



# SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

## TECHNICAL WORKING GROUP (TWG)

Thursday, March 19, 2015: 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: 1-800-832-0736 – Participant Code: 7334636**

Please use for web connection: <http://scag.adobeconnect.com/twg91814/>

### AGENDA

#### Introductions

#### Receive and File

1. Meeting Summary 2-19-15 (Attachment)
2. Agenda Outlook for the Development of the 2016 RTP/SCS (Attachment)
3. Potential Policy Committee Meetings Outlook (Attachment)
4. Affordable Housing Sustainable Communities (AHSC) Grant Criteria (Attachment Under Separate Cover)
5. 2016 RTP/SCS Preliminary Scenario Planning Matrix Overview (Jason Greenspan) (Attachment)

#### Information Items

6. CALTRANS California Transportation Plan 2040 (Dan Kopulsky, Caltrans District 7) (Attachment)
7. 2016 RTP/SCS Performance Measures (Naresh Amatya/Ping Chang) (Attachment)
8. Asset Management and Condition Overview (Naresh Amatya/Ping Chang) (Attachment)
9. Active Transportation Program (ATP) Regional Guidelines (Stephen Patchan) (No Attachment)
10. 2016 RTP/SCS Active Transportation Progress Update (Alan Thompson) (Attachment)



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Item 1 Attachment:  
Meeting Summary 2-19-15



## TECHNICAL WORKING GROUP (TWG)

February 19, 2015

### **Meeting Summary**

The following is a summary of discussions at the Technical Working Group meeting of February 19, 2015.

### **Receive and File**

- 1. Meeting Summary 1-15-15**
- 2. 2016 RTP/SCS Agenda Outlook**

### **Information Items**

#### **3. Overview of the RTP/SCS Transit Element**

Matt Gleason, SCAG staff, presented highlights of the Transit Element of the RTP/SCS and an outline of the plan performance. Highlights included a review of the SCAG region transit system, a review of the adopted 2012 RTP/SCS Transit Element, the 2012 RTP/SCS implementation progress, and transit emerging issues for 2016 RTP/SCS.

#### **4. Overview of RTP/SCS Passenger Rail Element**

Steve Fox, SCAG staff, presented highlights of the Passenger Rail Element, including a review of the adopted 2012 RTP/SCS Passenger Rail Element, 2012 RTP/SCS implementation progress, and the passenger rail vision for 2016 RTP/SCS.

#### **5. Scenario Matrix**

Jason Greenspan, SCAG staff, presented an introduction and overview of the Preliminary 2016 RTP/SCS Scenario Planning Matrix. The Scenario Matrix will be presented to the Policy Committees on March 5, 2015.

#### **6. Preliminary Technical Information for Environmental Justice Analysis in the 2016 RTP/SCS**

Kimberly Clark, SCAG staff, provided an overview of the Federal and State requirements for SCAG's Environmental Justice Program, along with a technical analysis introduction, both localized and regional. Ms. Clark stated that staff will conduct more a detailed analysis of various topics, including active transportation safety, gentrification and affordable housing, accessibility to parks and shopping facilities, and public health. Ms. Clark further stated that staff has sought participation from a number of stakeholder groups, including social justice advocacy groups, active transportation advocates, public health groups, environmental organizations, housing advocates, and partner agencies.

**7. 2016 RTP/SCS Program Environmental Impact Report**

Lijin Sun, SCAG staff, presented an overview of the Program Environmental Impact Report (PEIR). Ms. Sun stated that staff is currently preparing the Notice of Preparation (NOP) in accordance with CEQA guidelines, and the NOP will be released for public review in March. The report will be presented to the policy committees on March 5, 2015.

**8. Public Health Framework for 2016-2040 RTP/SCS**

Rye Baerg, SCAG staff, presented the Public Health Framework for 2016-2040 RTP/SCS. Mr. Baerg stated that the Public Health Subcommittee adopted a number of recommendations, one of which is to include more public health data to better inform the regional policy and development of the 2016 RTP/SCS. Mr. Baerg further stated that staff has been working on the Subcommittee's recommendations and has integrated a number of active transportation components. Mr. Baerg noted that staff has formed a Public Health Working Group to better engage stakeholders.

Wally Siembab, representing South Bay Cities Council of Governments, reiterated his objections that a mobility agency is directing its resources to public health issues outside the more valid parameters of safety and air-quality.

**9. 2015 Active Transportation Program (ATP)**

Sarah Jepson, SCAG staff, reported that the 2015 cycle of the ATP is underway and the draft statewide guidelines have been released. The guidelines will be adopted on March 26, 2015 and on that same day the County Transportation Commissions will release the Call for Projects and applications will be due on May 31, 2015. Ms. Jepson stated that the budget will be approximately \$300M over three (3) years starting FY 2016-17.

**10. 2015 Local Profiles Status Update**

Ping Chang, SCAG staff, stated that staff is completing the draft 2015 local profiles to be provided to local jurisdictions and subregions for review by the end of February 2015. The final local profiles will be distributed at the General Assembly in May 2015.

**11. Best Practices Research Project Status Update**

Ping Chang, SCAG staff, stated that staff is building on the local implementation survey, and more details will be provided as the project moves forward.



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Item 2 Attachment:  
Agenda Outlook for the Development  
of the 2016 RTP/SCS

## **Agenda Outlook for the Development of the 2016 RTP/SCS**

(Note: Revised to put the outlook in chronological order as suggested at the Sept. 2014 TWG)  
(Updated 2/11/15)

- Strikethrough signifies item was not covered

### June 2013

- Potential approach/process, coordination between various technical working groups and policy committees, and updated overall schedule for the development of the 2016 RTP/SCS

### January 2014

- System Preservation and system operation focus in the 2012 RTP/SCS and our current efforts on Pavement and Bridge condition database/management

### February 2014

- System Performance Measures and MAP-21 requirements under Performance Based Planning and implications of MAP-21
- Local Input Process for Growth Forecast/Land Use (Scenario Planning) for 2016 RTP/SCS, including growth forecast and technology

### March 2014

- Performance Based Planning and implications of MAP-21: Safety Performance Measures
- Overview of baseline and innovative funding sources adopted in the 2012 RTP/SCS including underlying technical assumptions/methodology/analysis under Transportation Finance
- Overview of cost assumptions/cost modal for the 2012 RTP/SCS under Transportation Finance
- Model and Tools and Datasets to be used in the 2016 RTP/SCS
- Overview of Aviation program in the 2012 RTP/SCS with a focus on ground transportation improvements

### May 2014

- OCTA Draft Long Range Plan Update
- System Preservation Update
- Draft Paper on TOD benefits, challenges and best practices
- Active Transportation Program Update
- Local Input Survey Update
- MAP-21 Safety NPRM Update
- CalEnviro Screen Tool

### June 2014

- SCAG Active Transportation Results from the 2011 Household Travel Survey
- 2016 RTP/SCS Modeling variables matrix
- Statewide and MPO Planning Rules NPRM Update
- California Active Transportation Program Update

### July 2014

- 2016 RTP/SCS Modeling Variables Matrix

### September 2014

- 2016 RTP/SCS Development Agenda Outlook
- Status of Local Input for the 2016 RTP/SCS; Growth Forecast Update
- Modeling Update
- CAL LOTS Update

### October 2014

- Overview of SCS in the 2012 RTP/SCS
- Current status of SCS implementation (Local Implementation survey)
- Environmental Justice (First EJ Workshop will be held on 10/23)
- Map Collaborator Database (A web based tool to collect data and develop open space plan.)

### November 2014

- Discussion on existing and proposed Performance Measures
- Role of Technology in the 2016 RTP/SCS
- Development of alternative scenarios (Scenario Planning) for 2016 RTP/SCS, including growth forecast, technology
- Emerging issues/themes that could influence 2016 SCS
- ~~Zero/Near Zero/Clean Technology Applications, including Slow Speed/ Electric Vehicle programs (Nov. 2014)~~
- ~~Emerging New Technology Applications~~

### December 2014

- ~~Technical assumptions/methodology/data/analysis in the 2012 RTP/SCS~~
- ~~Potential changes in the 2016 RTP/SCS to technical assumptions/methodology/data/analysis~~
- ~~Updated forecast/land use distribution for 2016 RTP/SCS~~
- ~~Updated SCS for 2016 RTP/SCS~~
- ~~Overview of Active Transportation Strategy in the 2012 RTP/SCS~~
- ~~Progress update on Active Transportation Strategy and emerging issues and their implications to the 2016 RTP/SCS~~
- Zero/Near Zero/Clean Technology Applications, including Slow Speed/ Electric Vehicle programs (Nov. 2014)
- Update on 2016 RTP/SCS Schedule
- Update on research and analysis for RTP/SCS strategies

### January 2015

- ~~Asset Management and Infrastructure Performance Measures~~
- ~~Overview of Goods Movement (GM) Strategy in the 2012 RTP/SCS with a focus on technical assumptions (including technology assumptions)/data/analysis~~
- ~~Progress update on the GM Strategy with focus on emerging issues and implications on the 2016 RTP/SCS~~
- ~~Technical assumptions/methodology/data/analysis in the 2012 RTP/SCS~~
- ~~Potential changes in the 2016 RTP/SCS to technical assumptions/methodology/data/analysis~~

- ~~Updated forecast/land use distribution for 2016 RTP/SCS~~
- ~~Updated SCS for 2016 RTP/SCS~~
- ~~Overview of Active Transportation Strategy in the 2012 RTP/SCS~~
- ~~Progress update on Active Transportation Strategy and emerging issues and their implications to the 2016 RTP/SCS~~
- Draft 2016-2040 RTP/SCS Datasets for two Scenarios 1) Local Input 2) Updated 2012-35 RTP/SCS and analysis relative to HQTAs, TPAs and Local Specific Plans
- Preview of the Progress Report/General Framework presentation for the 2016 RTP/SCS to be given at the February 5 Joint Regional Council/Policy Committee Meeting

### February 2015

- Program EIR
- Overview of RTP/SCS Transit Element
- Overview of RTP/SCS Passenger Rail Element
- **2015 Active Transportation Program**
- **Public Health Framework for 2016-2040 RTP/SCS**
- **Environmental Justice Framework**
- **Draft Scenario Planning Matrix**
- **2015 Local Profiles Status Update**
- **Best Practices Research Project Status Update**

### March 2015

- **Affordable Housing Sustainable Communities Grant Criteria**
- **Draft Scenario Matrix**
- **2016 RTP/SCS Performance Measures**
- **Asset Management and Condition Overview**
- **Active Transportation Program (ATP) Regional Guidelines**
- **2016 RTP/SCS Active Transportation Progress Update**
- **California Transportation Plan 2040**
- ~~Public Participation Plan~~

### April 2015

- **Public Health Analysis Framework**
- **Scenario Planning Model – Performance Results**
- ~~Overview of Goods Movement (GM) Strategy in the 2012 RTP/SCS with a focus on technical assumptions (including technology assumptions)/data/analysis~~
- ~~Progress update on the GM Strategy with focus on emerging issues and implications on the 2016 RTP/SCS~~

### May 2015

- Progress update on the current status of the Aviation component of the 2012 RTP/SCS and emerging issues that may influence the 2016 RTP/SCS
- Overview of TDM/TSM in the 2012 RTP/SCS, including underlying assumptions

- Progress status of TDM/TSM and emerging issues
- **Overview of Highway/HOV/HOT/Toll Roads/Express Lanes proposed in the 2012 RTP/SCS with a focus on technical assumptions/analysis**
- **Progress update and emerging issues related to highways/HOV/HOT/Toll Roads/Express Lanes**

#### **June 2015**

- Progress update on 2012 RTP/SCS revenue/cost
- Potential changes/focus areas and emerging issues in the 2016 RTP/SCS

#### **July 2015**

- Transportation Conformity

#### **August 2015**

- Finance Plan for 2016 RTP/SCS
- Updated GM Strategy for the 2016 RTP/SCS
- Updated Transit Strategy for the 2016 RTP/SCS
- Updated Active Transportation Strategy for the 2016 RTP/SCS
- Highways Improvement Element in the 2016 RTP/SCS
- Updated Aviation Element of the 2016 RTP/SCS
- Updated TDM/TSM Element for the 2016 RTP/SCS

Note: The Agenda Outlook is intended as a reference for TWG and is subject to change as needed and appropriate as things progress.

Legend:

Light Grey Font: Items already presented

Regular Grey Font: Future Agenda Items

Bold Face Fonts: New or revised Agenda Items



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Item 3 Attachment:  
Potential Policy Committee Meetings Outlook

**2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)  
Potential Policy Committee Meetings Outlook**

2015 Meeting Dates	Topic	Committee <sup>1</sup>			
		Joint	TC	CEHD	EEC
March 5	Draft Scenario Planning Matrix		X	X	X
	Environmental Justice Framework		X	X	X
	Public Health Planning & Analysis Framework		X	X	X
	Release of Notice of Preparation of Program Environmental Impact Report (PEIR)				X
April 2	Focus on System Operation and Preservation	X			
May 7	Draft Scenario Planning and SCS Workshops Rollout	General Assembly			
June 4	Performance Measures and Goals	X			
	Active Transportation		X		
	Rail and Transit		X		
	Regional Aviation		X		
	Regional Goods Movement		X		
	Transportation Finance		X		
	Growth Forecast/Land Use & Transit-Oriented Development Strategies			X	
	2016 South Coast Air Quality Management Plan				X
	Administrative Draft PEIR				X
	Public Health				X
June - Date TBD	Special Meeting - topics TBD on as-needed basis	X			
July 2	Base Year and No-Build (Baseline) System Performance		X		
	Emerging Technology Consideration in 2016 RTP/SCS		X		
	Active Transportation			X	X
	Public Health			X	
	Environmental Justice, Policy Choices & Mitigations			X	X
	PEIR Approaches to Mitigation Measures				X
July - Date TBD	Special Meeting - topics TBD on as-needed basis	X			
August - Date TBD <sup>2</sup>	Summary of Findings from Workshops & How Incorporated into Draft Plan	X			
	PEIR Approaches to Alternatives	X			
	Draft Transportation Finance Plan	X			
September 3	Review and Consider Staff Recommendation on All Elements of Draft 2016 RTP/SCS	X			
	PEIR Findings, Draft Technical Studies, and Draft PEIR	X			
	Draft Transportation Conformity Determination	X			
	Transmittal of Draft 2016 South Coast Air Quality Management Plan Appendix IV-C	X			
October 8	Consideration of the Release of Draft PEIR and Draft 2016 RTP/SCS	X			

<sup>1</sup> Committee abbreviations include (in order of appearance): Joint (Joint Policy Committee); TC (Transportation Committee); CEHD (Community, Economic & Human Development Committee); and EEC (Energy & Environment Committee).

<sup>2</sup> Meeting may not be necessary depending on progress. If it were to occur, it could allow the September 3 meeting to be more targeted in its focus.

**Additional Topic Areas Not Directly Related to the 2016-2040 RTP/SCS that Must be Addressed by the  
Regional Council/Policy Committees During Calendar Year 2015**

2015 Meeting Dates	Topic	Committee <sup>1</sup>				
		RC	Joint	TC	CEHD	EEC
March 5	Strategic Growth Council (SGC) Affordable Housing and Sustainable Communities (AHSC) Concept Application Review	X		X	X	X
April 2	2015 Active Transportation Program Regional Guidelines	X		X	X	X
	SANBAG Transportation Control Measure (TCM) Substitution	X				X
	SGC AHSC Full Application Review Criteria	X		X	X	X
	Election of Chairs and Vice Chairs			X	X	X
	Regional Housing Needs Assessment (RHNA) and Housing Element Subcommittee Final Report				X	
May 7	RHNA and Housing Element Subcommittee Final Report	X				
June 4	Metro and RCTC TCM Substitutions					X
July 2	Metro and RCTC TCM Substitutions	X				

<sup>1</sup> Committee abbreviations include (in order of appearance): RC (Regional Council); Joint (Joint Policy Committee); TC (Transportation Committee); CEHD (Community, Economic & Human Development Committee); and EEC (Energy & Environment Committee).



