SCAG
INNOVATING FOR A BETTER TOMORROW

SOUTHERN CALIFORNIA
ASSOCIATION OF GOVERNMENTS
900 Wilshire Blvd., Ste. 1700
Los Angeles, CA 90017
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www.scag.ca.gov

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REGULAR MEETING

TRANSPORTATION COMMITTEE

Thursday, June 6, 2019
10:00 AM - 12:00 PM

SCAG MAIN OFFICE
900 Wilshire Blvd., Ste. 1700
Regional Council Room
Los Angeles, CA 90017
(213) 236-1800

If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact Tess Rey-Chaput at (213) 236-1908 or via email at REY@scag.ca.gov. Agendas & Minutes for the TC - Transportation Committee are also available at: www.scag.ca.gov/committees

SCAG, in accordance with the Americans with Disabilities Act (ADA), will accommodate persons who require a modification of accommodation in order to participate in this meeting. SCAG is also committed to helping people with limited proficiency in the English language access the agency's essential public information and services. You can request such assistance by calling (213) 236-1908. We request at least 72 hours (three days) notice to provide reasonable accommodations and will make every effort to arrange for assistance as soon as possible.

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23. **Hon. Dave Harrington**
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    Bell, RC District 27

49. **Hon. Damon Sandoval**
    Morongo Band of Mission Indians

50. **Hon. Tim Sandoval**
    Pomona, RC District 38

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    Brea, RC District 22

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58. **Hon. Alicia Weintraub**
    Calabasas, LVMCOG

59. **Mr. Paul Marquez**
    Ex-Officio, Caltrans, District 7

60. Hon. Michael Carroll (NEW Member)
    Irvine, RC District 14

TRANSPORTATION COMMITTEE AGENDA

Southern California Association of Governments
900 Wilshire Boulevard, Suite 1700 – Regional Council Room
Los Angeles, California 90017
Thursday, June 6, 2019
10:00 AM

The Transportation Committee may consider and act upon any of the items on the agenda regardless of whether they are listed as Information or Action items.

CALL TO ORDER AND PLEDGE OF ALLEGIANCE
(The Honorable Cheryl Viegas-Walker, Chair)

PUBLIC COMMENT PERIOD
Members of the public desiring to speak on items on the agenda, or items not on the agenda, but within the purview of the Committee, must fill out and present a Public Comment Card to the Assistant prior to speaking. Comments will be limited to three (3) minutes per speaker. The Chair has the discretion to reduce the time limit based upon the number of speakers and may limit the total time for all public comments to twenty (20) minutes.

REVIEW AND PRIORITIZE AGENDA ITEMS

ACTION/DISCUSSION ITEMS

1. I-105 Corridor Sustainability Study Status Report — Page 8
(Naresh Amatya, SCAG Manager of Transportation; and
Gary Hamrick, Cambridge Systematics)

RECOMMENDED ACTION:
Receive the study findings and direct staff to finalize the report and transmit the final reports to Caltrans, FHWA, Metro and other interested stakeholder agencies.

CONSENT CALENDAR

Approval Items

2. Minutes of TC Meeting, April 4, 2019 — Page 27

Receive and File

3. Safety Leadership Symposium and Workshop Series — Page 34
4. ADA Paratransit Demand Forecast — Page 37
5. Transit Asset Management Target Setting — Page 39
6. Connect SoCal Technical Methodology Submittal to California Air Resources Board — Page 43
7. Local Input Survey Results — Page 90

INFORMATION ITEMS

8. Connect SoCal Financial Plan Development Update — Page 143 — 10 Mins.
(Annie Nam, Manager of Goods Movement & Transportation Finance, SCAG)

9. SCAG Transportation Demand Management Strategic Plan Update — Page 151 — 20 Mins.
(Steve Fox, Senior Regional Planner, SCAG)

10. The Future of the Workplace: Regional Summary and Travel Impacts — Page 161 — 15 Mins.
(Anurag Komanduri, Principal, Cambridge Systematics)

CHAIR'S REPORT
(The Honorable Cheryl Viegas-Walker, Chair)

METROLINK REPORT
(The Honorable Art Brown, SCAG Representative)

STAFF REPORT
(John Asuncion, SCAG Staff)

FUTURE AGENDA ITEMS

ANNOUNCEMENT/S

SCAG is 'dark' in July. The next regular meeting of the Transportation Committee is scheduled for Thursday, August 1, 2019 at the SCAG Los Angeles Office, 900 Wilshire Boulevard, Los Angeles, CA 90017.

ADJOURNMENT

AGENDA ITEM NO. 1

REPORT

Southern California Association of Governments
900 Wilshire Boulevard, Suite 1700, Los Angeles, California 90017
June 6, 2019

To: Transportation Committee (TC)

EXECUTIVE DIRECTOR'S APPROVAL

Kome Ajise

From: Hina Chanchlani, Assistant Regional Planner, Transportation Planning and Programming, 213-236-1829, chanchlani@scag.ca.gov

Subject: I-105 Corridor Sustainability Study Status Report

RECOMMENDED ACTION:
Receive the study findings and direct staff to finalize the report and transmit the final report to Caltrans, FHWA, Metro and other interested stakeholder agencies.

STRATEGIC PLAN:
This item supports the following Strategic Plan Goal 1: Produce innovative solutions that improve the quality of life for Southern Californians.

EXECUTIVE SUMMARY:
SCAG staff in coordination with the consultant team, Cambridge Systematics, will present the final report on the I-105 Corridor Sustainability Study (CSS or Study) which was initiated in summer of 2017. The goal of the Study is to identify a comprehensive set of multimodal solutions to the challenges on this corridor in an effort to reduce overall congestion within the corridor, while promoting long-term sustainability and safety.

BACKGROUND:
In FY 2016-17, SCAG was awarded a Caltrans Sustainable Transportation Planning Grant to examine the multi-modal I-105 corridor and to assess its future potential through a Corridor Sustainability Study. Historically, SCAG, working in partnership with Caltrans, has developed Corridor System Management Plans (CSMPs) for a number of freeway corridors throughout the region. CSMPs have traditionally focused on roadway operation and delay due to congestion along the mainline highway. The I-105 CSS goes beyond the current CSMP framework to examine the entire I-105 corridor from a multi-modal perspective. The Study integrates new planning frameworks and sustainable strategies that go beyond the traditional approach of adding capacity, including, but not limited to: complete streets concepts, the Smart Mobility Framework (SMF), managed lanes and advanced operational strategies (e.g., integrated corridor management, transportation system management and operations (TSMO) strategies) in an effort to improve overall mobility and safety throughout the corridor.

<u>Study Scope and Overview</u>
The scope of the Study includes: information regarding its comprehensive public and stakeholder outreach; purpose and need statement; an assessment of existing conditions and future baseline conditions; development of performance measures; development and evaluation of improvement

scenarios; a series of comprehensive multi-modal recommendations; and associated cost estimates. A project development team (PDT) was formed to provide technical guidance and input to SCAG and its consultant. The PDT includes staff representatives from the Los Angeles County Metropolitan Transportation Authority (Metro) and Caltrans. In addition to the PDT, a technical advisory committee (TAC) was also formed to provide additional technical guidance and input during major project milestones. The TAC is composed of planning staff from local jurisdictions along the corridor (e.g., Norwalk, Bellflower, and Gardena), Los Angeles County, the Los Angeles World Airports (LAWA), Gateway Cities Council of Governments, South Bay Cities Council of Governments, Metro, and Caltrans.

The work completed to support the Study includes defining the study area, comprehensive collection of data related to socio economic/demographic makeup of the study area, current condition data on all modes of transportation within the Study area leading to a completion of a comprehensive current condition report, future baseline condition report which establishes a baseline for developing future improvement scenarios. Emphasis is given to future improvement scenarios built from a collection of projects which are organized by near, mid and long term implementation timeframes. The team assembled a comprehensive list of improvement projects that are planned, programmed or are in implementation phase within the Study area, which serves as a starting point for the improvement scenarios. A total of 425 projects were identified for inclusion in the study through existing planning studies and working with corridor cities and stakeholders. Furthermore, the team developed a framework for evaluating the alternative scenarios that will serve as the foundation for the selection of a preferred alternative scenario.

The project evaluation is categorized by project types such as arterials, transit, active transportation, goods movement, and highway which are used to evaluate the performance by highest performing, the middle tier and lower performing tier of projects. The categorization of projects as near-term, mid-term, and long-term is not intended to be used to prioritize funding and implementation. Instead, the project list is intended to assist decision makers in understanding the relative benefits and challenges associated with types of projects. Ultimately, project implementation will be decided by the project sponsor(s) and jurisdiction(s) that the project is located in. The project information in detail has been provided in the final report and will ultimately be forwarded to the implementing agencies as part of the final report.

More than half of the projects are near term, about a quarter are mid-term, and a small number are defined as long-term projects. Nearly a quarter of projects for near term or midterm are highest performers which means that they are considered likely to better enhance the corridor sustainability. A majority of projects fall in the middle performance evaluation tier in the near and mid-term categories. These highest tier projects include bikeways and trails, complete streets, first/ last mile improvements, bridge and grade separation, new bus rapid transit (BRT), transit centers, arterial ITS and operational improvements, and new rail projects. Some of these will take much longer to implement, such as new rail, despite its many benefits. Other projects, such as new Class II bikeways, could be implemented in less time and would thus make an impact in the corridor in the near-term by closing critical gaps and improving non-motorized transportation options in the I-105 Study Area.

In the near term project improvements, majority are active transportation and arterial improvement projects. Fifty one (51) projects are in the top tier. The mid-term project scenario includes projects such as adding express lanes, ramp improvements, and sound walls which are larger infrastructure undertakings that require numerous levels of approval, years of planning, environmental review and major construction. Fifty two percent (52%) of mid-term projects includes transit projects such as Metro link commuter rail enhancements, new BRT, and transit centers and park and ride facilities. The top tier projects that will improve accessibility, mobility, sustainability, and safety of the corridor and could likely be completed in five to fifteen years include a new BRT, HOV/Express lanes, bridge and grade separation, new sidewalk/ trail, complete streets and class one or four bikeways. About 20 projects are long term which could take more than 15 years to implement. The projects include major highway capacity enhancements, grade separations and crossings, and new rail projects. New rail facilities are placed in higher performing category despite their longer timeframe for implementation because they address the multi-modal objectives of the study and on the other hand, capacity enhancement projects generally fall in the lower tier because they do not tend to advance sustainability in the same way as alternative modes.

Next Steps

Upon acceptance of this Study by this committee, staff will finalize the report and the associated technical documents for transmittal to Caltrans, LA Metro and other interested stakeholders. Many of the projects identified in the report are already in SCAG's planning and programming documents (2019 FTIP and 2016 RTP/SCS). Staff will review options for incorporating those additional projects that are not currently in SCAG's planning and programming documents, for inclusion in the Connect SoCal (2020 RTP/SCS), at least as unconstrained strategic projects. As with most planning studies prepared by SCAG, SCAG will work with the implementing agencies to support their implementation as funding and opportunities arise. Prioritizing funding for these projects will be solely at the discretion of the implementing agencies that have the jurisdiction over the project implementation for each of the projects identified in the Study.

The link for a draft study can be found on SCAG's website http://scag.ca.gov/I-105-Corridor-Study.

FISCAL IMPACT:

The I-105 Corridor Sustainability Study is funded by a Caltrans Sustainable Transportation Planning Grant in the amount of $500,000 and Local Match of $125,000. The funds are programmed in SCAG's Overall Work Program (OWP), project number 145-4425.01.

ATTACHMENT(S):

1. PowerPoint Presentation - I 105 Corridor Sustainability Study

I-105 Corridor Sustainability Study

SCAG Transportation Committee

June 6, 2019

Presented By:

Gary Hamrick, Cambridge Systematics

Project History and Background

- 2016 Caltrans Sustainable Transportation Planning Grant
- **Purpose of the Study**:
  - Examine ***multi-modal*** I-105 corridor conditions
  - Go beyond traditional freeway planning
  - Integrate Caltrans Smart Mobility Framework
  - Include key stakeholders

Attachment: PowerPoint Presentation - I 105 Corridor Sustainability Study (I-105 Corridor Sustainability Study Status Report)

Multi-Modal Corridor Plan Guidelines

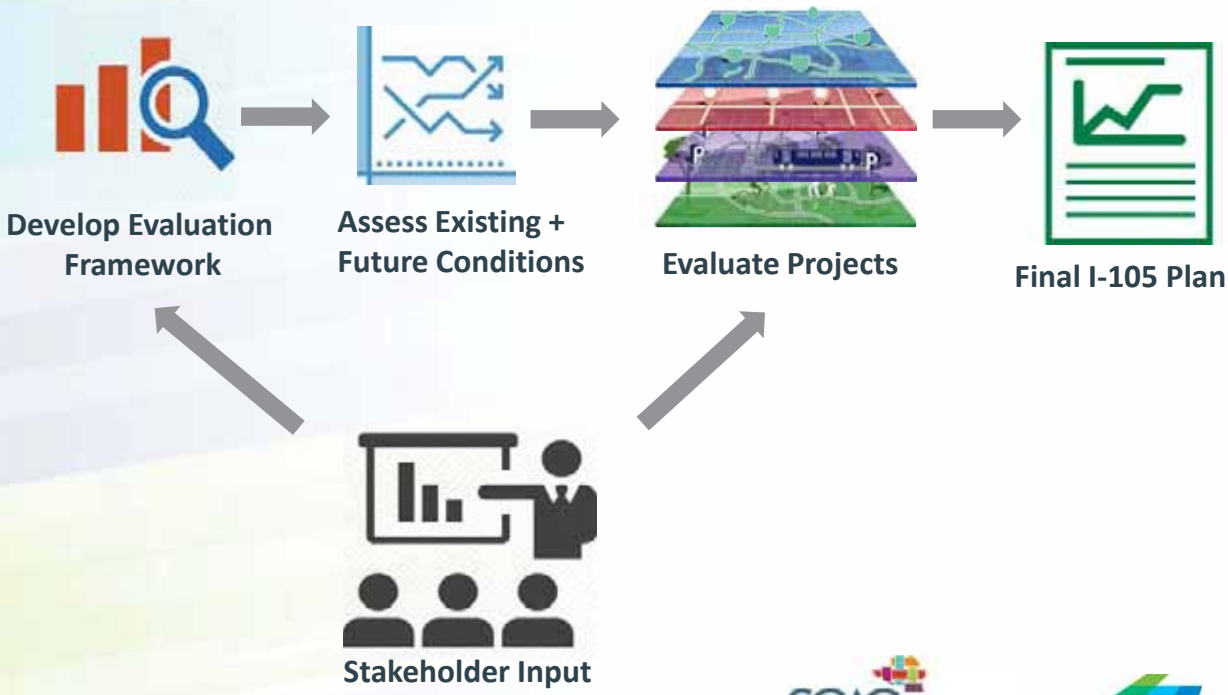
- **Caltrans Corridor Planning Guidebook**
  - To replace Transportation Concept Report (TCR) guidelines
  - Public draft released in December, 2018
- **CTC Comprehensive Multi-Modal Corridor Plan Guidelines**
  - California Transportation Commission guidelines for eligibility of ***plans*** under Congested corridors program (SB1)
  - Final guidelines approved December 5, 2018
  - Agencies beginning to create plans now

Project Objectives

- ***Not simply Level of Service for Autos!***
  - **Reduce delay** per capita;
  - **Reduce vehicle miles traveled (VMT)** per capita;
  - **Improve connectivity** between modes;
  - **Increase mode share for** transit, walking, and bicycling;
  - **Improve system conditions** (preservation);
  - **Improve system efficiency** (operations);
  - **Reduce serious and fatal collisions**; and
  - **Support Senate Bill 375** and **greenhouse gas reduction**

Attachment: PowerPoint Presentation - I 105 Corridor Sustainability Study (I-105 Corridor Sustainability Study Status Report)

Process



Project Study Area

- **3 Miles around all sides of I-105 Freeway**

Attachment: PowerPoint Presentation - I 105 Corridor Sustainability Study (I-105 Corridor Sustainability Study Status Report)

Evaluation Framework

Goals	Objectives	Performance Measures
Mobility	• Improve multimodal system efficiency • Improve transit ridership • Reduce congestion	• Transit ridership/mode share • High-occupant vehicle (HOV) mode share • Total person throughput • Travel time by mode • Vehicle/person hours of delay (VHD/PHD) • Truck VHD
Accessibility & Equity	• Improve system connectivity and access to non-SOV modes • Increase service to social equity focus (SEF) populations • Promote geographic equity throughout the corridor	• Households within 1/2-mile of high quality transit access • Jobs within 1/2-mile of high quality transit access • Bicycle facility density within 1/2-mile of high quality transit access • Healthcare, schools and activity centers accessible by low-stress bicycle/pedestrian facilities • Travel time by mode for social equity focus (SEF) populations • SEF households with access to high quality transit • Geographic equity

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Evaluation Framework

Goals	Objectives	Performance Measures
Safety	• Reduce safety collisions and hazards	• Serious injury crash rates (by mode) • Fatal collision rate (by mode)
State of Good Repair	• Improve & preserve system conditions	• Pavement in good, fair, and poor condition • NHS bridges in good, fair, and poor condition
Sustainability	• Improve air quality and public health • Reduce emissions	• Greenhouse gas (GHG) emissions • Air quality criteria pollutant emissions • Bicycle and walk mode share • Non-single occupant vehicle (SOV) mode share • Parks, recreation & open space accessible by low-stress bike/ped facilities, complete streets, and/or high quality transit • Vehicle miles traveled (VMT)

SCAG CAMBRIDGE SYSTEMATICS

Attachment: PowerPoint Presentation - I 105 Corridor Sustainability Study (I-105 Corridor Sustainability Study Status Report)

Significant Stakeholder Outreach Effort

- **Project Develop Team**
  - » SCAG, Caltrans, Metro
- **Technical Advisory Committee**
  - » Cities/county
  - » Transit providers
  - » Interest groups
- **Stakeholder Interviews**
  - » Transit providers,
  - » Active transportation groups
  - » Cities
- **Infographics**
- **Project Website**
- **Online Public Survey**

Public Engagement

Four public events:
- Downey
- El Segundo
- Lynwood
- Hawthorne

Public survey:
- 124 responses

Attachment: PowerPoint Presentation - I 105 Corridor Sustainability Study (I-105 Corridor Sustainability Study Status Report)

EXISTING AND FUTURE DEFICIENCIES

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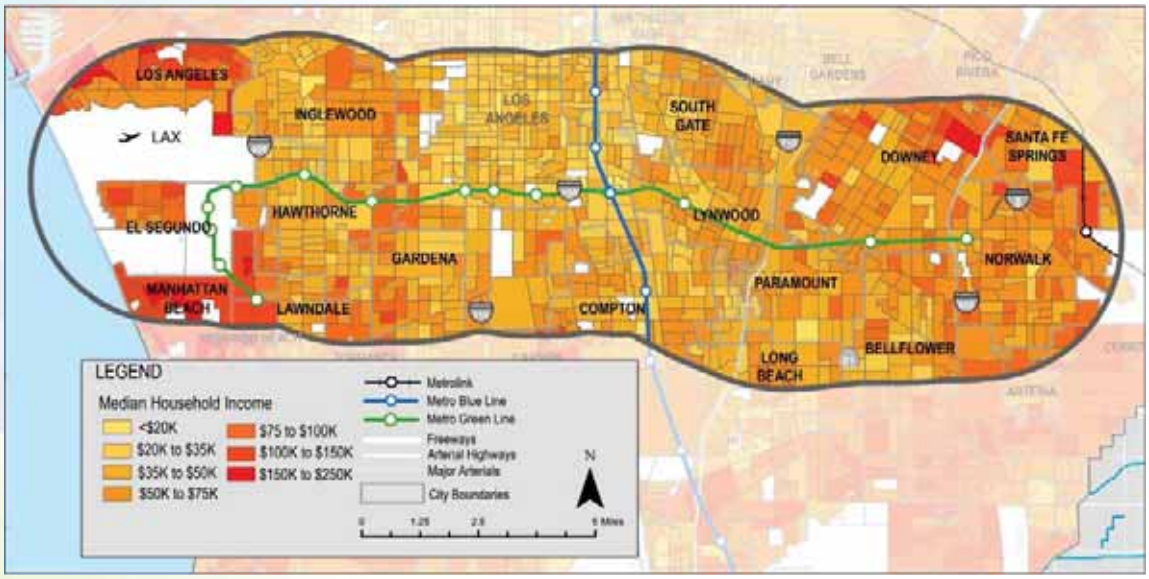
Land Use and Demographics

Median Household Income



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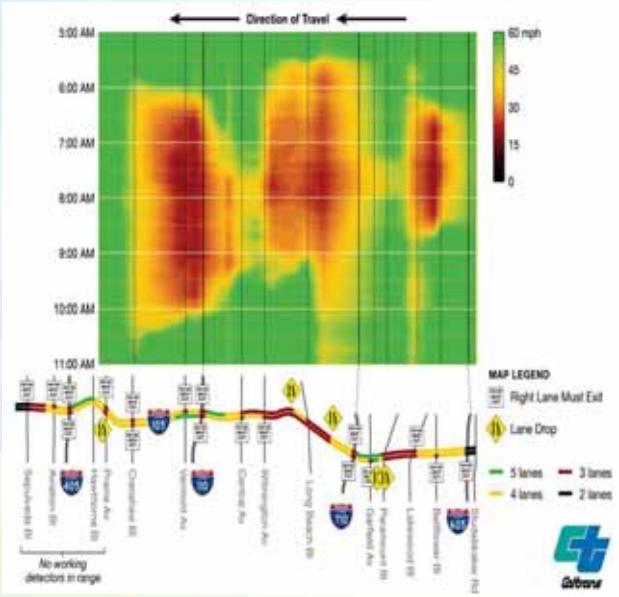
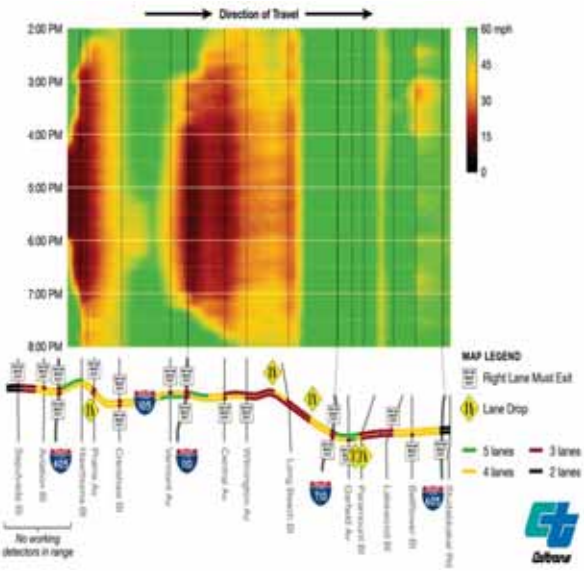
Freeway

AM Westbound Speed Contours



PM Eastbound Speed Contours



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CAMBRIDGE SYSTEMATICS

Arterials

Daily Vehicle Hours Traveled

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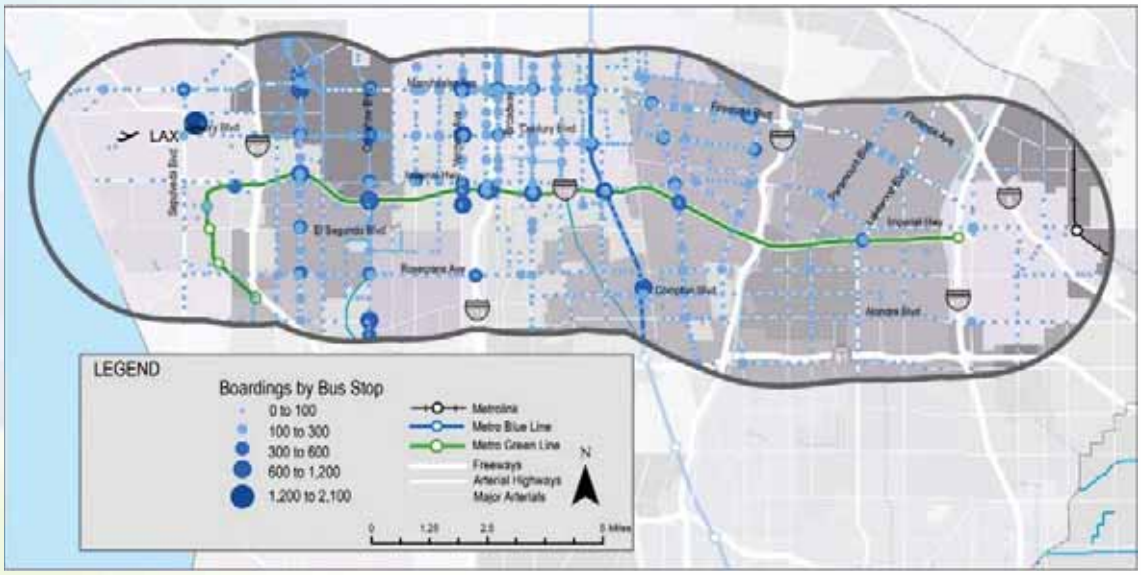
Transit

Metro Bus Ridership by Stop



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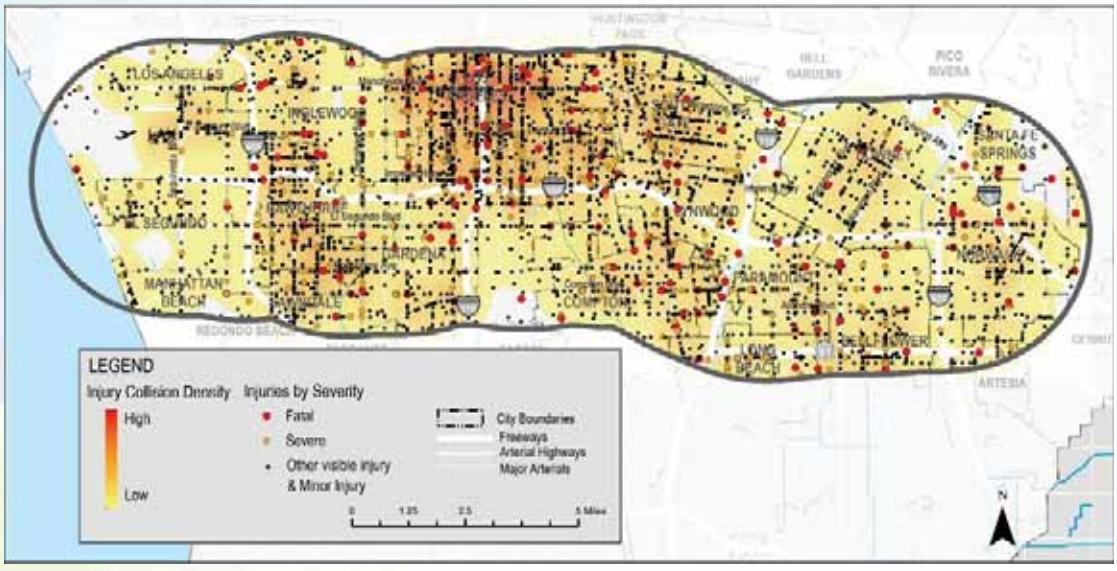
Safety

Bicycle and Pedestrian Collisions



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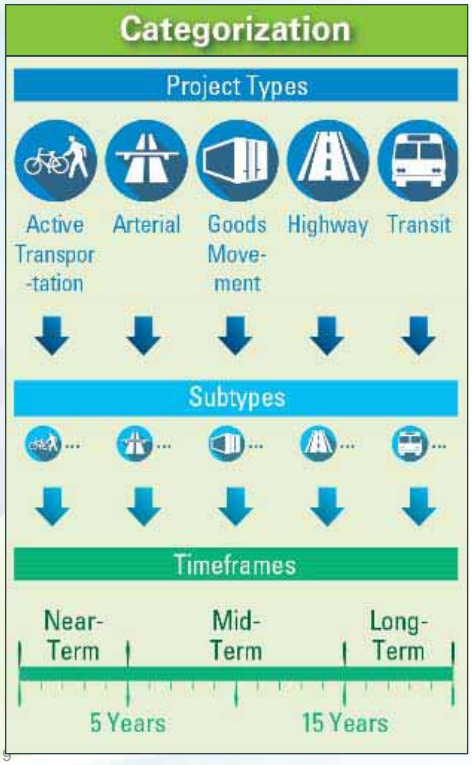
Attachment: PowerPoint Presentation - I 105 Corridor Sustainability Study (I-105 Corridor Sustainability Study Status Report)

