pay attention to the uniqueness of each station areas and incentivize developers, both financially and procedurally, to incorporate even the smallest of design details. Although incorporation of detailed and high quality design codes costs capitals upfront on developers, the final result will likely be high quality.

Seven TOD projects offered empirical sources for twelve principles of good designs that focus on processes, places, and facilities.<sup>33</sup> Three of these TOD projects are in the State of Virginia, one in the State of Missouri, one in the State of Illinois, and two are in the Oakland area. The twelve principles of good design include the following:

1. Appreciate that planning and developing great places takes time;
2. Engage the public and experts as collaborators and work with activist energy;
3. Program spaces of use;
4. Invest in maintaining spaces;
5. Design at a human scale;
6. Provide public spaces that accommodate a variety of uses and users;
7. Use design and programming strategies to increase safety;
8. Allow for variety and complexity;
9. Create connections between spaces;
10. Design sidewalks and crosswalks for appropriate pedestrian use;
11. Integrate transit and transit facilities into urban pattern; and
12. Don't forget (but don't overemphasize) car movement and parking.<sup>34</sup>

### *Complete Streets*

Communities are implementing strategies to make streets safe, walkable, accessible, and enjoyable for users of all ages and abilities. Some of the structural design guidelines and standards discussed above are also relevant to street designs (i.e. street transportation, traffic, circulation). Strategies that could be used to bolster the “ABC” (accessibility, bikability, and connectivity) of TOD include complete and shared streets, a web of transit and user-friendly bus stops, pedestrian and bicycle pathways, and connection with open spaces through bicycle routes and greenways. Design attributes in support of walkability include short street blocks, many intersections, pedestrian crossings at

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<sup>33</sup> Justin Jacobson and Ann Forsyth. 2008. *Seven American TODs: Good Practices for Urban Design in Transit-Oriented Development Projects*. Available at: <http://www.jtlu.org/index.php/jtu/article/download/67/34>

<sup>34</sup> Ibid. page 25.

major roads, continuous sidewalks, legible street patterns, street landscaping and lighting, and benches.

TOD-supportive complete streets policies have been adopted at the state, regional, county, and local levels. The California legislature adopted the Complete Streets Act (AB 1358) in 2008. In the same year, the California Department of Transportation adopted the Deputy Directive 64-R1. In 2006, the Metropolitan Transportation Commission in the San Francisco Bay Area adopted a regional policy for the Accommodation of Non-Motorized Travelers. The Marin County in the northern San Francisco Bay Area, California, approved the Best Practices Directive for Inclusion of Multimodal Elements into Improvement Projects in 2007. Since 2006 to the present, nearly 488 communities in the nation have adopted some forms of complete streets policies. In the SCAG region, they include the following six cities.<sup>35</sup>

| City Legislation        | Complete Street Ordinance, Resolution, and Policy | Year of Adoption |
|-------------------------|---|------------------|
| 1. Rancho Cucamonga, CA | Ordinance No. 867                                 | 2012             |
| 2. Hermosa Beach, CA    | Living Streets Policy                             | 2012             |
| 3. Huntington Park, CA  | Resolution No. 2012-18                            | 2012             |
| 4. Baldwin Park, CA     | Complete Street Policies                          | 2011             |
| 5. Ojai, CA             | Complete Street Policies                          | 2011             |
| 6. Azusa, CA            | Complete Street Policies                          | 2011             |

Complete streets foster livable communities. However, streets are not complete if they are not designed with all users in mind. Regardless age, ability, or mode of transportation, complete streets ensure users can get to their destination easily, quickly, safely, and enjoyably. Streetscapes that benefit all users, especially vulnerable street users (i.e. children and elderly) include, for instance, retiming signals to account for slower walking speed, shortening crossing distances with median refuges or sidewalk bulb-outs, constructing curb cut-outs and street benches, creating sitting or resting areas, and mounting clear street signs with large size of font.<sup>36,37</sup> Hence, streets that are built and improved today will serve all populations' needs and meet tomorrow's challenges.

### *Complete and Livable Communities*

Design and manage a TOD to give a sense of a complete and livable community. This includes placing the TOD in a close proximity to transportation arterials (i.e.: freeways, transit stations, and bus lines) and existing neighborhood amenities (i.e.: schools, recreational facilities and parks, and retailer centers such as a neighborhood grocery store. In addition, providing a wide choice of amenities and

<sup>35</sup> Smart Growth America. April 2013. *The Best Complete Streets Policies of 2012*. Available at: <http://www.smartgrowthamerica.org/documents/cs-2012-policy-analysis.pdf>

<sup>36</sup> Smart Growth America. Accessed 5 July 2013. *Benefits of Complete Street, Complete Streets Improve Mobility for Older Americans*. Available at: <http://www.smartgrowthamerica.org/documents/cs/factsheets/cs-older.pdf>

<sup>37</sup> AARP Public Policy Institute. 2009. *In Brief: Planning Complete Streets for an Aging America*. Available at: [http://assets.aarp.org/rgcenter/il/inb167\\_streets.pdf](http://assets.aarp.org/rgcenter/il/inb167_streets.pdf)

personal retail spaces (i.e.: beauty salon, dry cleaners, financial services) on site will just be a trip down to the ground level of the same building for the tenants residing on site. Neighborhood amenities can also provide personal services to surrounding communities, thereby decreasing local traffic with reduced vehicular trips in localized areas.

Make all users of the TOD site feel they belong to a complete and livable community through a pedestrian- and resident-friendly design. As discussed above, this design focuses on walkability, connectivity, transparency, aesthetics, and compatibility with the existing community at large in which a TOD is located. A number of strategies are available to make this community design concept a reality. They include, for instance, creating a focal point inside an open triangular shape to give a feel of “a community within another community at large;” aligning retail spaces with major transportation corridors where most of the foot traffic will take place while placing residential units far way; orienting residential units to maximize natural lighting and fresh air penetration; connecting pedestrians and shoppers with on-site neighborhood amenities and personal retail services through pathways; and providing accessible means of ingress and egress for all users of all modes of transportation in all directions.

In the SCAG region, the Wilshire/Vermont TOD on the Red Line is a successful example of creating a livable and sustainable community. Located in the urban area of the City of Los Angeles, the Wilshire/Vermont TOD includes apartments (20% affordable units), bus layover spaces, subway access, ground-level retail spaces, and a public plaza with sitting areas in the center.<sup>38</sup> According to a 2010 case study completed by the Federal Transit Administration, the Wilshire/Vermont TOD demonstrates the following livability highlights.