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Item 4 Attachment:  
(Under Separate Cover)



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Item 5 Attachment:  
2016 Draft Scenario Matrix

# Preliminary Scenario Planning Matrix

To help facilitate policy discussions during the development of the draft Regional Transportation Plan/Sustainable Communities Strategy, SCAG will develop one baseline and three additional scenarios to evaluate how each performs in terms of sustainability, mobility and other performance metrics. In response to stakeholder input, scenarios A and B include expanded policy concepts to target health, social equity and reflect advancements in technology. The policy concepts refer to visioning for new land use, transportation, or housing decisions.

POLICY DRIVERS/PERFORMANCE METRICS: ACCESSIBILITY | CLIMATE RESILIENCE & ADAPTATION | ECONOMY | ENVIRONMENTAL JUSTICE | MOBILITY | PUBLIC HEALTH | SOCIAL EQUITY | SUSTAINABILITY

## POLICY INPUTS

### PLAN ELEMENTS - DATA INPUT CATEGORIES

Land Use Socio-Economic Data (SED) & Housing

Farm & Natural Lands Conservation

Highway/Roadway Network (includes freight)

Transit/High-Speed Rail

Active Transportation

Technology/Innovation

Finance Pricing/Incentives

Transportation Demand Management (TDM) & Transportation System Management (TSM)

### 1 NO BUILD/BASELINE No build network and trend SED

Trend Baseline

Protect resource areas (farmlands and natural lands) based on local input

Baseline

Baseline

Baseline

No new inputs

Baseline

Baseline

### 2 UPDATED 2012 PLAN/LOCAL INPUT Updated growth forecast

Local input

Protect resource areas (farmlands and natural lands) based on local input

2012 plan amendment 2 + New County Transportation Commission (CTC) input for 2016 plan

2012 plan amendment 2 + New CTC input for 2016 plan

2012 plan amendment 2 + New CTC input for 2016 plan

2012 plan amendment 2 + New CTC input for 2016 plan

2012 plan amendment 2 + New CTC input for 2016 plan

2012 plan amendment 2 + New CTC input for 2016 plan

### 3 POLICY A Update 2012 Policies for Active Transportation, public health, Environmental Justice (EJ), technology, millennials. Balance GHG, air, livability benefits with transportation capacity efficiency

Scenario 2 + 2012 land use (LU) policy updated. Emphasize multi-family. Target 70/30 Multi-Family (MF)/Single-Family (SF) housing type for new development. Focus on rail corridors and HQTAs.

Protect resource areas (farmlands and natural lands) based on local input

Scenario 2 + 25% increase in system preservation

Scenario 2 + Add additional high quality (HQ) transit corridors based on feedback from transit operators + Livable Blvd/Complete Corridors (transit + Active Transportation (AT) + LU Strategy)

Scenario 2 + Focus on AT for regional trips. Expanded Regional Corridors. First/last Mile implementation. Livable Blvd/Complete Corridors (transit + AT + LU Strategy).

Assume a modest rate/depth of penetration of new transportation innovations; Primarily private investment; Minimal supportive public policy

Scenario 2 + Any further modifications reflecting recent economic trends and legislative initiatives

2012 plan amendment 2 + Assume additional (modest) benefits - e.g. 1-2% reduction home-based work (HBW) trips; 5% speed, capacity increase

### 4 POLICY B "Push the envelope." Comprehensive "short trip" strategy. Maximize GHG, air quality, livability public health, EJ, affordability benefits. Assume profound technology effects

Scenario 3 + Target 70/30 MF/SF housing type for new development

Scenario 3 + Avoid critical sea-level rise, natural hazard areas + Exclude unprotected, high quality habitat areas

Scenario 3 + Strategic plan projects

Scenario 3 + Assume 20% decrease headway, reduced/eliminated fares (funded from increased VMT fee/finance innovation)

Scenario 3 + Comprehensive "short trip" strategy, including AT + shared-use, Neighborhood Electric Vehicle (NEV), etc.

Assume an aggressive rate/depth of penetration of new transportation innovations; Public & private investment; More supportive public policy

Unconstrained

2012 plan amendment 2 + Assume additional (aggressive) benefits - e.g. 2-3% reduction HBW trips; 7% speed, capacity increase

## PERFORMANCE METRICS



**SOUTHERN CALIFORNIA  
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Item 6 Attachment:  
CALTRANS California Transportation Plan 2040



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# California Transportation Plan 2040

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# California Transportation Plan

## What is the CTP2040?

*It is a vision for California's Transportation Future.*



The California Transportation Plan (CTP) is a statewide, long-range transportation policy plan designed to meet the State's future transportation needs.

It looks at the State's Transportation needs for the *next 25 years.*

Caltrans prepares the CTP in response to federal (Map 21) and State (SB 391) laws and requirements **every five years.**

## Why it is important

1. Better understand interregional travel patterns and promote system cohesiveness
2. Summary of trends, challenges and themes from around the State
3. Forum to elevate issues to policy and decision makers and better coordination in general
4. Data consistency and transparency on interregional and freight movement
5. We need your input on policies, strategies and performance measures

## Sustainable Transportation Future

- **Reduced per Capita VMT**
- **Reduced Green House Gas (GHG) Emissions**
- **Increased Accessibility**
- **Increased Livability**
- **Increased Economic Prosperity**
- **Improved Safety**
- **Improved Public Health**
- **Improved Multimodal Mobility**

# State and Federal Linkage

The **CTP 2040** will integrate a detailed planning approach that is consistent with the national goals specified by the federal surface transportation reauthorization bill **MAP-21**: safety, infrastructure condition, congestion reduction, system reliability, freight movement and economic vitality, environmental sustainability and reduced project delivery delays.

# Key Legislation

- **AB 32, the Global Warming Solution Act of 2006**, requires reduction of greenhouse gas emissions to 1990 levels by 2020.
- **SB 375** requires sustainable communities strategies (SCS)
- **SB 391** requires Caltrans to update the CTP every five years to show how to achieve statewide greenhouse gas emission (GHG) reduction consistent with Executive Order S-3-05
- **AB 857 – State Planning Priorities** requires equitable infill development
- **SB 743** changes the California Environmental Quality Act (CEQA) criteria to implement GHG emissions reduction
- **Executive Order S-3-05** calls for emissions to be reduced to 80% below 1990 levels by 2050

## Senate Bill 391 (Liu)



### Requires Caltrans to:

- Identify the statewide integrated multimodal transportation system
- Prepare Interim Report (CIB) to legislature, by December 31, 2012, based on SB 375 sustainable communities strategies and their influence statewide
- Develop State Transportation Plan (CTP) by December 31, 2015 that identifies the integrated, multimodal system needed to achieve maximum feasible greenhouse gas reductions



### Three Major Elements

1. Integrating statewide modal plans and programs
2. Building upon regional transportation plans and Sustainable Community Strategies
3. Developing robust modeling tools to analyze different scenarios and strategies

# California Transportation Plan

## Overview of the Plan

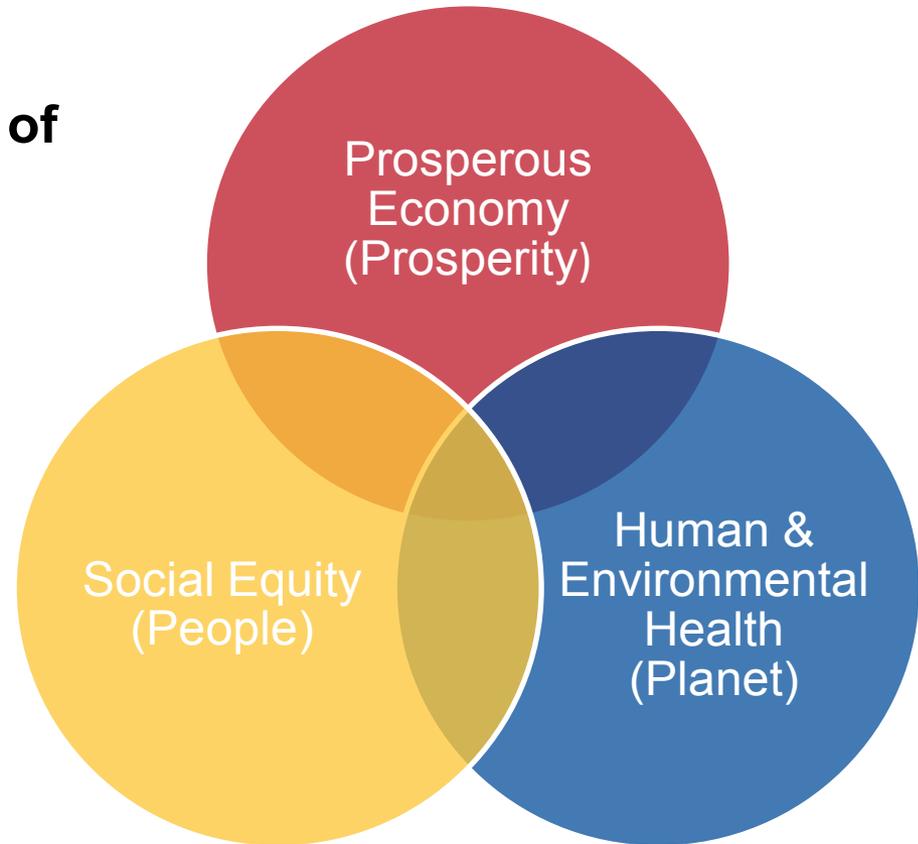
### The CTP 2040 Vision:

California's transportation system is **safe**, **sustainable**, and **globally competitive**. It provides **reliable** and **efficient** mobility and accessibility for people, goods, and services while meeting our greenhouse gas emission reduction goals and preserving community character.

# California Transportation Plan

## CTP 2040 – The Next 25 Years

Key to this vision is the 3 Es of sustainability:



# Modal Plans

## CTP INTEGRATES THE STATEWIDE MODAL PLANS



*Bicycle/Pedestrian Plan*  
2017



# Programs

## INTEGRATES STATEWIDE PROGRAMS



THINK GLOBALLY  
PLAN REGIONALLY  
ACT LOCALLY



CALIFORNIA HIGH-  
SPEED RAIL

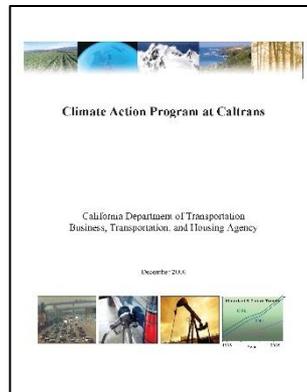


CALIFORNIA ESSENTIAL HABITAT  
CONNECTIVITY PROJECT



Regional Advance Mitigation  
Planning (RAMP) Website

CLIMATE ACTION  
PROGRAM



Smart Mobility  
FRAMEWORK



CLIMATE CHANGE  
SCOPING PLAN



## THE VISION SUSTAINABILITY

California's transportation system is safe, sustainable, and globally competitive. It provides reliable and efficient mobility and accessibility for people, goods, and services while meeting our greenhouse gas emission reduction goals and preserving community character. This integrated, connected, and resilient multimodal system supports a prosperous economy, human and environmental health, and social equity.

## THE GOALS

- 1** Improve Multimodal Mobility and Accessibility for All People
- 2** Preserve the Multimodal Transportation System
- 3** Support a Vibrant Economy
- 4** Improve Public Safety and Security
- 5** Foster Livable and Healthy Communities and Promote Social Equity
- 6** Practice Environmental Stewardship

## THE POLICIES

<b>POLICY 1</b> Manage and Operate an Efficient Integrated System	<b>POLICY 1</b> Apply Sustainable Preventative Maintenance and Rehabilitation Strategies	<b>POLICY 1</b> Support Transportation Choices to Enhance Economic Activity	<b>POLICY 1</b> Reduce Fatalities, Serious Injuries, and Collisions	<b>POLICY 1</b> Expand Engagement in Multimodal Transportation Planning and Decision Making	<b>POLICY 1</b> Integrate Environmental Considerations in All Stages of Planning and Implementation
<b>POLICY 2</b> Invest Strategically to Optimize System Performance	<b>POLICY 2</b> Evaluate Multimodal Life Cycle Costs in Project Decision Making	<b>POLICY 2</b> Enhance Freight Mobility, Reliability, and Global Competitiveness	<b>POLICY 2</b> Provide for System Security, Emergency Preparedness, Response, and Recovery	<b>POLICY 2</b> Integrate Multimodal Transportation and Land Use Development	<b>POLICY 2</b> Conserve and Enhance Natural, Agricultural, and Cultural Resources
<b>POLICY 3</b> Provide Viable and Equitable Multimodal Choices Including Active Transportation	<b>POLICY 3</b> Adapt the Transportation System to Reduce Impacts from Climate Change	<b>POLICY 3</b> Seek Sustainable and Flexible Funding to Maintain and Improve the System		<b>POLICY 3</b> Integrate Health and Social Equity in Transportation Planning and Decision Making	<b>POLICY 3</b> Reduce Greenhouse Gas Emissions and Other Air Pollutants
					<b>POLICY 4</b> Transform to a Clean and Energy Efficient Transportation System

# Draft Plan Chapters

Chapter 1	Purpose and Context
Chapter 2	The Transportation System
Chapter 3	Trends and Opportunities
Chapter 4	Native American Transportation
Chapter 5	Revenues and Expenditures
Chapter 6	Goals to Move Forward
Chapter 7	Analysis and Outcomes
Chapter 8	Recommendations

# Transportation Trends & Opportunities

- **Demographics**
- **Economic Prosperity**
- **Transportation Funding**
- **Climate Change and GHG Reductions**
- **Freight Mobility**
- **Fuel, Energy and Technology**
- **Sustainability in Tribal, Rural, and Small Town Communities**
- **Public Health**
- **Housing and Land Use**

# Goals

1. **Improve Multimodal Mobility and Accessibility for All People**
2. **Preserve the Multimodal Transportation System**
3. **Support a Vibrant Economy**
4. **Improve Public Safety and Security**
5. **Foster Livable and Healthy Communities and Promote Social Equity**
6. **Practice Environmental Stewardship**

# Performance Based Planning

Where  
we  
want  
to go

**Goal**

Key Desired Outcome

**Policy**

Measureable statement that supports a goal or an outcome to achieve under each goal

How  
we're  
going  
to get  
there

**Strategy**

Specific programs, etc. to achieve policy

**PM\***

Support strategies/policies by tracking results over time

## Example

- G: Improve public safety and security
- P: Reduce fatalities, serious injuries, and collisions
- S: Maintain and update the California SHSP
- PM\*: Fatalities/serious injuries per VMT

\*PMs will have targets to identify a specific level of performance desired over a certain timeframe

# Goals

1

**Improve  
Multimodal  
Mobility and  
Accessibility  
for All People**

## **POLICY 1**

Manage and  
Operate an  
Efficient  
Integrated  
System

## **POLICY 2**

Invest  
Strategically to  
Optimize  
System  
Performance

## **POLICY 3**

Provide Viable  
and Equitable  
Multimodal  
Choices Including  
Active  
Transportation

# Goals

2

**Preserve the  
Multimodal  
Transportation  
System**

## **POLICY 1**

Apply  
Sustainable  
Preventative  
Maintenance  
and  
Rehabilitation  
Strategies

## **POLICY 2**

Evaluate  
Multimodal  
Life Cycle Costs  
in Project  
Decision Making

## **POLICY 3**

Adapt the  
Transportation  
System to  
Reduce Impacts  
from Climate  
Change

# Goals

3

**Support a  
Vibrant  
Economy**

## **POLICY 1**

Support  
Transportation  
Choices to  
Enhance  
Economic  
Activity

## **POLICY 2**

Enhance  
Freight Mobility,  
Reliability, and  
Global  
Competitiveness

## **POLICY 3**

Seek  
Sustainable  
and Flexible  
Funding to Maintain  
and Improve the  
System

# Goals

4

Improve  
Public Safety  
and Security

## POLICY 1

Reduce  
Fatalities,  
Serious Injuries,  
and Collisions

## POLICY 2

Provide for  
System Security,  
Emergency  
Preparedness,  
Response, and  
Recovery

# Goals

5

Foster Livable  
and Healthy  
Communities  
and Promote  
Social Equity

## POLICY 1

Expand  
Engagement in  
Multimodal  
Transportation  
Planning and  
Decision Making

## POLICY 2

Integrate  
Multimodal  
Transportation  
and Land Use  
Development

## POLICY 3

Integrate Health  
and Social Equity  
in Transportation  
Planning and  
Decision Making