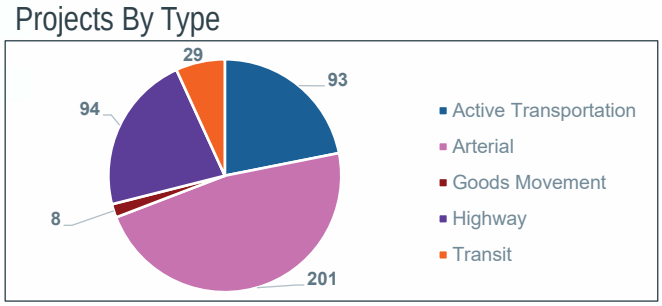
SCENARIO EVALUATION

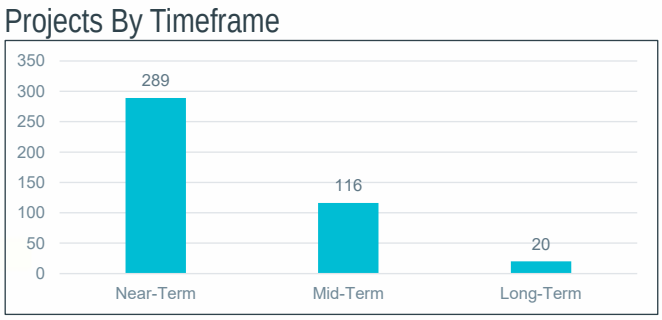
Project Evaluation Process

Attachment: PowerPoint Presentation - I 105 Corridor Sustainability Study (I-105 Corridor Sustainability Study Status Report)

Evaluation Process: Categorization







SCAG CAMBRIDGE SYSTEMATICS

Evaluation Process: Qualitative and Quantitative Evaluation

Attachment: PowerPoint Presentation - I 105 Corridor Sustainability Study (I-105 Corridor Sustainability Study Status Report)

Qualitative Evaluation; Active Transportation

Type	Subtype	Mobility & Connectivity	SOGR	Accessibility & Equity	Safety	Sustainability
Active Transportation	Bikeshare					
	Bikeway—Class 2					
	Bikeway—Class 3					
	Education and Promotion					
	Beautification/ Open Space					
	Pedestrian Improvements					
	1st/ Last Mile					
	Bikeway—Class 1 or 4					
	Bike/ ped Bridges					
	Complete Streets					
	New Sidewalk/ Trail					

GIS Locational Analysis; Projects Receive Detailed Score

Type	Extra Scoring
Active Transportation	**Within a half mile of a BRT or rail station**
	Intersects a CalEnviroScreen disadvantaged Census tract
	Intersects a quarter-mile buffer around schools, intersects a half-mile buffer around hospitals and medical centers, intersects a commercial center
Arterial	Project on east/ west corridor
	Vehicle hours of delay > 1,000
	VMT over 150,000 miles
Transit	**Employment Density >15 jobs per acre, intersects a commercial center**
	Intersects a CalEnviroScreen disadvantaged Census tract
	Population density > 20,000 people per square mile

SCAG CAMBRIDGE SYSTEMATICS

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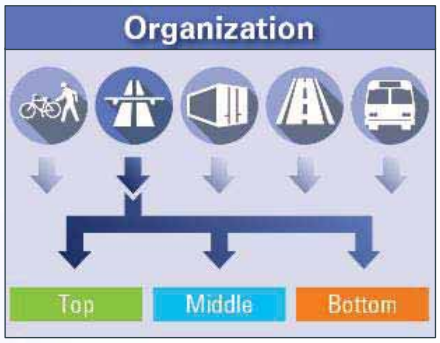
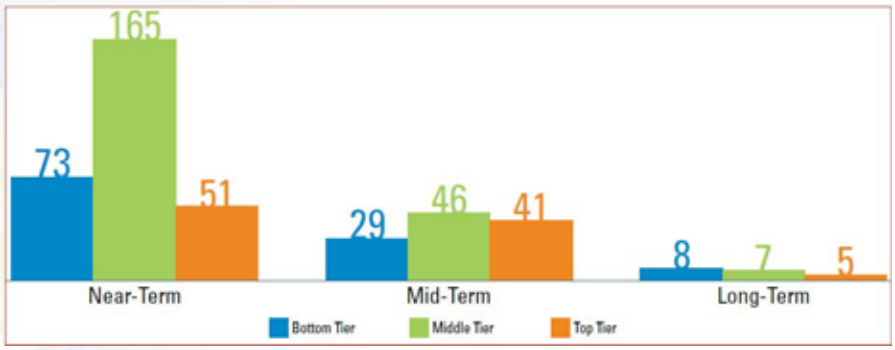
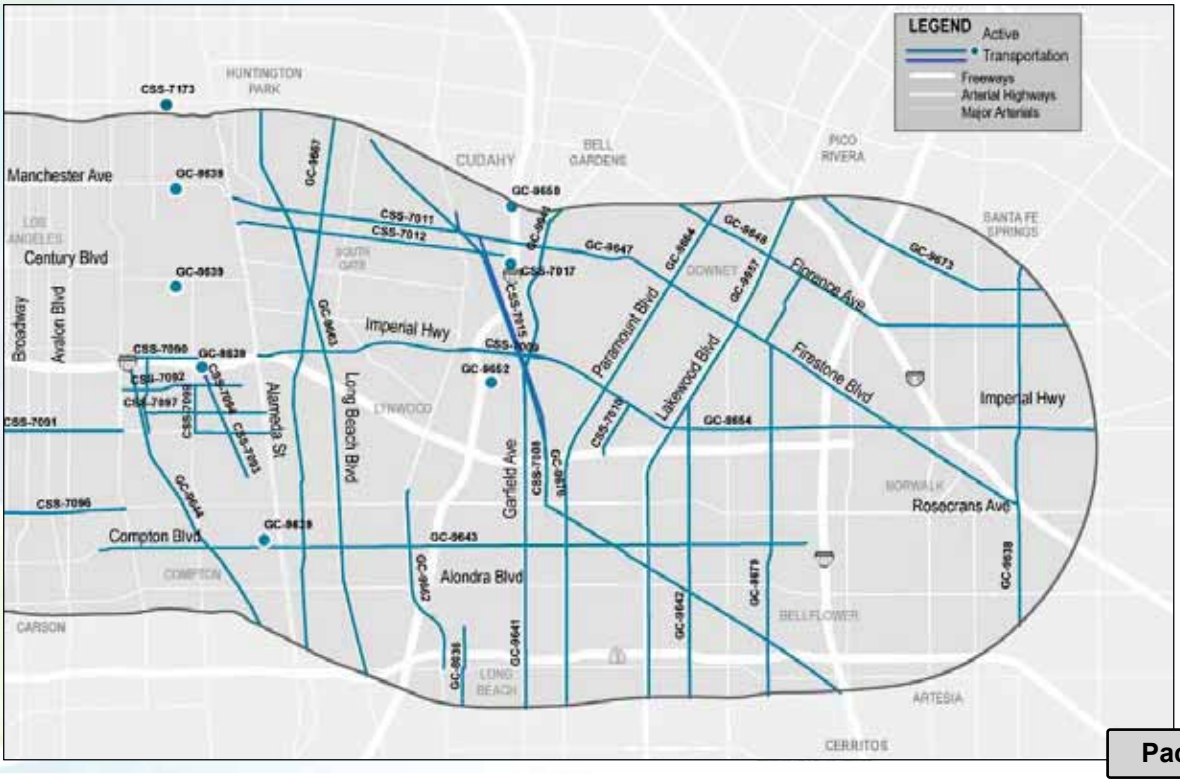
Evaluation Process: Organization



Projects By Timeframe and Tier



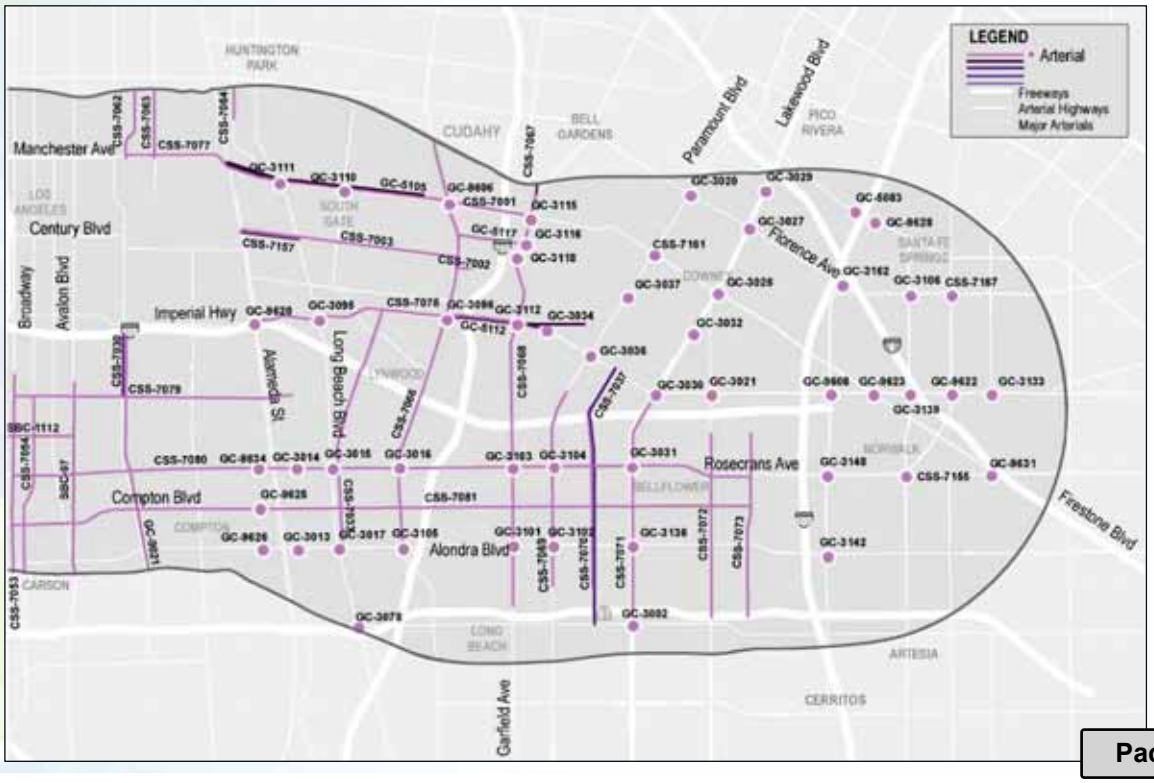
Active Transportation Projects (eastern)



Attachment: PowerPoint Presentation - I 105 Corridor Sustainability Study (I-105 Corridor Sustainability Study Status Report)

Highway Projects (western)

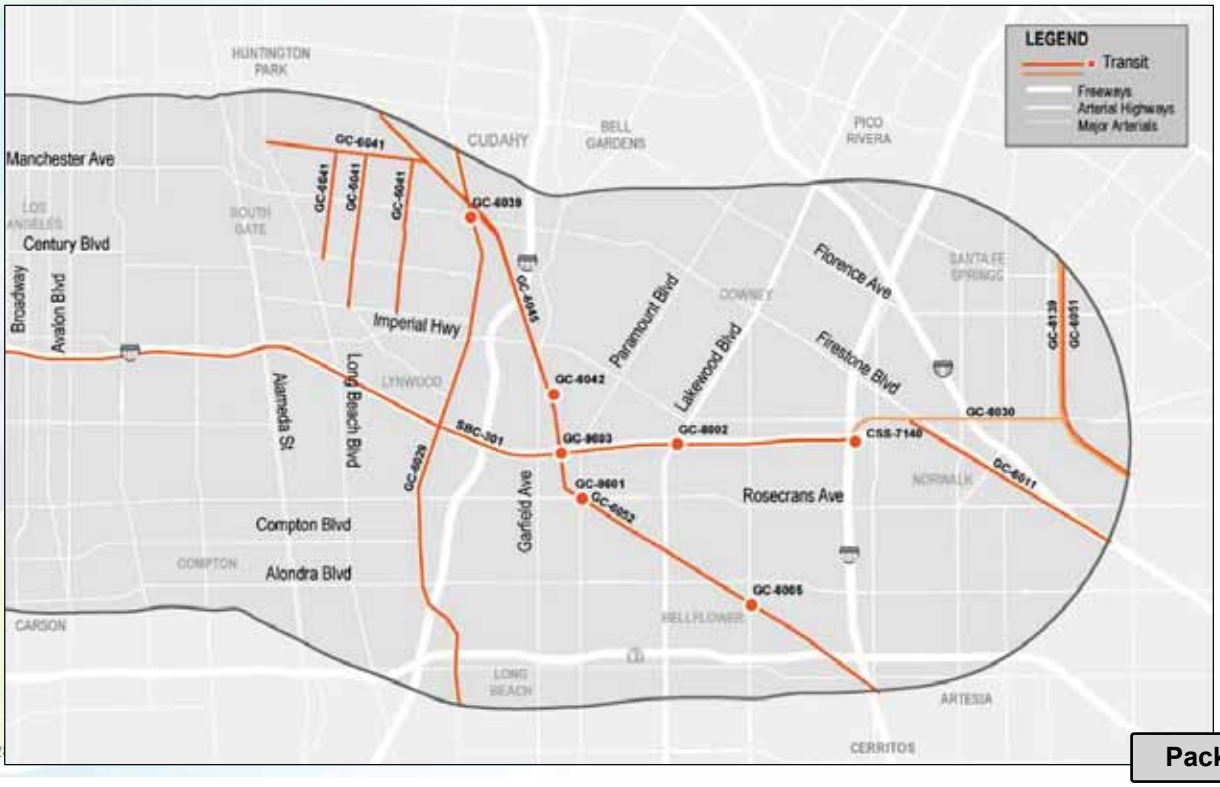
Arterial Projects (eastern)



Attachment: PowerPoint Presentation - I 105 Corridor Sustainability Study (I-105 Corridor Sustainability Study Status Report)

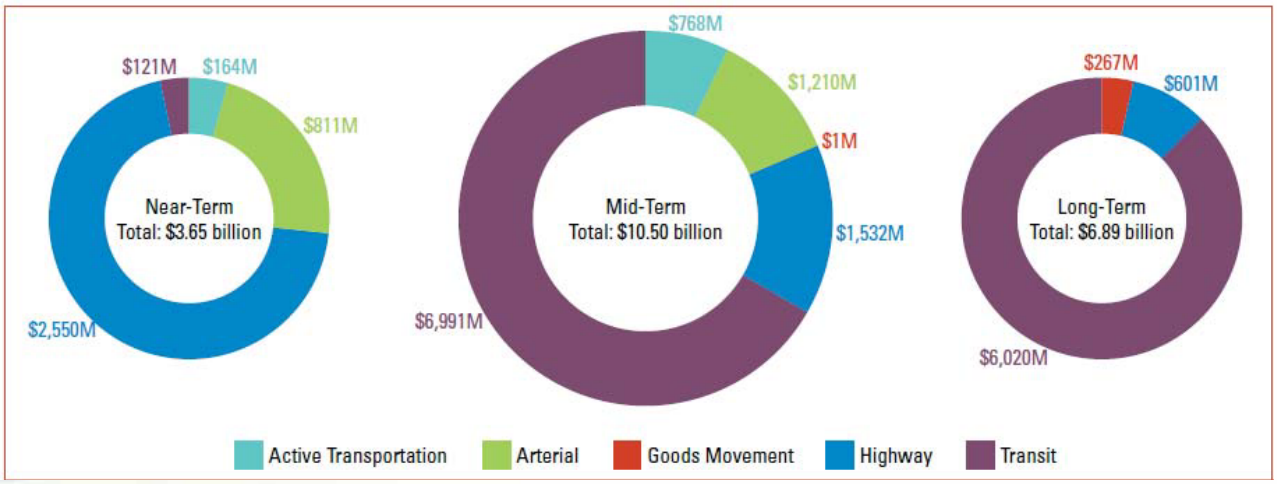
Goods Movement Projects (western)

Transit Projects (eastern)



Attachment: PowerPoint Presentation - I 105 Corridor Sustainability Study (I-105 Corridor Sustainability Study Status Report)

Funding Need



SCAG CAMBRIDGE SYSTEMATICS

Draft Report

http://scag.ca.gov/I-105-Corridor-Study

SCAG CAMBRIDGE SYSTEMATICS

Attachment: PowerPoint Presentation - I 105 Corridor Sustainability Study (I-105 Corridor Sustainability Study Status Report)

Questions

Gary Hamrick
Cambridge Systematics
ghamrick@camsys.com

Naresh Amatya
SCAG
amayta@scag.ca.gov

Attachment: PowerPoint Presentation - I 105 Corridor Sustainability Study (I-105 Corridor Sustainability Study Status Report)

Southern California Association of Governments
900 Wilshire Blvd., Suite 1700, Los Angeles, CA 90017
June 6, 2019

TRANSPORTATION COMMITTEE
MINUTES OF THE MEETING
THURSDAY, April 4, 2019

THE FOLLOWING MINUTES ARE A SUMMARY OF ACTIONS TAKEN BY THE TRANSPORTATION COMMITTEE. A DIGITAL RECORDING OF THE ACTUAL MEETING IS AVAILABLE FOR LISTENING IN SCAG'S OFFICE.

The Transportation Committee (TC) met at SCAG, 900 Wilshire Blvd., 17th Floor, Los Angeles, CA 90017. The meeting was called to order by Chair Hon. Curt Hagman, San Bernardino County. A quorum was present.

Members Present:

Hon.	Sean Ashton, Downey	District 25
Hon.	Rusty Bailey, Riverside	District 68
Hon.	Kathryn Barger	Los Angeles County
Hon.	Ben Benoit, Wildomar	South Coast AQMD
Hon.	Will Berg, Port Hueneme	VCOG
Hon.	Russell Betts, Desert Hot Springs	CVAG
Hon.	Art Brown, Buena Park	District 21
Hon.	Jonathan Curtis, La Cañada-Flintridge	District 36
Hon.	Emily Gabel-Luddy	AVCJPA
Hon.	James Gazeley, Lomita	District 39
Hon.	Jack Hadjinian, Montebello	SGVCOG
Hon.	Curt Hagman **(Chair)**	San Bernardino County
Hon.	Ray Hamada	Bellflower
Hon.	Jan Harnik, Palm Desert	RCTC
Hon.	Jim Hyatt, Calimesa	District 3
Hon.	Mike T. Judge, Simi Valley	VCTC
Hon.	Trish Kelley, Mission Viejo	OCCOG
Hon.	Steve Manos, Lake Elsinore	District 63
Hon.	Ray Marquez, Chino Hills	District 10
Hon.	Larry McCallon, Highland	SBCTA
Hon.	Marsha McLean, Santa Clarita	District 67
Hon.	Dan Medina, Gardena	District 28
Hon.	Fred Minagar, Laguna Niguel	District 12
Hon.	Carol Moore, Laguna Woods	OCCOG
Hon.	Frank Navarro, Colton	District 6
Hon.	Teresa Real Sebastian, Monterey Park	SGVCOG
Hon.	Carlos Rodriguez, Yorba Linda	President's Appointment
Hon.	Crystal Ruiz, San Jacinto	WRCOG
Hon.	Ali Saleh, Bell	GCCOG

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Hon.	Tim Sandoval, Pomona	District 38
Hon.	Marty Simonoff, Brea	District 22
Hon.	Thomas Small, Culver City	Culver City
Hon.	Karen Spiegel	Riverside County
Hon.	Cynthia Sternquist, Temple City	SGVCOG
Hon.	Jess Talamantes	SFVCOG
Hon.	Cheryl Viegas-Walker, El Centro **(Vice Chair)**	District 1
Hon.	Alan Wapner, Ontario	SBCTA/SBCOG
Mr.	Paul Marquez, Caltrans District 7	Ex-Officio Member

Members Not Present:

Hon.	Austin Bishop, Palmdale	North L.A. County
Hon.	Drew Boyles	El Segundo
Hon.	Joe Buscaino, Los Angeles	District 62
Hon.	Ross Chun, Aliso Viejo	OCTA
Hon.	Diane Dixon, Newport Beach	OCCOG
Hon.	Lena Gonzalez, Long Beach	District 30
Hon.	Dave Harrington, Aliso Viejo	OCCOG
Hon.	Carol Herrera, Diamond Bar	District 37
Hon.	Steven Hofbauer, Palmdale	District 43
Hon.	Jose Huizar, Los Angeles	District 61
Hon.	Paul Krekorian	District 49
Hon.	Linda Krupa, Hemet	WRCOG
Hon.	Randon Lane, Murrieta	District 5
Hon.	Clint Lorimore, Eastvale	District 4
Hon.	L. Dennis Michael	District 9
Hon.	Ara Najarian, Glendale	AVCJPA
Hon.	Charles Puckett, Tustin	District 17
Hon.	Dwight Robinson, Lake Forest	OCCOG
Hon.	Damon Sandoval	Morongo Band of Mission Indians
Hon.	Brent Tercero, Pico Rivera	GCCOG
Hon.	Alicia Weintraub, Calabasas	LVMCOG

CALL TO ORDER & PLEDGE OF ALLEGIANCE

Hon. Curt Hagman, San Bernardino County, called the meeting to order at 10:50 a.m. Hon. Art Brown, Buena Park, led the Pledge of Allegiance.

PUBLIC COMMENT

No members of the public requested to comment.

ACTION ITEMS

1. Election of 2019-20 Chair and Vice Chair

Joann Africa, SCAG Chief Counsel, announced that the Committee will elect its 2019-20 Chair and Vice Chair. Ms. Africa stated that additional nominations would be accepted from the floor and opened the floor for any additional nominations. As no nomination were received from the floor Ms. Africa stated the candidate for Chair is Hon. Cheryl Viegas-Walker, El Centro, and the candidates for Vice Chair are

Attachment: Minutes of the Meeting (Minutes of TC Meeting, April 4, 2019)

Hon. Sean Ashton, Downey, Hon. Steven Hofbauer, Palmdale and Hon. Jess Talamantes, Burbank. After statements were given by each candidate, the Committee voted.

Hon. Cheryl Viegas-Walker, El Centro, received the majority of votes and was elected Chair as follows:
Viegas-Walker: Ashton, Bailey, Barger, Benoit, Berg, Betts, Brown, Curtis, Gabel-Luddy, Gazeley, Hadjinian, Hagman, Hamada, Harnik, Hyatt, Judge, Kelley, Manos, Marquez, Medina, Minagar, Moore, Real Sebastian, Rodriguez, Ruiz, Saleh, Sandoval, Simonoff, Small, Spiegel, Sternquist, Talamantes, Viegas-Walker (33)

Hon. Jess Talamantes, Burbank, received the majority of votes and was elected Vice Chair as follows:
Ashton: Ashton, Berg, Hadjinian, Hagman, Hamada, McLean, Minagar, Moore, Sandoval, Saleh, Simonoff, Small, Sternquist, Viegas-Walker (12)
Hofbauer: Betts, Gazeley, Hyatt, Judge, McCallon (5)
Talamantes: Bailey, Barger, Benoit, Brown, Curtis, Gabel-Luddy, Harnik, Kelley, Manos, Marquez, Medina, Navarro, Real Sebastian, Rodriguez, Ruiz, Spiegel, Talamantes (17)

CONSENT CALENDAR

2. Minutes of the March 7, 2019 Meeting

Receive and File

3. RHNA Methodology Survey Packet
4. May is National Bike Month
5. Sustainable Communities Strategy Framework Update

Hon. Jan Harnik, Palm Desert, requested to pull Receive and File item 5. It was requested that the definition to emphasize land use patterns that facilitate multi-modal access to destinations include not only work and non-work destinations but also education. A MOTION was made (Brown) and SECONDED (Talamantes) to approve Consent Calendar items 2 – 4. The Motion passed by the following votes:
AYES: Ashton, Bailey, Barger, Benoit, Berg, Betts, Brown, Curtis, Gabel-Luddy, Gazeley, Hadjinian, Hagman, Hamada, Harnik, Hyatt, Judge, Kelley, Manos, Marquez, McCallon, McLean, Medina, Minagar, Moore, Navarro, Real Sebastian, Rodriguez, Ruiz, Saleh, Sandoval, Simonoff, Small, Spiegel, Sternquist, Talamantes, Viegas-Walker (36)
NOES: None (0)
ABSTAIN: None (0)

A MOTION was made (Real Sebastian) and SECONDED (Ashton) to approve Consent Calendar item 5 as modified. The Motion passed by the following votes:
AYES: Ashton, Bailey, Barger, Benoit, Berg, Betts, Brown, Curtis, Gabel-Luddy, Gazeley, Hadjinian, Hagman, Hamada, Harnik, Hyatt, Judge, Kelley, Manos, Marquez, McCallon, McLean, Medina, Minagar, Moore, Navarro, Real Sebastian, Rodriguez, Ruiz, Saleh, Sandoval, Simonoff, Spiegel, Sternquist, Talamantes, Viegas-Walker (35)
NOES: None (0)
ABSTAIN: None (0)

Attachment: Minutes of the Meeting (Minutes of TC Meeting, April 4, 2019)

INFORMATION ITEMS

6. Connect SoCal: How Will We Connect?

Brian Taylor, University of California, Los Angeles, reported on congestion pricing. Professor Taylor stated roadway congestion can simply be viewed as a shortage of road space. He noted when valuable things are given away free the demand exceeds available supply resulting in shortages. Further, there are three options when faced with a shortage, increase supply, reduce demand or bring supply and demand into equilibrium with pricing. Professor Taylor stated that increasing roadway capacity at first will improve traffic flows and for travelers "time cost" decreases, driving becomes more attractive and congestion and delays return to that roadway. He noted that enacting roadway pricing reduces the "time cost" and driving becomes easier and more expensive but congestion delays do not return. Additionally, urban areas have not been successful in reducing congestion using the common approaches of either reducing demand or increasing supply.

Professor Taylor stated that there are often concerns about equity when considering pricing. He noted that under our current system of non-priced roadways those with higher incomes own more cars, drive more often, travel more often in the peak hours and also live further from freeways and the increased emissions while paying a lower share of their incomes in sales taxes for transportation. By comparison those in low-income households tend to live nearer to congested roadways and bear the brunt of emissions and evidence indicates that our current system of free roads disproportionately hurt the poor. Professor Taylor noted that when enacting congestion pricing lower income users of toll roads can be compensated similar to life-line rates for utilities. Professor Taylor stated that as urban areas grow traffic continues to worsen and drivers will increasingly pay more in travel time for our current free road system.

Hon. Cheryl Viegas-Walker, El Centro, asked about research on people's opinions about their travel behavior and the shift in thinking that needs to occur for them to move from driving alone to embracing car and van pooling. Professor Taylor responded that research indicates that people tend to believe that their behaviors are more fixed than they actually are. Additionally, when there people think that small changes in their behavior will not have a collective effect this enforces that belief that there behaviors are generally fixed.

7. Mobility Go Zone & Pricing Feasibility Study Overview and Findings

Annie Nam, SCAG staff, provided an update on Mobility Go Zone & Pricing Feasibility Study. Ms. Nam stated that there are two kinds of pricing models. The first is Cordon Pricing which is used in Stockholm and uses a fee to enter a specific area. The second is area pricing which is used in London and enacts a flat rate for driving into and within an area. It was noted these efforts are often accompanied by enhancements in pedestrian infrastructure, bike sharing and infrastructure and on demand ride sharing. Ms. Nam noted the study examined a 4.3 mile area in West Los Angeles with recurring congestion. It is an area with 80,000 jobs and a 3 to 1 job to housing ratio. The study area is served by transit including Expo light rail although if pricing were used in this area it would be preceded by transit and mobility enhancements such as two local circulators and two commuter express bus lines serving the San Fernando Valley and South Bay.

Ms. Nam stated that the study assumes a $4 charge to enter the area in weekday peak periods with discounts for residents and low-income with toll collections similar to Metro Express Lanes. An analysis was conducted on low-income travelers which indicated that only 6% of all auto trips

Attachment: Minutes of the Meeting (Minutes of TC Meeting, April 4, 2019)

and 24% of all transit users travelling in peak hours are low-income. She reported that findings indicate the area would experience 21% less vehicle miles travelled and a 24% decrease in the a.m. and p.m. peak periods. On a daily basis an 8% decrease in vehicle miles travelled and a 10% decrease in vehicle hours travelled would be realized. Additionally, a 9% increase in transit use was seen as well as a 7% increase in walking and a 19% decrease in vehicle trips. This can be viewed as taking one in five vehicle off the road in peak periods which reduces greenhouse gas emissions. She noted that net revenue of approximately $70 million is anticipated which could be used to support toll infrastructure, transit, active transportation as well as discounts and credits. Ms. Nam stated the start-up capital needed for implementation is estimated to be $15 million for toll infrastructure and $28 million for transit expansion.

Hon. Trish Kelley, Mission Viejo, asked who would approve implementation of pricing in an area. Ms. Nam responded that under current state law local jurisdictions are not able to implement a strategy without enabling legislation. Additionally, because SCAG is not an implementing agency, SCAG's study was intended to be a feasibility study.

Hon. Steve Manos, asked if there had been an examination of the effects on businesses in fee priced areas. Ms. Nam responded that an economic assessment was conducted as well as examining the results in London and Stockholm which showed no negative impact on business and as a result of the improved foot traffic businesses saw improved sales.