1. Provide a range of transportation choices for residents, the surrounding community, and employee;
2. Promote equitable, affordable housing by making nearly 20 percent of new housing units affordable;
3. Enhance economic competitiveness by providing residents with easy access to employment centers in downtown Los Angeles and other locations along the Red Line;
4. Support existing communities by providing improved Metro access, public space, retail, and educational opportunities (i.e. a 800-student middle school) for the surrounding neighborhoods;
5. Coordinate policies and leverage investment because it used funding from a variety of local, state, federal, and private sources; and

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<sup>38</sup> U.S. Department of Transportation, Federal Transit Administration. Summer 2010. *Livable and Sustainable Communities Regional Case Studies – Region IX, Wilshire/Vermont, Red Line, Los Angeles, CA*. Available at: [http://www.sustainablecommunities.gov/pdf/studies/Region9\\_VermontWilshire.pdf](http://www.sustainablecommunities.gov/pdf/studies/Region9_VermontWilshire.pdf)

6. Value communities and neighborhoods by establishing a vibrant and walkable urban environment and a safe access to transit, shops, and school.<sup>39</sup>

The LEED for Neighborhood Development (LEED-ND) by the U.S. Green Building Council enlists measurable standards for smart, sustainable, and green community designs. The LEED-ND Rating System focuses on the community as a whole by integrating green design concepts and principles such as smart location and linkage, neighborhood pattern and compatibility, green infrastructure and structures, energy conservation, and material recycling and reuse.<sup>40</sup> There is an emerging trend to use the LEED-ND standards in the TOD and transit area planning among planners, engineers, and architects. Because LEED-ND is designed to promote healthy living, it can be used as a strategy to create environmentally, economically, and socially sustainable and livable communities.<sup>41</sup>

#### *Interdisciplinary TOD Design and Development Team*

TOD supportive design and development guidelines and standards require expertise and experience from an interdisciplinary team. These guidelines and standards, which appear in planning documents, encompass a range of subject areas from urban design, energy, water supply and consumption, to housing, and to civil engineering. Because everything about TOD is comprehensive, interdisciplinary, and holistic, TOD-supportive design and development practices go beyond the land use and zoning section in a planning document. To realize the comprehensiveness of TOD to the fullest extent possible, forming an interdisciplinary team, both inter- and intra-agency, is necessary. For instance, the team may include people with TOD-related expertise and experience. Disciplines that are relevant to TOD design and development guidelines and standards include, but not limited to, land use, planning, environmental compliance, transportation, market and economic analysis, urban design, engineering, legal, marketing and education, and public relations.

#### **Natural Resources Management and Conservation**

Promoting a high quality of life in TOD could be achieved by balancing the natural and built environment. Closely related to the two categories of TOD policies and practices discussed above (urban design guidelines and standards and green infrastructure), an environmentally sustainable TOD conserves, sustains, and celebrates the natural environment. Resources such as water, timber, soils, agricultural resources and farmlands, nonrenewable energy sources, and green spaces are within the natural environment. Using nature-friendly development practices for the TOD design protects natural assets and reduces the impact of development on natural environment.

#### *Green Infrastructure*

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<sup>39</sup> Ibid.

<sup>40</sup> National Resources Defense Council. Accessed 1 July 2013. *A Citizen's Guide to LEED for Neighborhood Development*. Available at: [http://www.nrdc.org/cities/smartgrowth/files/citizens\\_guide\\_LEED-ND.pdf](http://www.nrdc.org/cities/smartgrowth/files/citizens_guide_LEED-ND.pdf)

<sup>41</sup> U.S. Green Building Council. 2008. Accessed 1 July 2013. *LEED for Neighborhood Development Rating System*. Available at: <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=148>

Green infrastructure is an approach communities are using to strike the delicate balance between the natural and built environment. It allows communities to maintain healthy waters, provides multiple environmental benefits, and supports sustainability. "Unlike single-purpose gray stormwater infrastructure, which uses pipes to dispose of rainwater, green infrastructure uses vegetation and soil to manage rainwater where it falls. By weaving natural processes into the built environment, green infrastructure provides not only stormwater management, but also flood mitigation, air quality management, and much more."<sup>42</sup>

As the elected regional government for the Portland metropolitan area, Metro implements green infrastructure in its development. They include:

1. Tree planting and retaining on-site vegetation;
2. Landscaping with native plants;
3. Soil amendments and composting;
4. Pervious pavers, concrete and/or asphalt for roads, driveways and parking lots; and
5. Green street [*sic*] and bio retention features such as curb cuts, swales and rain gardens eco-roofs [...].<sup>43</sup>

A nature-friendly in practice by Metro in the Portland metropolitan area is the Buckman Height Apartments. This apartment complex sits on a two-acre redevelopment site. The complex is organized around a main courtyard with two 18-by-45 foot planting beds designed as rain gardens to filter and absorb the stormwater from the buildings' downspouts.<sup>44</sup>

#### *Marketing Green Infrastructure and Nature-Friendly TOD*

Like the TOD marketing and education strategies, policies and practices that are incorporated into the design of a TOD to manage and conserve natural resources need to be branded, packaged, and marketed. Successfully case studies need also be recognized and awarded. The award and recognition programs can help increase the public awareness of nature-friendly TOD and green infrastructure. The same marketing and education materials and strategies used for TOD projects can be used here.

#### *A Nature-Friendly Built Environment*

An environmentally sustainable TOD is a catalyst for creating a nature-friendly built environment in which a TOD is located. The built environment refers to the human-made environment that provides settings for human activities (i.e.: living, working, and playing). It encompasses a number elements, including, but not limited to, human, buildings, parks, green spaces, roads, highways,

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<sup>42</sup> United States Environmental Protection Agency. Last Updated 23 April, 2013. *Water: Green Infrastructure*. Available at: <http://water.epa.gov/infrastructure/greeninfrastructure/index.cfm>

<sup>43</sup> Metro. 2013. *Nature-friendly development*. Available at: <http://www.oregonmetro.gov/index.cfm/go/by.web/id=24592>

<sup>44</sup> Ibid.

telecommunicating systems, and infrastructure. These elements come in different scales, ranging from a building, to a block, to a neighborhood, and to community. It also varies geographically. In addition, the built environment is a manifestation of the social and cultural threads of communities. Apply the above-discussed strategies for building an environmentally sustainable TOD to create a large-scale, nature-friendly, high-quality, human-made space in which people live and work could continue to enjoy.

### **Environmental Review and Entitlement**

Besides land use regulation and zoning incentives, a TOD-complementary regulatory framework includes policy support in the form of a streamlined development review and approval process. One of the challenges faced is the long turnaround time for environmental clearance and entitlement approval for TOD. For instance, the approval turnaround time for planned development in many cities can take up to two years.<sup>45</sup> Hence, an expedited environmental review and entitlement process for TOD both at the state and local levels will reduce time delays, save soft development costs, and encourage TOD in practice.