# Goals

6

## Practice Environmental Stewardship

### POLICY 1

Integrate Environmental Considerations in All Stages of Planning and Implementation

### POLICY 2

Conserve and Enhance Natural, Agricultural, and Cultural Resources

### POLICY 3

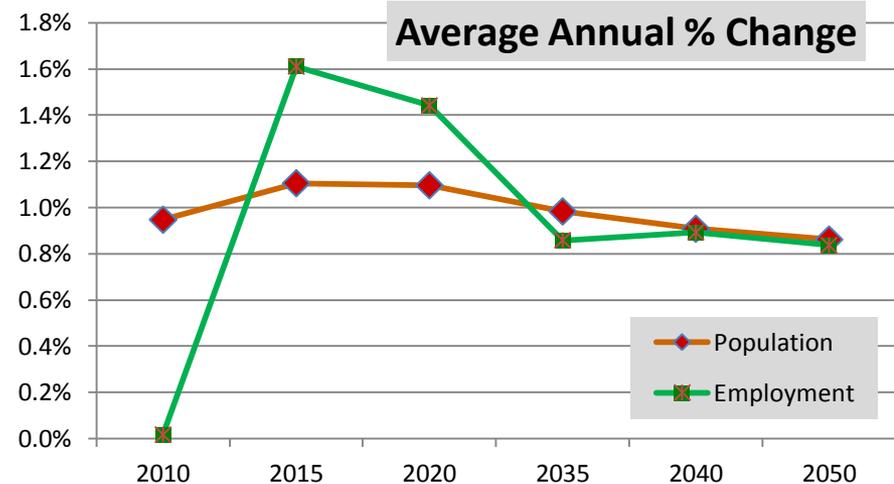
Reduce Greenhouse Gas Emissions and Other Air Pollutants

### POLICY 4

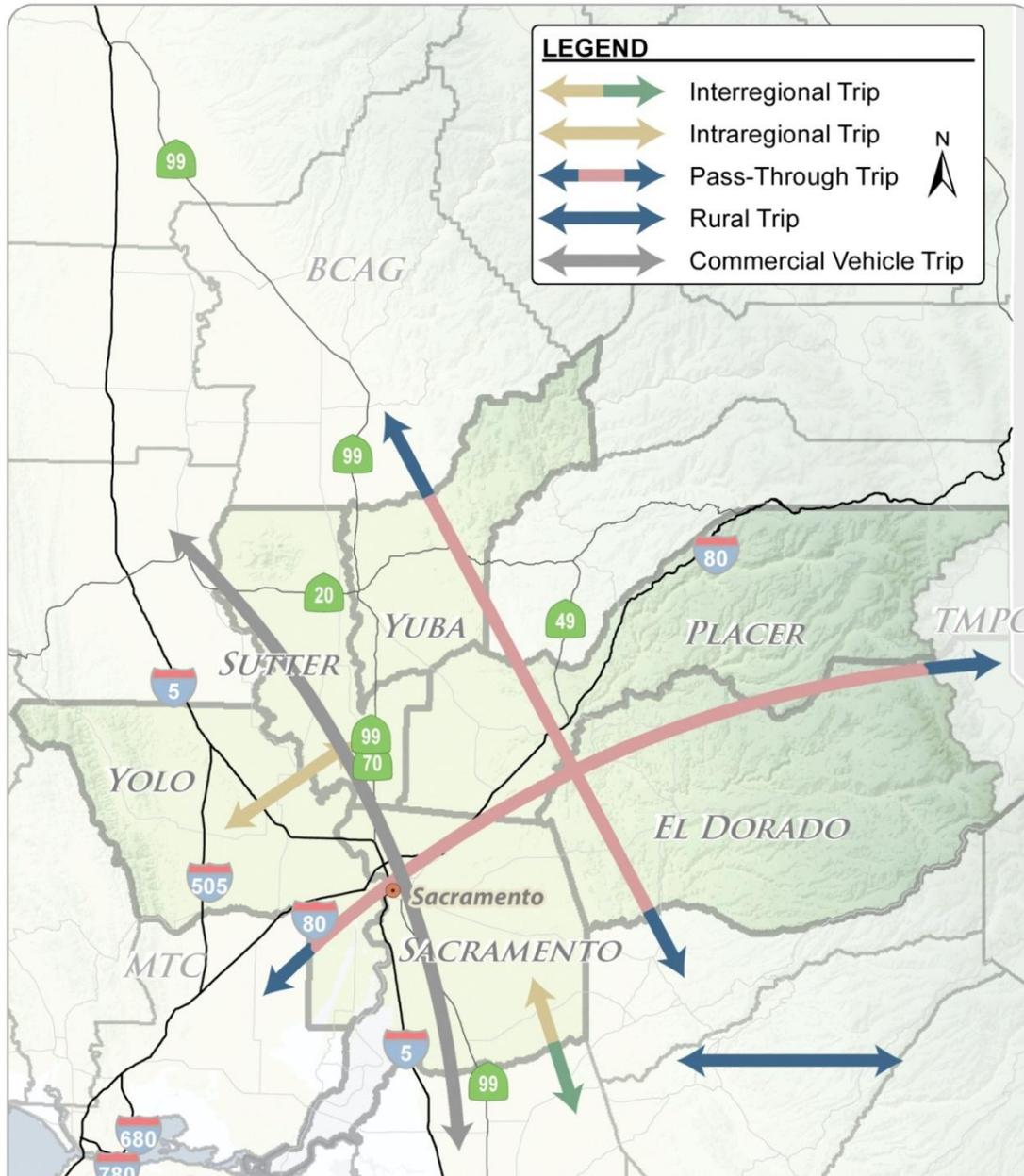
Transform to a Clean and Energy Efficient Transportation System

# DRAFT Alternatives & Analysis

A Suite of Analytic Tools For Analysis of Multi-Modal Transportation, Air Quality and Economic Impacts.



# Trip Types Captured by Statewide Model



# CTP 2040 Alternatives DRAFT

## Alternatives

## Statewide Strategy Packages

**Alt 1**  
Planned



RTP/SCS, Statewide Modal Plans and cleaner car/truck standards

**Alt 2**  
Planned + Future CTP Strategies



Alternative 1 + CTP 2040 Strategies: pricing, mode shift, operational efficiencies, transportation Alts.

**Alt 3**  
Meeting the Goals



Alternative 2 + Aggressive vehicle fleet mix from ARB Vision Model

## Results

CSTDM/Off Model

- \*Mode Split (Auto, Air, Bike, Ped, Rail, Transit)
- \*VMT
- \*VHD
- \*Trips (interregional)
- \*Commodity flow by Tonnage and Mode (Air, Marine, Truck, Rail)

TREDIS

- \*Jobs
- \*GSP
- \*Income

Vision

GHG Emissions using the base fleet mix/tech.

Vision

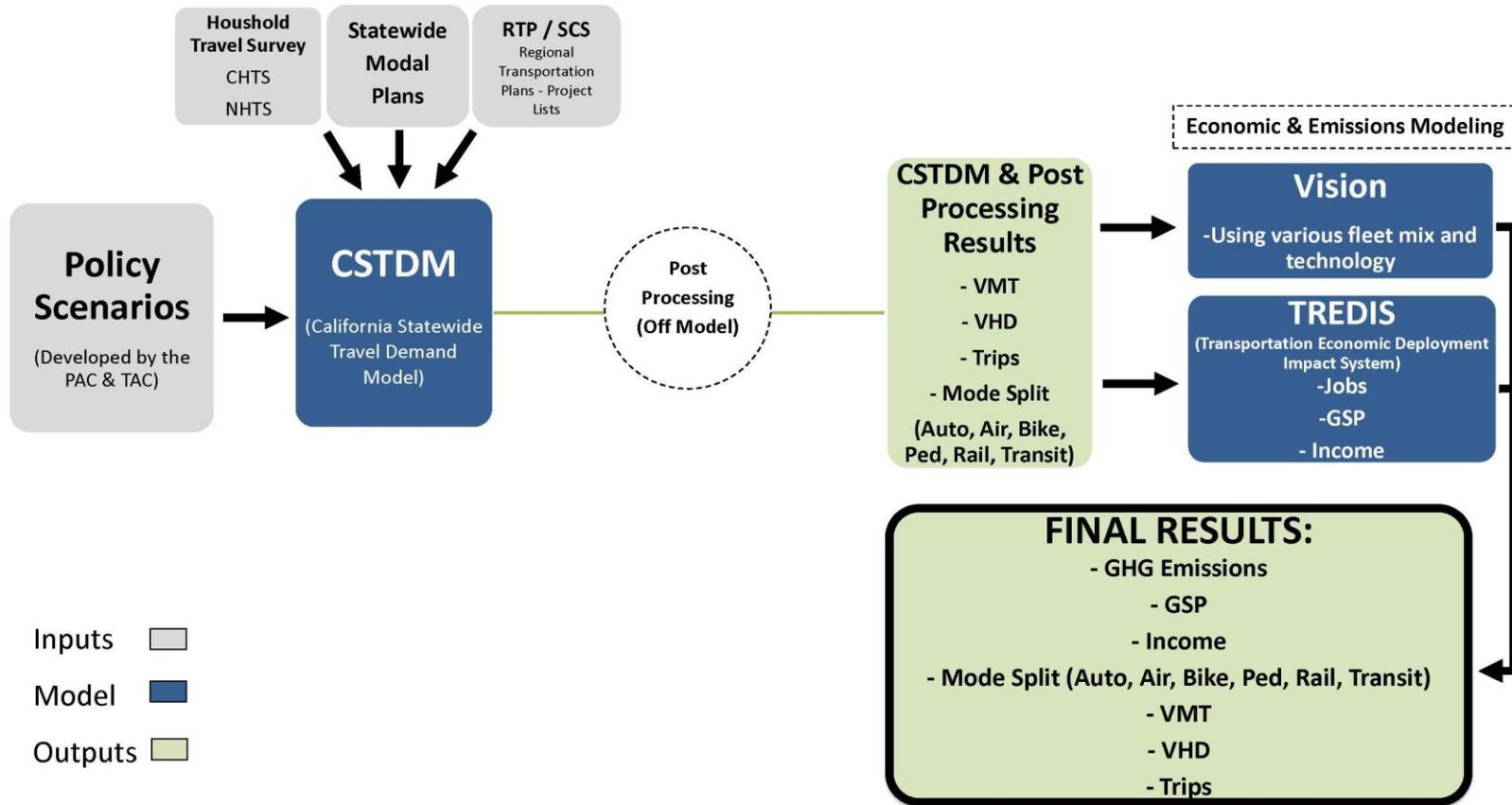
GHG Emissions using the base fleet mix/tech.

Vision

GHG Emissions using aggressive fleet mix/tech.



# Modeling our Alternatives



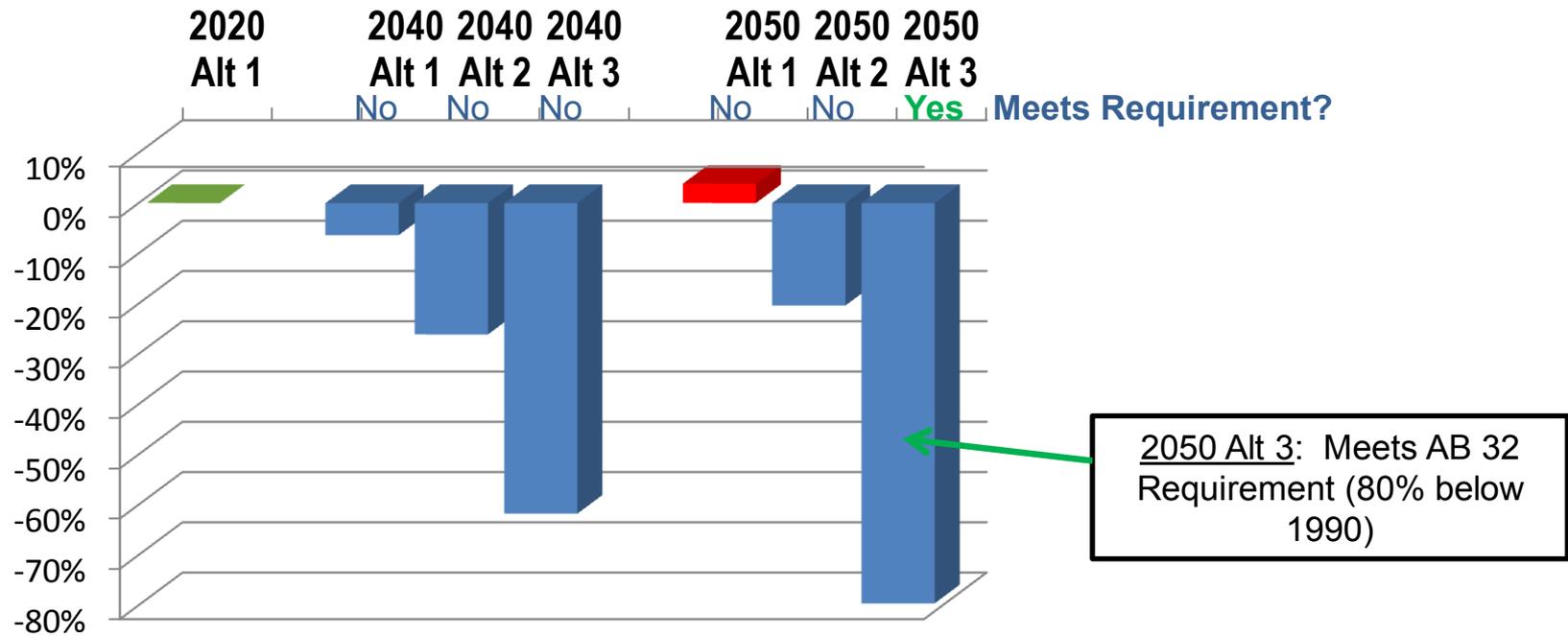
# Recommended GHG Strategies

Key Strategy Clusters	Strategies
Pricing	Road Pricing Strategy
Transportation Alternatives	Telecommute
	Carpool
	Car sharing
Mode Shift	Transit service improvements
	High Speed Rail
	Bus Rapid Transit
	Expand bike
	Expand pedestrian
	Carpool Lane Occupancy
	Increased HOV Lanes
Operational Efficiency	Caltrans' TMS Master Plan
	Intelligent Transportation System elements
	Incident and emergency management

# DRAFT Alternatives & Analysis

	Alternative		
	1	2	3
MPO SCS Land Use & Transportation Plans	✓	✓	✓
Caltrans Modal Plan	✓	✓	✓
ARB Advanced Clean Cars and In-Use Standards	✓	✓	✓
Transportation VMT Reduction Strategies		✓	✓
Additional future fuel efficiencies and vehicle technologies			✓

# Transportation GHG Reduction Strategies



# Economic Impact Analysis

The economic impact analysis of the CTP 2040 focuses on the VMT reduction strategies described in Alternative 2. Pricing strategies target motorists by imposing additional costs for utilizing the roadway transportation system. The increased cost is offset by making active transportation modes a viable substitute to vehicle travel through capacity and network improvements.

Changes in travel patterns resulting from the implementation of the strategies were estimated using the CSTDM. These outputs were used in the economic analysis.