8. 2019 SCAG Regional Active Transportation Program

Rye Baerg, SCAG staff, provided an update on the 2019 SCAG Regional Active Transportation Program. Mr. Baerg stated the regional active transportation program consists of 26 projects totaling $92.6 million that support walking and bicycling. He noted that with the committee's approval the Regional Program will be submitted to the California Transportation Commission for adoption at their June 26, 2019 meeting.

A MOTION was made (Navarro) and SECONDED (Viegas-Walker) to recommend to the Regional Council approval of the 2019 SCAG Regional Active Transportation Program. The Motion passed by the following votes:

AYES: Ashton, Bailey, Barger, Benoit, Berg, Betts, Brown, Curtis, Gabel-Luddy, Hadjinian, Hagman, Hamada, Harnik, Hyatt, Judge, Kelley, Manos, Marquez, McCallon, Medina, Minagar, Moore, Navarro, Real Sebastian, Rodriguez, Ruiz, Saleh, Sandoval, Simonoff, Spiegel, Sternquist, Talamantes, Viegas-Walker (33)
NOES: None (0)
ABSTAIN: McLean (1)

CHAIR'S REPORT

Hon. Curt Hagman, San Bernardino County, thanked the committee for allowing him to serve as Chair for the past two years. Mr. Hagman noted that SCAG's General Assembly will take place May 1st through 3rd, 2019 in Palm Desert. In addition, SCAG's 30th Annual Demographic Workshop will be held June 11, 2019 at USC.

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METROLINK REPORT

Hon. Art Brown, Buena Park, reported that a second platform and new siding track is in the works for the Anaheim Canyon Metrolink Station in the City of Anaheim. This will allow more than one train to serve the station and/or pass through the station area at a time, increasing on time performance and safety. Additionally, construction of a passing siding at the Laguna Niguel/Mission Viejo Metrolink Station is underway which will reduce delays for Metrolink and Amtrak trains on the LOSSAN Corridor. This $34 million project involves a 1.8-mile siding from the station to the city of San Juan Capistrano. Currently, southbound trains sometimes must wait up to five minutes for a northbound train to clear. Construction is expected to be completed by early 2021.

FUTURE AGENDA ITEMS

Hon. Russell Betts, Desert Hot Springs, suggested a future agenda item on alternate ways to reduce traffic congestion without using pricing. This suggestion was also endorsed by Hon. Carlos Rodriguez, Yorba Linda.

ADJOURNMENT

Hon. Curt Hagman, San Bernardino County, adjourned the meeting at 12:01 p.m.

[MINUTES ARE UNOFFICIAL UNTIL APPROVED BY THE TRANSPORTATION COMMITTEE]

Attachment: Minutes of the Meeting (Minutes of TC Meeting, April 4, 2019)

TC

2019																
MEMBERS	CITY	Representing	JAN (dark)	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	Total Mtgs Attended To Date
Ashton, Sean	Downey	District 25		1	1	1									3
Bailey, Rusty	Riverside	WRCOG			1	1									2
Barger, Kathryn	Los Angeles County	Los Angeles County		1		1									2
Benoit, Ben	Wildomar	South Coast AQMD			1	1									2
Berg, Will	Port Hueneme	VCOG		1		1									2
Betts, Russell	Desert Hot Springs	CVAG		1	1	1									3
Bishop, Austin	Palmdale	North L.A.		1	1										3
Boyles, Drew	El Segundo	El Segundo		1	1										2
Brown, Art	Buena Park	District 21		1	1	1									3
Buscaino, Joe	Los Angeles	District 62													0
Chun, Ross	Aliso Viejo	OCTA		1	1										2
Curtis, Jonathan	La Cañada Flintridge	District 36		1	1	1									3
Dixon, Diane	Newport Beach	OCCOG													0
Gabel-Luddy, Emily	Burbank	AVCJPA		1	1	1									3
Gazeley, James	Lomita	District 39		1	1	1									3
Gonzales, Lena	Long Beach	District 30													0
Hadjinian, Jack	Montebello	SGVCOG		1	1	1									3
Hagman, Curt	County of San Bernardino	County of San Bernardino		1		1									2
Hamada, Ray	Bellflower	Bellflower				1									0
Harnik, Jan	Palm Desert	RCTC			1	1									2
Harrington, Dave	Aliso Viejo	OCCOG													0
Herrera, Carol	Diamond Bar	District 37													0
Hofbauer, Steven	Palmdale	District 43		1	1										2
Huizar, Jose	City of Los Angeles	District 61													0
Hyatt, Jim	Calimesa	District 3		1	1	1									3
Judge, Mike	Simi Valley	VCTC		1	1	1									3
Kelley, Trish	Mission Viejo	OCCOG		1	1	1									3
Krekorian, Paul	Public Transit Rep	District 49													0
Krupa, Linda	Hemet	WRCOG			1										1
Lane, Randon	Murrieta	District 5		1	1										2
Lorimore, Clint	Eastvale	District 4		1	1										2
Manos, Steve	Lake Elsinore	District 63		1	1	1									3
Marquez, Paul	Caltrans District 7	Ex-Officio		1	1	1									3
Marquez, Ray	Chino Hills	District 10		1	1	1									3
McCallon, Larry	Highland	SBCTA		1	1	1									3
McLean, Marsha	No. L.A. County	District 67		1	1	1									3
Medina, Dan	Gardena	District 28		1	1	1									3
Michael, L. Dennis	Rancho Cucamonga	District 9			1										1
Minagar, Fred	Laguna Niguel	District 12		1	1	1									3
Moore, Carol	Laguna Woods	OCCOG		1	1	1									3
Najarian, Ara	Glendale	AVCJPA		1	1										2
Navarro, Frank	Colton	District 6			1	1									2
Puckett, Charles	Tustin	District 17		1	1										2
Real Sebastian, Teresa	Monterey Park	SGVCOG		1	1	1									3
Robinson, Dwight	Lake Forest	OCCOG													0
Rodriguez, Carlos	Yorba Linda	President's Appointment		1	1	1									3
Ruiz, Crystal	San Jacinto	WRCOG		1		1									2
Saleh, Ali	City of Bell	GCCOG		1	1	1									3
Sandoval, Damon	Morongo Mission Indians	Morongo Mission Indians													0
Sandoval, Tim	Pomona	District 38		1		1									2
Simonoff, Marty	Brea	District 22			1	1									2
Small, Thomas	Culver City	Culver City			1	1									2
Spiegel, Karen	Riverside County	Riverside County			1	1									2
Sternquist, Cynthia	Temple City	SGVCOG		1		1									2
Talamantes, Jess	Burbank	SFVCOG		1	1	1									3
Tercero, Brent	Pico Rivera	GCCOG		1	1										2
Viegas-Walker, Cheryl	El Centro	District 1		1		1									2
Wapner, Alan	Ontario	SBCTA		1	1	1									3
Weintraub, Alicia	Calabasas	LVMCOG		1											1

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AGENDA ITEM NO. 3

REPORT

Southern California Association of Governments
900 Wilshire Boulevard, Suite 1700, Los Angeles, California 90017
June 6, 2019

To: Transportation Committee (TC)

EXECUTIVE DIRECTOR'S APPROVAL

Kome Ajise

From: Hina Chanchlani, Assistant Regional Planner, Transportation Planning and Programming, 213-236-1829, chanchlani@scag.ca.gov

Subject: Safety Leadership Symposium and Workshop Series

RECOMMENDED ACTION:
Receive and File

STRATEGIC PLAN:
This item supports the following Strategic Plan Goal 1: Produce innovative solutions that improve the quality of life for Southern Californians.

EXECUTIVE SUMMARY:
On May 1, 2019, SCAG held a Traffic Safety Leadership Symposium which explored regional traffic safety issues and the policy and implementation tools available to local governments. This report and presentation provide an update on the Symposium outcomes and information on the upcoming sub-regional safety workshops and webinars planned for this summer.

BACKGROUND:
The SCAG region, like California and the nation as a whole, experienced a period of annual declines in traffic-related fatalities and serious injuries until 2012 when they began to steadily rise. Although the region has made some progress on safety, 1,500 people are killed, 5,200 are seriously injured and 136,000 are injured in traffic collisions on average each year. About 73 percent of those killed since 2001 were in vehicles or on motorcycles, while the remaining 27 percent were walking or bicycling (disproportionate to their mode share, 12 percent of all daily trips are walking or biking trips). The numbers of both pedestrians and motorcyclists killed are the highest they have been for more than a decade. These collisions are happening in every city across the region.

SCAG adopted its 2020 Regional Safety targets in February 2019 and aims to reduce fatalities by 3 percent and serious injuries by 1.5 percent annually to reach the goal of Towards Zero Death (TZD) by 2050. SCAG's targets support the state targets. SCAG's Connect SoCal 2020 Plan, Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which is currently being developed, prioritizes ensuring the safety and mobility of the region's residents, including drivers and passengers, transit riders, pedestrians, and bicyclists. The Plan's Safety and Security Technical report aims to provide a framework, largely grounded in the State's Strategic Highway Safety Plan that can help member agencies interested in pursuing safety initiatives and strategies at the local level. The Plan also aims to address actionable strategies that SCAG can support local jurisdictions with. The strategies will include, but are not limited to, developing and maintaining the High injury

Network to support safety planning efforts, working with the local jurisdictions to provide safety education opportunities through SCAG's Go Human Campaign, working with the County Transportation Commissions to include safety in long range transportation plans, and working with member agencies to develop and implement safety plans.

Go Human Campaign

To heighten awareness of the region's transportation safety challenges and opportunities, and to reduce collisions resulting in serious injuries or fatalities, SCAG launched the *Go Human* campaign in 2015. *Go Human* is an award winning community outreach and advertising campaign with the goals of reducing traffic collisions and encouraging people to walk and bike more in the SCAG region. *Go Human* is a collaboration between SCAG and the County Transportation Commissions and Public Health Departments in the region.

In addition to advertising, *Go Human* partners with cities to host temporary traffic safety demonstration projects. These projects aim to raise awareness of traffic safety issues and provide opportunities to test complete streets concepts with the public. To date, *Go Human* has achieved nearly 1 billion impressions and hosted more than 28 demonstration projects. To continue the success of *Go Human,* SCAG secured grant funding to hold a Regional Safety Leadership Symposium and Sub-regional Safety Workshops by September 30, 2019.

Regional Safety Leadership Symposium

The Regional Safety Leadership Symposium was held at the J.W. Marriott in Palm Desert in conjunction with SCAG's General Assembly on Wednesday, May 1, 2019 from 11 a.m. – 5 p.m. The Regional Safety Leadership Symposium aimed to educate and encourage collaboration among local Elected Officials to support collision-reducing policies, strategies, and projects. SCAG aimed to inform Elected Officials or their high-level practitioner designees (e.g., City Managers or Planning Directors) about timely traffic safety issues in the SCAG region, and motivate action to improve safety at the city level through a Traffic Safety Pledge that identified a commitment to safety related actions. Approximately 137 attendees participated in the event which included elected officials and their designated staff. SCAG has received 22 pledges as a result of the Symposium and related efforts.

SCAG encourages member agencies to take the Traffic Safety Pledge and join us in creating safer streets that promote walking, biking, and connect communities across Southern California. The safety pledge is available online at https://scag.wufoo.com/forms/scag-safety-pledge/

To complement the Symposium and showcase a safety strategy available to partner agencies, SCAG hosted an onsite *Go Human* temporary safety demonstration at the resort. More than 100 attendees tested out the temporary infrastructure.

Upcoming Sub-Regional Safety Workshop Series

SCAG will offer Sub-regional Safety Workshops at no cost to local government agencies after they complete a *Go Human* Safety Pledge in person or online. Workshops shall be conducted in two

different formats – a long-form 5-6 hour city-wide strategy training, and a short-form 2-3 hour webinar.

The long-form city-wide strategy training shall provide an opportunity for teams or cohorts of 3-5 city staff to learn technical and more in-depth information to help them implement safety improvements. Ultimately, the information learned should help cities complete an action, such as adopting a Vision Zero or Toward Zero Deaths strategy, implementing a public outreach or advertising campaign, or developing an Active Transportation Plan. Attendees can include representatives from a variety of city departments, potentially including law enforcement officials, Public Information Officers, engineers or planners.

The short-form topical webinars will be arranged as in-depth sessions on the design and implementation of local strategies to reduce collisions. The curriculum will focus on topics related to planning, enforcement, education/communications, policy and engineering.

Upcoming Sub-Regional Safety Workshops Details:

- Dates: Scheduled between June and July 2019
- Times: Four long-form workshops will last 5-6 hours, and four shorter web-based workshops will last 2-3 hours.
- Locations: Each long-form workshop will be held in a different county in the SCAG region.
- Short-form workshops will be held at SCAG offices, with participants joining online.
- Number of Participants: 25-50 per event; attendees can consist of teams of 3-5 from cities working on analyzing, developing or implementing local traffic safety plans.

If you have any questions regarding Safety Leadership Symposium and Workshop Series, or want to request Go Human materials, please contact Hina Chanchlani, Assistant Regional Planner, at chanchlani@scag.ca.gov or (213)-23-1829 or Julia Lippie-Klein, Associate Regional Planner at Lippe-Klein@scag.ca.gov or (213)-236-1856

FISCAL IMPACT:

All costs associated with this item are included in the FY 2019-20 Overall Work Program (OWP) under project number 225-3564.13 and funded by a Pedestrian and Bicycle Safety Program Grant from the California Office of Traffic Safety.

AGENDA ITEM NO. 4

REPORT

Southern California Association of Governments
900 Wilshire Boulevard, Suite 1700, Los Angeles, California 90017
June 6, 2019

To: Transportation Committee (TC)

EXECUTIVE DIRECTOR'S APPROVAL

Kome Ajise

From: Philip Law, Manager of Transit/Rail, Transit/Rail, 213-236-1841, LAW@scag.ca.gov

Subject: ADA Paratransit Demand Forecast

RECOMMENDED ACTION:
Receive and File

STRATEGIC PLAN:
This item supports the following Strategic Plan Goal 1: Produce innovative solutions that improve the quality of life for Southern Californians.

EXECUTIVE SUMMARY:
The Americans with Disabilities Act (ADA) mandates that providers of public transportation provide alternative curb-to-curb service for seniors and the disabled within three-quarters of a mile of their fixed route transit network. In Southern California, these trips are growing longer. Work has begun on a study to develop long range forecasting tools for ADA Paratransit, to understand the reasons for the growth in average trip length.

BACKGROUND:
Following the passage of the Americans with Disabilities Act of 1990, the FTA adopted four regulations to implement that statute, as well as the Rehabilitation Act of 1973. In particular, 49 CFR 37 mandated the provision of complementary paratransit for qualified individuals, by providers of public transportation. This rule mandates that paratransit service shall be provided according to the following criteria:

> (a) *Service Area*—(1) *Bus.* (i) The entity shall provide complementary paratransit service to origins and destinations within corridors with a width of three-fourths of a mile on each side of each fixed route. The corridor shall include an area with a three-fourths of a mile radius at the ends of each fixed route.
>
> (ii) Within the core service area, the entity also shall provide service to small areas not inside any of the corridors but which are surrounded by corridors.
>
> (iii) Outside the core service area, the entity may designate corridors with widths from three-fourths of a mile up to one and one half miles on each side of a fixed route, based on local circumstances.

> (iv) For purposes of this paragraph, the core service area is that area in which corridors with a width of three-fourths of a mile on each side of each fixed route merge together such that, with few and small exceptions, all origins and destinations within the area would be served.

Essentially, providers of public transportation services are mandated to provide complimentary paratransit service for trips within three-quarters of a mile of their fixed route service. This typically takes the form of a dedicated vehicle picking the passenger up directly at their origin and dropping them off directly at their destination, at the curb. The mandate does not specify that the vehicle operator escort the passenger to or from the door.

In addition to satisfying the ADA mandate, ADA Paratransit is also an important component of the Region's integrated mobility system. This service provides mobility for seniors and the disabled, many of whom cannot provide for themselves. However, since it typically operates at a rate of one vehicle operator to one passenger, this service is incredibly labor intensive. In FY 2015-16, ADA Paratransit and other demand response services compromised 18.1% of all revenue vehicle hours, but less than 2% of all unlinked passenger trips.

Given the mode's labor intensity, staff pay careful attention to it in performance monitoring activities. In recent years, a trend towards increasing average trips lengths has become apparent. Reported average trips lengths double between FY 1991-92 and FY 2015-16. Subsequent to this determination, staff applied for and received a FY 2017-18 Senate Bill (SB) 1 Sustainable Communities Grant. These funds will be used for to produce an ADA Paratransit Demand Forecast.

This project will include the development of a forecasting tool to provide estimates of long term demand for ADA paratransit trips, and the production of an initial forecast. There will also be significant outreach to partner agencies, and representatives of the elderly and disabled communities. Additionally, the study will address the role of new mobility services in providing service to elderly and disabled communities.

This project is funded by a Caltrans Sustainable Transportation Planning Grant awarded in FY 2017-18. Subsequent to the grant award, staff conducted a procurement and awarded a contract to HDR, Inc., who were the sole proposer. The Regional Council approved the final contract at its December 2018 meeting. Work has now commenced on this project. Staff have conducted a project kick off meeting, and initial outreach is underway. The project is currently expected to conclude all work by June 30, 2020.

FISCAL IMPACT:
Consultant work on this project is funded in the amount of $312,511 in the Overall Work Program (OWP) budget under project number 145-4835.01.

AGENDA ITEM NO. 5

REPORT

Southern California Association of Governments
900 Wilshire Boulevard, Suite 1700, Los Angeles, California 90017
June 6, 2019

To: Transportation Committee (TC)

EXECUTIVE DIRECTOR'S APPROVAL

Kome Ajise

From: Philip Law, Manager of Transit/Rail, Transit/Rail, 213-236-1841, LAW@scag.ca.gov

Subject: Transit Asset Management Target Setting

RECOMMENDED ACTION:
Receive and File

STRATEGIC PLAN:
This item supports the following Strategic Plan Goal 1: Produce innovative solutions that improve the quality of life for Southern Californians.

EXECUTIVE SUMMARY:
In its July 2017 meeting, the Transportation Committee adopted initial Transit Asset Management (TAM) performance targets, to comply with the Federal Transit Administration (FTA) TAM Final Rule. This Final Rule included requirements that transit operators establish initial TAM targets by January 1, 2017, and that MPOs establish initial regional targets six months later. MPOs must also establish regional TAM targets as part of the development of its Regional Transportation Plan. Consequently, consultant work has commenced to develop targets for Connect SoCal, in collaboration with the region's transit providers and county transportation commissions.

BACKGROUND:
The Federal Transit Administration (FTA) issued the Transit Asset Management Final Rule (49 CFR 625), effective October 1, 2016, to implement the asset management provisions of the Moving Ahead for Progress in the 21st Century Act (MAP-21). This Final Rule mandates the development of a National Transit Asset Management System, defines "state of good repair" (SGR), requires transit providers to develop asset management plans. It further requires States, Metropolitan Planning Organizations (MPOs), and transit providers to develop locally coordinated performance targets, and to report on progress towards meeting the targets to the National Transit Database. The Statewide and Nonmetropolitan Transportation Planning and Metropolitan Transportation Planning Final Rule (23 CFR 450), published on May 27, 2016, outlines the timelines and processes by which states and MPOs must coordinate in target setting. The Final Rule (49 CFR 625) establishes a National Transit Asset Management System to monitor and manage public transportation capital assets to enhance safety, reduce maintenance costs, increase reliability, and improve performance. The FTA defines SGR as the condition in which a capital asset is able to operate at a full level of performance. SGR standards must be met in order for an asset to achieve a state of good repair. These SGR standards include:

- The asset can perform its designed function

- Use of the asset in its current condition does not pose a known and unacceptable safety risk
- Life- cycle investment needs of the asset have been met or recovered, including all scheduled maintenance, rehabilitation, and replacements

The FTA identifies four categories of assets (equipment, rolling stock, infrastructure, and facilities) and a measure for each class. These categories and measures are further discussed in the table below**.** Asset management planning requirements apply to all recipients and subrecipients of federal financial assistance under Federal Transit Act Chapter 53 (49 USC Chapter 53) that own, operate, or manage capital assets used in providing public transportation.

Under the rule, transit providers are separated into two tiers. All tier I providers (having 101 or more vehicles in peak revenue service, or operating rail fixed-guideway service) must develop and implement an individual asset management plan. Group asset management plans are to be developed by a State or a direct recipient to cover tier II transit providers (those with 100 bus vehicles or less and which do not operate any rail service) and all subrecipients under the 5311 Rural Area Formula Program. Native American tribes can elect to participate in a group asset management plan or develop their own asset management plan. Tier II providers must carry out the asset management plan. Transit providers that are also direct recipients of FTA Section 5307 funds must develop their own tier I or tier II asset management plan.

Requirements for asset management plans include:

- Asset management plans must include an inventory of capital assets and a condition assessment
- Asset management plans must include a project-based prioritization of investments, by year
- Asset management plans must cover at least four years, be updated every four years, and coincide with the Federal Transportation Improvement Program and Federal Statewide Transportation Improvement Program (FTIP/FSTIP)
- An initial asset management plan must be developed within two years of the effective date of the rule
- Tier I providers have additional asset management plan requirements, including an asset management and SGR policy, implementation strategy, list of key annual activities, identification of resources, and evaluation plan

Requirements for target setting include:

- SGR performance targets must be set for the following fiscal year for each asset class in the asset management plan, and this must be done within three months of the effective date of the rule
- At least once every fiscal year, every transit provider or group asset management plan sponsor must set performance targets for the following fiscal year
- To the maximum extent practicable, a transit provider or group asset management plan sponsor must coordinate with the State and MPO in selecting the State and MPO performance targets

Requirements for documentation and reporting include:

- A transit provider or group asset management plan sponsor must make its asset management plan and any supporting documents available to the State and MPO to aid in the planning process
- Annual reports must be submitted to FTA's National Transit Database (NTD) including targets for the following fiscal year, a current assessment of the condition of the provider's system, and a narrative description about the progress made to meet targets set in the previous year

The table below contains the asset categories to be tracked in an asset management plan, and the measures the FTA will require. All vehicles will be measured with Useful Life Benchmarks, and facilities will require a condition assessment and the use of the FTA TERM model or a similar tool. Only two agencies, Metro and Metrolink, are currently expected to have to address the infrastructure category.

Category	Capital Assets	Measure/Target
Rolling Stock	Revenue vehicles by asset class	Age (Useful Life Benchmark or ULB) % of revenue vehicles within a particular asset class that have met or exceeded their ULB
Equipment	Non-revenue, support-service and maintenance vehicles equipment	Age (ULB) % of vehicles that have met or exceeded their ULB
Facilities	Maintenance and administrative facilities, passenger stations, and parking facilities	Condition (TERM) % of facilities within an asset class, rated below 3.0 on the TERM scale (1=poor to 5=excellent)
Infrastructure	Rail fixed-guideway, track, signals and systems	Performance (%) % of track segments with performance restrictions

Transit agencies were responsible for developing initial targets by January 1, 2017. Regional targets were approved by the Regional Council July 6, 2017. There were one set of targets for each county, and another set for Metrolink. These targets were compiled by constructing a weighted average using the sum of the products of the number of revenue vehicles by reported targets divided by the county total of revenue vehicles.

Staff developed these targets in partnership with the members of the Regional Transit Technical Advisory Committee, as well as staff from local county transportation commissions and transit agencies. Staff previously reported to the RTTAC on the initial target development process in March and May of 2017.

Transit agencies and plan sponsors were responsible for developing transit asset management plans by October 2018. Staff requested these plans and initial targets from local agencies, and a list of responses was presented to the RTTAC in January 2019.

NEXT STEPS:
SCAG must establish regional TAM targets as part of the development of Connect SoCal, the 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). In setting the Connect SoCal targets, SCAG will continue to coordinate with the county transportation commissions and transit operators, through the RTTAC. The development of regional TAM targets for Connect SoCal is anticipated to occur through summer 2019.

Once the TAM targets are established in Connect SoCal, future RTPs must report on progress achieved in meeting the targets, in comparison with system performance recorded in previous reports (23 CFR 450.324(f)(4)(i)). Additionally, future FTIPs must describe the anticipated effect toward achieving the TAM targets set in the RTP, linking investment priorities to those targets (23 CFR 450.326(d)). It is expected that SCAG will require additional information from county transportation commissions and transit agencies as part of the RTP and FTIP development and project submittal processes to support these new reporting requirements.

Consultant assistance in target development has been retained, and work has begun. This work currently includes significant outreach to county transportation commissions and local transit agencies. This has begun, as the project team has met with groups of transit agencies as well as staff at the six county transportation commissions.

Consultant work is currently expected to be complete by June 30, 2020.

FISCAL IMPACT:
Consultant work on this project is funded in the amount of $307,047.39 in the FY 2018-19 Overall Work Program (OWP) under project number 140.0121.08.

AGENDA ITEM NO. 6

REPORT

Southern California Association of Governments
900 Wilshire Boulevard, Suite 1700, Los Angeles, California 90017
June 6, 2019

To: Community
Economic & Human Development Committee (CEHD)
Energy & Environment Committee (EEC)
Transportation Committee (TC)
Regional Council (RC)

From: Rongsheng Luo, Program Manager II, Compliance & Performance Monitoring, (213) 236-1994, LUO@scag.ca.gov

Subject: Connect SoCal Technical Methodology Submittal to California Air Resources Board

EXECUTIVE DIRECTOR'S APPROVAL

Kome Ajise

RECOMMENDED ACTION FOR EEC:
For Information Only – No Action Required

RECOMMENDED ACTION FOR CEHD, TC AND RC:
Receive and File

STRATEGIC PLAN:
This item supports the following Strategic Plan Goal 1: Produce innovative solutions that improve the quality of life for Southern Californians.

EXECUTIVE SUMMARY:
As required by California law, SCAG has submitted to the California Air Resources Board (ARB) for its approval the Technical Methodology that SCAG intends to quantify the greenhouse gas emissions from Connect SoCal, the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy for the SCAG region. Staff will present EEC with a brief summary of the statutory requirements, the development process, the content, and the next steps of the Technical Methodology.

BACKGROUND:
Pursuant to California Government Code Section 65080(b)(2)(J)(i), prior to starting the formal public participation process required by state planning law, a Metropolitan Planning Organization (MPO) must develop and submit to the California Air Resources Board (ARB) for its approval the technical methodology it intends to use to estimate the greenhouse gas (GHG) emissions from its Sustainable Communities Strategy (SCS) (or, if necessary, Alternative Planning Strategy).

SCAG is developing Connect SoCal, its mandated 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), and has initiated the required formal public participation process by holding the first public workshop on May 14, 2019. SCAG submitted its Technical Methodology to ARB on May 13, 2019, before the first public workshop was held.

In late March 2019, ARB released the Final Draft Sustainable Communities Strategy Program and Evaluation Guidelines (Final Draft Guidelines). The Final Draft Guidelines includes a technical methodology template prescribing what should be included in the technical methodology. In accordance with the ARB's guidance template, staff from every planning department at SCAG prepared their respective portions of the Technical Methodology, organized into the following nine sections:

Section I. Introduction describes the purpose of the Technical Methodology, identifies the applicable per capita GHG emissions reduction targets set by ARB, provides an overview of the analysis years, outlines the SCS schedule, and summarizes the organization of the Technical Methodology document.

Section II. Overview of Existing Conditions describes significant changes in existing regional and local planning contexts since the adoption of the last 2016 RTP/SCS and presents key regional issues that may influence the Connect SoCal policy framework and discussions.

Section III. Population, Household, and Employment Growth Forecast includes a description of the updated regional growth forecast as compared to the last SCS as well as major changes to the regional growth forecast methodology.

Section IV. Quantification Approaches lists quantification approaches, to the extent known and available by the completion date of this Technical Methodology, for each of the potential SCS strategies under consideration, details assumptions and method for estimating interregional travel, and specifies which version of ARB's EMFAC model was used for estimating GHG emissions from the 2016 RTP/SCS and which version will be used for Connect SoCal.

Section V. Travel Demand Modeling summarizes improvements made to the regional travel demand model, describes model inputs used in the activity-based regional travel demand model, includes SCAG's commitments to provide model sensitivity tests for SCS strategies under consideration, and explains whether and how travel model accounts for short- and long-run effects of induced demand for new roadway capacity projects.

Section VI. List of Exogenous Variables and Assumptions for Use in Proposed SCS presents assumptions for exogenous variables to travel demand modeling, to the extent known and available by the completion date of this Technical Methodology, as well as assumptions to derive cost of travel.

Section VII. Per Capita GHG Emissions from Prior SCS includes SCAG's commitment to working with ARB staff to conduct analysis for reporting on Incremental Progress

Section VIII. Off-Model Strategies details the off-model analysis methodology and assumptions to estimate GHG emission reduction from each of the potential SCS strategies under consideration that are not captured by the enhanced regional travel demand model.