#### *State Streamlining Policies and Practices*

Expediting the environmental review for planned TOD is achievable through California Environmental Quality Act (CEQA) streamlining bills. The environmental review and entitlement process at the state statutory level needs both flexibility and certainty. Flexibility can be achieved by, for example, statutory exemptions, limited environmental reviews, or permit expeditions. In California, certain types of projects (i.e. infill project, infill residential project, and mixed use development project in an infill location in a close proximity to transit) may be eligible for CEQA streamlining permitted by a statutory exemption, SB 226, SB 375, and SB 743. To ensure certainty of the process, an intergovernmental approach with consolidated steps in the process is encouraged. In most jurisdictions, intergovernmental collaboration is not uncommon. However, TOD requires a stronger degree of synergic intergovernmental working relationship that is built on trust and confidence. To make this happen, all local public agencies responsible for making a TOD a reality should consider the adoption of the 3C's policy – namely, cooperation first, coordination next, and for the purpose of long-term collaboration. This 3C's approach should be mixed into all phases of TOD planning from conception all the way to its opening day. Strategies to implement this 3C's approach include assigning a senior planner or staff member to work as a full-time liaison for all TOD-related issues and mandating copies of any plans requiring environmental review, entitlement, and discretionary permits to be sent to and reviewed by other responsible public agencies.

#### *Local Streamlining Policies and Practices*

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<sup>45</sup> Goodwill and Hendricks. November 2002. *Building Transit Oriented Development in Established Communities*. Center for Urban Transportation Research. Page 14. Tampa, Florida.

As an example, the Puget Sound Regional Council, a planning organization that develops policies and makes decisions about transportation planning, economic development, and growth management throughout the four-county Seattle metropolitan area, lists five ways to streamline the environmental review process:<sup>46</sup>

1. Review or consolidate steps in the process;
2. Simplify the process by making sure the applicable regulations are organized and easily accessible;
3. Review previous appeals to identify regulatory difficulties and opportunities;
4. Allow for flexibility in the permit process; and
5. Conduct some of the permit steps in advance of the development proposals.

As another example, the City of Pasadena posts an online flowchart to illustrate the legislative review process for all zone changes, master plans, and planned developments and the quasi-judicial review process for all conditional use permits, variances, and tract maps.<sup>47</sup> To assist developers, the flowchart includes the seven General Plan Principles and definitions of terms by the City's Planning and Development Department.<sup>48</sup>

#### *Public Health Concerns and Mitigation Measures*

By definition, TOD is development in proximity to transit. Development may be residential, commercial, or mixed-use; therefore, they cluster people and businesses along transit lines (e.g. bus routes, rails). A common concern of TOD is public health from being exposed to air pollution, noise, and vibration. Although the existing CEQA case laws consider potential significant environmental impacts of projects on the physical environment instead of those from the physical environment on the projects and the public brought in the projects, developers should consider design and material strategies to minimize potential air and noise exposures by TOD tenants. Those mitigation measures may include requiring installation of air filtration and noise buffer on all TOD that are within 500 feet of high quality transit corridor, and orienting TOD to avoid a downwind position. Local governments may adopt design and development guidelines and standards to fill in the missing puzzle in CEQA to address public health concerns of TOD and suggest solutions within their jurisdictions.

#### **Innovative Partnership**

TOD requires cooperation, coordination, and collaboration among all stakeholders. Stakeholders include local government agencies, transit agencies, developers, property owners, investors, businesses, community organizations, residents, and the general public. Forming a working relationship and a functional partnership between stakeholders sets a stage for ongoing and open

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<sup>46</sup> Goodwill and Hendricks. November 2002. *Building Transit Oriented Development in Established Communities*. Center for Urban Transportation Research. Page 15. Tampa, Florida.

<sup>47</sup> Ibid.

<sup>48</sup> City of Pasadena. Accessed 24 June 2013. *Legislative Review Process*. Available at: [www.cityofpasadena.net/WorkArea/linkit.aspx?LinkIdentifier=id&...](http://www.cityofpasadena.net/WorkArea/linkit.aspx?LinkIdentifier=id&...)

communication, which will in return help set realistic expectations and lead to mutually beneficial outcomes.

### *Public-and-Public Partnership*

Partnerships can take on many forms. One common form is the public-and-public partnership. The collaboration between the City of Los Angeles and the Los Angeles County Metropolitan Transportation Agency (Metro) is an example of the public-and-public partnership.<sup>49</sup> "The City, Metro, and other stakeholders need more inter-agency and inter-departmental collaboration and coordination to maximize leveraging of resources in support of TOD."<sup>50</sup>

Like the collaboration between the City of Los Angeles and the Metro, the public-and-public partnership is built upon the intergovernmental cooperation, coordination, and collaboration – the 3C's approach. Strategies to make the 3C's approach a daily practice include: 1) establishing intergovernmental TOD-supportive agreements through, for instance, MOUs and Letters of Intent, to set common development goals and objectives, design a common work plan, agree on lead and shared planning responsibilities, designate a point-of-contact, and allocate limited funds and resources; 2) holding regular meetings of staff representatives throughout the designing, planning, and implementing phases of the TOD process; and 3) administrating TOD projects by having non-planning personnel monitor, manage, and maintain contracts, legal agreements, and budgeting.

Implement the 3C's approach early in the TOD conceptualizing and planning process. If there is an existing and functional working relationship among agencies, negotiating to get "sign off," "exemption," or "expedition" for certain designs may be considered. Agencies would be more likely than not to grant the "signing off," "exemption," or "expedition" if they have "bought into a plan." In addition, incorporate the 3C's approach to every stage of the TOD planning. For instance, while TOD-supportive development and design guidelines and standards are being developed, have an intergovernmental team of representatives from all responsible agencies, if possible, prepare, review, adopt, and sign off on the languages. Negotiate a comprehensive set of TOD implementation strategies with all agencies responsible for issuing TOD permits and collecting fees. Lastly, negotiate a consolidated review and permitting approval process to fully utilize the power and strength of the public-and-public partnership.

The collaboration between local and regional public agencies is a type of the public-and-public partnership. This type of 3C's presents a unique opportunity in developing and promoting TOD from a regional network perspective. Because transit lines cross jurisdictional boundaries, regional agencies such as transportation commissions and SCAG can work collaboratively with local governments to foster TOD-friendly policies and resolve TOD-deterrent issues in a regional forum.

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<sup>49</sup> The Center for Transit-Oriented Development. 1 March 2010. *Creating Successful Transit-Oriented Districts in Los Angeles*. Available at:

[http://latod.reconnectingamerica.org/sites/default/files/LA\\_TOD\\_Final\\_Final\\_Report.pdf](http://latod.reconnectingamerica.org/sites/default/files/LA_TOD_Final_Final_Report.pdf)

<sup>50</sup> Ibid.

Strategies to encourage regional TOD dialogs may include conferences, workshops, and other educational programs. Already established work relationships and processes between regional and local government agencies should be reviewed and utilized. The purpose of regional TOD dialogs is to recognize, create, and improve TOD opportunities by city, county, and regional agencies.