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## NET ECONOMIC IMPACTS FROM ALTERNATIVE 1 TO ALTERNATIVE 2 (2040) (TREDIS)

	2012/15	2016/20	2021/25	2026/30	2031/35	2036/40	Net Total (2040)
<b>GSP (\$mil)</b>	\$(2,000)	\$16,000	\$33,000	\$23,000	\$11,000	\$(2,000)	\$79,000
<b>Jobs</b>	(20)	87,000	2,200	(23,000)	(26,000)	(28,000)	13,000
<b>Wage (\$mil)</b>	\$(1,000)	\$11,000	\$23,000	\$18,000	\$10,000	\$2,000	\$64,000

## Broad-based categories

Activities that can be achieved in various time spans:

- Short-Range (next 2 Years)
- Mid-Range (next 3-5 Years)
- Long-Range (next 5-20 years)

# DRAFT Recommendation Themes

- Safety
- Sustainability
- Multi-modal System Enhancements
- System Efficiency and Technology
- Modeling and Analysis Improvements

# DRAFT Recommendations

## Safety

Improve public  
safety and security



## Sustainability

- Foster Livable, Healthy Communities and Social Equity
- Practice Environmental Stewardship
- Support Economic Vibrancy
- Obtain Permanent Funding
- Address Climate Adaptation and Resiliency



## Multi-modal System Enhancements

- Improve Destination Access
- Active Transportation System (Biking and Walking)
- Expand Transit Services and Operations
- Improve Multimodal Mobility and Accessibility for All
- Promote Sustainability in Rural Communities and Small Towns



## System Efficiency and Technology

- “Stream-line” Delivery
- Coordinate Data and Analysis
- Systemize Traffic Management
- Manage Transportation Demand
- Invest Strategically
- Expand Freight Network Capacity
- Long Distance and Multimodal Travel



## Modeling and Analysis Improvements

- Reduce VMT
- Reduce GHG Emissions in Transportation
- Advance Modeling and Data



# Policy/Technical Advisory Committees

## Policy Advisory Committee

- MPO/RTPA planning staff and Tribes
- State Agencies
  - SB 391 specified
  - Other key State agencies
- Advocacy Groups – modal, environmental, local, etc.
- FHWA and US EPA

## Technical Advisory Committee

- MPO/RTPA technical staff
- Key State agency staff – ARB, CEC and OPR
- CT HQ's staff – modal plans
- District modelers

## 2013



### OUTREACH

*Communication & Public Participation*

- ◆ WEB PORTAL
- ◆ FOCUS GROUPS
- ◆ TRIBAL MEETINGS



### CONSULTATION

- ◆ POLICY & TECHNICAL COMMITTEES
- ◆ REGIONAL AGENCIES
- ◆ TRIBAL GOVERNMENTS



### PRODUCTS

*CTP Development*

- ◆ CTP 2040 FACT SHEET
- ◆ CTP 2040 SPANISH FACT SHEET

## 2014



### OUTREACH

*Communication & Public Participation*

- ◆ WEB PORTAL



### CONSULTATION

- ◆ POLICY & TECHNICAL COMMITTEES
- ◆ TRIBAL GOVERNMENTS
- ◆ REGIONAL AGENCIES



### PRODUCTS

*CTP Development*

- ◆ CTP 2040 - ADMINISTRATIVE DRAFT
- ◆ CTP 2040 BROCHURE
- ◆ CTP 2040 TRIBAL FACT SHEET
- ◆ SCOPE DOCUMENT & TIMELINE

## 2015



### OUTREACH

*Communication & Public Participation*

- ◆ WEB PORTAL
- ◆ WORKSHOPS  
Fresno, Los Angeles, Oakland  
Redding, Sacramento, San Diego

- ◆ CTP PUBLIC REVIEW DRAFT  
45-Day Comment Period



### CONSULTATION

- ◆ POLICY & TECHNICAL COMMITTEES
- ◆ REGIONAL AGENCIES
- ◆ TRIBAL GOVERNMENTS



### PRODUCTS

*CTP Development*

- ◆ CTP 2040 - DRAFT
- ◆ CTP 2040 - FINAL PLAN
- ◆ AGENCY APPROVAL

# Statewide Outreach

## WORKING WITH OUR PARTNERS

- Caltrans is holding meetings statewide in March/April with MPO/RTPA representatives to review and provide comments on the Public Review Draft.
- This will coincide with the timing of the seven public workshops.
- **Webinars**
  - March 5<sup>th</sup> (Public)
  - March 11<sup>th</sup> (Tribal)

# CTP 2040 Focus Groups

## Seven *General Public* Focus Groups - Summer 2013

- Locations:
  - Sacramento
  - Fresno/Madera (Central Valley)
  - Los Angeles (Metro)
  - Palm Desert (Coachella Valley)
  - Oakland (Bay Area)
  - Redding
  - Eureka
- Between 10 and 13 participants at each session
- Polling and open-ended questions

# CTP 2040 Tribal Listening Sessions

## Four Tribal Listening Sessions Groups held July - December of 2013

- Locations:
  - San Diego County
  - Woodland
  - Redding
  - Lemoore
- Also covered the ITSP, Freight Mobility Plan, Rail Plan, and Strategic Highway Safety Plan
- Main objective - get Tribes involved early in the process and hear from them about their issues, concerns, goals, etc.
- Around 20 Tribal Members at each session

# Statewide Outreach

## PUBLIC WORKSHOPS

**Sacramento: Tuesday, March 10, 2015**

North Natomas Library  
4660 Via Ingoglia Sacramento, CA

**Redding: Thursday, March 12, 2015,**

City of Redding Community Room,  
777 Cypress Avenue, Redding, CA

**San Diego: Tuesday, March 17, 2015**

Valencia Park/Malcolm X Branch Library and  
Performing Arts Center  
5148 Market Street, San Diego, CA

**Riverside: Wednesday, March 18, 2015**

Riverside City College  
4800 Magnolia Avenue, Riverside, CA

**Los Angeles: Thursday, March 19, 2015**

Southern California Association of Governments  
(SCAG),  
818 West 7th St, 12th floor, Los Angeles, CA  
90017

**Fresno: Tuesday, March 24, 2015**

Fresno City College,  
1101 E. University Avenue, Fresno,  
California 93741

**Oakland: Thursday, March 26, 2015**

Metropolitan Transportation Commission,  
101 Eighth Street, Oakland, CA 94607



## WHAT'S NEXT

- Public Review Draft Release March 2, 2015
- Workshops March 2015
- Comments Due **April 17, 2015**
- All Final Modeling Done July 2015
- Final Draft August 2015
- CTP 2040 to Governor & CalSTA Dec. 31, 2015

# 45 Day Public Review

## SUBMIT COMMENTS BY APRIL 17<sup>TH</sup>

www.dot.ca.gov/hq/tpp/californiatrnsportationplan2040/public\_review\_form.shtml



### Public Notice of the 45-day Public Review Period of the California Transportation Plan (CTP 2040)

We welcome your input!

The California Transportation Plan (CTP 2040) is now available for public review. The public comment period for this document begins Monday, March 2, 2015 and ends Friday, April 17, 2015, 5:00 PM PST.

The CTP is a statewide, long-range transportation policy plan designed to meet California's future mobility needs and reduce greenhouse gas (GHG) emissions. The plan envisions a fully integrated, multimodal, sustainable transportation system that supports economic vitality, protects natural resources, promotes the health and well-being of all Californians, and meets people's needs equitably.

We invite you to provide your ideas, comments and recommendations specific to the CTP 2040 plan.

To submit your input on-line, please fill out the form below and click the Submit button. You will receive a confirmation that you may print and keep for your records. If you wish to submit your input manually via mail, fax or email, please go to our [45 Day Manual Comment Form](#).

### CTP 2040 ON-LINE PUBLIC COMMENT FORM

#### Your Information:

We ask for your information so that we can contact you for clarification, if needed.

First Name:  (required)

Submit Your Comments

Send Us an Email

Share via Twitter

FAQs

Mini Poll

#### CTP 2040 Events

Today March 2015

Sun	Mon	Tue	Wed	Thu	Fri	Sat
Mar 1	2	3	4	5	6	7
			2pm			
8	9	10	11	12	13	14
		4pm	4pm			
15	16	17	18	19	20	21
		4pm	4pm	4pm		
22	23	24	25	26	27	28
		4pm	4pm			
29	30	31	Apr 1	2	3	4

Events shown in

Caltrans HQ-California...



# Get Involved...

**[www.californiatransporationplan2040.org](http://www.californiatransporationplan2040.org)**

 Visit the website – Read the plan, signup for updates and notifications

 Send us an email: [CTP2040@dot.ca.gov](mailto:CTP2040@dot.ca.gov)

 Follow us on Twitter: @CaltransHQ



**SOUTHERN CALIFORNIA  
ASSOCIATION of GOVERNMENTS**

Item 7 Attachment:  
2016 RTP/SCS Performance Measures

# 2016 RTP/SCS Performance Measures Update Technical Working Group

March 19, 2015

Ping Chang & Naresh Amatya  
SCAG Staff



# Presentation Outline

- Background
- Evolving/Enhanced Performance Measures (PM) Framework
  - Enhancement in 2012 vs. 2016
- Highlights of 2016 PM Updates
- Core vs. Additional Performance Measures

# Performance Measures Background

- A key component of performance-based planning
- SCAG has included performance measures since the 1998 RTP
- Quantitative measures of the extent that plan would accomplish its goals
  - Used during plan development to evaluate scenarios/plan performance
  - Used after plan adoption to track progress  
(Note: for April TWG discussion)

# Performance Measures Framework Enhancement for 2012 RTP/SCS

- For the 2012 RTP/SCS, the SB 375 requirement of SCS generated needs to go beyond transportation-focused measures
  - Need to address land use/urban form:  
Added a new “Location Efficiency” category
  - Need to estimate co-benefits:  
Developed new measures to estimate the resource efficiency & health co-benefits of scenarios. Not part of final PMs.

# Performance Measures Framework Enhancement Needs for 2016 RTP/SCS

- Growing interests and needs to address impacts/benefits on public health
- Protect the environment and residents' health is an RTP/SCS goal
- Need to address MAP-21 requirements as feasible since rulemaking still in progress
- Need to have a consistent set of PMs to evaluate scenarios and the final plan

# 2012 RTP/SCS Plan Performance Measures (Categories)

- 1) Location Efficiency (new in 2012)
- 2) Mobility and Accessibility
- 3) Safety and Health
- 4) Environmental Quality
- 5) Economic Well Being
- 6) Investment Effectiveness
- 7) System Sustainability

# Use of Performance Measures to Evaluate Scenarios/Final Plan

Performance Measures (PMs) Categories	2012 RTP/SCS		PMs	2016 RTP/SCS	
	Scenarios	Plan		Scenarios	Plan
<b>I. 2012 RTP/SCS</b> - Location Efficiency - Mobility and Accessibility - Safety and Health - Environmental Quality - Economic Well Being - Investment Effectiveness - System Sustainability		X	I. (Updated) 2012 RTP/SCS PMs	X	X
<b>II. Scenario Planning Model (SPM)</b> - Land consumption - Transportation & GHG - Resources Efficiency (Energy, Water, Fiscal) - Health	X		II. (Enhanced) SPM PMs	X	X
<b>III. Environmental Justice (EJ)</b>		X	III. (Enhanced) EJ PMs	X	X

# 2016 RTP/SCS Performance Measures (Draft Categories)

- 1) Location Efficiency\*
- 2) Mobility and Accessibility\*
- 3) Health and Safety\*
- 4) Environmental Quality\*
- 5) Economic Well Being\*
- 6) Investment Effectiveness\*
- 7) System Sustainability\*
- 8) Resource Efficiency\*\*
- 9) Environmental Justice\*\*

\* 2012 RTP/SCS performance measure (PM) categories

\*\* Proposed new categories for 2016 RTP/SCS PMs

# 2016 RTP/SCS Performance Measures

- 1) Core Performance Measures
  - Focus on land use/transportation/air quality/safety & health/economic related measures and EJ at the category level
  - Address federal requirements in conformity, MAP-21, EJ & Title 6
  - Address state requirements in SB 375
  
- 2) Additional Performance Measures
  - Focus on co-benefits from resource efficiency (e.g., energy, water & local fiscal impacts), and additional EJ performance measures

# 2016 RTP/SCS

## Core Performance Measures Proposed Additions

- 1) Location Efficiency
  - VMT/per capita
  - Mode share of transit
- 2) Mobility & Accessibility (No change from 2012)
- 3) Safety & Health
  - Mode share of walking & biking
  - Physical activity/weight related disease
  - Respiration/pollution-related disease
- 4) Environmental Quality (No change)
- 5) Economic Well-being (No change)

# 2016 RTP/SCS

## Core Performance Measures Proposed Additions (cont'd)

- 6) Investment Effectiveness (No change)
- 7) System Sustainability
  - State highway system pavement condition
  - Local roads pavement condition
- 8) Environmental Justice

\* See Table 1 attached for further details on core performance measures

# 2016 RTP/SCS

## Additional Performance Measures

- 1) Resource Efficiency
  - energy use & GHG co-benefits
  - water use & GHG co-benefits
  - local fiscal impacts
- 2) Environmental Justice
  - No unaddressed disproportionately high or adverse impacts to low income or minority populations

\*See Table 2 attached for further details on additional performance measures

# 2016 RTP/SCS

## Additional Performance Measures

### 2) Environmental Justice (cont'd)

- RTP Revenue Sources/Tax Burdens
- Share of Transportation System Usage
- RTP Project Investment Share by Income and Ethnicity
- Impacts from Funding Through VMT Fees (NEW in 2012)
- Distribution of Travel Time Savings and Travel Distance Savings
- Jobs-Housing Imbalance or Jobs-Housing Mismatch (NEW in 2012)
- Accessibility to Work/Shopping Opportunities
- Accessibility to Parks (NEW in 2008)
- Gentrification and Displacement (NEW in 2012)
- Environmental Impact Analysis (Air, Health, Noise)
- Rail-Related Impacts (NEW in 2012)
- Active Transportation Hazard (Proposed for 2016)

# 2016 RTP/SCS Performance Measures Update Summary

- Achieve a more comprehensive set of performance measures with a core component
- Could use one consistent set of PMs to evaluate scenarios and final plan
- Fill important gaps (e.g., equity (EJ)-related performance measures)
- Support the estimates of plan benefits with a broader scope (by including public health and resource efficiency for energy, water & fiscal resources)
- Prepare to align with MAP-21 requirements (e.g., safety and system sustainability measures) while its rule-making is still in progress

# 2016 RTP/SCS Performance Measures Update Timeline

March 19, 2015 – TWG Meeting on Performance Measures Update

April 16, 2015 – TWG Meeting on Monitoring Measures Update

June 4 , 2015 – Joint Policy Committee Meeting on Goals, Performance & Monitoring Measures Update

## For Further Information

Please contact:

Ping Chang, [chang@scag.ca.gov](mailto:chang@scag.ca.gov), 213-236-1839

Naresh Amatya, [Amatya@scag.ca.gov](mailto:Amatya@scag.ca.gov), 213-236-1885

Thank you!