Section IX. Other Data Collection Efforts document SCAG's 2020 Local Input Survey to collect information from local jurisdictions related to the implementation of the 2012 and 2016 RTP/SCS as well as to assist in the development of Connect SoCal.

The draft Technical Methodology was presented to SCAG's Transportation Working Group (TWG) on April 18, 2019. All TWG comments have been addressed as appropriate in the Final Technical Methodology.

Pursuant to California Government Code Section 65080(b)(2)(J)(i), ARB is required to respond to SCAG with timely written comments, including a specific description of any aspect of the technical methodology that it concludes will not yield accurate estimates of the GHG emissions and remedies. SCAG staff has worked closely with ARB staff in the development of the Technical Methodology and we will continue our close collaboration in refining as necessary and implementing the Technical Methodology in quantifying the GHG emissions from Connect SoCal.

FISCAL IMPACT:
Work associated with this item is included in the FY 2018-19 Overall Work Program under project number 025.0164.01: Air Quality Planning and Conformity.

ATTACHMENT(S):
1. SCAG Technical Methodology Cover Letter
2. Final SCAG GHG Technical Methodology

SCAG
INNOVATING FOR A BETTER TOMORROW

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Transportation
Cheryl Viegas-Walker, El Centro

May 13, 2019

Mr. Richard Corey
Executive Officer
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Subject: Technical Methodology to Estimate Greenhouse Gas Emissions for Connect SoCal, the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy, from the Southern California Association of Governments

Dear Mr. Corey:

I am pleased to submit for ARB approval the attached Technical Methodology that SCAG intends to use to estimate the greenhouse gas (GHG) emissions for *Connect SoCal*, the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) for the SCAG region. Embodying a collective vision for the region's future, *Connect SoCal* is being developed with input from local governments, county transportation commissions, tribal governments, non-profit organizations, business and local stakeholders within the six-county SCAG region. *Connect SoCal* will outline how the region can better integrate land use with transportation in order to achieve SCAG's regional GHG emissions reduction targets set by ARB.

In accordance with California Government Code Section 65080(b)(2)(J)(i), SCAG is required to submit the Technical Methodology prior to starting the formal public participation process required by SB 375. SCAG will conduct the formal *Connect SoCal* public process starting with the first public workshop on May 14, 2019.

The Technical Technology is prepared and organized based on *Appendix A. Technical Methodology Submission Template and Guidance* to the ARB's *Final Draft Sustainable Communities Strategy Program Evaluation Guidelines*. At the heart of the Technical Methodology is the activity-based regional travel demand model that SCAG has enhanced significantly since the 2016 RTP/SCS.

Also pursuant to California Government Code Section 65080(b)(2)(J)(i), upon receipt of the Technical Methodology, ARB is required to respond to SCAG with written comments timely, including specific description about any aspects of the methodology that ARB concludes will not yield accurate estimates of the GHG emissions and remedies.

Attachment: SCAG Technical Methodology Cover Letter (Connect SoCal Technical Methodology Submittal to California Air Resources Board)

I look forward to continuing our agencies' collaboration and partnership in air quality, transportation, and land use planning to reduce GHG emissions, improve air quality, and increase mobility for 19 million residents in the Southern California region. If you have any questions, please contact Mr. Rongsheng Luo, Air Quality and Conformity Program Manager, at (213) 236-1994 or luo@scag.ca.gov.

Sincerely,

KOME AJISE
Executive Director

Enclosure

cc via Email: Ms. Nicole Dolney, ARB
Mr. Nesamani Kalandiyur, ARB
Ms. Lezlie Kimura Szeto, ARB
Ms. Lana Wong, ARB

Technical Methodology to Estimate Greenhouse Gas Emissions for Connect SoCal (2020-2045 Regional Transportation Plan/Sustainable Communities Strategy)

Southern California Association of Governments

May 13, 2019

I. Introduction

1. Purpose of Technical Methodology

Pursuant to California Government Code Section 65080(b)(2)(J)(i), prior to starting the formal public participation process required by SB 375, a Metropolitan Planning Organization (MPO) must develop and submit to the California Air Resources Board (ARB) for its approval the technical methodology it intends to use to estimate the greenhouse gas (GHG) emissions from its Sustainable Communities Strategy (SCS) (or, if necessary, Alternative Planning Strategy). Upon receipt of the technical methodology, ARB is required to respond to the MPO with timely written comments, including a specific description of any aspect of the technical methodology that it concludes will not yield accurate estimates of the GHG emissions and remedies.

The Southern California Association of Governments (SCAG) is developing 'Connect SoCal', its mandated 2020-2045 RTP/SCS, and plans to initiate the SB 375 required formal public participation process by holding the first public workshop on May 14, 2019. SCAG plans to submit its Technical Methodology to ARB by May 9, 2019.

2. Applicable per capita GHG Emissions Reduction Targets Set by CARB

On March 22, 2018, the ARB Board adopted the following new, more stringent, per capita GHG emissions reduction targets from 2005 levels for the SCAG region effective October 1, 2018[1]:

2020 Target: -8%
2035 Target: -19%

3. Overview of Analysis Years

Pursuant to current regional transportation planning regulations and consistent with past practices, 2016 has been chosen as the base year for 'Connect SoCal', 2020 as the first year, and 2045 as the planning horizon year. To fulfill various federal and state planning requirements, SCAG will perform analysis including modeling for multiple years in addition to the base year and the planning horizon year.

Table 1 (below) provides a summary of the applicable analysis years, including their respective purposes, for the Technical Methodology to estimate GHG emissions for 'Connect SoCal'.

[1] https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets

Attachment: Final SCAG GHG Technical Methodology (Connect SoCal Technical Methodology Submittal to California Air Resources Board)

Table 1. Analysis Years Considered in SCAG's 'Connect SoCal'

Analysis Year	Purpose
2005	Base Year for SB 375 GHG emissions reduction target setting
2016	Base Year for 'Connect SoCal'
2020	SB 375 GHG emissions reduction target
2035	SB 375 GHG emissions reduction target
2045	Planning horizon year for 'Connect SoCal'

4. Overview of SCS Schedule

SCAG's Sustainable Communities Strategy (SCS) process kicked off with one-on-one meetings with each local jurisdiction in the region to update and verify our datasets for plan development. In May of 2018, SCAG launched a new working group, Sustainable Communities, to convene stakeholders from local jurisdictions and other organizations to solicit feedback on initial SCS development and other related issues.

The overall outreach timeline is provided below (future dates in *italics*):

October 2017: Launched Local Input Process

May 2018: Sustainable Communities Working Group Kickoff

August 2018: Sustainable Communities Working Group Meeting

September 2018: Concluded Local Input Process

October 2018: Regional Council Approved Sustainable Communities Strategy Framework

November 2018: Sustainable Communities Working Group Meeting

November 2018: Deadline for County Transportation Commissions to provide initial input on transportation projects, strategies, and programs

November-December 2018: Selected Planning and COG Director interview feedback on initial scenario concepts

April 2019: *Launched partnerships with local Community-Based Organizations throughout the region*

April 2019: *Public 'pop-up' events to solicit input on to-be-developed draft scenarios and/or strategies*

May 9, 2019: *Submittal of Technical Methodology to Estimate GHG Emissions to ARB*

May 14 - June 2019: *SB 375 Workshops (scenario development)*

October 2019: *Release of Draft 'Connect SoCal'*

Late 2019: *SB 375 Public Hearings*

January-March 2020: *SB 375 Elected Official Briefings*

April 2020: *Adoption of Final 'Connect SoCal'*

Attachment: Final SCAG GHG Technical Methodology (Connect SoCal Technical Methodology Submittal to California Air Resources Board)

5. Outline of the Technical Methodology

ARB staff released the Final Draft Sustainable Communities Strategy Program and Evaluation Guidelines (https://ww2.arb.ca.gov/sites/default/files/2019-03/Draft_SCS_Evaluation_Guidelines_Report.pdf; and https://ww2.arb.ca.gov/sites/default/files/2019-03/Draft_SCS_Evaluation_Guidelines_Appendices.pdf) in late March and held a public workshop on the Final Draft Guidelines on April 3, 2019. The Final Draft Guidelines prescribes what should be included in the technical methodology. In accordance with the ARB's Guidelines, SCAG's Technical Methodology consists of the following nine sections:

Section I. Introduction describes the purpose of the Technical Methodology, identifies the applicable per capita GHG emissions reduction targets set by ARB, provides an overview of the analysis years, outlines the SCS schedule, and summarizes the organization of the Technical Methodology document.

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Attachment: Final SCAG GHG Technical Methodology (Connect SoCal Technical Methodology Submittal to California Air Resources Board)

II. Overview of Existing Conditions

1. Notable Changes to Existing Regional or Local Planning Contexts

Since the 2016 RTP/SCS was adopted, there have been changes in the regional planning context for integrating the transportation network, measures, and policies with land use strategies to achieve reduced greenhouse gas (GHG) emissions. For 'Connect SoCal', SCAG will initiate a deliberative, collaborative scenario development process to engage the public on a range of regional planning topics and forecast a regional development pattern that will reduce GHG emissions from automobiles and light trucks to meet the ambitious 2035 target of a 19 percent reduction in per capita GHG emissions set forth by CARB. Although the issues listed below are not necessarily new, associated assumptions may change and will need to be addressed in a nuanced way in the scenario process and SCS.

- New sources of revenue have started to impact transportation funding allocation priorities (e.g. SB 1, Los Angeles County Measure M)
- Attracting and retaining transit system riders has proven to be a challenge, and ridership decline has been exacerbated by a variety of exogenous factors [e.g. increased vehicle efficiency and affordability and thus vehicle access, TNC (ride-hailing service) expansion, and gentrification]. (Link to https://www.scag.ca.gov/Documents/ITS_SCAG_Transit_Ridership.pdf)
- New and updated general plans and specific plans across several jurisdictions. At least 58 jurisdictions have updated one or more elements of their general plan since 2012.

2. Key Regional Issues Influencing RTP/SCS Policy Framework and Discussions

Key Regional Issues that may influence RTP/SCS policy framework and discussion may include but are not limited to the following:

- Development of innovative mobility options (e.g. micromobility), technology, and Mobility as a Service (which combines options from different transport providers into a single mobile service) are influencing travel behavior in ways that remain unpredictable.
- There are increased challenges for producing sufficient housing at multiple price ranges to serve very-low, low, and moderate income households in locations that do not induce SOV travel and/or adversely impact essential resources (e.g. water supply, agricultural lands, and critical habitats). Challenges include, but are not limited to, material and labor costs of housing construction, high land prices, as well as public opposition to new development in certain urbanized locations.
- Previous assumptions about shared mobility adoption rates and deployment strategies have not yet been borne out in reality. For example, whereas previously SCAG has assumed that increased adoption of transportation network company services (like Uber and Lyft) would lead to decreased VMT - recent studies have not proven that assumption to be true.
- Transit oriented development, associated densities, and active transportation infrastructure have not been implemented reliably region-wide to encourage significant mode shift.
- The challenges of facing a rapidly changing climate have become more apparent with numerous extreme events including wildfires, floods, and heat events impacting transportation, housing and the regional economy.
- Public resistance to Complete Streets design implementation sometimes results in piecemeal improvements that lack regional connectivity benefits.

Attachment: Final SCAG GHG Technical Methodology (Connect SoCal Technical Methodology Submittal to California Air Resources Board)

- Changing consumer patterns and technology are impacting the acquisition, delivery, and overall movement of goods into and through the region.
- Work at home and telecommuting rates have continued to increase, while the percentage of those who have opted to take public transportation to work has decreased.

Attachment: Final SCAG GHG Technical Methodology (Connect SoCal Technical Methodology Submittal to California Air Resources Board)

III. Population, Household, and Employment Growth Forecasts

1. Updated Regional Growth Forecast Compared to Last SCS

SCAG's integrated growth forecast methodology for 'Connect SoCal' is largely similar to the process established and followed during the 2012 RTP/SCS and the 2016 RTP/SCS. The development of forecasts for employment, population, and household growth between 2016 and 2045 includes:

- Convening a panel of regional economic and demographic experts to provide technical and advisory assistance (June 2017).
- Producing a set of draft growth forecasts using dynamically-coupled regional and county-level models.
- Conducting one-on-one meetings with all 197 local jurisdictions to solicit input on the draft growth forecast and other data elements required by the SCS (meetings completed in July 2018).
- Provided additional in-person technical assistance to 80 local jurisdictions to complete their review, input and comments.
- Developing several growth scenarios based on a set of land use development principles and priority development areas and policy objectives (beginning Spring 2019)
  - Conduct additional local, subregional, and stakeholder review as well as soliciting comments and input in order to refine the growth scenarios (May-September 2019).
  - Release the draft growth forecast along with the draft RTP/SCS (October 2019) and PEIR (November 2019) for public review and comment.
- Adopting final jurisdictional growth forecasts as part of the RTP/SCS process (April 2020).

2. Explanation of Changes to Regional Growth Forecast Methodology

a. Regional/County Growth Forecast

SCAG's Regional Growth Forecast is the basis for developing the Regional Transportation Plan (RTP), Sustainable Communities Strategy (SCS), Program Environmental Impact Report (PEIR), and the Regional Housing Needs Assessment (RHNA). SCAG's 'Connect SoCal' growth forecast includes six counties' jurisdictional level population, household, and employment for years 2016, 2020, 2030, 2035, and 2045.

The following major data sources are considered and used in the development of the growth forecast:

- U.S. Bureau of Labor Statistics (BLS) historical and projected labor force and employment by industry
- California Department of Finance (DOF) population and household estimates
- California Employment Development Department (EDD) jobs report by industry (ES202)
- Base Year (2016) existing land use and General Plans from local jurisdictions
- 2010 Census and 2015, 2016, and 2017 American Community Survey (ACS) data
- 2015 business establishment data from InfoGroup

SCAG's Regional Growth Forecast includes three major indicators: employment, population, and households which are dynamically coupled, meaning that changes in one indicator affect the forecast of the others. SCAG computes regional employment based on the region's share of national employment using a shift-share approach. A cohort-component model is used to project future population in which births, deaths, and gross migration are considered over the projection period. Households are projected

Attachment: Final SCAG GHG Technical Methodology (Connect SoCal Technical Methodology Submittal to California Air Resources Board)

by using separate headship rates by age, sex, and racial/ethnic subgroups and applying them to the residential population.

The county growth forecast is also developed using the shift-share method, cohort-component model, and headship rate method, similar to the regional growth forecast method. The main difference is that the initial county population and employment forecasts are further adjusted using the county level population-employment ratio, with the consideration of labor supply and demand of each county and inter-county commuting patterns. The county growth forecast for 'Connect SoCal' is derived reflecting the new draft regional growth forecast and each county's share from the 2016 RTP/SCS growth forecast.

This regional/county forecast was reviewed by a panel of experts in June 2017 and subsequently presented to SCAG's Community, Economic, and Human Development (CEHD) Committee in July 2017 for their consideration and endorsement.

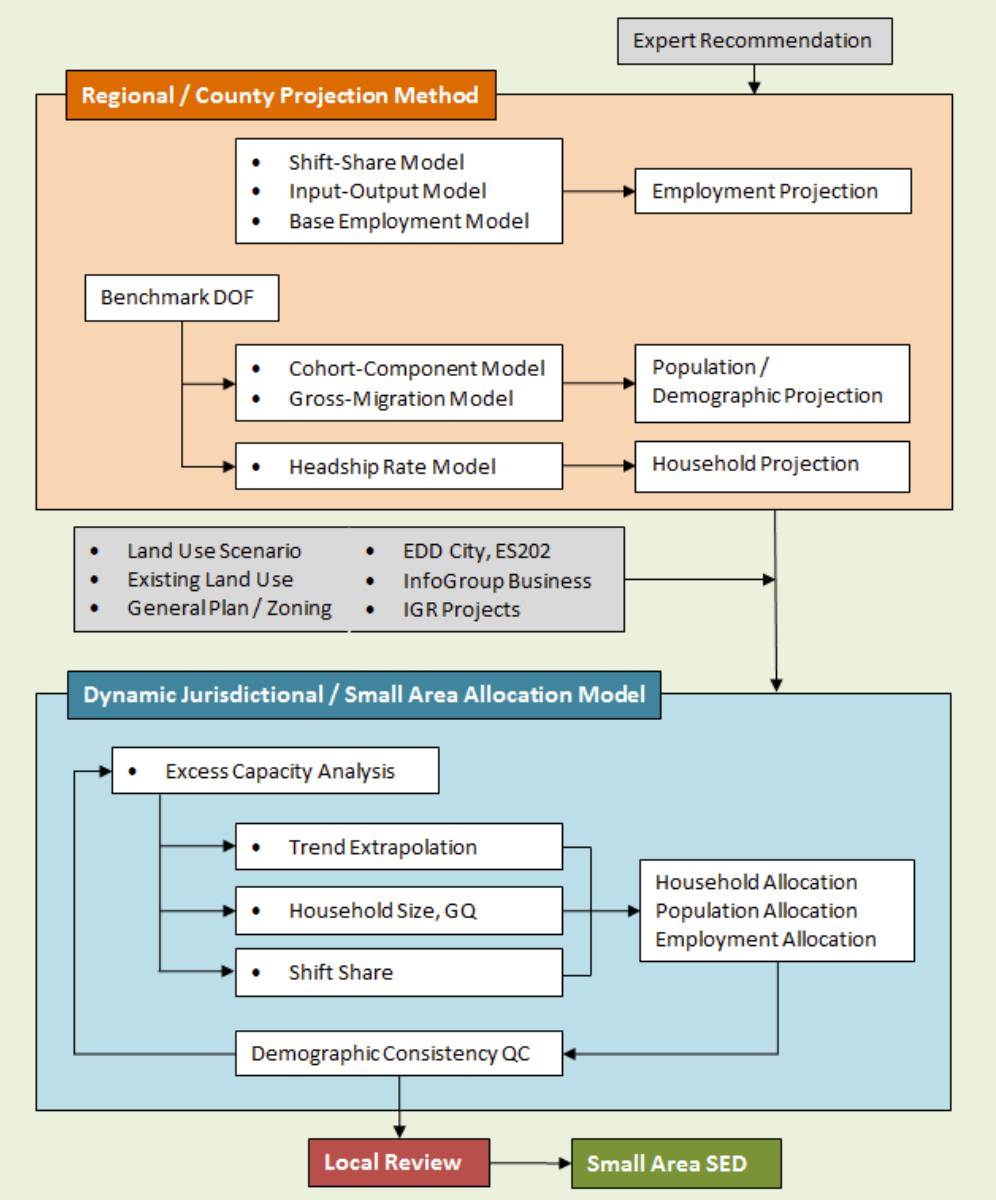

Figure 1: SCAG's Connect SoCal Integrated Growth Forecast Framework

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b. *Jurisdictional/Small Area Growth Forecast*

Based on the county growth forecast, SCAG then projects jurisdictional level population, households, and employment using the jurisdictions' most recent existing and general plan land use data as the basis for future year allocations. Household growth rates and household size are estimated based on historical trends and developable capacity. Population projections are calculated based on household growth and household size. Future employment is estimated based on the jurisdiction's employment share of the county's employment by sector and incorporation of local input.

The goal of the small area growth forecasting methodology is to allocate jurisdictional level population, household, and employment into the smaller Transportation Analysis Zones (TAZs) utilized by SCAG's Transportation Model. Jurisdictional level household and employment forecasts are developed using an independent projection methodology and review process with SCAG's cities and counties. Population projections are tied to household growth. The city's forecast and the projection year are often referred to as the 'control total' and the 'target year', respectively.

The geographic levels utilized in the growth forecasting process range from the SCAG region as a whole to Tier 2 (T2) Transportation Analysis Zones. Each lower level is consistent with higher aggregation levels (i.e., the values of cities when collectively summed for their respective county will equal the county projection). Similarly, the combination of city boundaries and Tier 2 zones when summed to their respective city total must be consistent with their city's projections.

SCAG's small area growth forecasting process is applied to develop base year and future year socio-economic data at the Tier 2 zone level. Below is a list of the data sources incorporated in the process:

- SCAG's existing land use data
- SCAG's general plan database, processed based on the most recently available jurisdictional general plans
- SCAG's 2016 RTP/SCS growth forecast
- SCAG's draft 'Connect SoCal' jurisdictional-level employment, population, and households
- 2015 Longitudinal Employer-Household Dynamics (LEHD) and Origin-Destination Employment Statistics (LODES) from the US Census Bureau
- 2016 QCEW firm location data from California Employment Development Department (EDD)
- 2015 business establishment data from InfoGroup
- SCAG Intergovernmental Review (IGR) data
- Digital Mapping Product (DMP) parcel-level land use data and new construction data (2014)
- 2010 Decennial Census and American Community Survey (ACS) data (2012-2016 5-year sample)

The above approach distributes jurisdictional level population, household, and employment into city/T2 level zones (15,000+ city/T2 zones), which work with SCAG's current databases and zonal systems. It creates the first cut of the small area forecast. The draft Tier 2 level forecast is then shared with SCAG jurisdictions for further review and comment.

c. Local Input

After the initial growth forecast was developed, SCAG staff conducted the 'Connect SoCal' Bottom-Up Local Input and Envisioning Process. Data/Map Books were prepared for each local jurisdiction (http://scagrtpscs.net/Pages/DataMapBooks.aspx) and one-on-one meetings with all 197 local jurisdictions to review and provide input on the jurisdictional growth forecast between October 2017

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and July 2018. In addition to growth forecasts, the Data/Map Book also contains extensive GIS data—20 maps covering each jurisdiction's General Plan, zoning, existing land use, farmland, resource areas, jurisdictional boundaries, truck lanes, bike lanes, and high quality transit areas (HQTAs), which were provided for local review and input. Moreover, a map of potential infill parcels was also produced for each jurisdiction to identify potential available sites for future housing and other development.

This local input process provided an opportunity for jurisdictions to offer their local knowledge and input to inform SCAG's regional datasets. SCAG evaluated the comments and incorporated the adjustments into the population, household, and employment growth forecasts/distributions. The resulting Draft 'Connect SoCal' growth forecast will serve as the basis for the initial 'Connect SoCal' scenario assessment. Additional refinements may be made through the scenario planning process in the development of the final 'Connect SoCal' growth alternative.

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IV. Quantification Approaches

1. Quantification Approaches for Each of Potential SCS Strategies under Consideration

SCAG is considering a wide variety of potential SCS strategies for 'Connect SoCal'. Table 2 below provides a summary list of these potential strategies and the anticipated approaches to quantify their respective GHG emission reductions. Many of these strategies were included in the 2016 RTP/SCS and have been updated and refined with current data or research. New strategies have been added, such as changing workplace and micromobility, to reflect emerging trends and new services within the region.

Table 2. Quantification Approach by SCS Strategy

SCS Strategy	Quantification Approach
1) Congestion Pricing*	Travel Demand Model
2) Express Lane Pricing*	Travel Demand Model
3) Improved Bike Infrastructure*	Travel Demand Model
4) Infill development and increased density near transit infrastructure* This strategy is embedded within several growth priority areas such as 'Transit Priority Areas', 'High Quality Transit Areas', and 'Livable Corridors' to reflect the benefits gained when development occurs near transit infrastructure.	Travel Demand Model
5) Mileage-Based User Fee*	Travel Demand Model
6) New transit capital projects*	Travel Demand Model
7) Shorter trips through land use strategies such as jobs/housing balance and complete communities*	Travel Demand Model
8) Telecommute program / Work from Home*	Travel Demand Model
9) Transportation Demand Management Alternatives to single occupancy vehicle travel, including but not limited to: ridesharing, carpooling and vanpooling, parking subsidies for carpoolers and others	Travel Demand Model
10) Safe Routes to School*	Off-Model
11) Bike Share and Micromobility Docked and dock-less bike sharing programs allow temporary and short-term bicycle rentals and increase share of bicycle trips. Policy development to support shared micromobility such as e-scooters for short trips and first/last mile connections	Off-Model
12) Car Share*	Off-Model

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SCS Strategy	Quantification Approach
13) Changing Workplace: Automation, Co-working Broad policy support to steer workplace changes towards a lower VMT outcome. Future automation of tasks could enable adaptive re-use potential of building stock and related reduction in commuting in certain industries. Co-working full or part time when used to work remotely can decrease commute distances.	Off-Model
14) Electric Vehicle Charging Infrastructure Increasing the number of EV charging stations to encourage adoption of EV and extend the range of hybrid PEVs	Off-Model
15) First/Last Mile Improvements Increasing safety, improving infrastructure, and reducing the time it takes to access transit stations for pedestrians and cyclists	Off-Model
16) Improved Pedestrian Infrastructure*	Off-Model
17) Parking Management Both navigation and pricing tools to decrease cruising and incentivize mode shift (pricing). This includes real-time identification of open spaces and adaptive pricing.	Off-Model
18) Multimodal Dedicated Lanes Conversion of traffic lanes to prioritize transit or active transportation modes.	Off-Model

* General descriptions of these strategies can be found in the Air Resources Board Policy Briefs at: https://arb.ca.gov/cc/sb375/policies/policies.htm

2. Assumptions and Methods for Estimating Inter-regional Travel

In the SCAG model, 40 cordon locations are defined to estimate external trips. The interregional or external trips for base year 2016 light-and medium duty vehicle cordon volumes are estimated by first obtained traffic counts from each cordon location. Then previous cordon surveys were used to split total external trip into: 1) Internal-External (I-E) trips, External-Internal (E-I) trips, and External-External (E-E) trips. Finally, the population growth rates were applied to base year volumes to estimate future years cordon volumes. SCAG includes 100 percent of the VMT associated with the Internal-Internal (I-I), X-I and I-X trips and exclude all VMT associated with X-X trips when estimating the VMT used in SB 375 GHG emissions reduction target achievement.

3. CARB's Mobile-Source Emission Factor Model for Estimating GHG Emissions

EMFAC2014 was used for estimating GHG emissions from the last 2016 RTP/SCS. SCAG will use this same model for estimating GHG emissions for 'Connect SoCal'.

SCAG staff will use the outputs from the Regional Travel Demand Model to determine regional and air basin GHG emissions. The estimate passenger vehicle VMT and speed profiles will be converted into EMFC 2014 inputs. After running EMFAC 2014, GHG emissions per capita will be calculated based on residential population, then compared with 2005 GHG emissions per capita to derive the 2020 and 2035 plan reduction in GHG emissions per capita. In order to provide an equivalent comparison to the first

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RTP/SCS, where emissions were established with EMFAC2007, the same adjustment factors from the 2016 RTP/SCS (2.2% and 1.9% for 2020 and 2035, respectively) will be added to the percentage reduction in GHG per capita calculated with EMFAC 2014. The final GHG emissions per capita will then be used to determine whether 'Connect SoCal' meets the respective 2020 and 2035 regional GHG emission reduction targets for the SCAG region.

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V. Travel Demand Modeling

1. Travel Demand Models

A. Improvement of Travel Demand Model – SCAG Activity-Based Model

SCAG is currently working on the transition of its regional travel demand model to an activity-based model (ABM) from the trip-based model (TBM) that SCAG had been using over previous decades. SCAG plans to use the newly developed and validated ABM for modeling analysis of SCAG's 'Connect SoCal'.

SCAG ABM is composed of three main components: 1) CT-RAMP2 (Coordinated Travel-Regional Activity Modeling Platform – 2nd version) which simulates daily activity participation and scheduling for each individual, with travel being viewed as a derivative of out-of-home activity participation and scheduling decisions, 2) a network assignment model that estimates traffic data of all vehicle modes, using O-D (Origin-Destination) input matrices generated by CT-RAMP2 (passenger vehicles), and 3) other pre-calculated OD input matrices (airport, seaport, inter-regional; by passenger vehicles and heavy-duty trucks).

Regarding model software, CT-RAMP2 is written in Java programming, and is based on Object-Oriented Programming modular design. TransCAD version 8 is used for assignment modeling and skim calculation. SCAG ABM user interface along with scenario manager is built with the Geographic Information System Developer's Kit (GISDK), which is the script language of TransCAD.

SCAG ABM covers the entire SCAG region which encompasses 6 counties and 11,267 Tier 2 Transportation Analysis Zones (TAZs). The network assignment uses static assignment model developed for SCAG TBM. The SCAG ABM contains 8 main model components and 39 sub-models that were estimated from the 2011-12 California Household Travel Survey. Below is a description of the main SCAG ABM components and model flow chart:

1) Population Synthesis - creates a list of synthetic households and persons for the entire model area for each horizon year. It serves as the primary input to SCAG ABM.
2) Accessibility Calculator - generates zonal accessibility measures that are used for different components of SCAG ABM.
3) Long Term Choice - estimates choices of work arrangements as well as usual location of the mandatory activity for each worker and student.
4) Mobility Choice - estimates individual decision of holding a driver's license and estimates the number of cars owned by each household.
5) Day-level models for activity generation, tour formation, and time allocation
    a. Coordinated daily activity travel pattern: Generates daily travel pattern for each household member, including daily travel with mandatory activities, without mandatory activities (non-mandatory activities only), and no travel.
    b. Individual mandatory activities/tours for each household member: Predicts frequency and scheduling of mandatory activities and tours, and decisions of escorting children to school.
    c. Fully joint activity generation and scheduling: Predicts joint activity frequency, joint travel party, tour formation, stop frequency, and location of each joint tour.
    d. Maintenance activity generation: Simulates the number of maintenance activities generated by each household and allocates to household members.