Another type of the public-and-public partnership is working with state public agencies. Both local and regional governments can be benefited from engaging in transit and TOD planning dialogs with state agencies. When statewide TOD-friendly regulations and plans are being developed, local and regional governments can participate in the public review process to ensure they will be suitable for the local and regional social, economic, and physical environments. In addition, regional government plays an important role in fostering dialogs between local and state agencies. Opportunities to influence statewide TOD-friendly laws, regulations, and administrative policies by local and regional public agencies should be recognized and used together with those between local and regional public agencies.

The definition of the public-and-public partnership is further broadened to include a partnership between the public (government) and the general public. The general public consists of community organizations, non-profit organizations (NGOs), special interest groups, and members of the TOD communities. This all-encompassing definition reflects another determining factor in the TOD's success – community support, which is being discussed in detail below. Therefore, it is important to form a partnership with “the general public” early in the TOD process in order to over any potential community resistance.

#### *Public-and-Private Partnership*

Another common form of partnership is between public-and-private entities. A public-and-private partnership is an innovative way to create tools to support TOD. A win-and-win situation is often used to describe this form of partnership. Examples of this public-and-private partnership include those joint developments by a real estate asset development and management program on Metro-owned properties at and adjacent to transit stations and corridors. The purpose is to secure the most appropriate private and/or public sector development on these properties.<sup>51</sup>

The public-and-private partnership is established to create values for all parties. To TOD developers, the public (i.e. transit agencies) could assist in land assembly, split or share TOD infrastructure development and maintenance costs with developers, or match TOD funds during the pre-development stage. In addition, public agencies could take actions to minimize soft development costs by streamlining or expediting the environmental review and entitlement process as described above, reducing time delays, and increasing budget and contract certainties. For instance, use a multiple-year contract with provisions to allow contract amendments and end-of-year funding and contract rollovers. Designate full-time personnel, preferably non-planners, to manage, monitor, and

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<sup>51</sup> The Los Angeles County Metropolitan Transportation Authority. Modified 24 June 2013. *Joint Development Program*. Available at: [http://www.metro.net/projects/joint\\_dev\\_pgm/](http://www.metro.net/projects/joint_dev_pgm/)

maintain TOD contracts, budgets, accounting, purchase orders, and schedules. To the public (government), selected TOD developers offer market and financing experiences and a secured, appropriate, and money-making use for the property.

### **TOD Governance**

TOD governance is another important factor in the TOD planning and implementation process. Relevant to the innovative partnerships, good TOD governance requires local responsible agencies to take a direct and proactive role in coordinating TOD efforts. One simple way to streamline the environmental review and entitlement process is to provide all necessary and updated information and forms at one place online. This one-stop shop for all TOD information will reduce research time, increase TOD planning and decision-making transparency, and promote streamlining.

Another aspect of TOD governance is about civic personalities and governments' approach towards TOD. Some local governments take on a more proactive role in TOD planning while others show great dependence on guiding private sector investment through statutory instruments. "One style is to get it done fast. Others prefer to take several years. Some are stable. Others change mayors, directors and senior staff several times during the process. One wants to wait until regional, state and federal policies are finalized. Others prefer to lead rather than follow. Some innovate through applications for development. Others want development to stop until they revise their plans and codes. Some want visibility, others prefer the stealth approach. None of this is right or wrong, just different."<sup>52</sup> Recognizing and working with different civic personalities at a particular community may help set realistic expectations and TOD work plans.

### **TOD Marketing and Education**

Like any products, TOD is a product that needs to be branded, packaged, and marketed to the public. The public encompasses a large number of stakeholders, including, but not limited to, government agencies, residents, property owners, businesses, developers, investors, financial institutions, consultants, community organizations or special interest groups, and NGOs. The TOD marketing and education efforts to these stakeholders are more than public outreach and participation in the TOD planning. It is about promoting the TOD concept and raising awareness of TOD opportunities in areas suitable for such developments. It is also about providing technical assistance through, for instance, publication of TOD guidance documents and dissemination of information on TOD. Using the City of Pasadena again as an example, Mayor Bill Bogaard promoted two of the City's TOD projects, the Del Mar Station TOD project and the Sierra Madre Villa TOD project, in an interview in the April, 2007 issue of *Urban Land*, a monthly magazine of the Urban Land Institute.<sup>53</sup>

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<sup>52</sup> Transit Oriented Development Advocate. Accessed 25 June 2013. *TOD Lessons Learned, Portland, Oregon. What's TOD Got To Do With It?* Available at: <http://www.todadvocate.com/todlessons.htm>

<sup>53</sup> The City of Pasadena. April 2007. *The Green Quotient – Q&A with Bill Bogaard: Urban Land, Interview with Mayor Bill Bogaard.* Available at: <http://www.ci.pasadena.ca.us/EkContent.aspx?theme=Black&id=3216&bid=0>

Promote public interests in TOD through implementation of TOD marketing and education strategies. This sometimes requires hiring a consultant team to develop, design, and manage such strategies. Use marketing materials in the public campaigns for TOD. They may include TOD market and economic analyses, TOD opportunity sites, profiles, maps, 3D visual presentations, case studies, brochures, handbooks, fact sheets, newsletters, and newspaper articles. Utilize all feasible and available means to disseminate these materials. For instance, hold focus groups meetings, workshops, seminars, conferences, lecture series, tours, field trips, sketch walks, computer simulations, social media, and television or radio shows. Incorporate TOD marketing and education strategies in the planning documents or public outreach and participation plan, if available. Hence, the place-making philosophy can become a place-marking reality – marking a TOD as a place through TOD branding, packing, and marketing.

When advocating for a high quality transit station area plan, the following steps have been suggested.<sup>54</sup>

1. Set goals for the station area plan
2. Educate and organize the base
3. Find a champion
4. Engage with government staff to influence process
5. Understand the process
6. Build alliances and partnerships for good planning
7. Contact the media at key milestones during the campaign
8. Shape the plan through community meetings
9. Review and respond to analyses and drafts of the plan
10. Manage opposition by staying in close contact with Council members and participating in community meetings
11. Implementation and continuous monitoring after adoption during

### **Community Engagement and Support Through Education**

Community support is critical to deciding TOD success. While there are literatures on many aspects of TOD in the areas of public policy, design, and financing, few studies focus on how to build community support for TOD. Perhaps the most difficult challenge in the TOD process is addressing community resistance from the very community in which a TOD will be located and is designed to benefit.