**Table 1: 2016 RTP/SCS Core Performance Measures\* (March 16, 2015 Draft)**

Outcome	Performance Measure/ Indicator	Definition	Performance Target	Data Sources Used
Location Efficiency	Share of growth in High Quality Transit Areas (HQTAs)	Share of the region's growth in households and employment in HQTAs	Improvement over No Project Baseline	<del>Census (including annual American Community Survey), InfoUSARTP/SCS Socio-economic small area data</del> <del>Rapid Fire Scenario Planning Model</del>
	Land consumption	<del>Additional land needed for development that has not previously been developed or otherwise impacted, including agricultural land, forest land, desert land and other virgin sites</del> <u>Greenfield land consumed</u> <u>Refill land consumed</u>	Improvement over No Project Baseline	
	<u>Vehicle Miles Traveled (VMT) per capita</u>		<u>Improvement over No Project Baseline</u>	<u>Travel Demand Model</u>
	<u>Mode share of transit</u>	<u>The share of transit of work and non-work trips respectively</u>	<u>Improvement over No Project Baseline</u>	<u>Travel Demand Model</u>
	Average distance for work or non-work trips	The average distance traveled for work or non-work trips separately	Improvement over No Project Baseline	Travel Demand Model
	Percent of <del>work</del> trips less than 3 miles	The share of <del>total</del> work <u>and non-work</u> trips which are fewer than 3 miles <u>respectively</u>	Improvement over No Project Baseline	Travel Demand Model
	Work trip length distribution	The statistical distribution of work trip length in the region	Improvement over No Project Baseline	Travel Demand Model
Mobility and Accessibility	Person delay per capita	Delay per capita can be used as a supplemental measure to account for population growth impacts on delay.	Improvement over No Project Baseline	Travel Demand Model
	Person delay by facility type (mixed flow, HOV, arterials)	Delay – excess travel time resulting from the difference between a reference speed and actual speed.	Improvement over No Project Baseline	Travel Demand Model
	Truck delay by facility type (Highway, Arterials)	Delay – excess travel time resulting from the difference between a reference speed and actual speed.	Improvement over No Project Baseline	Travel Demand Model

**Table 1: 2016 RTP/SCS Core Performance Measures (Cont'd)**

Outcome	Performance Measure/ Indicator	Definition	Performance Target	Data Sources Used
	Travel time distribution for transit, SOV, HOV for work and non-work trips	Travel time distribution for transit, SOV, HOV for work and non-work trips	Improvement over No Project Baseline	Travel Demand Model
Safety and Health	Collision/accident rates by severity by mode	Accident rates per <u>100</u> million vehicle miles by mode (all, bicycle/pedestrian <del>and fatality/killed</del> ) <a href="#">Number of fatalities and serious injuries by mode (all, bicycle/pedestrian)</a>	Improvement over Base Year	CHP Accident Data Base, Travel Demand Model Mode Split Outputs
	Criteria pollutants emissions	CO, NOX, PM2.5, PM10, and VOC	Meet Transportation Conformity requirements	Travel Demand Model /ARB EMFAC Model
	<a href="#">Air pollution-related health measures<sup>1</sup></a>	<a href="#">Respiratory/pollution-related disease incidence and costs</a>	<a href="#">Improvement over No Project Baseline</a>	<a href="#">Scenario Planning Model</a>
	<a href="#">Physical activity-related health measures<sup>2</sup></a>	<a href="#">Physical activity/weight related incidence and costs</a>	<a href="#">Improvement over No Project Baseline</a>	<a href="#">Scenario Planning Model</a>
	<a href="#">Mode share of walking and biking</a>	<a href="#">Mode share of walking and biking for work and non-work trips respectively</a>	<a href="#">Improvement over No Project Baseline</a>	<a href="#">Travel Demand Model</a>
Environmental Quality	Criteria pollutant and greenhouse gas emissions	CO, NOX, PM2.5, PM10, and VOC Per capita greenhouse gas emissions (CO2)	Meet Transportation Conformity requirements and SB 375 per capita GHG reduction targets	Travel Demand Model /ARB EMFAC Model
Economic Well Being	Additional jobs supported by improving competitiveness	Number of jobs added to the economy as a result of improved transportation conditions which make the region more competitive	Improvement over No Project Baseline	Regional Economic Model REMI
	Additional jobs supported by transportation investment	Total number of jobs supported in the economy as a result of transportation expenditures.	Improvement over No Project Baseline	Regional Economic Model (REMI)
	Net contribution to Gross Regional Product	Gross Regional Product due to transportation investments and increased competitiveness	Improvement over No Project Baseline	Regional Economic Model (REMI)
Investment Effectiveness	Benefit/Cost Ratio	Ratio of monetized user and societal benefits to the agency transportation costs	Greater than 1.0	California Benefit Cost Model

**Table 1: 2016 RTP/SCS Core Performance Measures (Cont'd)**

Outcome	Performance Measure/ Indicator	Definition	Performance Target	Data Sources Used
System Sustainability	Cost per capita to preserve multi-modal system to current and state of good repair conditions	Annual costs per capita required to preserve the multi-modal system to current conditions	Improvement over Base Year	Estimated using SHOPP Plan and recent California Transportation Commission 10-Year Needs Assessment
	<a href="#">State Highway System Pavement Condition</a>	<a href="#">Distressed share of State Highway Lane miles</a>	<a href="#">Improvement over No-Project Baseline</a>	<a href="#">Pavement Management System (Caltrans)</a>
	<a href="#">Local Roads Pavement Condition</a>	<a href="#">Pavement Condition Index (PCI) on Local Roads</a>	<a href="#">Improvement over No-Project Baseline</a>	<a href="#">Local Arterial Survey Database</a>
<a href="#">Environmental Justice</a>	<a href="#">See Table 2 for details</a>	<a href="#">See Table 2 for details</a>	<a href="#">No unaddressed disproportionately high or adverse effects for low income or minority communities</a>	<a href="#">See Table 2 for details</a>

**\*Please also see Table 2 on 2016 RTP/SCS Additional Performance Measures.**

- 1. Performance measures used in the Scenario Planning stage of the 2012 RTP/SCS using the Rapid Fire Model**
- 2. Performance measures expected from the new health module (in process of completion) in the Scenario Planning Model**

**Acronyms:**

**CHP: California Highway Patrol**

**EMFAC: Emissions Factors**

**SHOPP: State Highway Operation and Protection Program**

**Table 2: 2016 RTP/SCS Additional Performance Measures\* (March 14, 2015 Draft)**

Outcome	Performance Measure/ Indicator	Definition	Performance Target	Data Sources Used
<b><u>Resource Efficiency</u></b>	<u>Energy consumption (buildings)<sup>1</sup></u>	<u>Residential energy use</u> <u>Commercial energy use</u> <u>Building related total energy costs</u> <u>Building related GHG emission</u>	<u>Improvement over No Project Baseline</u>	<u>Scenario Planning Model</u>
	<u>Water consumption (buildings)<sup>1</sup></u>	<u>Indoor and outdoor water use</u> <u>Water costs</u> <u>Water related energy use</u> <u>Water related GHG emissions</u>	<u>Improvement over No Project Baseline</u>	<u>Scenario Planning Model</u>
	<u>Local Fiscal Impacts<sup>1</sup></u>	<u>Capital costs for local infrastructure (local streets, water, wastewater, sewage, local parks)</u> <u>Operation and maintenance costs</u> <u>Local tax and fee revenues</u>	<u>Improvement over No Project Baseline</u>	<u>Scenario Planning Model</u>
<b><u>Environmental Justice**</u></b>	<u>RTP revenue source in terms of tax burdens<sup>2</sup></u>	<u>Proportion of RTP/SCS revenue sources (taxable sales, income, and gasoline taxes) for low income and minority populations</u>	<u>No unaddressed disproportionately high or adverse effects for low income or minority communities</u>	<u>Census Data, BLS Consumer Expenditure Survey Data, BOE Taxable Sales Data, SCAG's Integrated Growth Forecast</u>
	<u>Share of transportation system usages<sup>2</sup></u>	<u>Comparison of transportation system usage by mode for low income and minority households vs. share of each groups' in the greater region</u>	<u>No unaddressed disproportionately high or adverse effects for low income or minority communities</u>	<u>NHTS, SCAG's Integrated Growth Forecast</u>
	<u>RTP/SCS investments<sup>2</sup></u>	<u>Allocation of RTP/SCS investments by mode (bus, HOV lanes, commuter/high speed rail, highways/arterials, and light/heavy rail transit)</u>	<u>No unaddressed disproportionately high or adverse effects for low income or minority communities</u>	<u>RTP/SCS Finance Strategy Data, Integrated Growth Forecast, RTP/SCS TDM Output</u>
	<u>Distribution of travel time savings and travel distance reductions<sup>2</sup></u>	<u>Details what groups are overall benefiting as a result of the Plan in terms of travel time and distance savings</u>	<u>No unaddressed disproportionately high or adverse effects for low income or minority communities</u>	<u>NHTS, SCAG's Integrated Growth Forecast, RTP/SCS TDM Output</u>
	<u>Job-housing imbalance or</u>	<u>Comparison of median earnings for</u>	<u>Establishing existing conditions – not</u>	<u>Census PUMS</u>

**Table 2: 2016 RTP/SCS Additional Performance Measures (Cont'd)**

Outcome	Performance Measure/ Indicator	Definition	Performance Target	Data Sources Used
	<u>job-housing mismatch<sup>2</sup></u>	<u>intra-county vs. inter-county commuters for each of the six counties in the SCAG region</u>	<u>a performance measure for the Plan</u>	
	<u>Accessibility to employment and services<sup>2</sup></u>	<u>The percentage of the population who can travel between work and home or between retail stores and home within 45 minutes during the morning peak period for both rail transit, bus, and auto modes</u>	<u>No unaddressed disproportionately high or adverse effects for low income or minority communities</u>	<u>InfoUSA Employment Data, RTP/SCS TDM Output, Census Data, SCAG's Integrated Growth Forecast, NHTS</u>
	<u>Accessibility to parks<sup>2</sup></u>	<u>The percent of population who can reach local, state, or national parks within 45 minutes of travel via rail transit, bus, and auto modes</u>	<u>No unaddressed disproportionately high or adverse effects for low income or minority communities</u>	<u>SCAG's Parcel Level Land Use Data, California Protected Areas Database (CPAD), RTP/SCS TDM Output, Integrated Growth Forecast, NHTS</u>
	<u>Gentrification and displacement<sup>2</sup></u>	<u>Examination of historical and projected demographic and housing trends for areas surrounding rail transit stations.</u>	<u>No unaddressed disproportionately high or adverse effects for low income or minority communities</u>	<u>High Quality Transit Areas (HQTAs), Census Data, NHTS</u>
	<u>Air quality health impacts along freeway and highly traveled corridors<sup>2</sup></u>	<u>Historical emissions and health data summarized for areas that have a high concentration of minority and low income population. Tabulation of health improvements resulting from the Plan.</u>	<u>Historical data used to establish existing conditions – not a performance measure of the Plan. Otherwise, no unaddressed disproportionately high or adverse effects for low income or minority communities</u>	<u>ARB Historical Emissions Data, SCAG's Integrated Growth Forecast</u>
	<u>Environmental impacts of plan and baseline scenarios<sup>2</sup></u>	<u>Comparison of Plan and Baseline Scenarios; identification of areas that are lower performing as a result of the Plan, along with a breakdown of demographics for these areas</u>	<u>No unaddressed disproportionately high or adverse effects for low income or minority communities</u>	<u>RTP/SCS Small Area Emissions Data (Base Year, Baseline &amp; Plan)</u>
	<u>Aviation noise impacts<sup>2</sup></u>	<u>Comparison of Plan and Baseline Scenarios; breakdown of population by race and ethnicity for low performing airport noise impacted</u>	<u>No unaddressed disproportionately high or adverse effects for low income or minority communities</u>	<u>Projected Noise Impacts from Aircraft Operations for 2035 (from PEIR), SCAG's Integrated Growth Forecast</u>

**Table 2: 2016 RTP/SCS Additional Performance Measures (Cont'd)**

Outcome	Performance Measure/ Indicator	Definition	Performance Target	Data Sources Used
	<u>Roadway noise impacts<sup>2</sup></u>	Comparison of Plan and Baseline Scenarios , identification of areas that are low performing as a result of the Plan; breakdown of population for these impacted areas by race/ethnicity and income	No unaddressed disproportionately high or adverse effects for low income or minority communities	RTP/SCS TDM Output, SCAG's Integrated Growth Forecast
	<u>Active Transportation Hazard</u>	Comparison of Plan and Baseline Scenarios , identification of areas that are low performing as a result of the Plan; breakdown of population for these impacted areas by race/ethnicity and income	No unaddressed disproportionately high or adverse effects for low income or minority communities	RTP/SCS TDM Output, SCAG's Integrated Growth Forecast, SWITRS Data
	<u>Rail-related impacts<sup>2</sup></u>	Breakdown of population by race and ethnicity for areas in close proximity to rail corridors and planned grade separations	No unaddressed disproportionately high or adverse effects for low income or minority communities	Rail Network Geodata, Rail Traffic Data, Grade Separations Geodata, Census Data, SCAG's Integrated Growth Forecast

\* Please also see Table 1: 2016 RTP/SCS Core Performance Measures

\*\*Under Environmental Justice, additional information is included in the 2012 RTP/SCS Environmental Justice Technical Appendix.

1. Performance measures used in the Scenario Planning stage of the 2012 RTP/SCS using the Rapid Fire Model

2. Performance measures used in the Environmental Justice Analysis of the 2012 RTP/SCS

Acronyms:

BLS: Bureau of labor Statistics

BOE: Board of Equalization

HOV: High-occupant Vehicles

NHTS: National Household Travel

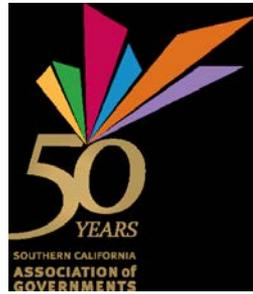
SWITRS: (California) Statewide Traffic Records System



SOUTHERN CALIFORNIA  
**ASSOCIATION of GOVERNMENTS**

Item 8 Attachment:  
Asset Management and Condition Overview

**Southern California Association of  
Governments**



# **Asset Management Update**

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Los Angeles, CA  
March 19, 2015

**System Metrics Group, Inc.**



## Agenda

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- Recent Asset Management Developments
- Update on Asset Management Results:
  - State Highway System
  - Local Roads
- Discussion



**Recent Asset Management  
Developments**

# Federal Asset Management Developments

➤ MAP 21 Draft Performance Measures:

Pavement	Bridges
<ul style="list-style-type: none"> <li>• Percentage of pavements on the Interstate System in Good condition</li> <li>• Percentage of pavements on the Interstate System in Poor condition</li> <li>• Percentage of pavements on the NHS (excluding the Interstate System) in Good condition</li> <li>• Percentage of pavements on the NHS (excluding the Interstate System) in Poor condition.</li> </ul>	<ul style="list-style-type: none"> <li>• Percentage of NHS Bridges Classified as in Good Condition</li> <li>• Percentage of NHS Bridges Classified as in Poor Condition.</li> </ul>

## Federal Developments ... continued

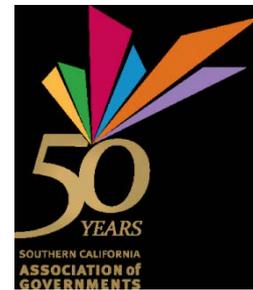
- Proposed Target Setting:
  - Caltrans would establish 2- and 4-year targets for a 4-year performance period
  - SCAG must establish 4-year targets, but not 2-year targets
  - SCAG must establish targets by:
    - Either supporting the Caltrans statewide target, or
    - Defining a SCAG specific target each time that Caltrans establishes a target.
  - Caltrans would establish the first statewide targets one year after the effective date of the rule
  - SCAG would establish its targets 180 days after the Caltrans target has been set.



## Federal Developments ... continued

- The NPRM states that Caltrans will make “significant” progress toward meeting targets during the reporting period when either of the actual condition either is equal to or better than either the Caltrans’ established target or the identified baseline condition.
- The FHWA believes that any improvement over the baseline, which represents a 0.1% improvement over four years, should be viewed as significant progress considering financial uncertainties many State DOTs are faced with today. Although a change of 0.1% may appear insignificant, this degree of improvement to a pavement or bridge system is difficult to achieve. It appears that the State can be making significant progress during the biennial reporting period, but after four years if the target is not met find itself in non-compliance.