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e. Individual discretionary activity generation: Predicts the frequency of discretionary activities for each person.
f. Individual tour formation: (1) Allocates individual non-mandatory activities by day segments; (2) Predicts tour frequency and location of each activity/stop.

6) Tour-level models - Estimates travel details related to each tour, including primary destination, stop location, time of day, and tour mode.
7) Trip-level models - Estimates travel details of each trip, including trip mode, trip departure time, activity duration, and trip model.
8) Assignment – Static assignment for both traffic and transit assignment

B. Description of SCAG model components

1) Population Synthesizer

SCAG Population Synthesizer, pyPopSyn, is a module that generates a list of households (including GQ), and its associated household members within entire model area for each horizon year. The pyPopSyn is formed using the detailed household and person data from the American Community Survey Public Use Microdata Sample (ACS PUMS Year 2012-2016). The household sample weights from the PUMS are adjusted under the theory of the Entropy Maximization formulation to match the various controls externally provided for TAZ, county, and the entire region simultaneously. Comparing to other synthetic population models based on iterative proportional fitting (IPF) methods that focus on few selected variables, pyPopSyn draws the samples from PUMS via its adjusted weights that the vast array of PUMS variables can be utilized for modeling their travel behavior.

2) Accessibility Calculator

Accessibility measures are important behavioral components of the ABM that express closeness of the modeled individual to potential locations where the activity 'supply' (employment of the corresponding type) is present. Accessibility has a strong impact on individual activity patterns and travel behavior. Multiple sets of accessibility measures are used across different parts of the SCAG ABM. Each set corresponds to a given activity purpose and are sometimes further segmented by travel arrangement type, user class, and/or mode. The accessibilities are computed in a module that precedes the core demand components of the SCAG ABM, and known as the Accessibility Calculator.

3) Long Term Choices

Long-term choices include 4 models: work arrangement, work flexibility, work location, and school location.

Usual work arrangement model: The model simultaneously predicts three job characteristics of each worker – (i) the weekly work hours for the primary job, (ii) the number of jobs, and (iii) the primary workplace location type.

Usual work schedule flexibility model: The model simultaneously predicts three work schedule characteristics of each worker – (i) number of days per week working at primary job, (ii) work flexibility at primary job, and (iii) the availability of compressed week option at primary job.

Usual workplace location choice: The model assigns a workplace TAZ to each worker who does not work from home.

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Usual school location model: The model predicts a school TAZ for every student in the population. The model is fully segmented by type of student, as follows: pre-school students, grade school students, and college/university students.

4) Mobility Choices

Driver license model: The model predicts whether an individual holds a valid driver's license or not. It applies to all persons 16 years and over.

Auto ownership model: The model predicts the number of households by auto ownership level (0, 1, 2, 3, and 4 or more). It applies to all households in the synthetic population.

5) Day-Level Models for Activity Generation, Tour Formation, and Time Allocation

Coordinated daily activity travel pattern: Generates daily travel pattern for each household member, including daily travel with mandatory activities, without mandatory activities, and no travel.

Mandatory activity generation and tour skeleton formation: This model includes decisions that relate to the least flexible activities - work, university, school, or any other business-related activity. Many of these activities are pre-planned before a person builds his or her daily activity pattern and schedule around them.

School escorting: The escorting model can be thought of as a matching model that predicts whether escorting occurs, and if so which adult household members are chauffeurs and which children are escorted to school.

Fully joint activity generation and scheduling: Shared intra-household non-mandatory activities are generated and are also considered prioritized activities. These activities are organized into fully-joint tours when all members of the travel party travel together and participate in all activities included in the tour.

Non-mandatory activity generation: The maintenance task generation model is a simultaneous choice of household task frequency by three maintenance activity types (escorting, shopping, and other maintenance). The discretionary activity generation model estimates frequency of individual discretionary activity episodes for each person by five discretionary activity types (eating out/breakfast, eating out/lunch, eating out/dinner, visiting relatives and friends, and other discretionary activity).

Preliminary tour formation: Combines the outcomes of all prior sub-models into tours. These prior model outcomes include mandatory tour skeletons, fully joint tours, and non-mandatory activities, as well as the corresponding activity locations.

6) Tour and Trip Level Models

Combinatorial mode choice: Mode choice in most ABMs in practice is implemented in two steps. The first step relates to the entire tour mode and it is frequently solely based on the tour primary destination ignoring stop locations. The second step relates to trip mode choice conditional upon tour mode choice. The innovative mode choice structure implemented in the SCAG ABM is based on a different principle, where the tour-level and trip-level mode choices are fully integrated. The tour-level and trip-level mode choices are integrated in a network combinatorial representation. The tour mode is dependent on the modes observed in all trips that comprise the tour, and is defined using predetermined priority rules.

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Tour time of day: Tour time is a hybrid discrete-choice and duration construct that operates with tour departure-from-home and arrival-back-home time combinations as alternatives. The model utilizes direct availability rules for each subsequently scheduled tour, to be placed in the residual time window left after scheduling tours of higher priority. This conditionality ensures a full consistency for the individual entire-day activity and travel schedule as an outcome of the model.

Individual schedule consolidation with simulated travel times: Individual schedule consolidation process applied to each household and person with a special consideration of joint activities and trips that create intra-household linkages between schedules of different household members.

7) Network Assignment
Network assignment is the process of loading vehicle trips onto the appropriate networks. For highway assignment, SCAG ABM consists of series of multi-class simultaneous equilibrium assignments for seven classes vehicles (drive alone, 2-person carpool, 3-person carpool, 4 or more-person carpool, light HDT, medium HDT, and heavy HDT) and by five time periods. During this assignment process, trucks are converted to Passenger Car Equivalent (PCE) for each link and each truck type is based on: 1) percentage of trucks, 2) percentage of grade, 3) length of the link, and 4) level of congestion (v/c ratios). Transit vehicles are also included in the highway assignment. In transit trip assignment, the final transit trips that are formed in the last loop of model choice model are aggregated by access model and time period, and then assigned to transit networks for each time period. The vehicle trip tables obtained from airports and Heavy-Duty Truck models are aggregated into the 4,109 zone system (Tier-1 zones) prior to network assignment.

C. SCAG Travel Demand Modeling Flow Chart

The flow chart on the next page illustrates SCAG's travel demand modeling process.

2. Model Inputs used in Activity Based Model

A. Synthetic Population/Household

SCAG ABM uses synthetic population and household as main input to the model. Below describes main variables used in SCAG ABM.

1) For each synthesized household: household size, household income, housing type
2) For each synthesized person:
   a. Basic Variables: age, sex
   b. Worker/Student: worker's status (worker or not a worker), worker's industry, student's grade
   c. Person Type: SCAG ABM processes eight person types as primary input to the model, including (1) full-time worker, (2) part-time worker, (3) college student, (4) non-working adult, (5) non-working senior, (6) driving age child, (7) pre-driving age child, and (8) pre-school child
3) Group Quarter Population: same as residential population

B. Zonal Variables

A set of zonal variables by SCAG TAZ are created for size term calculation and Accessibility Calculator:

1) Population: total/residential population
2) Households: total households, multiple-family dwelling households
3) Employment: total employment, employment by 13 industries (aggregated 2-digit NAICS)
4) School Enrollment: K-8, 9-12, college
5) Median household income

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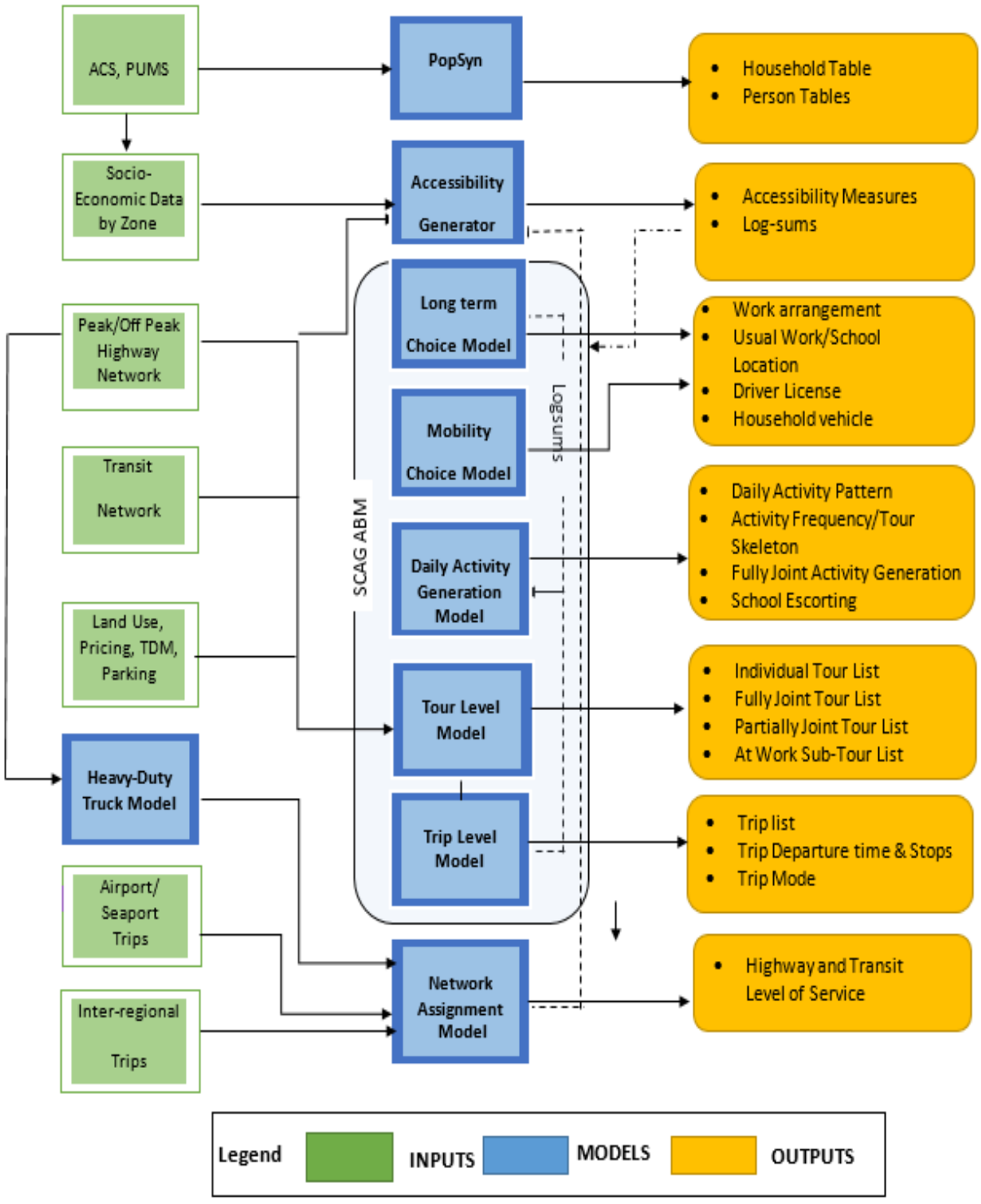
SCAG Travel Demand Modeling Process



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C. Land Use & Built Environment (LUBE) Variables

A set of land use and built environment variables by TAZs are calculated in SCAG ABM.

1) Land use variables (calculated from zonal SED):
   a. Density: By residential population, household, and employment density
   b. Diversity: Land use mix indicator (population, commercial/industrial jobs, other jobs), jobs to households ratio
   c. Multiple Housing: Percentage of multiple-unit dwelling households
2) Built Environment (calculated from network):
   a. Transit Access: Transit stop density
   b. Street Density: By higher-speed density (MPH>=35); lower-speed density (otherwise)
   c. Bike Lane Density (pre-processed)

D. Network

1) Highway network
2) Transit network

E. Travel Cost:

1) Auto Operating Cost
2) Parking Cost: In 2013, SCAG purchased parking cost data from Parkme.com which has on and off-street parking locations, prices (hourly, daily, and monthly) information in the Southern California region. Off-street parking data has 2,548 entities and on-street parking data has 2,102 entities in it. In March 2017, SCAG staff manually collected data from Parkme.com. About 2,500 records were collected. SCAG staff combined the collected data and processed parking cost data by TAZs, including 1) daily average for commuter (early bird), 2) one hour parking, 3) extra hour parking, and 4) daily maximum.

F. Work from Home (WfH): Percent of Work-from-Home Workers

SCAG ABM developed a new function to incorporate the assumptions for percent of workers who work from home, including telecommuting, home office, or other strategies. Inputs can be either WfH workers as percent of total workers, or by eight different household income segments: <$25K, $25k-$50k, $50k-$75k, $75k-$100k, $100k-$125k, $125k-$150k, $150k-$200k and >$200k. It is noted that the rebound effect is included in the SCAG ABM. While a WfH worker saves commuting trip to/from work place, the SCAG ABM does not exclude additional non-work travel or business (work-related) travel by the worker.

G. Travel Demand Management (TDM)

SCAG ABM developed an add-on function to incorporate the assumptions for percent of workers who change commuting modes from driving a car to other modes. Inputs are based on the CAPCOA Quantifying Greenhouse Gas Mitigation Measures report fact sheets regarding effectiveness of commute trip reduction programs, the City of Los Angeles VMT Calculator tool, and mode split data from the South Coast AQMD Rule 2202 Employee Commute Reduction Program. The input will apply to

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tour mode choice output for work tour. The reduction of vehicle-driving modes will be converted to other modes.

3. Commitments to Provide Model Sensitivity Tests for SCS Strategies under Consideration

SCAG commits to conducting model sensitivity tests with the enhanced SCAG Regional Travel Demand Model for SCS Strategies.

4. Whether and How Travel Model Accounts for Short- and Long-run Effects of Induced Demand for New Roadway Capacity Projects

According to the 'Technical Advisory on Evaluating Transportation Impacts in CEQA' report released in 2018 by the Governor's Office of Planning and Research (OPR), induced travel occurs where roadway capacity is expanded in an area of existing or projected future congestion. The report describes that proper use of a travel demand model may capture the effects of induced travel, including the number of trips, trip length or VMT, and change in mode share for automobiles. The SCAG travel demand model does incorporate short-term induced demand, which will be shown in the model sensitivity test results with increasing roadway capacity. For long-term induced travel, SCAG staff will work with ARB to develop a reasonable approach to examine long-term travel effects, such as applying long-term elasticity to policy input.

VI. List of Exogenous Variables and Assumptions for Use in Proposed SCS

1. Assumptions for Exogenous Variables to Travel Demand Modeling

Table 3 below is a list of exogenous variables to SCAG regional travel demand model. Assumptions for year 2035 will be provided when data is available.

Table 3. List of Exogenous Variables for Incremental Progress Analysis

Category of Variables[2]	Variables Specification in Model[3]	Assumption in 2035
Auto Operating Cost (2011 dollar value)	Fuel and non-fuel related costs (maintenance, repair, and tire wear)	Fuel: $0.1132 Non-Fuel: $0.0692
Vehicle fleet efficiency	EMFAC model	37.61 miles/gallon
Demographics	Population and employment	Will be provided when it is available
Household income	Median or distribution	Will be provided when it is available
Household demographics	Household size, workers per household, age	Will be provided when it is available
Inter-regional travel	Share of external inter-regional VMT	Will be provided when it is available
Travel demand model version	Newly developed Activity-Based Model	SCAG Activity-Based Model

2. Assumptions to Derive Cost of Travel

The assumptions and methods for auto operating cost calculation are described below:

A. Fuel Price (FP)

SCAG calculated average fuel price based on price of four different types of fuels.

1) Gasoline: Annual average price data is based on EIA (U.S. Energy Information Administration). Data between 2002 and 2018 for California and the U.S. was downloaded from the EIA website.
2) Diesel: Annual average price data is based on EIA (U.S. Energy Information Administration). Data between 2002 and 2018 for California and the U.S. was downloaded from the EIA website.

[2] As applicable.
[3] Cross-walking the relationship of certain variables back to the modeling conducted for the previous SCS may require MPO staff discretion and interpretation. For example, updated household demographic variables (such as household size) may result in a change to the regional population compared to the previous SCS. CARB staff expects a good-faith effort to construct a reasonable approximation. Exact accounting is not necessary.

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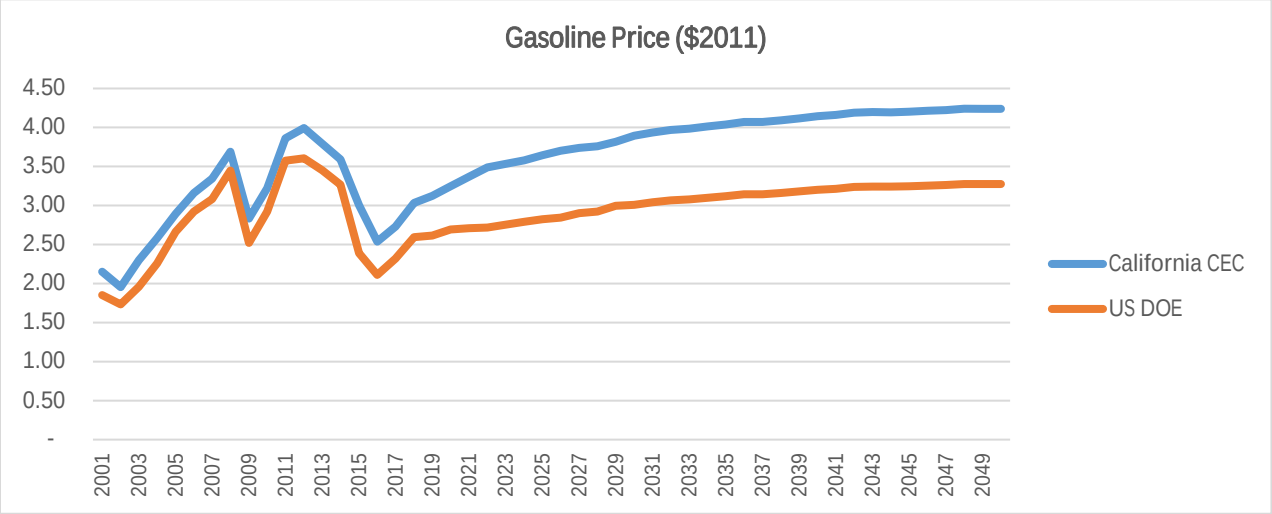
3) Gasoline and Diesel Projection (2019-2030): Data based on CEC (California Energy Commission) - using ARB AOC Calculator to retrieve the data.
4) Gasoline and Diesel Projection (2031-2045): Using growth pattern based on data from Annual Energy Outlook 2019 (EIA)

Assumptions and Methods:

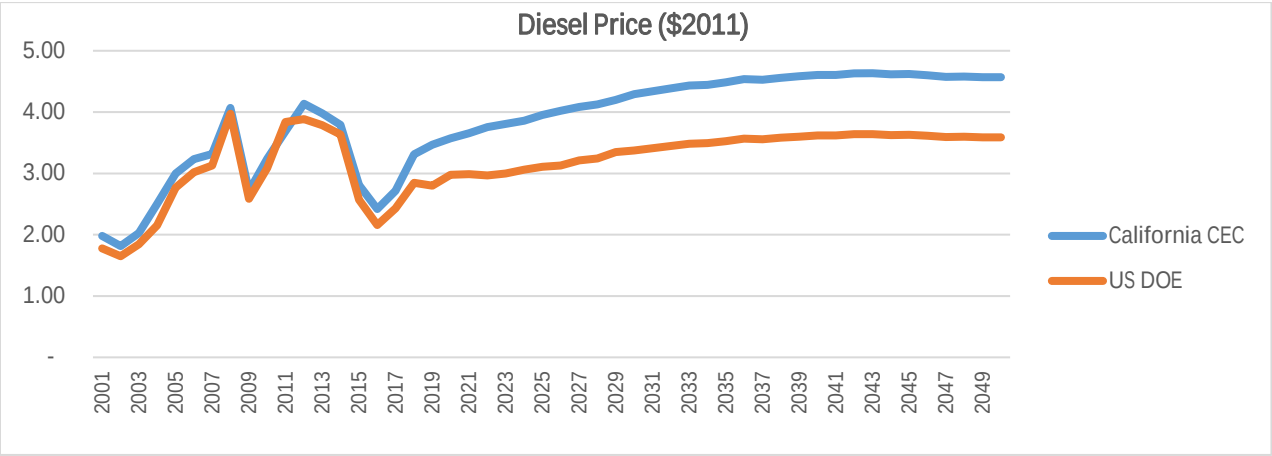
1) To be consistent with SCAG model assumptions, all price data are converted to 2011 dollar value.
2) Gasoline and Diesel data (2002-2018): Based on California data from EIA website
3) Gasoline and Diesel data (2019-2030): Based on 2018 data from Step 2, apply annual growth based on CEC projection
4) Gasoline and Diesel data (2031-2045): Based on 2030 data from Step 3, apply annual growth based on U.S. projection. The charts provided below show that the historical data and projections up to 2030 are quite consistent between CEC and EIA.

Gasoline Prices 2002-2045



- CEC after 2030: SCAG estimate (based on DOE projection growth rate)

Diesel Prices 2002-2045



- CEC after 2030: SCAG estimate (based on DOE projection growth rate)

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5) Electric and Hydrogen: Using data from AOC Calculator for SCAG
6) Calculate average fuel price: For each year, calculating average price of the four types of fuel (gasoline, diesel, electric, and hydrogen) weighted by VMT of each type of fuel (data from AOC Calculator for the SCAG region).

B. Non-Fuel-Related Operating Costs (NF Cost)

The base year non-fuel-related costs from the American Automobile Association (AAA) were used to estimate forecast-year non-fuel-related costs. It is noted that AAA changed its methodology in 2006 and 2017.

Assumptions and Methods:

1) All price data was converted to 2011 dollar value.
2) For year 2017 data, since the method was changed, SCAG assumed the price is the same as 2016.
3) For 2018 data, the growth rate from original data was applied to adjusted 2017 data.
4) SCAG applied linear regression based on data of past 10 years (2009-2018).

C. Effective Fleet-wide Fuel Efficiency (FE)

To be consistent with the use of EMFAC 2014 model for emission analysis, fuel efficiency derived from EMFAC 2014 was used.

D. Total Auto Operating Cost (AOC)

AOC = (FP/FE) + NF Cost

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VII. Per Capita GHG Emissions from Prior 2016 RTP/SCS

SCAG will refer to the approach described in the SCS Guidelines to report incremental progress.

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VIII. Off-Model Strategies

Of the 18 potential SCS strategies presented in Table 2 in *Section IV. Quantification Approaches*, the following strategies will rely on off-model analysis to quantify their GHG emissions reduction benefits:

1) Bike Share and Micromobility
2) Car Share
3) Changing Workplace: Automation, Co-working
4) Electric Vehicle Charging Infrastructure
5) First/Last Mile Improvements
6) Improved Pedestrian Infrastructure
7) Parking Management
8) Multimodal Dedicated Lanes
9) Safe Routes to School Strategies

Following ARB's Final Draft SCS Evaluation Guidelines, each of the off-model analysis will consist of the five elements below:

1) Strategy Description
2) Objectives
3) Trip and Emissions Data Needs
4) Quantification Methodology
5) Challenges, Constraints, and Strategy Implementation Tracking

1. Bike Share and Micromobility

1) Strategy Description

Bike share and micromobility is a mode of mobility that comprises a fleet of bicycles, electric bicycles (e-bikes) or electric scooters (e-scooters) that are available for short term rental. There are three types of bike share services that are comprised of docked bicycles, dockless bicycles, or a hybrid. Docked bicycles are checked out from docking stations and must be returned to another docking station. Dockless bikes on the other hand feature locking mechanisms which lock the rear wheel. When a user checks out a bike using a smart phone app, the wheel is released. The bike can be left anywhere within the service area. A hybrid system features docking stations, however, the locking mechanism is self-contained. In this case, users are encouraged to return bicycles to the stations, but they may be left locked to street furniture anywhere within the service area for a premium charge. E-scooters are all operated as dockless systems. At night, volunteers can take the e-scooters in and charge them and receive payment. Currently in the SCAG region, the Los Angeles County Metropolitan Transportation Authority (LA Metro) operates docked bicycles in the downtown Los Angeles, Venice, and San Pedro areas. Jump Bikes (formerly Social Bikes), which features a hybrid system, has operating agreements with the cities of Santa Monica, Beverly Hills, and West Hollywood. Finally, there are numerous new entrants into the dockless bike share space including: Jump, Lime Bike, and Spin. There are also numerous new entrants into the e-scooter share space including: Lime, Jump, Spin, Bird, Razor, Skip, and others.

This strategy aims to reduce GHG emissions by providing access to bicycles and scooters, and replacing auto trips. Some bike share programs also include electric pedal-assist bikes to make it easier for

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members to go farther distances. E-scooter sharing programs can follow the framework of quantification methodology in this section to estimate the potential GHG benefit.

2) Objectives

The objective of bike share and micromobility systems are to provide flexible mobility for short to medium distances (1-5 miles). They reduce GHG by the following:

- Replacing short distance auto trips
- Reducing household vehicle ownership and reducing usage of owned household vehicles with subsequent reductions in VMT
- Supporting transit by providing first/last mile connection options

3) Trip and Emissions Data Needs

Data needs include:

- Service Areas for bike share and e-scooter systems
- Ridership data from public partners such as local jurisdictions that regulate such service
- Average bike share/scooter share one-way travel distance.

4) Quantification Methodology

SCAG has two options for quantifying GHG reductions from bike share (the same quantification methodology applies to micromobility programs). The first option is to use an off-model Excel-based calculator developed by the San Diego Association of Governments (SANDAG) as part of a project under the four MPO Future Mobility Research Program. The second option is to use the methodology laid out in the ARB Final Draft SCS Evaluation Guidelines Appendices. Both work on the same premise of identifying different geographies where docked and dockless bikes will be operating, identifying a number of docking stations and bikes within those geographic areas, and assigning a participation rate within those respective areas. Based on the participation rate, SCAG staff will derive a VMT replacement figure and a subsequent GHG emissions reduction.

ARB Methodology:

Step 1: Identify service areas for each jurisdiction with planned bike share program and determine the number of planned bike share stations and population for each service area.

Step 2: Calculate the number of bike share stations per square kilometer (km) for each service area by dividing the number of planned bike share stations by the land area of each service area.

$$\textit{Bike share stations}_{skm} = \sum \frac{Bike\ share\ stations}{Service\ areaskm}$$

Where: *Bike share stations$_{skm}$ = Bike share stations per square km per service area (SA)*
Bike share stations = Number of planned bike share stations per service area
Service area$_{skm}$ = Area of each service area (square km)

Step 3: Apply a regression formula derived from the Institute for Transportation and Development Policy (ITDP) to estimate the number of daily bike share trips per 1,000 residents in each area:

Daily bike share trips per 1,000 residents = 1.74 * station density + 17.2

Step 4: Estimate the number of daily bike share trips in each service area by multiplying the number of residents in each service area by the number of daily bike share trips calculated in Step 3.

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*Bike share trips$_{SA}$ = $\sum ResidentsSA$ * Daily bike share trips*

Where: Bike share trips$_{SA}$ = Number of daily bike share trips per service area (SA)
Residents$_{SA}$ = Number residents in each service area
Daily bike share trips = Number of daily bike share trips per 1,000 residents

Step 5: Multiply total daily bike share trips by the average population growth for the scenario year to estimate future total daily bike share trips.

Step 6: Estimate average regional home-to-work (H-W) trip lengths.

a) Preferred Approach: Use region-specific trip lengths from travel demand model, regional and/or local bicycling and pedestrian master plan, region-specific study, or other empirical data sources.
b) Alternate Approach: Use average distance of 1.8 miles for biking and 0.98 mile for walking based on National Household Transportation Survey data.

Step 7: Estimate mode shift VMT reductions from private automobiles to bike share by multiplying the daily bike share trips calculated in Step 4 by the average regional H-W trip lengths from Step 6.

*VMT = Bike share trips$_{SA}$ * TL*

Where: Bike share trips$_{SA}$ = Number of daily bike share trips per service area (SA)
TL = Average regional H-W Trip Length (miles per trip)

Step 8: Obtain displaced private automobile trip CO_2 emission rates from the current version of EMFAC.

Step 9: Calculate total CO_2 emission reductions by multiplying VMT reductions calculated in Step 7 by EMFAC exhaust emission rates from Step 8.