Advocating for a sound TOD requires public agencies and private parties to work with people who live and work in the community. When a TOD is planned in a community, residents are concerned about, for instance, safety, noise, fumes, litter, traffic, and parking. To overcome community resistance, it requires, for example, to uncover communities' real concerns through formal and

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<sup>54</sup> Great Communities Collaborative. October 2009. *Great Communities Toolkit*. Available at: <http://www.greatcommunities.org/toolkit/>

informal, ongoing, and constructive dialogs, form a public-and-public partnership, employ public outreach, participation, and involvement program, and implement TOD marketing and education strategies. Other strategies that can be used to facilitate meaningful community engagement in the TOD planning and decision-making process include: 1) conducting multilingual outreach; 2) making periodic community assessments; and 3) holding community planning and visioning workshops.<sup>55</sup>

The public involvement plan implemented by Charlotte, North Carolina when alternative transit options were being explored for Charlotte's South Corridor was a successful example.<sup>56</sup> "During each phase of the Major Investment Study, residents and stakeholders were educated about the transit opportunities and challenges in the corridors, and their input were gathered to identify community needs, issues, and concerns."<sup>57</sup>

Seattle's Station Area Planning Program is another successful example of overcoming community resistance through education. This program included a community outreach subprogram, and the outreach efforts covered all interested citizens in the station areas. In the station area planning process, a number of station area advisory committees were established for each proposed light rail station.<sup>58</sup>

The Great Communities Collaborative in the San Francisco Bay Area is a group of organizations dedicated to connecting local residents and businesses with tools and resources to influence transit development decision-making<sup>59</sup>. The Great Communities Toolkit, also available in Spanish and Chinese, outlines strategies on how to develop a station area plan campaign and how to manage and take advantage of the media.<sup>60</sup>

In the SCAG region, Metro has recently incorporated a community and neighborhood outreach component during the design and conceptual development stage for its TOD projects in East Los Angeles.<sup>61</sup> This effort is helping Metro identify, understand, and incorporate the needs of community and neighborhood in which TOD will be located. For instance, on December 6, 2012, Metro

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<sup>55</sup> United States Environmental Protection Agency, Office of Sustainable Communities, Office of Environmental Justice. February 2013. *Creating Equitable, Healthy, and Sustainable Communities: Strategies for Advancing Smart Growth, Environmental Justice, and Equitable Development*. Available at: <http://www.epa.gov/smartgrowth/pdf/equitable-dev/equitable-development-report-508-011713b.pdf>

<sup>56</sup> Goodwill and Hendricks. November 2002. *Building Transit Oriented Development in Established Communities*. Page 25. Center for Urban Transportation Research. Tampa, Florida.

<sup>57</sup> Ibid.

<sup>58</sup> Ibid.

<sup>59</sup> Great Communities Collaborative. Accessed 25 June 2013. Available at: <http://www.greatcommunities.org/>

<sup>60</sup> Great Communities Collaborative. October 2009. *Great Communities Toolkit*. Available at: <http://www.greatcommunities.org/toolkit/>

<sup>61</sup> Los Angeles County Metropolitan Transportation Authority. 6 December 2012. *Eastside Transit Oriented Development: Community Update*. Available at: [http://www.metro.net/projects\\_studies/joint\\_development/images/eastside\\_update\\_2012\\_1206.pdf](http://www.metro.net/projects_studies/joint_development/images/eastside_update_2012_1206.pdf)

conducted a TOD community meeting in Boyle Heights at the Boyle Heights Senior Center. Videos of this meeting are viewable online.<sup>62</sup>

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<sup>62</sup> East Side Metro Transit Oriented Development Community Meeting in Boyle Height. Published 18 December 2012. Available at: <http://www.youtube.com/watch?v=fkMF5g9IUmg>  
<http://www.youtube.com/watch?v=xz5KOlcuyh8>



SOUTHERN CALIFORNIA  
**ASSOCIATION of GOVERNMENTS**

Item 4: NO ATTACHMENTS



SOUTHERN CALIFORNIA  
**ASSOCIATION of GOVERNMENTS**

Item 5 Attachment: Local Input Survey Update

# Local Implementation Survey Completion (May 6, 2014)

| <b>Imperial County (IVAG)</b> |                                     |                                   |
|-------------------------------|-------------------------------------|-----------------------------------|
| <b>Jurisdiction</b>           | <b>Part I: Local Implementation</b> | <b>Part II: Open Space Survey</b> |
| Brawley                       | X                                   | X                                 |
| Calexico                      |                                     |                                   |
| Calipatria                    |                                     |                                   |
| El Centro                     |                                     |                                   |
| Holtville                     |                                     |                                   |
| Imperial                      |                                     |                                   |
| Westmorland                   | X                                   | X                                 |
| Imperial County               |                                     |                                   |
| <b>IVAG Total</b>             | <b>2</b>                            | <b>2</b>                          |
| <b>Completion Rate</b>        | <b>25.0%</b>                        | <b>25.0%</b>                      |

| <b>Los Angeles County</b>       |                                     |                                   |
|---------------------------------|-------------------------------------|-----------------------------------|
| <b>Arroyo Verdugo Subregion</b> |                                     |                                   |
| <b>Jurisdiction</b>             | <b>Part I: Local Implementation</b> | <b>Part II: Open Space Survey</b> |
| Burbank                         | X                                   | X                                 |
| Glendale                        |                                     |                                   |
| La Canada Flintridge            |                                     |                                   |
| <b>Arroyo Verdugo Total</b>     | <b>1</b>                            | <b>1</b>                          |
| <b>Completion Rate</b>          | <b>33.3%</b>                        | <b>33.3%</b>                      |

| <b>Los Angeles County</b>         |                                     |                                   |
|-----------------------------------|-------------------------------------|-----------------------------------|
| <b>Los Angeles City Subregion</b> |                                     |                                   |
| <b>Jurisdiction</b>               | <b>Part I: Local Implementation</b> | <b>Part II: Open Space Survey</b> |
| Los Angeles                       | X                                   | X                                 |
| San Fernando                      |                                     |                                   |
| Los Angeles County                | X                                   | X                                 |
| <b>LA City Total</b>              | <b>2</b>                            | <b>2</b>                          |
| <b>Completion Rate</b>            | <b>66.7%</b>                        | <b>66.7%</b>                      |

| <b>Los Angeles County</b>                     |                                     |                                   |
|---|-------------------------------------|-----------------------------------|
| <b>Westside Cities Council of Governments</b> |                                     |                                   |
| <b>Jurisdiction</b>                           | <b>Part I: Local Implementation</b> | <b>Part II: Open Space Survey</b> |
| Beverly Hills                                 |                                     |                                   |
| Culver City                                   | X                                   | X                                 |
| Santa Monica                                  |                                     |                                   |
| West Hollywood                                |                                     |                                   |
| <b>WCCOG Total</b>                            | <b>1</b>                            | <b>1</b>                          |
| <b>Completion Rate</b>                        | <b>25.0%</b>                        | <b>25.0%</b>                      |