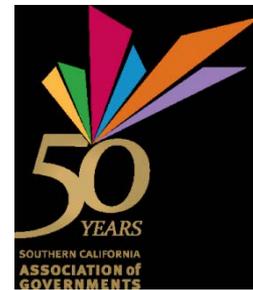




## Federal Developments ... continued

- If FHWA determines that Caltrans is not in compliance with the rule for pavement, then Caltrans must:
  1. Obligate, from the amount apportioned to California for the National Highway Performance Program (NHPP), an amount that is not less than the Interstate Maintenance apportionment for FY 2009, plus 2 percent per year compounded annually (for the 5 additional FYs after 2013)
  2. Transfer certain apportioned Surface Transportation Program (STP) funds equal to 10 percent of Interstate Maintenance apportionment for FY 2009. These funds would need to be used to improve Interstate pavement conditions (as provided under the pre-MAP-21 Interstate Maintenance Program).
- If not in compliance for bridges, then Caltrans would be required to obligate a set aside amount equal to 50 percent of the funds apportioned to California for fiscal year 2009 to carry out the Highway Bridge Program





## State Developments

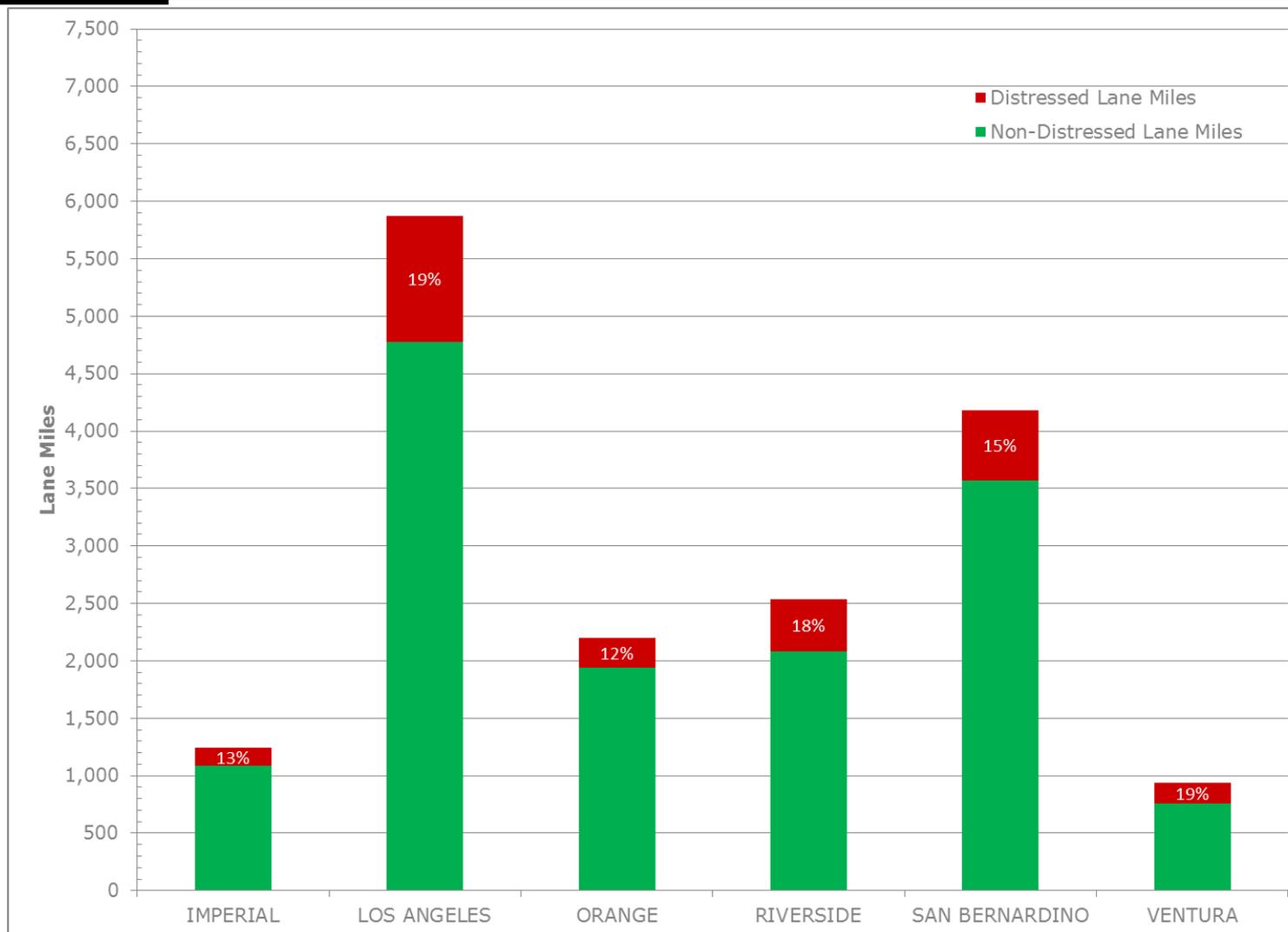
### ➤ Governor's Budget:

- *Highway Repairs/ Maintenance will get the average annual state share of federal and state fuel excise taxes (\$2 billion), a relatively small portion of other one-time funding has gone to the repair/rehabilitation and maintenance of pavement, culverts, and bridges. The state's share of ARRA, America Recovery and Reinvestment Act, funding for maintenance and repair projects on the state highway system was just \$964 million, only 26 percent of the total awarded to California. An early loan repayment in 2014 provided \$127 million for highway maintenance and repairs, and Proposition 1B provided \$500 million for the State Highway Operation and Protection Program (SHOPP). Highway repairs/ Maintenance needs \$8 billion and is only being funded about \$2 billion. With \$6 billion missing there is going to have to be strategies to come up with the missing money.*
- *Effective project planning, Pavement Management System (PaveM), Pavement deteriorates at different rates depending on the type of traffic or weather conditions to which it is exposed. This data is now being tracked over time to measure rates and types of pavement deterioration. This will prioritize roads that need pavement and increase maintenance efficiency.*



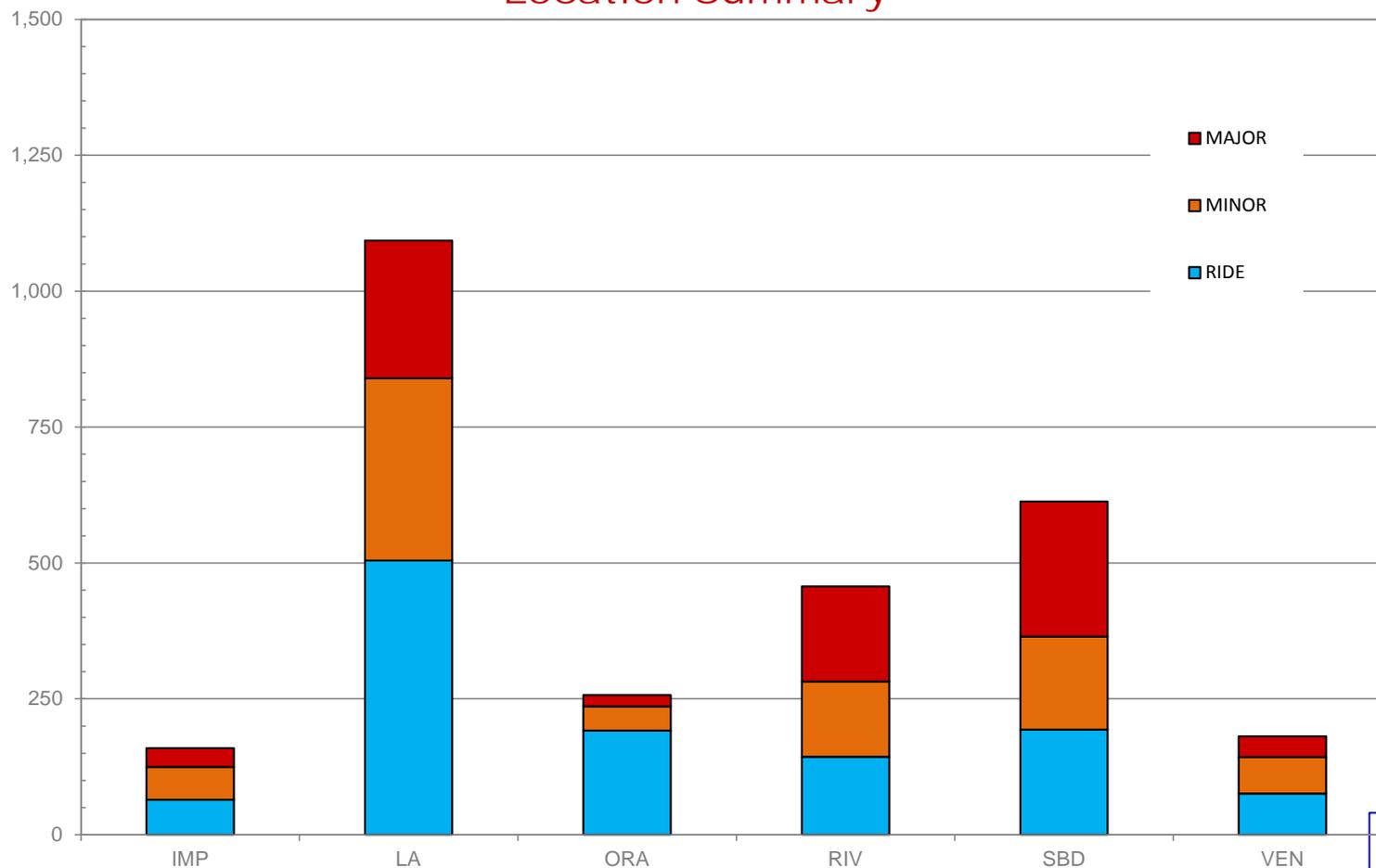
**Update on Asset Management Results**

# State Highway System – Pavement Conditions Based on 2013 Pavement Conditions Survey



# State Highway System – Pavement Conditions Based on 2013 Pavement Conditions Survey

## 2013 Pavement Condition Survey Location Summary



## SHS Bridge Conditions

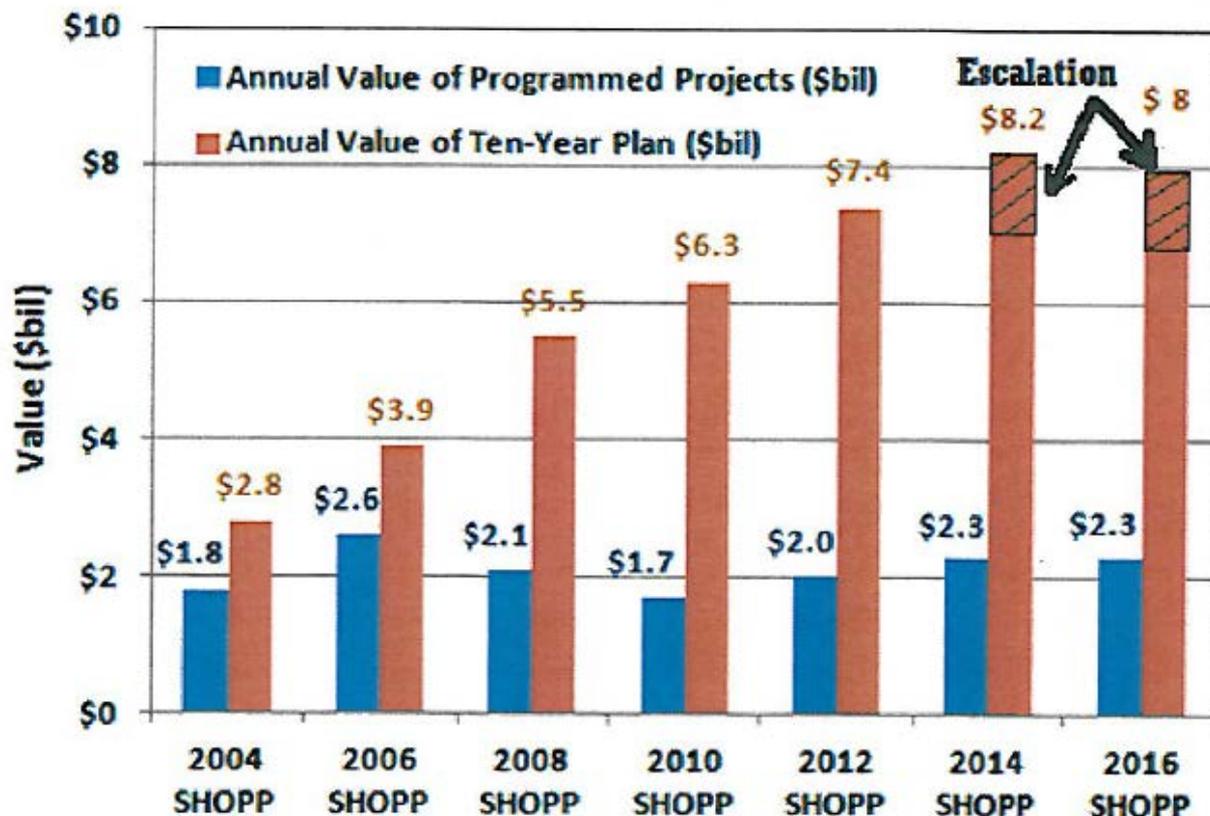
County	Number of Bridges	Number of Structurally Deficient Bridges	Number of Functionally Obsolete Bridges	Total Deficient	% Structurally Deficient	% Functionally Obsolete	% Deficient
IMPERIAL	436	43	25	68	10%	6%	16%
LOS ANGELES	3,552	372	879	1,251	10%	25%	35%
ORANGE	1,117	65	246	311	6%	22%	28%
RIVERSIDE	1,074	107	121	228	10%	11%	21%
SAN BERNARDINO	1,384	170	77	247	12%	6%	18%
VENTURA	497	50	74	124	10%	15%	25%
<b>TOTALS</b>	<b>8,060</b>	<b>807</b>	<b>1,422</b>	<b>2,229</b>	<b>10%</b>	<b>18%</b>	<b>28%</b>

"Structural Deficiency" and Functionally Obsolete" categories are defined by Federal guidance on "23 CFR 650 D". These categories are based on appraisals of approach roadway alignment; culvert and retaining walls; deck/deck geometry; structural condition; substructures; superstructures; under clearances; and waterway adequacy.

# Draft 2015 SHOPP Plan

## Almost \$6B per year unfunded over 10 years

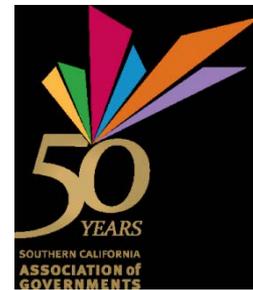
Figure 3. Comparison of Needs vs. Programmed SHOPP (\$ Billions)



## Local Roads ... recent update

County	Scenario	Current PCI	PCI <sub>2039</sub>	Area(SY)	Budget Required (\$ million)	Deferred maintenance (\$ million)
Imperial	Existing Budget	57	46	27,837,887	\$ 779	\$ 2,551
	Maintain PCI		57	27,837,887	\$ 1,120	\$ 1,683
	Increase PCI by 5		62	27,837,887	\$ 1,394	\$ 1,304
Los Angeles	Existing Budget	66	47	456,608,417	\$ 9,881	\$ 36,359
	Maintain PCI		66	456,608,417	\$ 20,131	\$ 14,131
	Increase PCI by 5		71	456,608,417	\$ 23,349	\$ 9,333
Orange	Existing Budget	77	50	150,294,239	\$ 2,878	\$ 9,735
	Maintain PCI		77	150,294,239	\$ 6,830	\$ 1,054
	Increase PCI by 5		82	150,294,239	\$ 7,415	\$ -
Riverside	Existing Budget	70	52	145,222,220	\$ 3,360	\$ 9,727
	Maintain PCI		70	145,222,220	\$ 6,023	\$ 3,638
	Increase PCI by 5		75	145,222,220	\$ 7,224	\$ 1,893
San Bernardino	Existing Budget	71	35	172,206,114	\$ 2,249	\$ 17,272
	Maintain PCI		71	172,206,115	\$ 8,170	\$ 3,675
	Increase PCI by 5		76	172,206,115	\$ 9,386	\$ 1,802
Ventura	Existing Budget	70	36	50,366,653	\$ 691	\$ 4,860
	Maintain PCI		70	50,366,654	\$ 2,310.3	\$ 1,181.4
	Increase PCI by 5		75	50,366,654	\$ 2,682.4	\$ 651.6