*CO_2=VMT * EMFAC * 12.4%*

VMT = Calculated displaced VMT (miles)
12.4% of Bike Rides displace VMT for commutes or errands
EMFAC = EMFAC CO_2 emission rate (grams per mile)

5) Challenges, Constraints, and Strategy Implementation Tracking

A bike-friendly ecosystem is important to effectively implement this strategy. The ecosystem will require sufficient bike-related infrastructure, such as bike lanes, bike racks, etc. However, these infrastructure are usually beyond the scope of bike-sharing programs. Therefore, the effectiveness of bike sharing programs could be constrained by the readiness and availability of bike-related Infrastructure. Other challenges come from transportation network companies (TNCs), such as Lyft and Uber. Additionally, bike share is constrained by the terrain and its topography. In order to track this strategy, SCAG will continue to monitor growth of the bike share service territories.

Bike commuters frequently use additional transportation modes for their trip, which can significantly increase the total time required to travel. In addition, many bike share programs only provide service in a limited area (e.g., select cities) either near home location or work place. As a result, potential bike commuters will need to plan longer travel time and pay a premium for using bikes from multiple companies, which may increase total commute cost.

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In addition, bike sharing program users may worry about the protection of their privacy. Many shared bikes are installed with route tracking devices (e.g., GPS) to help company tracking the bike flow. However, it can be a big challenge to properly store and use these activity data. Currently, there are no specific regulations in this area and improper usage of activity data may violate people's privacy that could lead to adversely affecting their willingness to participate in bike sharing programs.

Another potential challenge of bike sharing programs is rider safety. Most bike sharing programs do not provide complimentary protective gear (e.g., helmet, knee pads, etc.), and exercise minimum liability and responsibility if users get injured. These issues need to be addressed in the long run to successfully implement bike sharing programs.

Monitoring/Tracking

- Specific bike share, e-scooter sharing, or other related projects
- Number of bikes in bike sharing program
- Number of miles logged through bike sharing programs

2. Car Sharing

1) Strategy Description

Car share service is available in three varieties in the SCAG region: traditional roundtrip, one-way, and peer-to-peer car share. Traditional roundtrip service provides vehicles at designated parking spaces, called pods or stations depending on the provider. Cars must be returned to their pods at the end of the trip. One-way vehicles can be picked up then dropped off at another station within the specified service territory. Peer-to-peer car share is similar to roundtrip service, except the vehicles are owned/leased by private individuals and the transaction is managed by a third-party operator, usually via a smart phone app. Potential GHG-reducing benefits associated with car sharing include reduced vehicle ownership rates, single occupancy vehicle trips, and VMT, as trips shift to walking, bicycle, and public transit due to reduced driving associated with reduced ownership rates. In addition, vehicles used for car sharing are often newer and less polluting than older privately-owned vehicles whose trips are replaced by car sharing.

Currently, there are five car share providers in the SCAG region. Zipcar provides roundtrip service and primarily serves university and college campuses in the region, except within the central Los Angeles area, where they have numerous locations. There is also a one-way provider called Blue LA that specifically serves low-income disadvantaged communities. Blue LA is a CARB funded program through Clean Mobility for Disadvantaged Communities, therefore it will not be included in the final analysis or will only be included to the extent of local funding. Finally, there are three peer-to-peer car share providers: Getaround, Turo, and Maven.

2) Objectives

Car sharing systems reduce GHG emissions in a number of different ways:

- Reducing congestion by lowering the number of owned vehicles
- Lowering the overall VMT, ultimately cVMT (combustion engine VMT)
- Changes in fleet mix, such as reducing vehicle ownership and more zero emission vehicles (ZEV)
- Replacing private-owned vehicles with car share vehicles
- Diverse impacts on other modes

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3) Trip and Emissions Data Needs

Data needs include:

- Service Areas for round-trip and one-way car share systems
- Ridership data from publicly subsidized partners
- Service areas for peer-to-peer car share systems
- Ridership data where possible
- Average vehicle trip length
- VMT reduced

4) Quantification Methodology

SCAG has two options for quantifying GHG reductions from car sharing. The first option is to use an off-model Excel-based calculator developed by SANDAG as part of a project under the 4 MPO Future Mobility Research Program. The second option is to use the methodology laid out in the ARB Final Draft SCS Evaluation Guidelines Appendices. Both work on the same premise of identifying different geographies where car share vehicles will be operating, identifying a number of car share vehicles within those geographic areas, and assigning a participation rate within those respective areas. Based on the participation rate, staff will derive the GHG emissions reduction based on changes in travel behavior related to changes in vehicle ownership supported research.

ARB Methodology

Step 1: Identify region/County/City/TAZs that have sufficient residential densities to support car sharing. Research indicates the minimum residential density required for a neighborhood to support car sharing is five (5) residential units per acre.

a) Preferred Approach: Use data from regional and/or local TNC operators, region-specific study, or other local empirical data sources for local residential density support rate.

b) Alternate Approach: Use conservative local residential density support rate five (5) residential units per acre.

Step 2: Estimate Total Population of region/County/City/TAZs identified in Step 1 as having sufficient residential densities to support car sharing.

Step 3: Identify regional car share adoption rate. Research from the Transportation Research Board's Transit Cooperative Research Program indicates that car share members are most likely to be between the ages of 25 to 45, while 10% of individuals aged 21+ in metropolitan areas of North America would become members if it were more convenient.

a) Preferred Approach: Use data from regional and/or local TNC operators, region-specific study, or other local empirical data sources for regional adoption rate.

b) Alternate Approach: Use conservative adoption rate of 10% of individuals aged 21 to 45. This number was derived from two car-sharing studies in major metropolitan/urban areas described above.

Step 4: Estimate car share membership population of region/County/City/TAZs identified as having sufficient residential densities to support car sharing (Step 2) using the car sharing adoption rate (Step 3).

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*Membership Population$_{CS}$ = (Total Population$_{CS}$ * Adoption Rate$_{CS}$)*

Where: Membership Population$_{CS}$ = Number of car sharing members in region/County/City/TAZs
Total Population$_{CS}$ = Total population of region/County/City/TAZs identified as having sufficient residential densities to support car sharing
Adoption Rate$_{CS}$ = Car sharing adoption rate for region/TAZ

Step 5: Estimate VMT reductions from vehicles discarded or shed by car sharing members. Research by the University of California at Berkeley Transportation Sustainability Research Center (TSRC) indicates that car sharing leads to net VMT reduction, which are associated with car sharing members selling their existing vehicles and reducing purchases of new vehicles. Research from the San José State University's Norman Y. Mineta International Institute for Surface Transportation Policy Studies (MTI) indicates that vehicles discarded or shed by car sharing members would otherwise have been driven 8,200 miles per year While VMT may slightly increase for specific car share members that did not previously own a car, the overall VMT tends to drop substantially for the car sharing membership fleet.

a) Preferred Approach: Use data from regional and/or local TNC operators, region-specific study, or other local empirical data sources to estimate the number of trips or miles per year that are associated with shed vehicles per car sharing member.

b) Alternate Approach: Use conservative estimate that shed VMT is 8,200 miles per year per car sharing member.

*Total VMT$_{Shed}$ = (Membership Population$_{CS}$ * - VMT$_{Memb\ Shed}$)*

Where: *Total VMT$_{Shed}$ = Total VMT from shed vehicles in region/TAZs (miles/year)*
Membership Population$_{CS}$ = Number of car sharing members in region/TAZs
VMT$_{Memb\ Shed}$ = VMT shed per carshare member per year (miles/member/year)

Step 6: Obtain CO_2 emission rates for shed private automobiles from the current version of EMFAC.

Step 7: Estimate CO_2 emission reductions from private automobiles shed by car sharing members.

*- $CO_{2\ Shed}$ = - Total VMT$_{Shed}$ * EMFAC$_{Shed}$*

Where: $CO_{2\ Shed}$ = CO_2 emission reductions from shed vehicles in region/County/City/TAZs (grams/year)
Total VMT$_{Shed}$ = Total VMT from shed vehicles in region/County/City/TAZs (miles/year)
EMFAC$_{Shed}$ = Average EMFAC CO_2 emission rate for shed vehicles in region/County/City/TAZs (grams per mile)

Step 8: Estimate VMT from car share members driving car share vehicles. CARB analysis of research conducted by MTI indicates that car share members drive an average of 1,200 miles per year in a car share vehicle.

a) Preferred Approach: Use data from regional and/or local TNC operators, region-specific study, or other local empirical data sources to estimate the average number of trips or miles per year driven per car sharing member.

b) Alternate Approach: Use conservative estimate that each car share member drives 1,200 miles per year in a car share vehicle.

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*Total VMT_{CS} = (Membership $Population_{CS}$ * $VMTMemb_{CS}$)*

Where: Total VMT_{CS} = Total VMT from car share members driving car share vehicles in region/TAZs (miles/member/year)
Membership $Population_{CS}$ = Number of car sharing members in region/TAZs
$VMTMemb_{CS}$ = Car share VMT per member per year in region/TAZs (miles/member/year)

Car share vehicles are expected to be more fuel efficient than the average fleet. Vehicles used for car sharing are often newer and less polluting than older privately-owned vehicles whose trips are replaced by car sharing. California's car sharing services offer a variety of vehicles to members, however, compared to the average light duty fleet, the vast majority of the car sharing fleet are low and zero emission vehicles (ZEV) such as hybrids, PHEVs or a Battery Electric Vehicles (BEV). Until the average light duty fleet in CA reaches the same ratio of conventional/combustion vs. low/zero emission vehicles (cVMT vs eVMT), the car sharing fleet will be, on average, more fuel-efficient. This difference in fuel usage represents, when converted, a direct GHG emission reduction. CARB analysis of research conducted by MTI indicates that car sharing vehicle fleets are typically 29% more efficient than the overall population of vehicles shed by car sharing members.

a) Preferred Approach: Use average local car sharing mix fleet based on data from regional and/or local TNC operators, region-specific study, or other local empirical data sources to identify average fleet-specific mix and age distribution to estimate car share fleet emission rates from the current version of EMFAC.

b) Alternate Approach: Obtain CO_2 emission rates for shed private automobiles from the current version of EMFAC and reduce by 29%.

Step 9: Estimate CO_2 emissions from car sharing vehicle operation.

*CO_{2CS} = Total VMT_{CS} * $EMFAC_{CS}$*

Where: CO_{2CS} = CO2 emissions from car share vehicles in region/TAZs (grams)
Total VMT_{CS} = VMT from car share vehicles in region/TAZs (miles)
$EMFAC_{CS}$ = EMFAC CO2 emission rate for car share vehicles in region/TAZs (grams per mile)

Step 10: Estimate total CO_2 emissions associated with car sharing in the region/TAZs.

Total CO_{2CS} = $CO_{2\ Shed}$ + $CO_{2\ CS}$

Where: Total CO_{2CS} = Total CO_2 emissions from car share strategy (grams/year)
CO_{2Shed} = CO_2 emission reductions from shed vehicles in region/County/City/TAZs (grams/year)
CO_{2CS} = CO_2 emissions from car share vehicles in region/County/City/TAZs (grams/year)

5) Challenges, Constraints, and Strategy Implementation Tracking

One of the main challenges with car share is the limited utility of round-trip services, and the limited penetration of one-way services. While the growth of peer-to-peer car share is encouraging, data sharing has been limited as they are private companies. In the SCAG region, Blue LA is a promising service with a long-term vision for expansion in the region.

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Other challenges include the following:

- Is there sufficient local empirical data sets available to identify:
  - Residential densities that support car sharing
  - Car share adoption rate
  - Competition from ride-hailing services that provide point-to-point transportation service
  - VMT reductions from shed vehicles
  - VMT associated with car share vehicles driven by car share members
  - Shed vehicles and car share fleet characteristics
- Do the types of car sharing programs (i.e., traditional roundtrip, one-way, peer-to-peer, and fractional) have different adoption rates?

6) Monitoring and Tracking
   - Regions/TAZs that support car sharing
   - Car share member population before and after strategy implementation
   - VMT reductions from shed vehicles or trips
   - VMT associated with car share vehicles driven by car share members

3. Changing Workplace: Automation, Co-working

1) Strategy Description

In general, this strategy aims to increase telecommuting, working from home, and other alternatives to single-occupant vehicle (SOV) employee commuting to a fixed work site. The specific focus is on co-working spaces, which are an increasingly prevalent feature of the region's employment landscape over the last several years. While the travel behavior of co-workers likely varies, it is reasonable to believe that the ability to use a co-working site in lieu of a farther away work space is a primary driver of their increasing popularity, which would result in lower VMT.

2) Objectives

Objectives of 'Connect SoCal' are to increase the options available to workers across the region, allowing them to choose alternatives to fixed places of work, which are major drivers of VMT. Telecommuting and flexible working hours are key factors in achieving this. However, not all work is suitable for a home location, and co-working spaces or teleworking centers can offer conveniently-located, affordable spaces for work to take place outside the home, but without the need to commute a longer distance to a fixed work location. While there has been a consistent increase in telecommuting and working from home, co-working spaces (in particular WeWork sites and Regus shared offices) are fairly new and have not yet been considered as part of a VMT reduction strategy. SCAG hopes to increase investments and policies in this area through the 2020 'Connect SoCal' RTP/SCS.

3) Trip and Emissions Data Needs

The primary data challenge is understanding the travel behavior of the users of co-working sites to ensure that they are indeed traveling less than they would to a fixed worksite. A SCAG-led consultant project is currently underway and as of this writing has surveyed roughly 150 co-working site users across the region, collecting data on their home locations, their industry/occupation, their commute

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mode, and where they would go if they didn't have a co-working site available. In addition, data is being collected about the extent and spatial distribution of co-working sites in the region, in order to forecast their likely number and penetration during the RTP/SCS forecast horizon. Finally, the surveying effort has resulted in a robust network of contacts of co-working space site managers, which will allow SCAG and its partners to help promote the advancement of trip-reducing uses of co-working throughout the region.

4) Quantification Methodology

Once survey results are completed by mid-2019, data can be used to estimate the current trip reduction potential based on the location of the region's co-working sites today and in the future. In addition, longitudinal telework and work-at-home data from the National Household Travel Survey (NHTS) and American Communities Survey (ACS) provide trend projections of these activities, which are similar to co-working spaces. It will then be possible to apply a past telecommute/work-at-home growth rate to our co-working site data to project future co-working travel behavior.

5) Challenges, Constraints, and Strategy Implementation Tracking

Implementation tracking may be a challenge; however, SCAG's experience with collecting survey data has resulted in a robust list of contacts at co-working sites. A follow-up plan and additional surveying may need to be developed. A challenge is that, until survey results are available in mid-2019, it will not be possible to quantify the trip reduction potential of co-working sites.

4. Electric Vehicle Charging Infrastructure

1) Strategy Description

The goal of the electric vehicle (EV) Charging Infrastructure strategy is to increase the number of workplace EV chargers in the region to facilitate workplace plug-in hybrid vehicles (PHEVs) charging by employees where the infrastructure is installed at workplaces. Currently, the average all-electric range (AER) of the PHEV fleet in California is approximately 33 miles per day per vehicle (mi/d/veh), while the average PHEV electric-drive range for this fleet is usage is only 20 e-miles/d/veh This difference between AER and average PHEV electric-drive range suggests that PHEV drivers operate their PHEVs in gasoline operating mode rather than electric operating mode for part of their work commutes.

As PHEVs can operate in gasoline and electric operating modes, the strategy would serve to maximize PHEV operation in electric operating mode and minimize their operation in gasoline mode, thereby reducing tailpipe CO2 emissions. Providing EV chargers at employee workplaces would help to extend the electric operation range of PHEVs used by employees who use EVs for commuting. Specifically, the strategy assumes PHEV batteries are fully charged prior to an employee beginning a commute trip to their workplace from home, as most PHEVs charge at home where the owner can qualify for low-cost nighttime charging that makes the electricity cheaper than gasoline. To facilitate PHEVs operating in electric mode on the employee's return commute trip to their home from workplace, the PHEV batteries are 'topped off' during work hours through the EV charging infrastructure installed under this strategy. In addition, as the strategy would be limited to employees where EV charging infrastructure is installed due to the strategy and would not be available to the general public, it is anticipated the strategy would not affect PHEVs driven by the general public and would not lead to induced VMT nor trips.

As part of this strategy, the following financial incentives would be provided:

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a. A one-time financial subsidy offered to employers for the purchase and installation of workplace EV charging infrastructure.
b. When gasoline is cheaper than electricity on a per-mile basis, on-going incentives offered to employers to subsidize PHEV-driving employees to charge their cars with EV vehicle infrastructure to help dis-incentivize the operation of PHEVs in gasoline operating mode.

In addition, providing subsidized power to employees through the employer would facilitate implementation of this off-model strategy because subsidized power would help to make electric charging cheaper than gasoline to dis-incentivize gasoline operation. Allowing PHEV drivers to charge at home and recharge at work can increase electrical mode usage.

2) Objectives

Electric Vehicle Charging Infrastructure strategies can reduce GHG emissions as follows:

- Increase the number of new workplace EV charging stations
- Increase the number of PHEVs participating in the program

3) Trip and Emissions Data Needs

- Number of vehicles that can be charged per EV charging station
- Number of PHEVs in the region (this data is available from the DMV)
- Number of EV charging facilities implemented as part of the program
- Electric range of PHEVs in the region (this data might be available from the DMV or from the National Renewable Energy Laboratory)
- Driving length frequency distribution of drivers (i.e., how far does the average PHEV drive each day above its all-electric range?)

4) Quantification Methodology

The overall approach is to determine the increase of PHEV mileage shifted from gasoline to electricity (e-miles) due to PHEV workplace charging at EV charging connectors installed by the strategy.

The estimate of GHG emission reductions from increased PHEV e-miles due to the strategy can be based upon two different initial approaches of the strategy:

a) Set up of the strategy based on the number of EV charging connectors installed:

- Estimate the number of population of PHEVs in region
- Estimate the number of PHEVs per charging connector
- Estimate the number of PHEVs in the region that could use workplace EV Charging Connectors
- Estimate average VMT shift per PHEV from gas to electricity (e-miles)
- Estimate total regional VMT shift from gas to electricity (e-miles)
- Estimate CO_2 emission reductions from PHEV e-miles

b) Set up of the strategy based on the number of PHEVs in the region that could use installed EV charging connectors:

- Estimate population of PHEVs in region
- Estimate number of PHEVs per charging connector
- Estimate number of EV Charging Connectors to install
- Estimate VMT shift from gas to electricity (e-miles)

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- Estimate CO_2 emission reductions from PHEV e-miles

These approaches are described in more detail in ARB's Final Draft SCS Program and Evaluation Guidelines Appendices.

SCAG's implementation of the strategy will create more charging stations across the region than would be created by state efforts alone. A greater number of charging stations in the region will enable PHEV drivers to charge more frequently and operate their vehicles in electric mode for a higher proportion of travel.

SCAG intends to use the quantification methodology outlined in ARB's Final Draft SCS Program and Evaluation Guidelines Appendices.

5) Challenges, Constraints, and Strategy Implementation Tracking

- This strategy can be tracked by analyzing longitudinal data of registered PHEVs and installed EV stations in the region.
- The effectiveness of this strategy may fluctuate depending on adoption of EVs, availability of funding sources for incentives, and electric range of PHEVs.
- Local data on charging and electric use of PHEVs may be limited.

Other:

- The goal of the strategy is to increase PHEV e-miles per day; not to increase purchases of PHEV nor Battery Electric Vehicles (BEVs). That is covered by other strategies.
- PHEV electric range would not increase as a result of the strategy. Rather, the strategy will allow workplace charging to facilitate the operation of the PHEV in electric mode and limit operation in gasoline mode.
- The choice of electricity over gasoline in a PHEV depends upon the relative price (cost/mile). It is critical to the success of this strategy to have a low competitive price for electricity, whether from the power company rate structure or from direct employer subsidy

5. First/Last Mile Improvements

1) Strategy Description

This strategy uses a Complete Streets approach to maximize the number of people walking or biking to transit by improving active transportation conditions within a radius of up to three miles from a transit station or stop. Improving conditions includes increasing safety, improving infrastructure, and reducing the time it takes to access the transit station or stop.

Infrastructure investments may include dedicated bike routes, sidewalk enhancements, mid-block crossings (short-cuts), reduced waiting periods at traffic signals, bicycle parking, signage and wayfinding, bike share, micro mobility, landscaping, streetscape furniture, and others.

The strategy of developing first/last mile solutions will increase transit ridership and increase the number of people using active transportation to reach a transit stop. This strategy works by attracting transit riders by decreasing the "cost" or total trip time of a transit trip (creating the conditions that allow people to travel a longer distance in the same amount of time) as well as improving safety.

2) Objectives

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- Reduce vehicle miles traveled (VMT)
- Increase transit ridership
- Reduction air pollution
- Increase physical activity and improve health outcomes

3) Trip and Emissions Data Needs

- Existing bicycle network
- Ratio of sidewalk miles to road miles
- Intersection density (an indicator of degree of traffic stream conflict points and street connectivity)
- Percent of population within a 10 minute walk shed and bike shed of 2-3 miles of a transit station or stop.
- Number and location of transit stops/ stations

4) Quantification Methodology

To analyze travel effect of First/Last mile improvement, SCAG uses Active Transportation Tool (AT Tool) developed by 2016 RTP/SCS. AT Tool generates mode share by 1) auto, 2) transit, 3) walk-to-activity, 4) walk-access-transit, and 5) bike, with different input/assumption to input variables, including 1) bike lane density, 2) pedestrian improvement, 3) intersection density (for mid-block crossing), and 4) local street density (design/street calming). To avoid double counting issues, only mid-block crossing and street calming are improved in the First/last mile areas. Improvement on bike lane, pedestrian, micro mobility and bike share are not included in the analysis.

5) Challenges, Constraints, and Strategy Implementation Tracking

Potential challenges and constraints include:

- Collecting consistent data from a variety of jurisdictions and transit service providers
- Making accurate estimates of sidewalk coverage due to lack of complete data sets
- Decreases in transit ridership from other factors including TNCs and increased auto ownership
- Funding availability

Implementation success will be tracked by evaluating the following metrics:

- Increases in transit ridership
- Reduction in VMT
- Miles of new bicycle or pedestrian infrastructure improvements (e.g., protected bicycle lanes, new sidewalk, etc.) around transit stations and stops.
- Installation of transit station amenities to encourage bicycling and walking (e.g., bike parking)
- Reduction in rate of collisions involving people walking and biking near transit stations

6. <u>Improved Pedestrian Infrastructure</u>

1) Strategy Description

Installation of pedestrian facilities to support safe conditions for walking trips and to encourage additional trips to be taken by walking. This strategy is closely aligned with the First/Last Mile Strategy and the Safe Routes to School Strategy, but focuses primarily on the development of wholesale pedestrian networks across land use scenarios.

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Investments will include the installation of new sidewalks, repair of existing sidewalks, improvement of intersection designs, installation of ADA compliant infrastructure, walking paths, traffic control devices, crosswalks, curb extensions/bulb outs, ADA requirements, and other traffic calming projects that reduce vehicle speeds. Investments will include state and federal grants, complete streets investment strategies, and county and local funding sources.

Providing complete sidewalk networks allows safe travel for walking trips and encourages walking for a variety of short trip purposes. Investments will improve safety outcomes for pedestrians and reduce VMT by shifting short trips to walking modes.

2) Objectives

- Reduction in VMT
- Increase in walking mode share
- Reduction in rate of collisions involving pedestrians
- Reduction in air pollution
- Increase in physical activity and health outcomes

3) Trip and Emissions Data Needs

Much of the built environment currently includes sidewalks, however, there are often gaps in the network, sidewalks in need of repair due to tree roots and other impacts, and in some cases, sidewalks were previously installed but do not meet current ADA requirements. Several jurisdictions have completed sidewalk inventories that can be used to develop estimates across place types for identifying regional investment strategies and expected changes in mode choice.

4) Quantification Methodology

Estimates for sidewalk coverage will be developed for place types as was done in the 2016 RTP/SCS. Investment and completion levels will be based on the percent completed for different land use investment strategies (NMAs, TPAs, HQTAs, etc.), which will be modeled using an off-model strategy. To avoid double counting, this strategy includes general pedestrian improvements that would not include the specialized location specific place-based improvements included in the First/Last Mile and Safe Routes to School strategies.

Changes in transit infrastructure, land use, and pedestrian infrastructure will all impact mode shift and safety outcomes. Other strategies that impact those factors should be considered during modeling.

5) Challenges, Constraints, and Strategy Implementation Tracking

- Collecting consistent data from a variety of jurisdictions
- Funding availability
- Making accurate estimates of sidewalk coverage due to lack of complete data sets
- Decreases in transit ridership from other factors including TNCs and increased auto ownership

Metrics of success may include:

- Reduction in VMT
- Reduction in rate of collisions involving pedestrians
- Miles of new and/or repaired sidewalk or other pedestrian facilities (e.g., mid-block crossings, ADA compliant infrastructure, signage/wayfinding)
- Traffic calming project implementation

Attachment: Final SCAG GHG Technical Methodology (Connect SoCal Technical Methodology Submittal to California Air Resources Board)

7. Parking Management

1) Strategy Description

Parking management techniques include real-time identification of open parking spaces, active wayfinding, adaptive pricing and consumer-facing apps for information and payment of parking. These pertain to on-street as well as public off-street parking. Private parking is not precluded, but likely is not incentivized to participate. In the SCAG region, the City of Los Angeles Department of Transportation (LADOT) has deployed smart parking systems throughout downtown Los Angeles and Hollywood, and has plans for deployment in Westwood Village near UCLA.

Parking management strategies aim to reduce GHG emissions by reducing vehicle trips and promoting alternative modes of transportation through methods such as pricing mechanisms, allowable hours of parking, or parking permits. These strategies can potentially improve and increase turnover rates for parking availability in impacted areas and reduce parking search time and the associated VMT and GHG emissions. The existing parking management strategies that SCAG will quantify include the following:

- Long/short-term fee differentials
- On-street fees and resident parking permits
- Reduced reliance on minimum parking standards
- Adaptive parking pricing

In the SCAG region, the parking management strategy that will be analyzed will be discouraging vehicle trips through installing parking meters and assigning limited hours for parking areas that are currently offered for free.

2) Objectives

The intended goal is increased customer satisfaction, better utilization, and increased parking revenues and citations. The GHG reduction goal is a decrease in VMT by reducing cruising for empty spaces due to the improved wayfinding. Additionally, where parking has not been priced before, some mode switching to transit, biking and walking may occur as driving is dis-incentivized.

Parking management strategies can reduce GHG emissions as follows:

- Reduced VMT
- Reduced vehicle trips
- Reduced vehicle hours traveled (VHT) (i.e., searching time for parking)
- Changes in mode share

3) Trip and Emissions Data Needs

Data needs include

- Extent of smart parking deployments
- Reduction in circling due to implementation
- Number of vehicle trips reduced
- Average vehicle trip length in the implemented area
- Parking turnover rates before and after the implementation of strategy

Attachment: Final SCAG GHG Technical Methodology (Connect SoCal Technical Methodology Submittal to California Air Resources Board)

4) Quantification Methodology

SCAG will follow the off-model methodology laid out in the ARB Draft SCS Evaluation Guidelines for calculating VMT due to shorter searching time for parking based on Smart Parking deployment. The GHG emission reductions SCAG will analyze are generally attributable to reductions in VMT due to shorter search times for parking and less vehicle trips.

The following are the basic analytical steps that MPOs can consider when estimating VMT and/or GHG emission reductions associated with parking management strategies.

Quantifying VMT reduced due to shorter searching time for parking:

$-VMT_{parking} = v_{avg} * t_{saved}$

Where: *-VMT= VMT reduced due to shorter search time for parking (mile*
v_{avg}: Average travel speed on local streets (mph)
t_{saved}: Time saved from parking (hour).

5) Challenges, Constraints, and Strategy Implementation Tracking

Smart Parking systems face one unanticipated challenge; that is, the proliferation and abuse of disabled or handicap parking placards. Since placards allow drivers to park for free, there is a large incentive for non-eligible drivers to use their relatives' placards, or seek out disreputable doctors to provide them as reported by Los Angeles Times in April 2019. Additionally, with an aging population, there will be an increase in such placards being given out to elderly residents. According to a source at one agency, up to 40% of the most sought-after spaces in their service area may be occupied by placard holders at any given time.

Another challenge to parking management policy planning is that MPOs and/or local jurisdictions need to partner with communities to identify the rates and hours of parking that would be effective in reducing GHG emissions. Especially in developing areas, proposed parking management policy needs to consider the unforeseen demand as well. Another possible challenge would be to isolate the parking management strategy's impact on reducing VMT and/or GHG emissions from other strategies that potentially have similar impacts on the affected population and implemented areas. For example, high-cost of parking can incentivize travelers to consider transit as an alternative means of transportation. However, direct transit strategy (e.g., more frequent transit service) can also motivate travelers in the same planning area to switch from auto mode to transit mode.