# Local Implementation Survey Completion (May 6, 2014)

| <b>Los Angeles County</b>                    |                                     |                                   |
|--|-------------------------------------|-----------------------------------|
| <b>Gateway Cities Council of Governments</b> |                                     |                                   |
| <b>Jurisdiction</b>                          | <b>Part I: Local Implementation</b> | <b>Part II: Open Space Survey</b> |
| Artesia                                      | X                                   | X                                 |
| Avalon                                       |                                     |                                   |
| Bell   |                                     |                                   |
| Bell Gardens                                 | X                                   | X                                 |
| Bellflower                                   | X                                   | X                                 |
| Cerritos                                     | X                                   | X                                 |
| Commerce                                     |                                     |                                   |
| Compton                                      |                                     |                                   |
| Cudahy                                       |                                     |                                   |
| Downey                                       |                                     |                                   |
| Hawaiian Gardens                             |                                     |                                   |
| Huntington Park                              |                                     |                                   |
| La Habra Heights                             |                                     |                                   |
| La Mirada                                    |                                     |                                   |
| Lakewood                                     | X                                   | X                                 |
| Long Beach                                   | X                                   | X                                 |
| Lynwood                                      | X                                   | X                                 |
| Maywood                                      |                                     |                                   |
| Norwalk                                      |                                     |                                   |
| Paramount                                    |                                     |                                   |
| Pico Rivera                                  | X                                   | X                                 |
| Santa Fe Springs                             | X                                   | X                                 |
| Signal Hill                                  | X                                   | X                                 |
| South Gate                                   | X                                   | X                                 |
| Vernon                                       | X                                   | X                                 |
| Whittier                                     | X                                   | X                                 |
| <b>GCCOG Total</b>                           | <b>13</b>                           | <b>13</b>                         |
| <b>Completion Rate</b>                       | <b>50.0%</b>                        | <b>50.0%</b>                      |

| <b>Los Angeles County</b>                 |                                     |                                   |
|---|-------------------------------------|-----------------------------------|
| <b>North Los Angeles County Subregion</b> |                                     |                                   |
| <b>Jurisdiction</b>                       | <b>Part I: Local Implementation</b> | <b>Part II: Open Space Survey</b> |
| Lancaster                                 | X                                   | X                                 |
| Palmdale                                  | X                                   | X                                 |
| Santa Clarita                             | X                                   | X                                 |
| <b>North LA County Total</b>              | <b>3</b>                            | <b>3</b>                          |
| <b>Completion Rate</b>                    | <b>100.0%</b>                       | <b>100.0%</b>                     |

## Local Implementation Survey Completion (May 6, 2014)

| <b>Los Angeles County</b>                      |                                     |                                   |
|--|-------------------------------------|-----------------------------------|
| <b>South Bay Cities Council of Governments</b> |                                     |                                   |
| <b>Jurisdiction</b>                            | <b>Part I: Local Implementation</b> | <b>Part II: Open Space Survey</b> |
| Carson   |                                     |                                   |
| El Segundo                                     | X                                   | X                                 |
| Gardena  | X                                   | X                                 |
| Hawthorne                                      |                                     |                                   |
| Hermosa Beach                                  | X                                   | X                                 |
| Inglewood                                      | X                                   | X                                 |
| Lawndale                                       | X                                   | X                                 |
| Lomita   | X                                   | X                                 |
| Manhattan Beach                                | X                                   | X                                 |
| Palos Verdes Estates                           |                                     |                                   |
| Rancho Palos Verdes                            | X                                   | X                                 |
| Redondo Beach                                  |                                     |                                   |
| Rolling Hills                                  | X                                   | X                                 |
| Rolling Hills Estates                          | X                                   | X                                 |
| Torrance                                       | X                                   | X                                 |
| <b>South Bay Cities Total</b>                  | <b>11</b>                           | <b>11</b>                         |
| <b>Completion Rate</b>                         | <b>73.3%</b>                        | <b>73.3%</b>                      |

| <b>Los Angeles County</b>                         |                                     |                                   |
|---|-------------------------------------|-----------------------------------|
| <b>Las Virgenes-Malibu Council of Governments</b> |                                     |                                   |
| <b>Jurisdiction</b>                               | <b>Part I: Local Implementation</b> | <b>Part II: Open Space Survey</b> |
| Agoura Hills                                      | X                                   | X                                 |
| Calabasas   | X                                   | X                                 |
| Hidden Hills                                      |                                     |                                   |
| Malibu  | X                                   | X                                 |
| Westlake Village                                  |                                     |                                   |
| <b>Las Virgenes-Malibu Total</b>                  | <b>3</b>                            | <b>3</b>                          |
| <b>Completion Rate</b>                            | <b>60.0%</b>                        | <b>60.0%</b>                      |

# Local Implementation Survey Completion (May 6, 2014)

| <b>Los Angeles County</b>                        |                                     |                                   |
|--|-------------------------------------|-----------------------------------|
| <b>San Gabriel Valley Council of Governments</b> |                                     |                                   |
| <b>Jurisdiction</b>                              | <b>Part I: Local Implementation</b> | <b>Part II: Open Space Survey</b> |
| Alhambra   | X                                   | X                                 |
| Arcadia  | X                                   | X                                 |
| Azusa  |                                     |                                   |
| Baldwin Park                                     |                                     |                                   |
| Bradbury   |                                     |                                   |
| Claremont  | X                                   | X                                 |
| Covina   |                                     |                                   |
| Diamond Bar                                      | X                                   | X                                 |
| Duarte   | X                                   | X                                 |
| El Monte   |                                     |                                   |
| Glendora   | X                                   | X                                 |
| Industry   | X                                   | X                                 |
| Irwindale  |                                     |                                   |
| La Puente  |                                     |                                   |
| La Verne   | X                                   | X                                 |
| Monrovia   |                                     |                                   |
| Montebello                                       |                                     |                                   |
| Monterey Park                                    |                                     |                                   |
| Pasadena   | X                                   | X                                 |
| Pomona   |                                     |                                   |
| Rosemead   | X                                   | X                                 |
| San Dimas  |                                     |                                   |
| San Gabriel                                      | X                                   | X                                 |
| San Marino                                       |                                     |                                   |
| Sierra Madre                                     |                                     |                                   |
| South El Monte                                   |                                     |                                   |
| South Pasadena                                   | X                                   | X                                 |
| Temple City                                      |                                     |                                   |
| Walnut   |                                     |                                   |
| West Covina                                      | X                                   | X                                 |
| <b>SGVCOG Total</b>                              | <b>13</b>                           | <b>13</b>                         |
| <b>Completion Rate</b>                           | <b>43.3%</b>                        | <b>43.3%</b>                      |