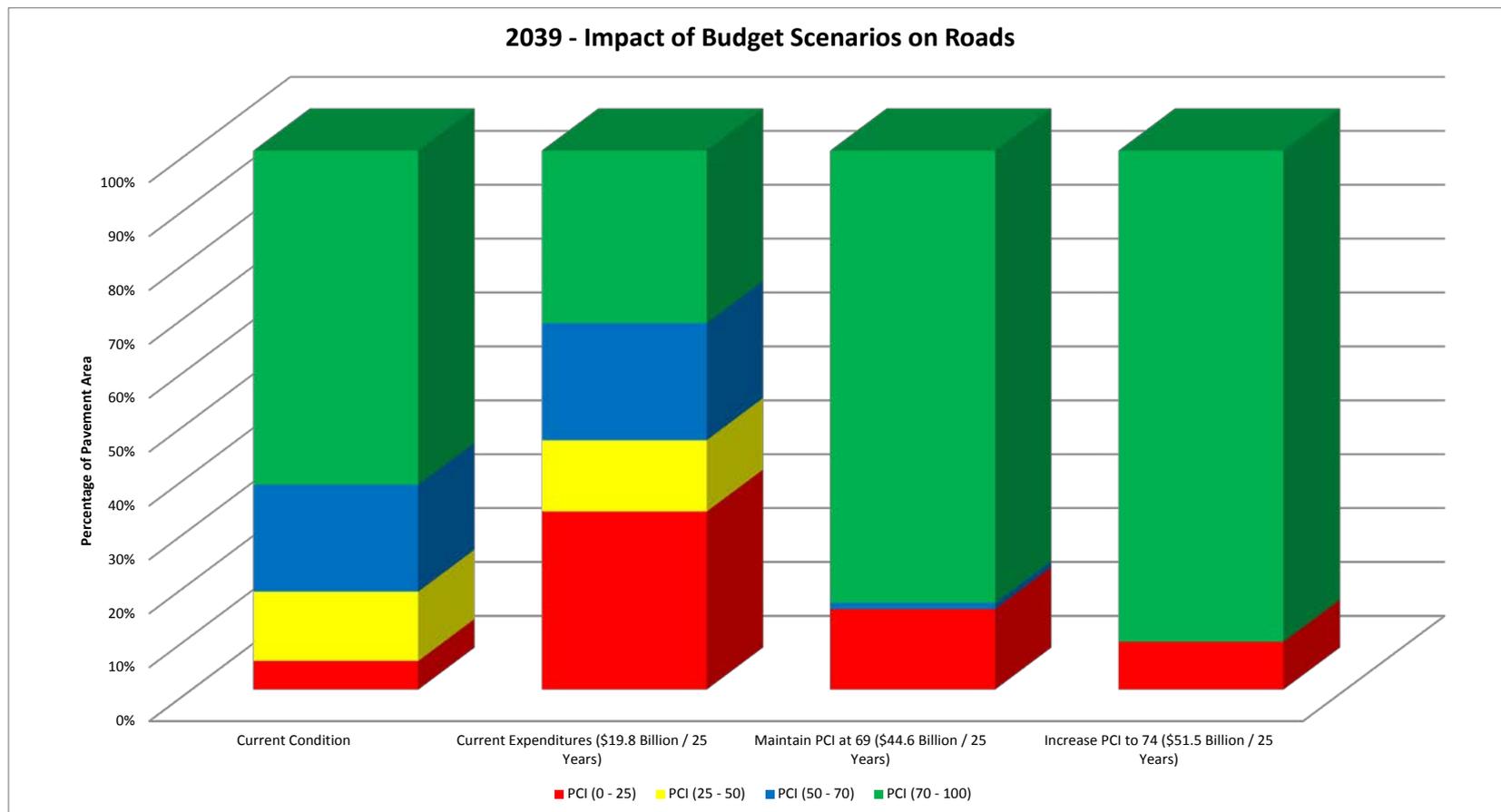




## Local Roads ... recent update

	Budget Required (\$ million)	Deferred maintenance (\$ million)	Total needs
Existing Budget	\$ 19,838	\$ 80,506	\$ 100,344
Maintain PCI	\$ 44,583	\$ 25,362	\$ 69,945
Increase PCI by 5	\$ 51,451	\$ 14,984	\$ 66,434

# Local Roads ... recent update



**Discussion**



SOUTHERN CALIFORNIA  
**ASSOCIATION of GOVERNMENTS**

Item 9  
No Attachment



SOUTHERN CALIFORNIA  
**ASSOCIATION of GOVERNMENTS**

Item 10 Attachment:  
2016 RTP/SCS Active Transportation Progress Update

# Active Transportation

## Progress towards 2016 RTP/SCS

Alan Thompson

Senior Regional Planner - Active Transportation

Technical Working Group

September 24, 2014



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ASSOCIATION of GOVERNMENTS

# Today's Topics

- Current Conditions
- Household Travel Survey
- New focus for 2016 RTP

# Current Conditions

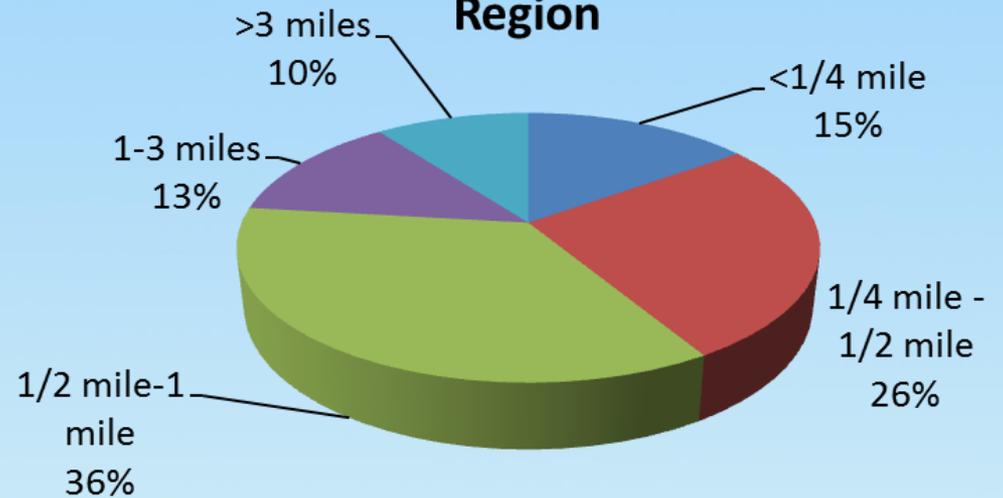
- All bike trips increase by 72% since 2008
  - 1.4% of all trips
  - 1.2% of commute trips
  - 1.0% of school commute trips
  - 1.95% of shopping trips
  - 2.4% of all exercise trips
- Bikeways increased by 11.5%
- 4 of 6 counties in SCAG region have good-excellent Pavement Condition Index, but three are on edge of being at risk

# Current Conditions

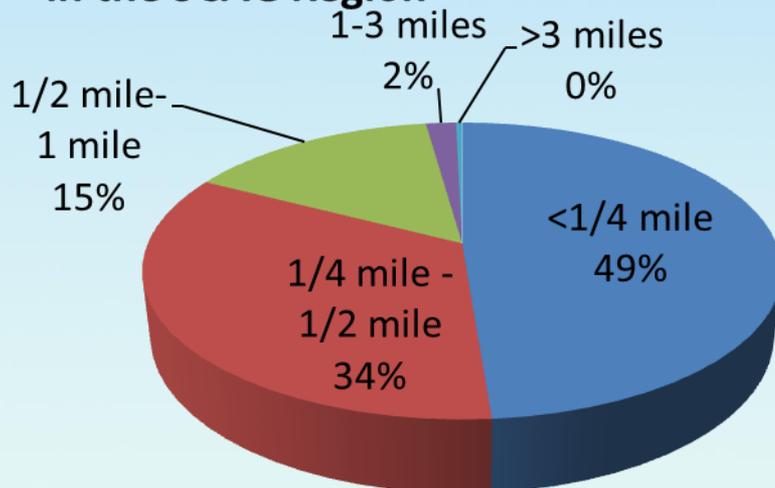
- Walk Trips approximately 13.5% of total trips
- 11.5% of all commute trips
- 18.7% of all school commute trips
- 10.4% of all shopping trips
- 14.2% of all exercise trips

# But Most Trips are fairly short

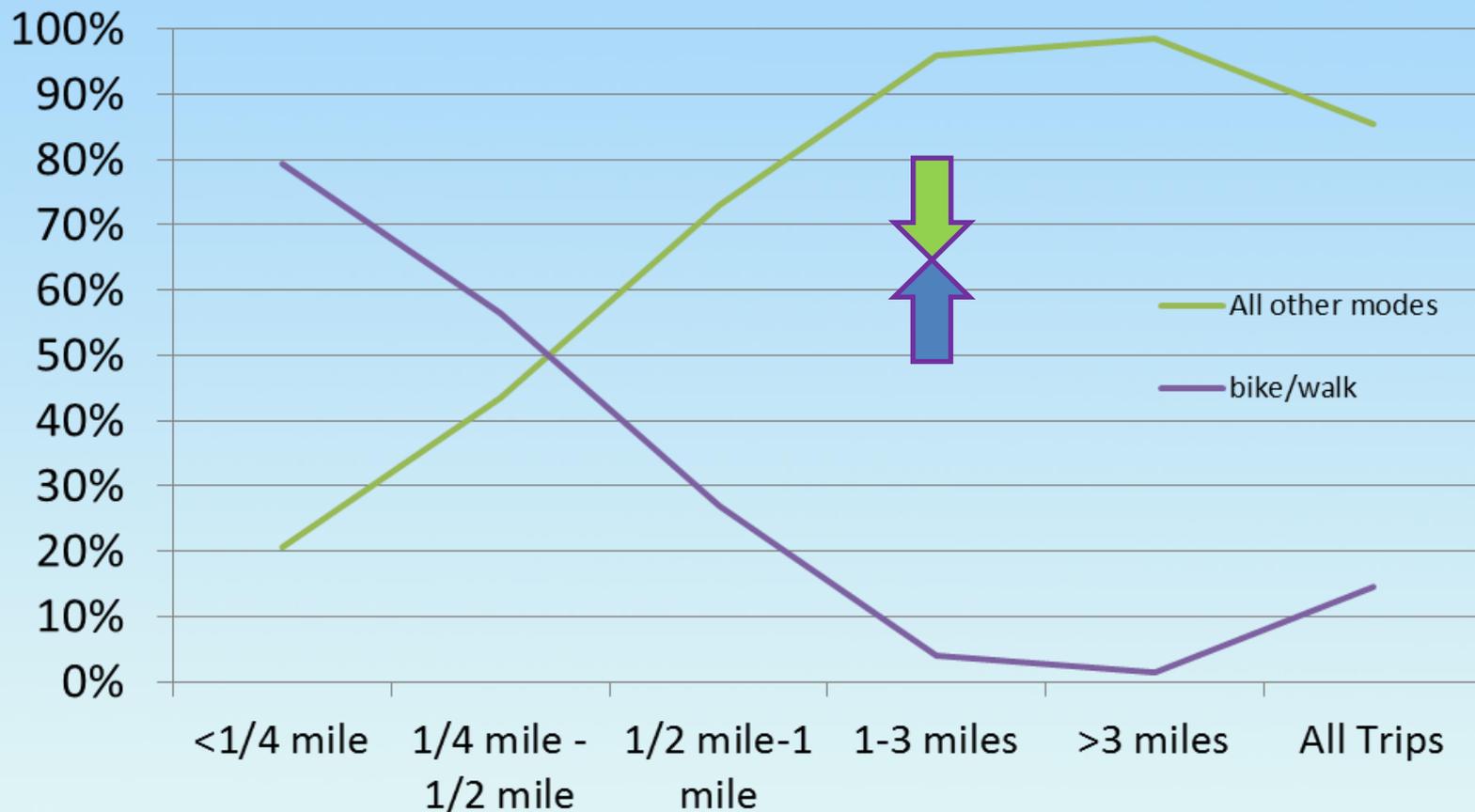
## Average Bike Distances in SCAG Region



## Average Walking Distances in the SCAG Region



# BUT...Not enough short trips in region are taken by walking or biking



# Current Conditions (Safety)

## Pedestrian and Bicyclist Injuries/Fatalities in the SCAG Region 2003-2012

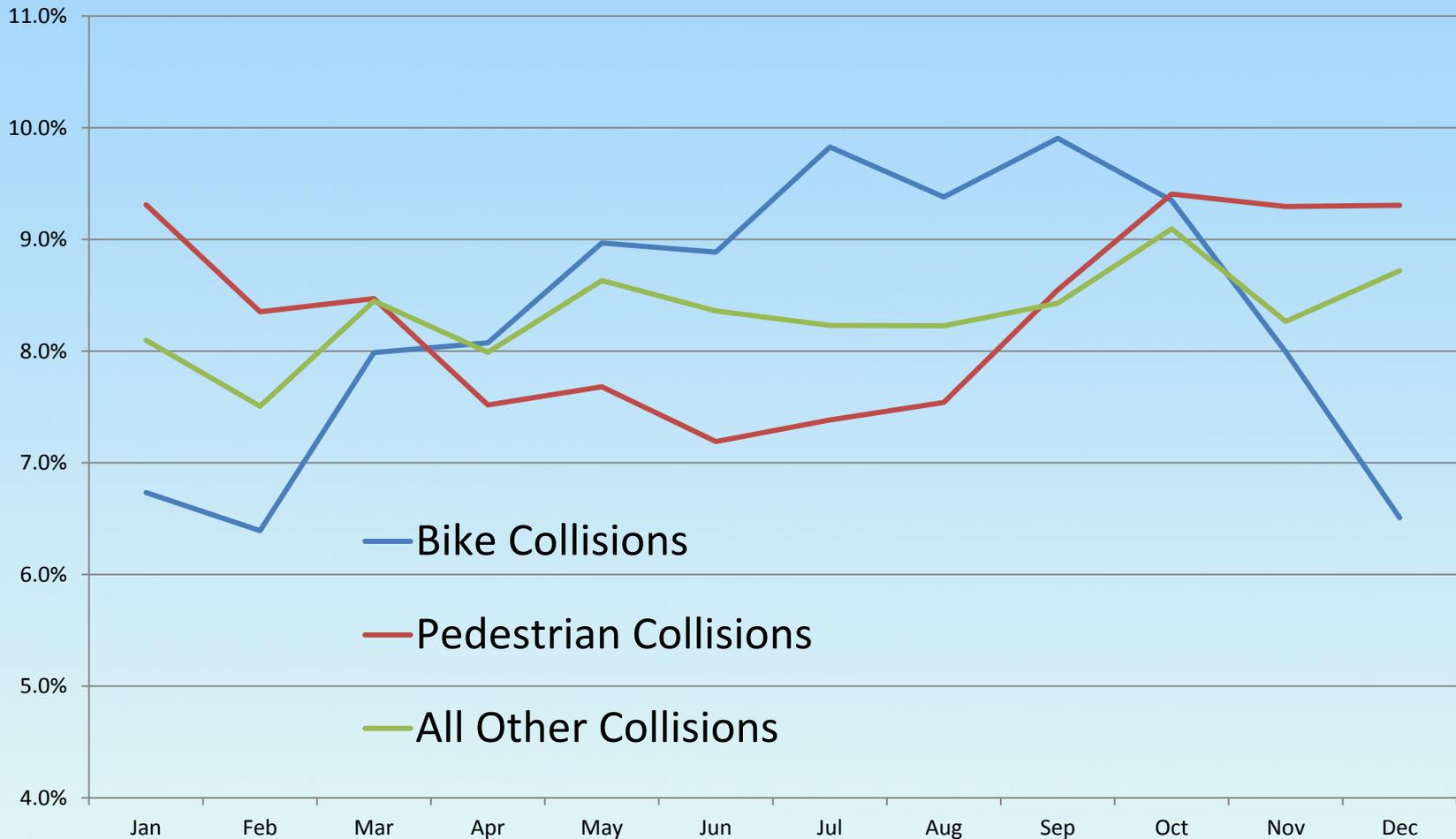
YEAR	Pedestrian		Bicyclist		Total	
	Killed	Injured	Killed	Injured	Killed	Injured
2003	369	7,553	60	5,236	1,815	157,173
2004	357	7,547	58	5,322	1,821	154,809
2005	373	7,265	73	4,870	1,825	149,811
2006	383	7,261	88	4,871	1,881	145,058
2007	354	7,289	57	4,813	1,740	138,778
2008	321	7,178	61	5,391	1,533	124,975
2009	312	7,224	49	5,840	1,297	120,709
2010	301	6,622	44	6,349	1,172	119,655
2011	303	6,690	67	7,051	1,212	118,981
2012	363	7,087	62	7,428	1,321	121,304