8. Multimodal Dedicated Lanes

1) Strategy Description – Multimodal Dedicated Lanes.

Conversion of traffic lanes to multimodal dedicated lanes has been planned in portions of the City of Los Angeles. These lane conversions would serve both transit and active transportation modes. They have been developed to be consistent with the City of Los Angeles' Transit Enhanced Network, a key strategy of the Mobility Plan 2035: An Element of the General Plan.

There are three levels of intervention: comprehensive, moderate plus, and moderate. The comprehensive corridors feature round-the-clock dedicated multimodal lanes. The moderate plus lanes feature peak hour multimodal lanes. The moderate lanes feature bicycle lanes and rapid bus service, and are only being included for the San Fernando Valley portions of the City of Los Angeles.

Attachment: Final SCAG GHG Technical Methodology (Connect SoCal Technical Methodology Submittal to California Air Resources Board)

The strategy is expected to reduce greenhouse gas emissions by encouraging modal shift from auto travel to active modes and transit.

2) Objectives

Multimodal dedicated lanes would be implemented to: 1) Increase transit vehicle speeds, 2) Increase transit system reliability by reducing traffic congestion imposed variably in travel time, and 3) Enhance safety for cyclists and new mobility users. These objectives would lead to increased use of these modes in the specified corridors and would provide residents of these areas with additional mobility options. Additionally, reduced mixed-vehicle capacity may result in less vehicle miles travelled.

The strategy is expected to increase bicycle lanes and transit boardings, while decreasing vehicle miles travelled. Reduced vehicle miles travelled and greenhouse gas emissions would be the result of reduced vehicle trips due to modal shift.

3) Trip and Emissions Data Needs

Cost estimates for the strategy will be based on the average of programmed totals from programmed investments for dedicated bus lanes.

Currently, there are dedicated lanes or road facilities for transit buses in at least five SCAG subregions – Westside COG, San Fernando Valley COG, San Bernardino COG, City of Los Angeles, and San Gabriel Valley COG. Responsible parties for the implementation of this strategy could be either local cities or transit providers. SCAG will partner with those entities to track strategy implementation and success metrics. The affected population for this strategy are the residents living near the corridors, as well as travelers who use the corridors.

There are three types of data needed: infrastructure assumptions; baseline travel data; and travel demand model test run elasticity factors.

Data needs include:

- Total baseline travel via personal vehicle, transit, and active modes
- Corridor length for the entire network, split between comprehensive and moderate plus networks.
- Total mileage for each network needs to be identified:

Infrastructure Assumptions

- Comprehensive Bus Corridors
- Moderate Plus Bus Corridors
- Moderate Bus Corridors
- Bike Lanes

Baseline Travel Data

- Plan year baseline and plan transit travel
- Plan year baseline and plan active modes travel
- Plan year baseline and plan VMT

Elasticity Factors

- Model test run elasticity factor for auto travel

Attachment: Final SCAG GHG Technical Methodology (Connect SoCal Technical Methodology Submittal to California Air Resources Board)

- Model test run elasticity factor for transit travel
- Model test run elasticity factor for active travel modes
- Model test run elasticity factor for VMT

4) Quantification Methodology

Use of the converted multimodal dedicated lanes will be estimated using elasticity factors derived from a test run of the regional travel demand model. These estimates will be expressed in VMT. The methodology will attempt to estimate the benefits of comprehensive, moderate plus, and moderate lanes.

The elasticity factors will be applied to the output of the travel demand model for the three modes (vehicle travel, transit, and active transportation) along the specified corridors. These numbers will be aggregated to the comprehensive, moderate plus, and moderate levels. The difference between aggregated baseline and aggregated new travel across the three modes will be multiplied by CO2 emissions rates obtained from EMFAC and used to produce estimated greenhouse gas reductions.

5) Challenges, Constraints, and Strategy Implementation Tracking

The off-model analysis of this strategy will require the production of elasticity factors from the travel demand model. A test run has been conducted and this seems achievable. These factors will then have to be multiplied against plan year forecast data from the travel demand model, which will be produced as part of SCAG's normal metropolitan planning activities.

Implementation tracking may be a challenge. However, Federal Transit Administration Small Starts grants require before and after studies; if any Small Starts grants are used to pay for lane conversions, these reports would be required. These reports will facilitate implementation tracking.

Metrics of success would include:

Direct measures:

1) increased average transit vehicle speeds in the corridor
2) increased on-time performance in the corridor
3) decreased pedestrian involved traffic collisions in the corridor
4) decreased bicyclist involved traffic collisions in the corridor

Indirect measures:

1) increased transit trips in the specified corridors
2) increased active mode travel in the specified corridors
3) decreased auto travel in the specified corridors

9. Safe Routes to School Strategies

1) Strategy Description

Safe Routes to School strategies are comprehensive approaches to reduce the number of Single Occupant Vehicle (SOV) trips to schools and shorten commute trips where one stop of the trip is at a school. The Safe Routes to School Strategy includes a combination of both infrastructure investments as well as encouragement programs:

Attachment: Final SCAG GHG Technical Methodology (Connect SoCal Technical Methodology Submittal to California Air Resources Board)

- *Safe Routes to School Encouragement Programs:* Safe Routes to School is a comprehensive strategy aimed at increasing rates of children walking and bicycling to school. It includes a wide variety of encouragement and education strategies based on the 6 Es of Encouragement, Education, Evaluation, Enforcement, Engineering, and Equity.
- *Safe Routes to School Active Transportation Infrastructure Improvements:* This strategy aims to increase the number of children walking and biking to school by implementing the Engineering "E" through infrastructure improvements to the bicycle and pedestrian network within a short distance of a school site.

When implemented, Safe Routes to School strategies improve safety, reduce congestion and vehicle miles traveled (VMT), improve air quality, and increase the physical activity rates of students and their parents.

2) Objectives

The objective of bike share systems are to provide flexible mobility for short to medium distances (1-5 miles). They reduce GHG by the following:

- Replacing short distance auto trips
- Improving health outcomes
- Increasing rates of walking and bicycling

3) Trip and Emissions Data Needs

Data needs include:

- Number of schools and students impacted
- Literature on the effectiveness of the program

4) Quantification Methodology

Students participating in Safe Routes to School program will change travel model to/from school from vehicle and transit to walking or biking. Since most of school age students are not vehicle drivers, most of them are carpool passengers or walking/biking to school (transit share is very small). As they change travel mode from carpool to active transportation modes, vehicle travel will be reduced because parents or family adults will no longer need to pick up/drop off school kids. Two types of VMT saving will be estimated: 1) pure escort trip: family adults driving school kids to school, then back to home; and family adults driving to school to pick up school kids, then back to home. 2) share-ride: travel detour for adult workers to pick up or drop off school kids. SCAG will use household travel survey data and model output to calculate VMT saving described above. To avoid double counting with other infrastructure enhancement, SCAG will apply a 10% discount on calculated VMT saving.

5) Challenges, Constraints, and Strategy Implementation Tracking

Challenges will be mostly on the data collection side. Many agencies currently operate Safe Routes to School programs but no centralized database exists for California or the SCAG region. National literature for program effectiveness is available and will be used for off model estimates.

Attachment: Final SCAG GHG Technical Methodology (Connect SoCal Technical Methodology Submittal to California Air Resources Board)

IX. Other Data Collection Efforts

1. Local Input Survey

To assist in the development of 'Connect SoCal', SCAG initiated the Local Input Process in 2017. The Local Input Process was designed to engage local jurisdictions in establishing base geographic and socioeconomic data sets for Connect SoCal. As part of the Local Input Process, SCAG developed a 2020 Local Input Survey to collect information from local jurisdictions related to the implementation of the 2012 and 2016 RTP/SCS, as well as to assist in the development of 'Connect SoCal'. The 2020 survey builds and expands upon the 2016 survey by adding substantive questions. Whereas the 2016 Local Input Survey focused primarily on land use, transportation and natural lands issues, the 2020 Local Input Survey expands the set of questions to include inquiries related to housing, goods movement, public safety, environmental compliance, environmental justice, and data.

During the 2016 Local Input process, SCAG staff received multiple requests from local jurisdictions to provide clarifications on certain technical terms. As such, SCAG staff has developed a glossary to assist local jurisdictions in completing the Local Input Survey in a timely matter. Distribution of the 2020 Local Input Survey began on October 1, 2017 and concluded on October 1, 2018. The survey was distributed via email, hardcopy, and online (Survey Monkey). The Local Input Survey consists of the following topics:

1) Land Use
2) Transportation
3) Environmental
4) Public Health and Safety
5) Data

One hundred twelve local jurisdictions (about 60%) responded to the survey. Survey responses will assist in developing SCAG's scenario planning model for the SCS.

Attachment: Final SCAG GHG Technical Methodology (Connect SoCal Technical Methodology Submittal to California Air Resources Board)

AGENDA ITEM NO. 7

REPORT

Southern California Association of Governments
900 Wilshire Boulevard, Suite 1700, Los Angeles, California 90017
June 6, 2019

To: Energy & Environment Committee (EEC)
Transportation Committee (TC)
Community, Economic and Human Development Committee (CEHD)

From: Roland Ok, Senior Regional Planner, Compliance & Performance Monitoring, (213) 236-1819, ok@scag.ca.gov

Subject: Local Input Survey Results

EXECUTIVE DIRECTOR'S APPROVAL

Kome Ajise

RECOMMENDED ACTION FOR CEHD AND EEC:
For Information Only – No Action Required

RECOMMENDED ACTION FOR TC:
Receive and File

STRATEGIC PLAN:
This item supports the following Strategic Plan Goal 1: Produce innovative solutions that improve the quality of life for Southern Californians. 3: Be the foremost data information hub for the region.

EXECUTIVE SUMMARY:
In preparation for development of Connect SoCal ("2020 Regional Transportation Plan/Sustainable Communities Strategies") all 197 local jurisdictions within the SCAG region were asked to complete a survey to gauge current progress toward implementation of regional sustainability goals as set forth in the 2012 RTP/SCS and 2016 RTP/SCS. Survey questions were wide-ranging in scope, but focused on developing a meaningful summary of where the region currently stands. 112 jurisdictions have provided responses, for a response rate of 60%. Responses provided have allowed SCAG to determine policies and strategies that have been successfully implemented and those that have opportunities for improvements. Results have been summarized to obtain a snapshot of how Southern California is currently performing in implementing sustainability policies and strategies, at the regional levels.

BACKGROUND:
The Southern California Association of Governments (SCAG) developed a Local Input Survey to seek input from local jurisdictions across the six-county area to assist in the development of the Connect SoCal (2020 Regional Transportation Plan/Sustainable Communities Strategies (RTP/SCS)).

Connect SoCal is a long-range visioning plan containing transportation projects and land use development strategies, that balances future mobility and housing needs with economic, environmental and public health goals. Additionally, per SB 375, land use strategies developed within the SCS will help the region achieve state greenhouse gas emission reduction goals.

In addition to the development of the Connect SoCal Plan, information from the Local Input Survey will assist SCAG in tracking the implementation of the 2012 and 2016 RTP/SCS strategies and will assist in developing and bolstering new and or existing programs aimed at supporting plan development and implementation including assisting local jurisdictions within the region.

The Local Input Survey was comprised of 62 questions, separated into the five distinct categories (For further details, please refer to *Attachment 1, Local Input Survey)*. The format and topics of the Local Input Survey is as follows:

I. Land Use
II. Transportation
III. Environmental
IV. Public Health and Safety
V. Data

The Local Input Survey was sent out to all 197 jurisdictions in October 31, 2017 and responses were due on October 1, 2018. Local agencies were offered the choice of submitting responses online through Survey Monkey or by email.

KEY FINDINGS:

Approximately 60% (112 out of 197 local jurisdictions) of local jurisdictions in the SCAG region provided responses to the Local Input Survey. Response rates per topic area differed amongst respondents. SCAG found that several strategies noted in the previously conducted RTP/SCS have been successfully implemented throughout the region, whereas others were not as frequently implemented and are key indicators for improvement opportunities. As stated previously, SCAG will utilize the data received to develop Connect SoCal and will improve and expand its programs for areas that present opportunities. Key findings of the survey are provided below.

Successful Implementation:

- **General Plans with SCS Strategies (80% [91 respondents]):**
  - 95% of respondents (87 jurisdictions) have implemented Infill Development.
- **Zoning Code with SCS Strategies (90% [101 respondents]):**
  - 90% of respondents (91 jurisdictions) have implemented Accessory Dwelling Units.
- **Infill Incentives (58% [65 respondents]):**
  - 86% (56 jurisdictions) of respondents offer Density Bonus.
- **Parking Strategies (75% [85 respondents]):**
  - 90% (77 jurisdictions) have implemented additional Bicycle Parking.
- **Water Management Strategies (96% [108 respondents]):**
  - 91% (93 jurisdictions) have implemented Low Impact Development.
- **Transportation Strategies (94% [105 respondents]):**
  - 82% (87 jurisdictions) have implemented a Bicycle Master Plan
- **Travel Demand Management (74% [83 respondents]):**
  - 73% (61 jurisdictions) offer Ridesharing and Matching Incentives.
- **Climate Change (72% [81 respondents]):**
  - 72% (81 jurisdictions) of respondents have considered the threat of hazards related to climate change in their general plans and to support their local programs

- **Native Vegetation (85% [95 respondents]):**
  - 85% (81 local jurisdictions) implement through the Development on Privately Owned Land.
- **Conservation Strategies (66% [74 respondents]):**
  - 70% (52 local jurisdictions) have implemented a Hillside/Steep Slope Protection Ordinance.
- **Emergency Plans (90% [101 respondents]):**
  - 94% (95 local jurisdictions) have implemented a Hazard Mitigation Plan.

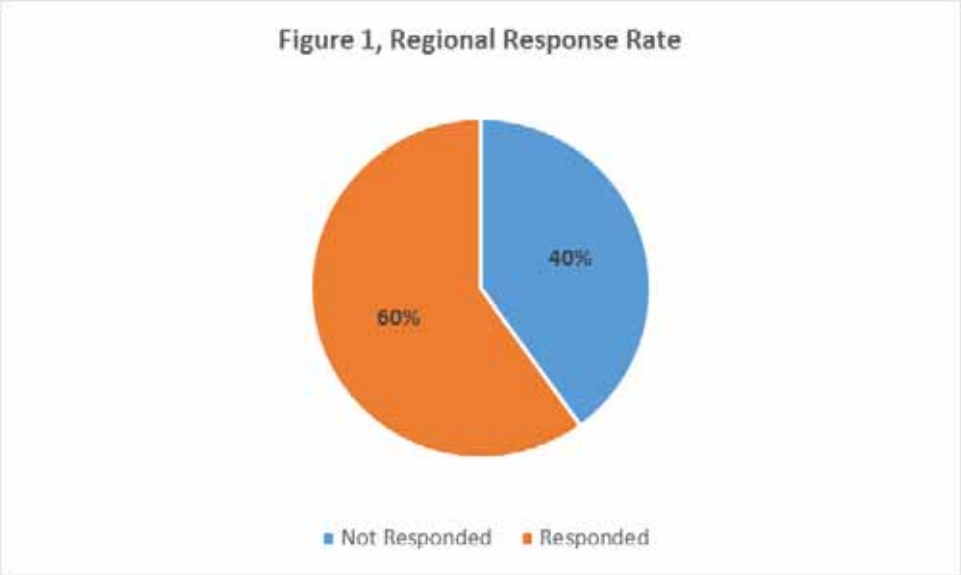
Opportunities for Improvement:

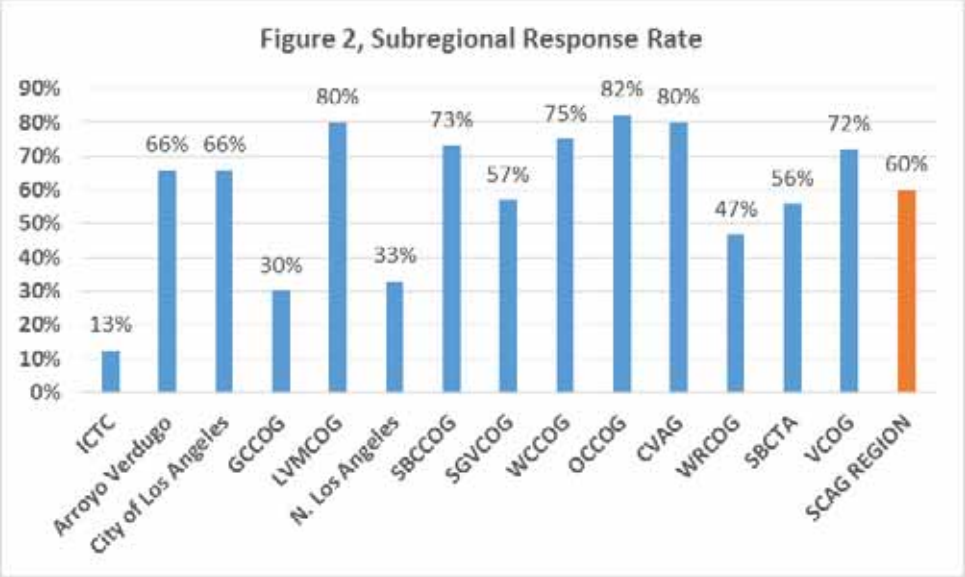
- **General Plans with SCS Strategies (80% [91 respondents])**
  - Only 16% of respondents (15 jurisdictions) have implemented Form Based Code.
- **Zoning Code with SCS Strategies (90% [101 respondents]):**
  - Only 21% of respondents (21 jurisdictions) have implemented Form Based Code.
- **Infill Incentives (58% [65 respondents]):**
  - Only 10% (7 jurisdictions) of respondents offer Tax Subsidies.
- **Parking Strategies (75% [85 respondents]):**
  - Only 13% (11 jurisdictions) have implemented Unbundled Parking.
- **Transportation Strategies (94% [105 respondents]):**
  - Only 6% (6 jurisdictions) have implemented Vision Zero Policies.
- **Travel Demand Management (74% [83 respondents]):**
  - Only 4% (3 jurisdictions) offer Parking Cash Out Policies.
- **Climate Change (72% [81 respondents]):**
  - 50% (57 jurisdictions) of the survey respondents have implemented Climate Action Plans. While this doesn't appear low, for the region to hit State emissions targets and curb climate change, it is important that more local jurisdictions implement a Climate Action Plan to assist in reducing emissions.
  - Only 36% (40 jurisdictions) of survey respondents have implemented Greenhouse Gas Reduction Targets.
  - Only 29% (32 jurisdictions) of survey respondents have staff capacity to apply for Green House Gas Reduction Funds.
- **Native Vegetation (85% [95 respondents]):**
  - Only 6% (6 local jurisdictions) offer Code Incentives.
- **Conservation Strategies (66% [74 respondents]):**
  - 20% (15 local jurisdictions) have implemented Mitigation Banks.
- **Public Health (25% (28 respondents]):**
  - 25% (28 jurisdictions) of all respondents have implemented Public Health Practices.
- **Emergency Plans (90% [101 respondents]):**
  - While 64% (65 local jurisdictions) have implemented a Seismic Safety Plan, given that California frequently experiences seismic activities, the region needs all local jurisdictions to implement Seismic Safety Plans.

SURVEY RESULTS:

Response Rate:

- Approximately 60% (112 out of 197 local jurisdictions) of local jurisdictions in the SCAG region provided responses to the Local Input Survey (*See Figure 1, Regional Response Rate*).
- Subregional responses rates varied between 13% (ICTC) to 82% percent (OCCOG) (*See Figure 2, Subregional Response Rate*).

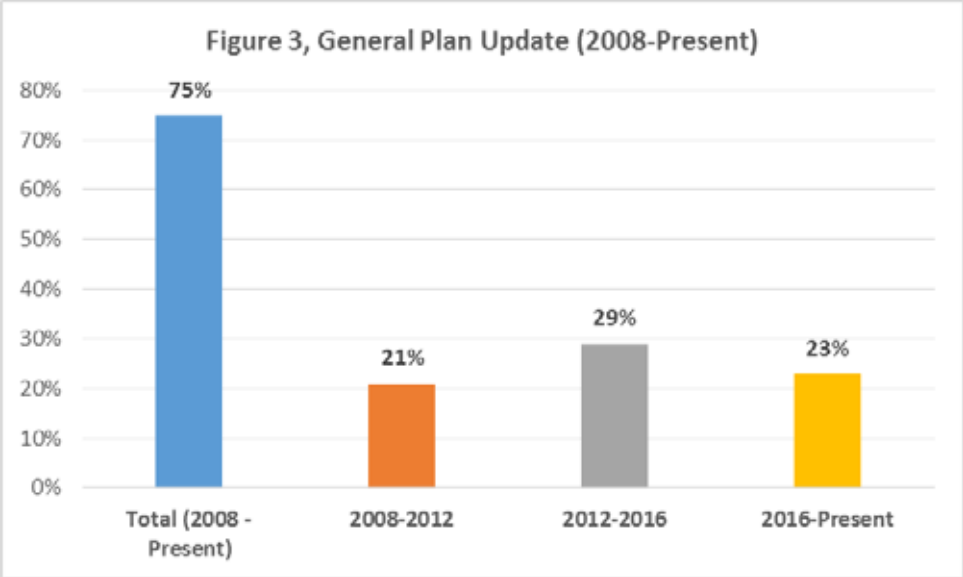


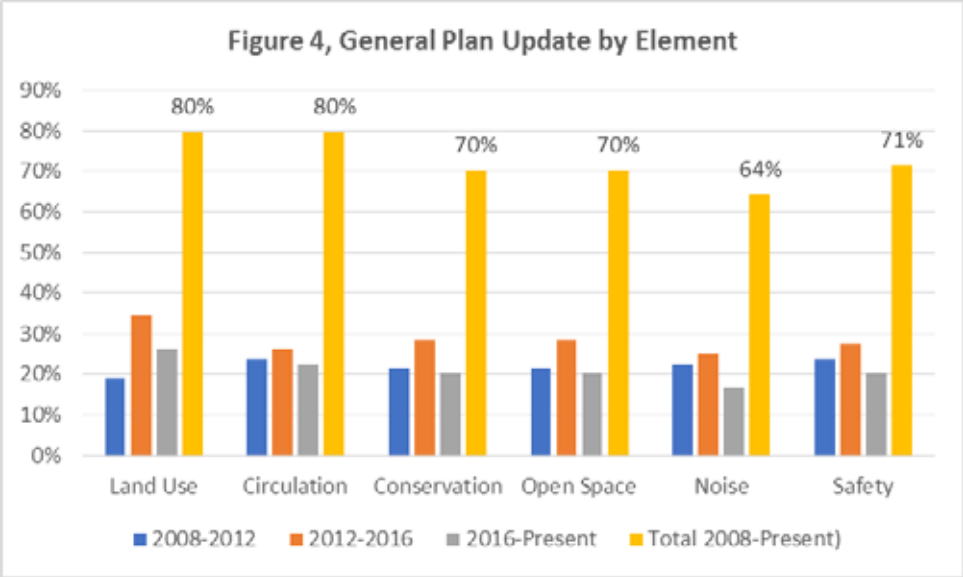


General Plan Updates:

- Excluding mandatory Housing element updates, 75% of respondents have updated at least one element of their General Plan since 2008, of which 21% occurred between 2008 to 2012, 29% occurred between 2012 to 2016 and 23% occurring between 2016 to present day *(See Figure 3, General Plan Update).*

- The most frequent elements that were updated between 2008 to present day were the Land Use and Circulation elements (80%), followed by Conservation and Open Space elements (70%) (*See Figure 4, General Plan Update by Element*).

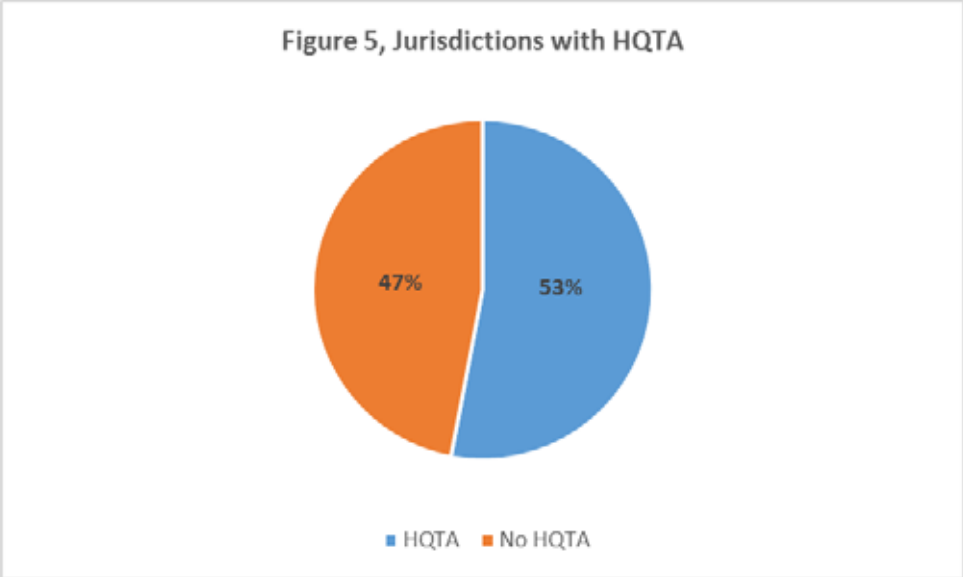


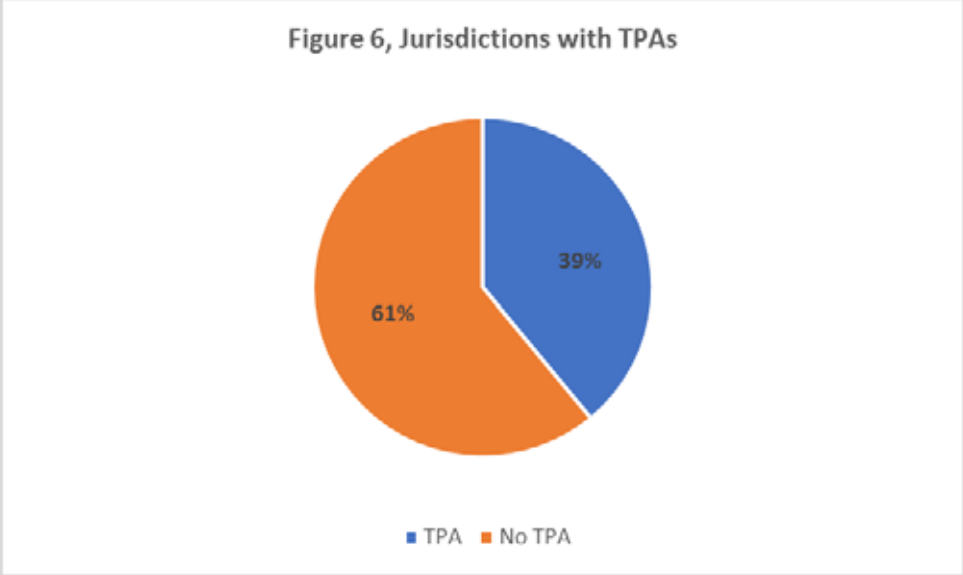


High Quality Transit Area and Transit Priority Area:

- Approximately 53% of respondents indicate having an RTP-designated 'High Quality Transit Area' (HQTA) within their jurisdiction *(See Figure 5, Jurisdictions with HQTA).*

- Approximately 39% of jurisdictions with an HQTA have adopted at least one Transit Priority Area (TPA) specific plan *(See Figure 6, Jurisdictions with TPA).*

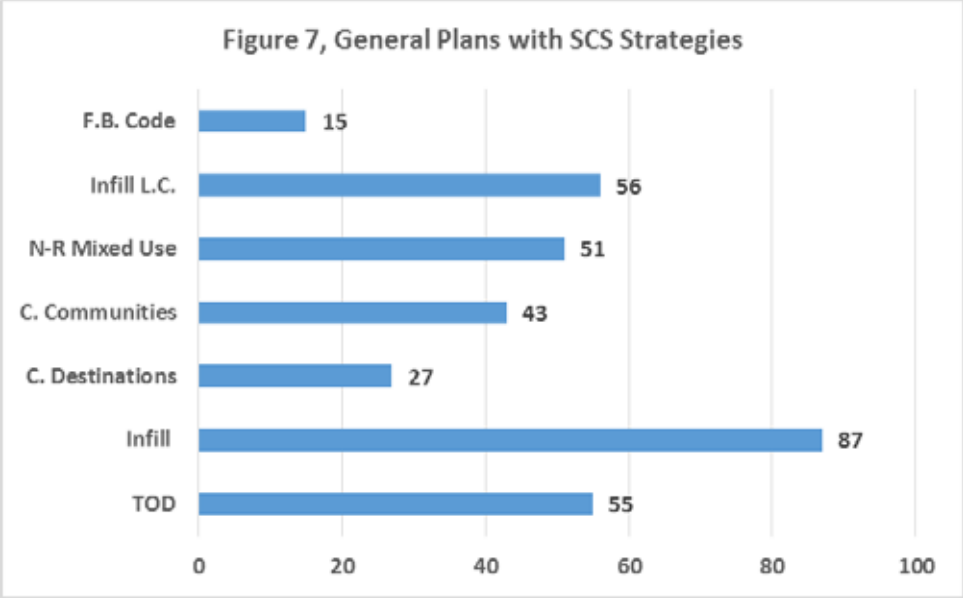




General Plans with SCS Strategies:

- 80% of responding jurisdictions (91 jurisdictions) reported at least one of the 2012 and 2016 RTP/SCS strategies was supported by their currently adopted General Plan, 78% of respondents have implemented at least two or more of the SCS strategies, 60% have implemented at least three or more SCS strategies.
- Based on the responses from the 91 jurisdictions, the results regarding the implementation of SCS strategies in general plans are as follows (*See Figure 7, General Plans with SCS Strategies)*:
    - 95% of respondents (87 jurisdictions) have implemented Infill Development.
    - 61% of respondents (56 jurisdictions) have implemented Infill Along Livable Corridors.