# Local Implementation Survey Completion (May 6, 2014)

| Orange County (OCCOG)  |                              |                            |
|------------------------|------------------------------|----------------------------|
| Jurisdiction           | Part I: Local Implementation | Part II: Open Space Survey |
| Aliso Viejo            | X                            | X                          |
| Anaheim                | X                            | X                          |
| Brea                   | X                            | X                          |
| Buena Park             |                              |                            |
| Costa Mesa             | X                            | X                          |
| Cypress                |                              |                            |
| Dana Point             | X                            | X                          |
| Fountain Valley        |                              |                            |
| Fullerton              | X                            | X                          |
| Garden Grove           | X                            | X                          |
| Huntington Beach       | X                            | X                          |
| Irvine                 | X                            | X                          |
| La Habra               | X                            | X                          |
| La Palma               | X                            | X                          |
| Laguna Beach           | X                            | X                          |
| Laguna Hills           | X                            | X                          |
| Laguna Niguel          | X                            | X                          |
| Laguna Woods           |                              |                            |
| Lake Forest            | X                            | X                          |
| Los Alamitos           | X                            |                            |
| Mission Viejo          | X                            | X                          |
| Newport Beach          |                              |                            |
| Orange                 | X                            | X                          |
| Placentia              |                              |                            |
| Rancho Santa Margarita | X                            | X                          |
| San Clemente           | X                            | X                          |
| San Juan Capistrano    | X                            | X                          |
| Santa Ana              | X                            | X                          |
| Seal Beach             | X                            | X                          |
| Stanton                | X                            | X                          |
| Tustin                 | X                            | X                          |
| Villa Park             |                              |                            |
| Westminster            |                              |                            |
| Yorba Linda            | X                            | X                          |
| Orange County          |                              |                            |
| <b>OCCOG Total</b>     | <b>26</b>                    | <b>25</b>                  |
| <b>Completion Rate</b> | <b>86.7%</b>                 | <b>83.3%</b>               |

# Local Implementation Survey Completion (May 6, 2014)

| <b>Riverside County</b>                            |                                     |                                   |
|--|-------------------------------------|-----------------------------------|
| <b>Coachella Valley Association of Governments</b> |                                     |                                   |
| <b>Jurisdiction</b>                                | <b>Part I: Local Implementation</b> | <b>Part II: Open Space Survey</b> |
| Blythe   |                                     |                                   |
| Cathedral City                                     | X                                   | X                                 |
| Coachella  | X                                   | X                                 |
| Desert Hot Springs                                 | X                                   | X                                 |
| Indian Wells                                       | X                                   | X                                 |
| Indio  |                                     |                                   |
| La Quinta  |                                     |                                   |
| Palm Desert  | X                                   | X                                 |
| Palm Springs                                       | X                                   | X                                 |
| Rancho Mirage                                      |                                     |                                   |
| <b>CVAG Total</b>                                  | <b>6</b>                            | <b>6</b>                          |
| <b>Completion Rate</b>                             | <b>60.0%</b>                        | <b>60.0%</b>                      |

| <b>Riverside County</b>                         |                                     |                                   |
|---|-------------------------------------|-----------------------------------|
| <b>Western Riverside Council of Governments</b> |                                     |                                   |
| <b>Jurisdiction</b>                             | <b>Part I: Local Implementation</b> | <b>Part II: Open Space Survey</b> |
| Banning   |                                     |                                   |
| Beaumont  | X                                   | X                                 |
| Calimesa  |                                     |                                   |
| Canyon Lake                                     | X                                   | X                                 |
| Corona  | X                                   | X                                 |
| Eastvale  | X                                   |                                   |
| Hemet   | X                                   |                                   |
| Jurupa Valley                                   |                                     |                                   |
| Lake Elsinore                                   | X                                   | X                                 |
| Menifee   | X                                   | X                                 |
| Moreno Valley                                   | X                                   | X                                 |
| Murrieta  |                                     |                                   |
| Norco   |                                     |                                   |
| Perris  | X                                   | X                                 |
| Riverside                                       | X                                   | X                                 |
| San Jacinto                                     | X                                   |                                   |
| Temecula  | X                                   | X                                 |
| Wildomar  | X                                   |                                   |
| Riverside County                                |                                     |                                   |
| <b>WRCOG Total</b>                              | <b>13</b>                           | <b>9</b>                          |
| <b>Completion Rate</b>                          | <b>68.4%</b>                        | <b>47.4%</b>                      |

# Local Implementation Survey Completion (May 6, 2014)

| <b>San Bernardino County (SANBAG)</b> |                                     |                                   |
|---------------------------------------|-------------------------------------|-----------------------------------|
| <b>Jurisdiction</b>                   | <b>Part I: Local Implementation</b> | <b>Part II: Open Space Survey</b> |
| Adelanto                              | X                                   | X                                 |
| Apple Valley                          | X                                   | X                                 |
| Barstow                               | X                                   | X                                 |
| Big Bear Lake                         | X                                   | X                                 |
| Chino                                 | X                                   | X                                 |
| Chino Hills                           |                                     |                                   |
| Colton                                | X                                   | X                                 |
| Fontana                               |                                     |                                   |
| Grand Terrace                         | X                                   | X                                 |
| Hesperia                              |                                     |                                   |
| Highland                              |                                     |                                   |
| Loma Linda                            |                                     |                                   |
| Montclair                             | X                                   | X                                 |
| Needles                               | X                                   | X                                 |
| Ontario                               | X                                   | X                                 |
| Rancho Cucamonga                      |                                     |                                   |
| Redlands                              |                                     |                                   |
| Rialto                                |                                     |                                   |
| San Bernardino                        |                                     |                                   |
| Twentynine Palms                      |                                     |                                   |
| Upland                                |                                     |                                   |
| Victorville                           |                                     |                                   |
| Yucaipa                               |                                     |                                   |
| Yucca Valley                          |                                     |                                   |
| San Bernardino County                 | X                                   | X                                 |
| <b>SANBAG Total</b>                   | <b>11</b>                           | <b>11</b>                         |
| <b>Completion Rate</b>                | <b>44.0%</b>                        | <b>44.0%</b>                      |

## Local Implementation Survey Completion (May 6, 2014)

| <b>Ventura County</b>           |                                     |                                   |
|---------------------------------|-------------------------------------|-----------------------------------|
| <b>Jurisdiction</b>             | <b>Part I: Local Implementation</b> | <b>Part II: Open Space Survey</b> |
| Camarillo                       | X                                   | X                                 |
| Fillmore                        | X                                   |                                   |
| Moorpark                        | X                                   | X                                 |
| Ojai                            | X                                   | X                                 |
| Oxnard                          | X                                   | X                                 |
| Port Hueneme                    |                                     |                                   |
| San Buenaventura                | X                                   | X                                 |
| Santa Paula                     | X                                   | X                                 |
| Simi Valley                     | X                                   | X                                 |
| Thousand Oaks                   | X                                   | X                                 |
| Ventura County                  | X                                   | X                                 |
| <b>Ventura County Total</b>     | <b>10</b>                           | <b>9</b>                          |
| <b>Completion Rate</b>          | <b>90.9%</b>                        | <b>81.8%</b>                      |
| <hr/>                           |                                     |                                   |
| <b>SCAG Regional Total</b>      | <b>115</b>                          | <b>109</b>                        |
| <b>Regional Completion Rate</b> | <b>58.4%</b>                        | <b>55.3%</b>                      |



**SOUTHERN CALIFORNIA  
ASSOCIATION of GOVERNMENTS**

Item 6 Attachment: MAP-21 Safety NPRM Comments

# National Performance Management Measures; Highway Safety Improvement Program; Proposed Rule

(Released for comment on March 11, 2014, comment period ends on June 9, 2014)

## What is in this NPRM?

This NPRM proposes performance measures for state departments of transportation (DOTs) to use to carry out the Highway Safety Improvement Program (HSIP) and to assess the number of serious injuries and fatalities, and serious injuries and fatalities per vehicle mile traveled. As such, the focus of this NPRM is on state DOTs, who are required to establish and report on performance targets to FHWA in each HSIP annual report, be subject to an annual FHWA review, and face the consequences of an unfavorable review.