Source: SWITRS Table 8. 2003 -2012

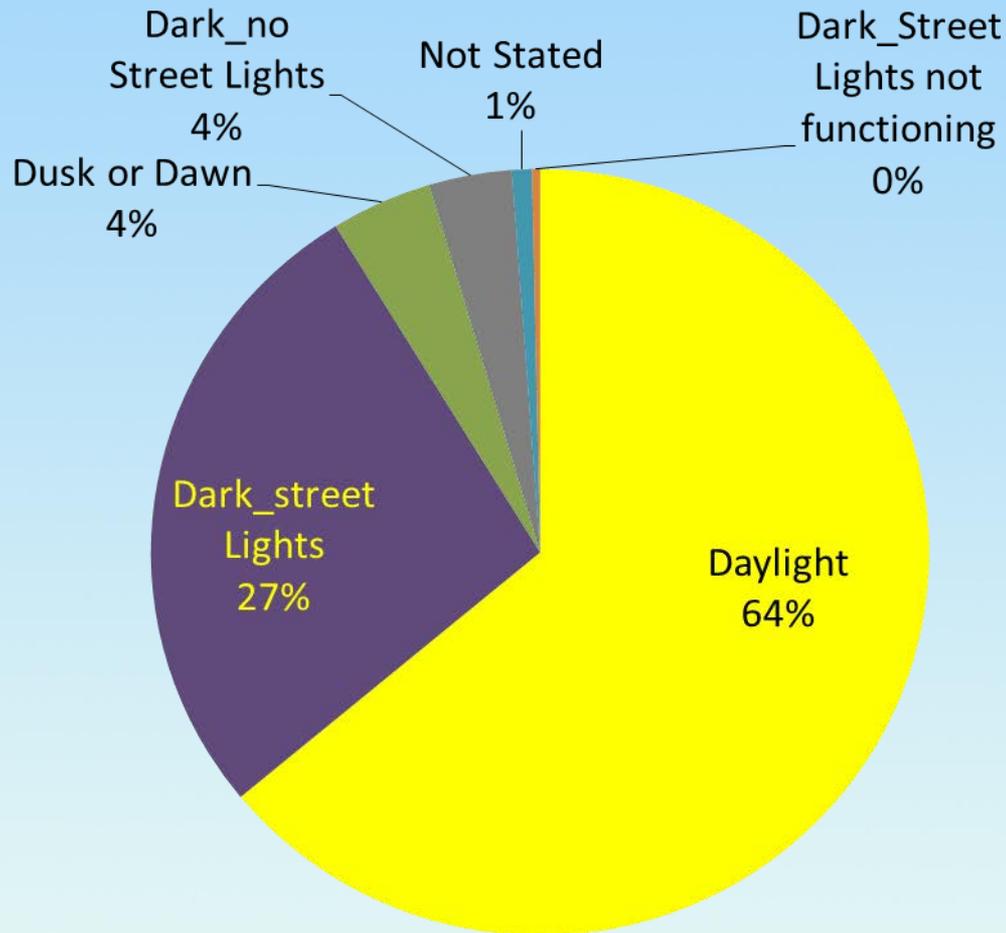
2008-2012	13%	-1%	2%	38%	-14%	-3%
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# Average Number of Collisions by Month

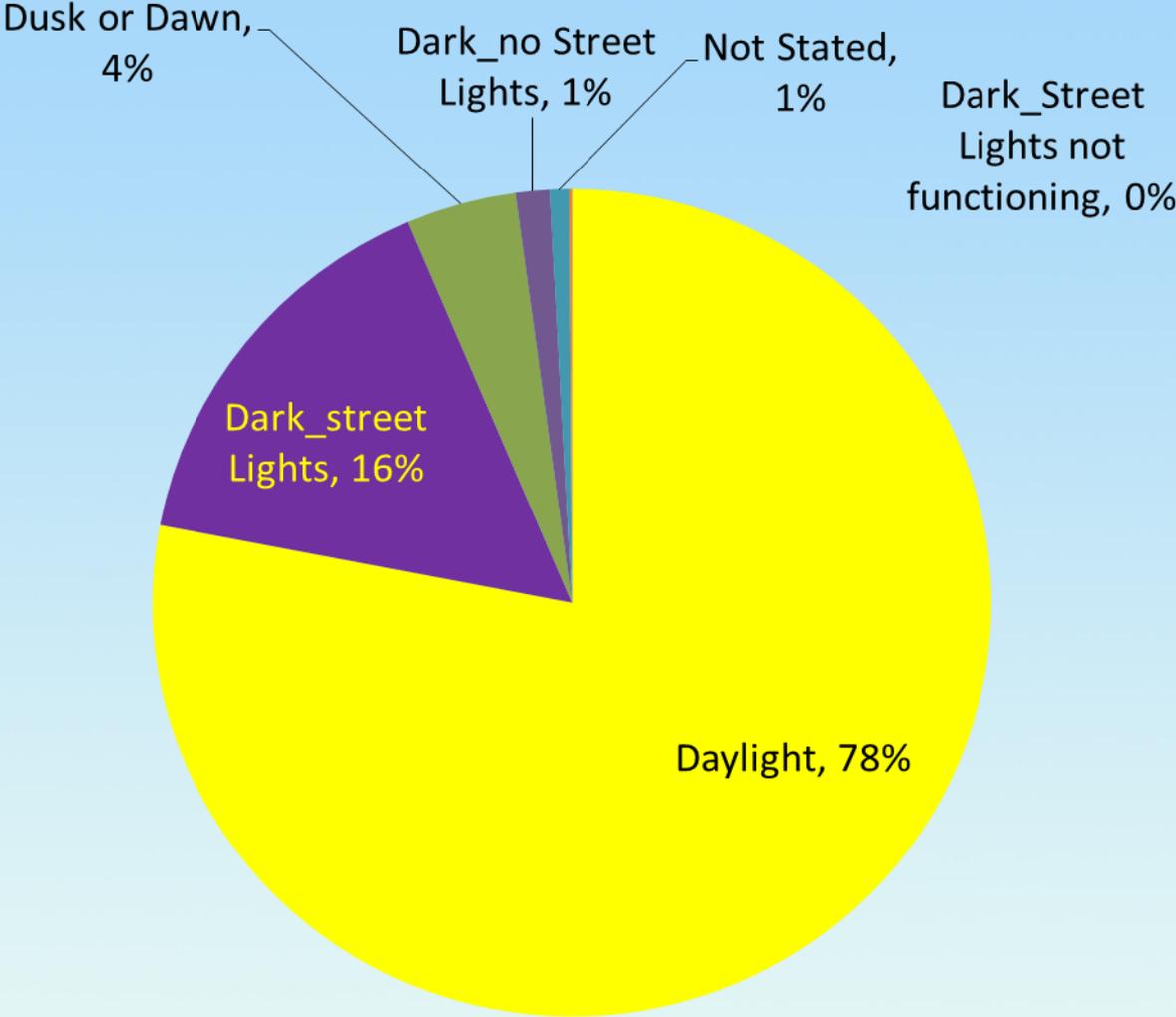
(2007-2012)



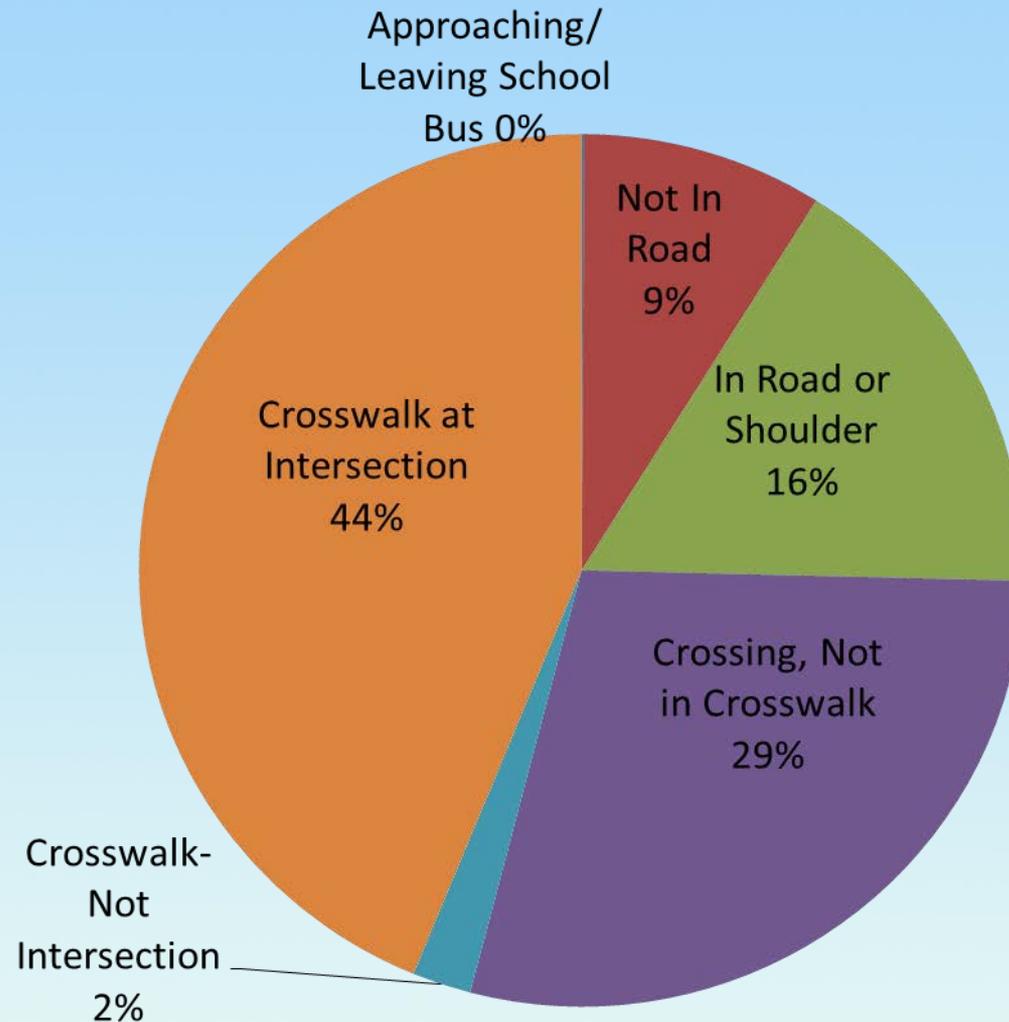
# Lighting Conditions for Pedestrian Involved Collisions



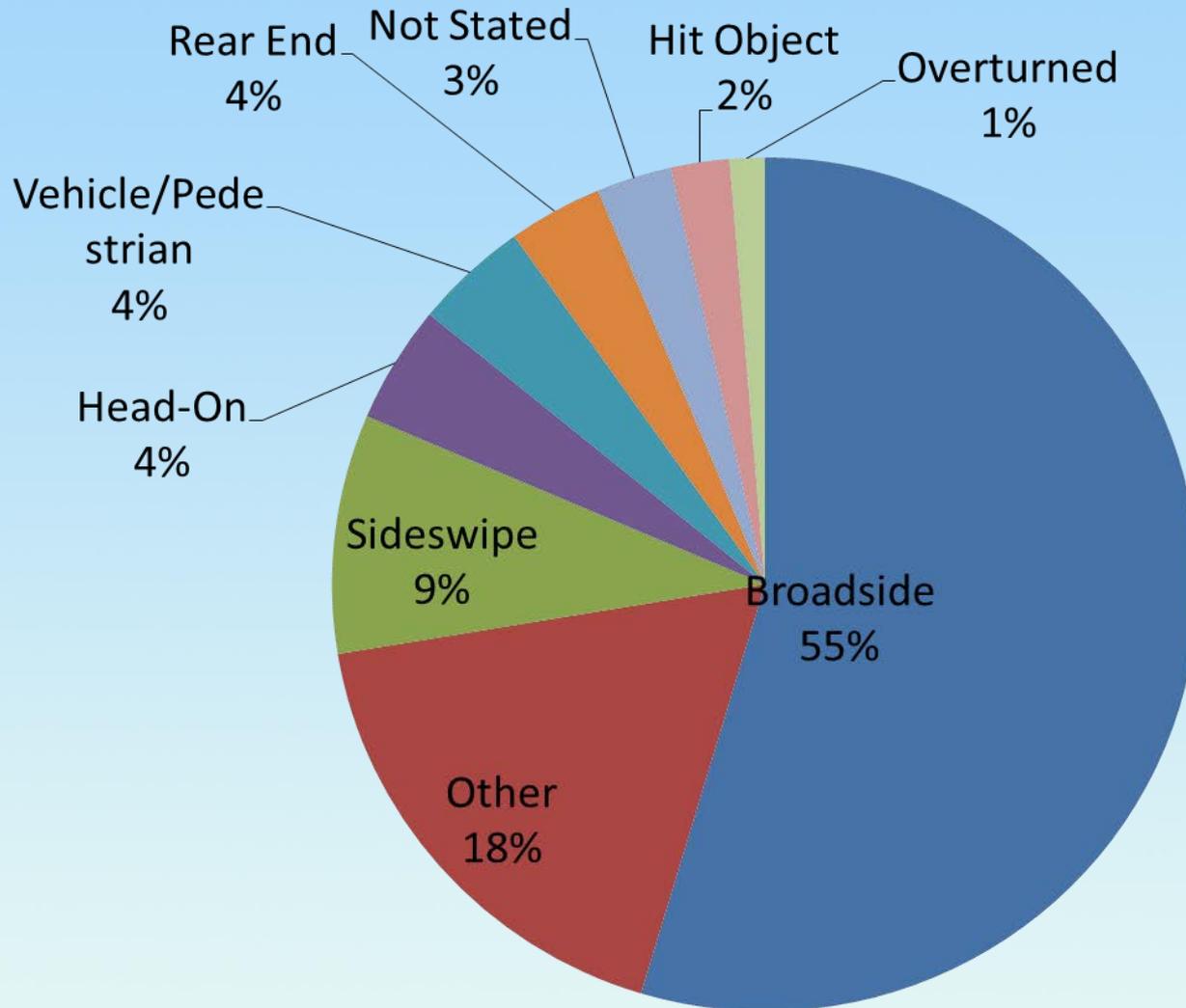
# Bicyclist Involved Collisions Lighting Conditions



# Pedestrian Locations for collisions



# Bicyclist Type of Collision By Type



# Focus for 2016

## Draft Goals

- **1:** Decrease Bicyclist and Pedestrian Fatalities and Injuries
- **2:** Increase active transportation usage in the SCAG region
- **3:** Encourage the development of local active transportation plans

# Focus for 2016

- Regional Trips Strategies
- Short Trips Strategies
- Education/Encouragement

# Focus for 2016

- Regional Trips Strategies
  - Regional Bikeway Network
  - Greenway Network
  - Grand Boulevards
  - 1<sup>st</sup>/Last Mile

# Focus for 2016

- Short Trips Strategies
  - Local Bikeway Networks
  - Pedestrian/Bike Friendly Districts (Livable Corridors)
  - Bike Share

# Focus for 2016

- Education/Encouragement
  - Safety/educational Campaign
  - Safe Routes to School
  - Local Assistance/Planning Support

# Schedule

- Finalize Scenario Development (March 2015)
- Modeling (April)
- Scenarios Outcomes (May)
- Outreach to TWG and Working Groups (May – June)
- RTP/SCS Policies and Strategies (June)
- Draft Active Transportation Plan to TC (September)
- Draft RTP/SCS out for Public Review/Comment (October)

# Active Transportation & Special Programs

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# Follow Up from a Previous Meeting

- Following are the 30+ purpose codes from the California Household Travel survey, categorized by type.

# FYI: Purpose Codes from California Household Travel Survey

## School Trips

- In school/classroom/laboratory,

## Commute Trips

- Work/job duties,
- All other work-related activities at my work,

# Purpose Code (Exercise)

- exercise/sports,
- outdoor exercise (playing sports/jogging, bicycling, walking, walking the dog, etc.),
- indoor exercise (gym, yoga, etc.),
- exercise (with or without equipment)/playing sports,

# Purpose Code (utilitarian)

- routine shopping
- shopping for major purchases or specialty items
- household errands (bank, dry cleaning, etc.),
- personal business
- eat meal at restaurant/diner,
- health care (doctor, dentist, eye care, hiropractor, veterinarian),
- civic/religious activities,
- entertainment (movies, watch sports, etc),
- social/visit friends/relatives,

# Purpose Code (misc)

- other (specify)
- loop trip (for interviewer only-not listed on diary),
- dont know/refused
- work-sponsored social activities (holiday or birthday celebrations, etc),
- non-work related activities (social clubs, etc),
- meals at school/college,
- after school or non-class-related sports/physical activity,
- training,
- meals at work
- volunteer work/activities

# Purpose Code (misc)

- all other after school or non-class related activities (library, band rehearsal, clubs, etc) ,
- change type of transportation/transfer (walk to bus, walk to/from parked car),
- pickup/drop off passenger(s),
- drive through meals (snacks, coffee, etc.)
- drive through other (atm, bank)
- work-related (meeting, sales call, delivery),
- service private vehicle (gas, oil, lube, repairs),

# Purpose Codes (at home)

- Personal activities
- Preparing meals/eating,
- hosting visitors/entertaining guests,
- study / schoolwork,
- work for pay at home using telecommunications equipment,
- using computer/telephone/cell or smart phone or other communications device for personal activities,
- all other activities at my home,