The role of metropolitan planning organizations (MPOs) is limited to supporting the state DOT in the achievement of the state targets. While the NPRM requires MPOs to establish performance targets for the region or support State DOT's targets within 180 days of the state issuance of the HSIP, the NPRM does not require that MPOs submit its targets to FHWA for review. Instead, MPOs are directed to work closely with the state DOT, to whom the MPO would report its regional targets on an annual basis.

## When will all of this go into effect?

The rules will not be implemented quickly enough to directly affect the 2016 RTP/SCS planning process, although the work of setting state targets would occur while the 2016 RTP/SCS is being developed.

- Spring 2015: Rules take effect.
- August 31, 2016: State DOT to establish targets for 2017 and report to FHWA in HSIP.
- **March 2017: MPO to establish targets for 2017 or affirm support for the state DOT targets.**
- Early 2020: States notified of significant progress determination for 2017 targets.
- October 1, 2020: States that did not achieve significant progress must use obligation authority in FY2021 equal to its FY2016 HSIP apportionment only on HSIP projects.

## What does this mean for SCAG?

As indicated earlier, the burden of compliance with these new rules primarily lies with state DOTs. This makes sense, given that the Strategic Highway Safety Plan (SHSP) and HSIP, which are both prepared by the state DOTs, are the primary vehicles for implementing these new rules. Therefore, the impact to SCAG of the proposed new rules is tied to our state DOT, Caltrans, led efforts. To that end, staff continues to work closely with Caltrans to ensure that the compliance plan to be developed by Caltrans, including target setting, data collection, monitoring, analyzing, and reporting will complement and support our planning efforts.

## Proposed SCAG comments

Staff proposes submitting the following comments on the proposed NPRM:

- Overall, SCAG supports the proposed process to measure progress toward safety improvement and the four performance measures (number of fatalities and serious injuries, fatalities per 100 million VMT and serious injuries per 100 Million VMT) proposed for target setting and monitoring safety.

- Given that the HSIP is updated every year and state DOT's will be required to report progress through the HSIP, the annual reporting requirement in this context appears reasonable. On the other hand, the proposed process calls for MPOs to report progress within their regions to their respective State DOTs, and not directly to FHWA. Most MPOs do not currently administer safety improvement plans on an annual basis. Therefore, SCAG recommends that MPO reporting of safety improvement progress to state DOTs be aligned with their respective metropolitan transportation planning cycles.
- Implementation of these new rules requires the collection and use of multiple sources of data and tools, including the Fatality Analysis Reporting System (FARS), Statewide Integrated Traffic Records System (SWITRS), and Highway Performance Monitoring System (HPMS). There are potential data gaps, particularly on local roads, and filling those gaps would require data collection at substantial additional costs or the procurement of appropriate tools and techniques be developed to address the data gaps. The rules should clarify how the consistency in the use of data, tools, and analysis techniques would be maintained across the board so that there can be apples to apples comparison of the progress reports among the regions within a state or even between the states.
- SCAG appreciates the acknowledgement and estimate of additional costs and benefits associated with the implementation of the proposed new rules to the states as well as MPOs on an aggregated basis provided in the NPRM. However, it is not clear how these costs would be funded and distributed to the states and by the states. Furthermore, it is not clear whether the estimates take into account the vast difference in the cost of implementation, depending on the geographic location of the states and the MPOs, size and complexity of the transportation systems, etc.
- SCAG recommends that some flexibility be built into the implementation schedule of some of the elements of the proposed new rules. For example, the NPRM recommends that hospital records injury outcome reporting system that links injury outcomes from medical records to crash reports be used by 2020. While this effort is already underway in California, SCAG believes, given the need for substantial time and resources, that it may be challenging to achieve this in California by 2020.



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Item 7 Attachment: CalEnviro Screen Tool Update

## **“CalEnviroScreen Tool Update Workshop at SCAG on May 12**

SCAG cordially invites representatives from local jurisdictions and interested parties to attend a Workshop where Cal/EPA will present the updated draft CalEnviroScreen Tool, receive input, and respond to questions. The Workshop will be held on **May, 12, 2014, 1:30 – 3:30, at SCAG’s Los Angeles office.** Videoconference will be available at all SCAG Regional offices (see [www.scag.ca.gov/about/Pages/SCAGOffices.aspx](http://www.scag.ca.gov/about/Pages/SCAGOffices.aspx).)

California Communities Environmental Health Screening (CalEnviroScreen) is a screening tool to identify California communities that are disproportionately burdened by multiple sources of pollution and, pursuant to SB 535, is expected to be used in allocating the state’s Cap-and Trade auction proceeds in order to assist the most impacted communities. SCAG held a Cal/EPA workshop on December 12, 2012 in cooperation with other interested stakeholders intended to offer businesses, local governments and other stakeholders the opportunity to receive relevant information and provide input to Cal/EPA on the draft CalEnviroScreen tool. As a follow up, a second Cal/EPA workshop was held at SCAG on February 5, 2013 to provide an overview of the second draft of CalEnviroScreen. CalEnviroScreen Tool Version 1.0 was released in April 2013 with a minor update (Version 1.1) in September 2013. On April 21, 2014, Draft CalEnviroScreen Tool Version 2.0 was publicly released by Cal/EPA. Draft CalEnviroScreen Tool 2.0 uses the same overall methodology as Version 1.1 except for adding two indicators for drinking water quality and unemployment rate, and uses census tracts rather than ZIP codes as the geographic unit. The use of census tracts may allow for a more precise screening of pollution burdens and vulnerabilities in communities. In addition, Version 2.0 includes scoring refinement such as emphasizing hazards that are closer to where people live. Finally, many data sets have been updated with more recent data.

Further information about the draft CalEnviroScreen Tool 2.0 including the Draft 2.0 Report and additional Workshops around the state can be viewed at <http://oehha.ca.gov/ej/ces2.html>. Comments on CalEnviroScreen 2.0 (draft) are due May 23, 2014 and may be e-mailed to [CalEnviroScreen@oehha.ca.gov](mailto:CalEnviroScreen@oehha.ca.gov)”