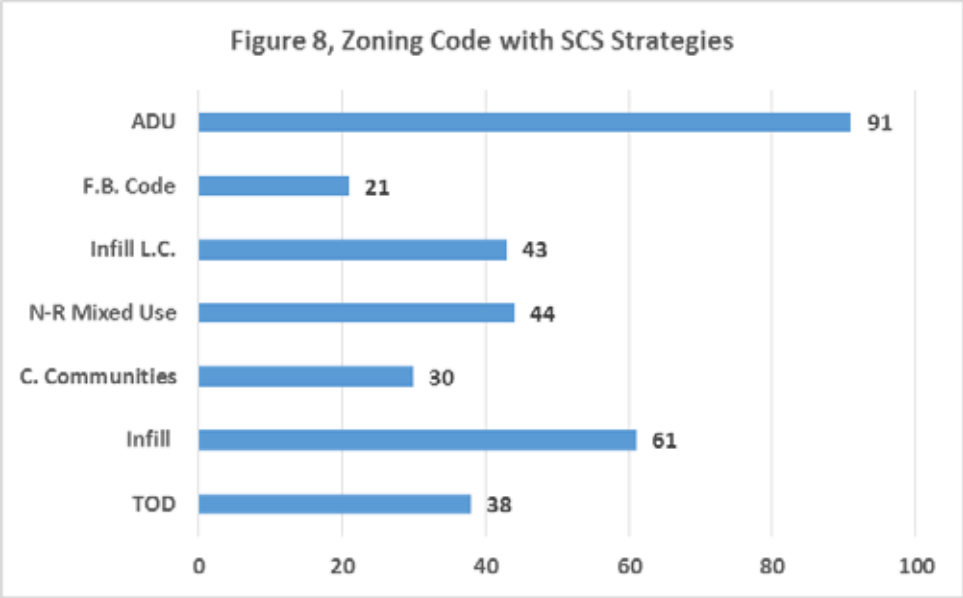
- 60% of respondents (55 jurisdictions) have implemented Transit Oriented Development.
- 56% of respondents (51 jurisdictions) have implemented Non-Residential Mixed Use.
- 47% of respondents (43 jurisdictions) have implemented Complete Communities.
- 30% of respondents (27 jurisdictions) have implemented Concentrating Destinations.
- 16% of respondents (15 jurisdictions) have implemented Form Based Code.



Zoning Code with SCS Strategies:

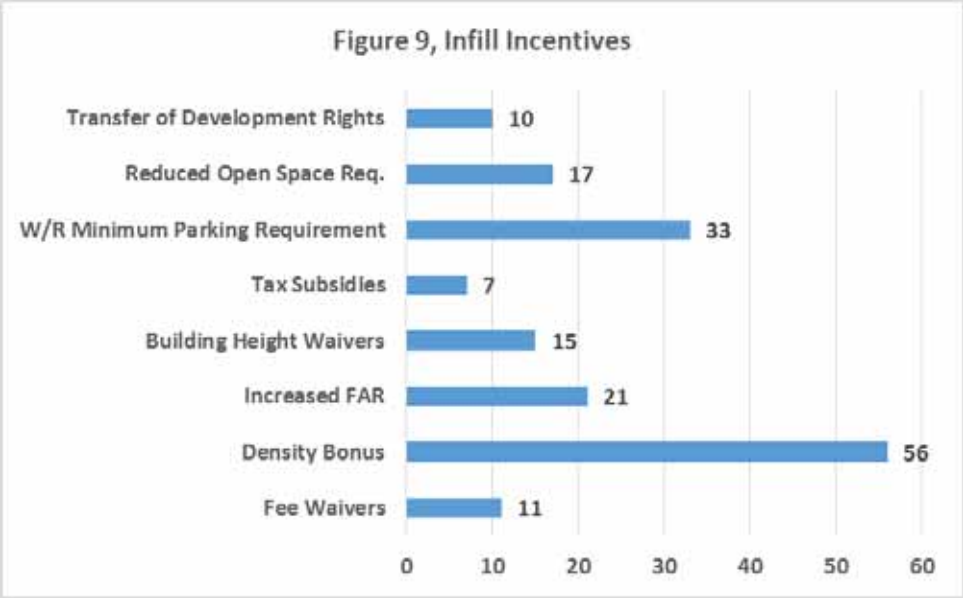
- 90% of responding jurisdictions (101 jurisdictions) reported at least one of the 2012 and 2016 RTP/SCS strategies was supported by their Zoning Code, while 69% of respondents have implemented at least two or more of the SCS strategies.

- Based on the responses from the 101 jurisdictions, the results regarding the implementation of SCS strategies in zoning codes are as follows (*See Figure 8, Zoning Code with SCS Strategies)*:
  - 90% of respondents (91 jurisdictions) have implemented Accessory Dwelling Units.
  - 60% of respondents (61 jurisdictions) have implemented Infill Development.
  - 44% of respondents (44 jurisdictions) have implemented Non-Residential Mixed Use.
  - 42% of respondents (43 jurisdictions) have implemented Infill Development Along Livable Corridors.
  - 38% of respondents (38 jurisdictions) have implemented Transit Oriented Development.
  - 30% of respondents (30 jurisdictions) have implemented Complete Communities.
  - 21% of respondents (21 jurisdictions) have implemented Form Based Code.



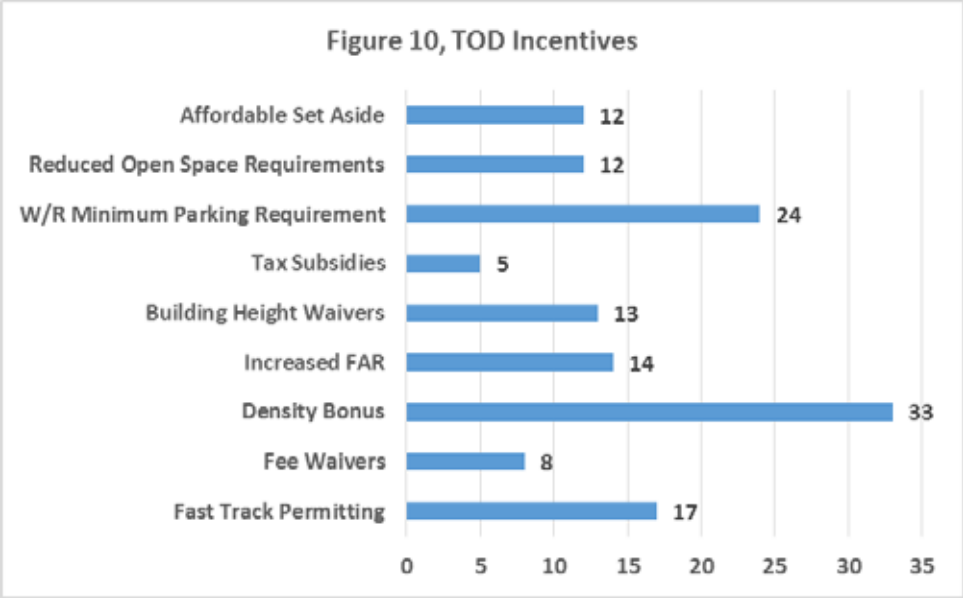
Infill Incentives:

- 58% of respondents (65 jurisdictions) indicated that their jurisdiction offered infill incentives. Of the 65 jurisdictions, 60% of respondents indicated that their jurisdiction offered at least two incentives and 40 percent offering three or more incentives.
- Based on the responses from the 65 jurisdictions, the results regarding the implementation of infill incentives are as follows (*See Figure 9, Infill Incentives)*:
    - 86% (56 jurisdictions) of respondents offer Density Bonus.
    - 50% (33 jurisdictions) of respondents offer Waiving or Reducing the Minimum Parking Requirement.
    - 26% (17 jurisdictions) of respondents offer Reduced Open Space Requirements.
    - 23% (15 jurisdictions) of respondents offer Building Height Waivers.
    - 17% (11 jurisdictions) of respondents offer Fee Waivers.
    - 15% (10 jurisdictions) of respondents offer Transfer of Development Rights.
    - 10% (7 jurisdictions) of respondents offer Tax Subsidies.



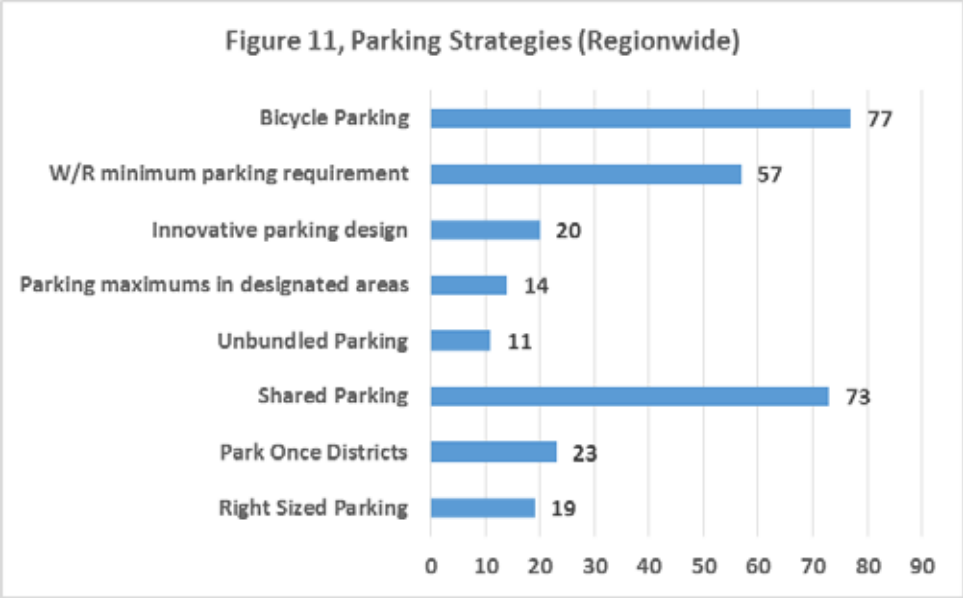
Transit Oriented Development Incentives:

- 33% of respondents (37 jurisdictions) indicated that their jurisdiction offers Transit Oriented development incentives. Of the 37 respondents, 70% of jurisdictions offer at least two incentives, and 59% offer three or more incentives for Transit Oriented Development.
- Based on the responses from the 37 jurisdictions, results regarding the implementation of Transit Oriented Development Incentives are as follows (*See Figure 10, TOD Incentives*):
    - 89% (33 jurisdictions) offer Density Bonus'.
    - 64% (24 jurisdictions) offer Waived or Reduced Parking Requirements.
    - 45% (17 jurisdictions) offer Fast Track Permitting.
    - 38% (14 jurisdictions) offer Increased Floor Area Ratio.
    - 35% (13 jurisdictions) offer Building Height Waivers.
    - 32% (12 jurisdictions) offer Affordable Set Aside.
    - 32% (12 jurisdictions) offer Reduced Open Space Requirements.
    - 22% (8 jurisdictions) offer Fee Waivers.
    - 14% (5 jurisdictions) offer Tax Subsidies.



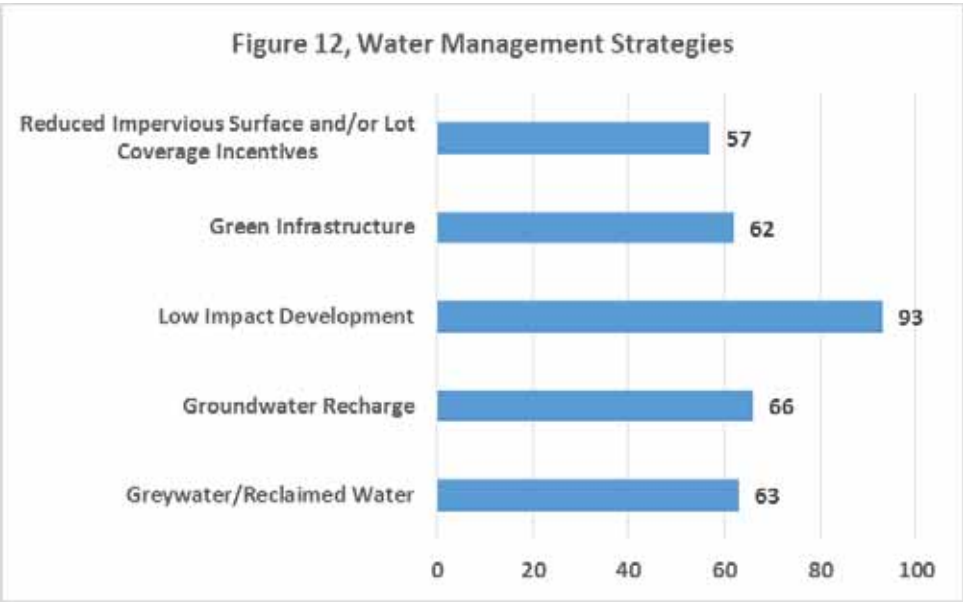
Parking Strategies

- 75% (85 jurisdictions) of respondents have implemented parking strategies. Of the 85 jurisdictions, 76% have implemented at least two strategies, and 44% have implemented three or more strategies.
- Based on the responses from the 85 jurisdictions, the results regarding the implementation of parking strategies are as follows (*See Figure 11, Parking Strategies (Regionwide)*):
    - 90% (77 jurisdictions) have implemented additional Bicycle Parking.
    - 86% (73 jurisdictions) have implemented Shared Parking.
    - 67% (57 jurisdictions) have implement implemented Waiving or Reducing Minimum Parking Requirements.
    - 27% (23 jurisdictions) have implemented Park Once Districts.
    - 24% (20 jurisdictions) have implemented Innovative Parking Design.
    - 22% (19 jurisdictions) have implemented Right Sized Parking.
    - 16% (14 jurisdictions) have implemented Parking Maximums in Designated Areas.
    - 13% (11 jurisdictions) have implemented Unbundled Parking.



Water Management Strategies:

- 96% (108 jurisdictions) of respondents have implemented water management strategies within their jurisdiction.
- Based on the responses from the 108 jurisdictions, the results regarding the implementation of Water Management Strategies are as follows (*See Figure 12, Water Management Strategies*):
    - 91% (93 jurisdictions) implement Low Impact Development.
    - 62% (63 jurisdictions implement Greywater/Reclaimed Water Strategies.
    - 61% (62 jurisdictions) implement Green Infrastructure.
    - 56% (57 jurisdictions) offer Reductions to Impervious Surface and/or Lot Coverage Incentives.



Transportation:

- 94% (105 jurisdictions) of respondents have implemented various Transportation Strategies.
- Based on the responses from the 105 jurisdictions, the results regarding the implementation of Transportation Strategies are as follows (*See Figure 13, Transportation Strategies – Part 1 and Figure 14, Transportation Strategies – Part 2*):
    - 82% (87 jurisdictions) have implemented a Bicycle Master Plan.
    - 74% (78 jurisdictions) have implemented Truck Route/Truck Prohibit Route Plans.
    - 69% (72 jurisdictions) have implemented Streetscape Standards.
    - 65% (68 jurisdictions) have implemented Traffic Calming measures.
    - 61% (64 jurisdictions) have implemented a Safe Routes to School Program.
    - 48% (50 jurisdictions) have implemented TDM Ordinances.
    - 45% (47 jurisdictions) have implemented a Complete Streets Policy.
    - 50% (53 jurisdictions) have implemented TDM Programs.
    - 43% (45 jurisdictions) have implemented Industrial Land Use Ordinances.
    - 39% (41 jurisdictions) have implemented a Parking Management Plan.
    - 36% (38 jurisdictions) have implemented an Active Transportation Plan.
    - 36% (38 jurisdictions) have implemented a Safety Plan or Safety Targets.
    - 32% (34 jurisdictions) have implemented provisions for commercial access.
    - 30% (32 jurisdictions) have implemented a Bicycle Master Plan.
    - 29% (30 jurisdictions) have implemented Intelligent Transportation Systems Plan.
    - 26% (27 jurisdictions) have implemented Provisions for Delivery or Truck Access.
    - 25% (23 jurisdictions have implemented a Scenic Roadway Plan.
    - 25% (26 jurisdictions) have implemented provisions for truck parking.
    - 16% (17 jurisdictions) have implemented First/Last Mile Strategies.
    - 15% (16 jurisdictions) have implemented Transit Overlay District.
    - 11% (12 jurisdictions) have implemented Multimodal Performance.
    - 8% (8 jurisdictions) have implemented Intermodal Facility Plans.
    - 6% (6 jurisdictions) have implemented Vision Zero Policies.

Figure 13, Transportation Strategies - Part 1

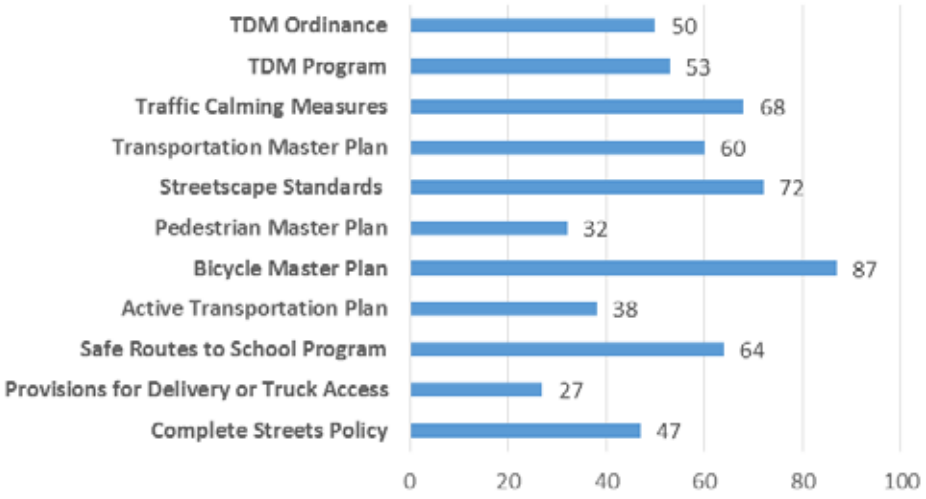
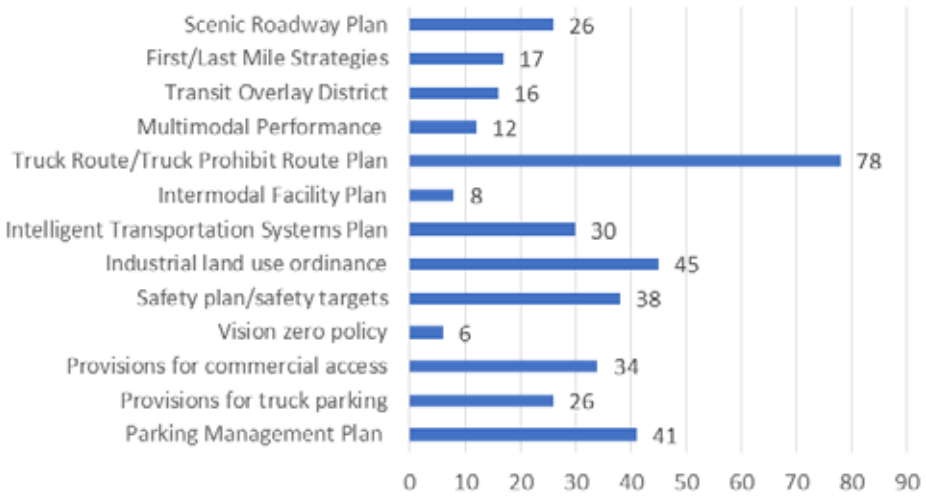


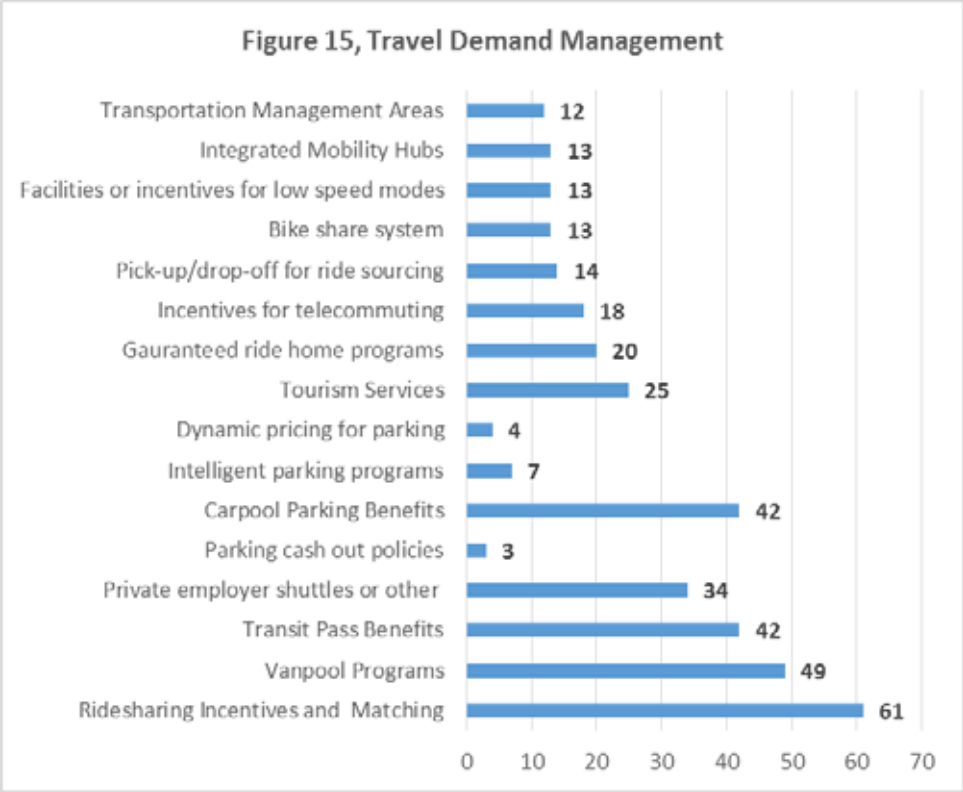
Figure 14, Transportation Strategies - Part 2



Travel Demand Management:

- 74% (83 jurisdictions) of respondents have implemented various Travel Demand Management Strategies.
- Based on the responses from the 105 jurisdictions, the results regarding the implementation of Transportation Strategies are as follows (*See Figure 15, Travel Demand Management)*:
    - 73% (61 jurisdictions) offer Ridesharing and Matching Incentives.
    - 59% (49 jurisdictions) offer Vanpool Programs.
    - 51% (42 jurisdictions) offer Transit Pass Benefits.
    - 51% (42 jurisdictions) offer Carpool Parking Benefits.
    - 41% (34 jurisdictions) offer Private Employer Shuttles or Similar Programs.
    - 30% (25 jurisdictions) offer Tourism Services.

- 24% (20 jurisdictions) offer Guarantee Ride Home Programs.
- 22% (18 jurisdictions) offer Incentives for Telecommuting.
- 17% (14 jurisdictions) have implemented Pick-up/drop-off for ride sourcing.
- 16% (13 jurisdictions) have implemented Integrated Mobility Hubs.
- 16% (13 jurisdictions) have offer Facilities or Incentives for low speed nodes.
- 16% (13 jurisdictions) offer a Bike Share System.
- 14% (12 jurisdictions) have implemented Transportation Management Areas
- 8% (7 jurisdictions) have implemented Intelligent Parking Programs.
- 5% (4 jurisdictions) have implemented Dynamic Pricing for Parking.
- 4% (3 jurisdictions) offer Parking Cash Out Policies.



Climate Change:

- 50% (57 jurisdictions) of the survey respondents have implemented Climate Action Plans *(See Figure 16, Jurisdictions with Climate Action Plans)*.
- 36% (40 jurisdictions) of survey respondents have implemented Greenhouse Gas Reduction Targets *(See Figure 17, Jurisdictions with GHG Reduction Targets).*
- Only 29% (32 jurisdictions) of survey respondents have staff capacity to apply for Green House Gas Reduction Funds.
- 72% (81 jurisdictions) of respondents have considered the threat of hazards related to climate change in their general plans and to support their local programs *(See Figure 18, Staff Capacity to Apply for GHG Funds)*.

- Based on the responses from the 81 jurisdictions, the results regarding the consideration of Climate Change Hazards are as follows (*See Figure 19, Consideration of Climate Change Hazards)*:
    - 91% (74 local jurisdictions) consider Flood Impacts.
    - 84% (68 local jurisdictions) consider Fire Impacts.
    - 60% (49 local jurisdictions) consider Drought Resistance.
    - 35% (23 local jurisdictions) consider Heat Island Effect.
    - 28% (23 local jurisdictions) consider Sea Level Rise.

Figure 16, Jurisdictions with Climate Action Plans

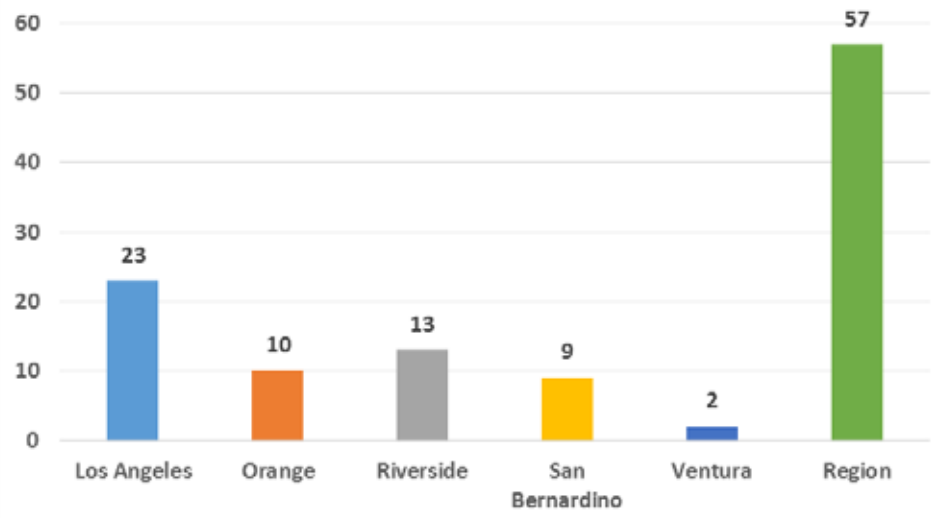
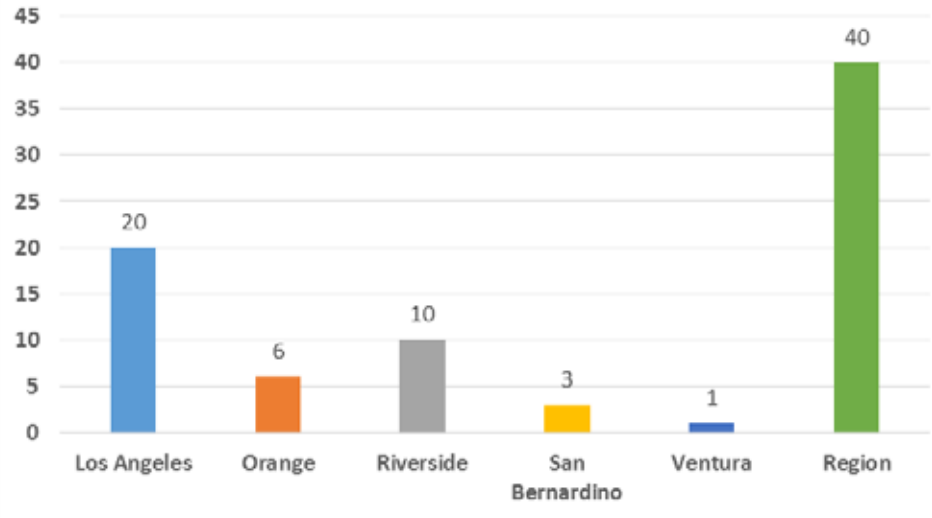
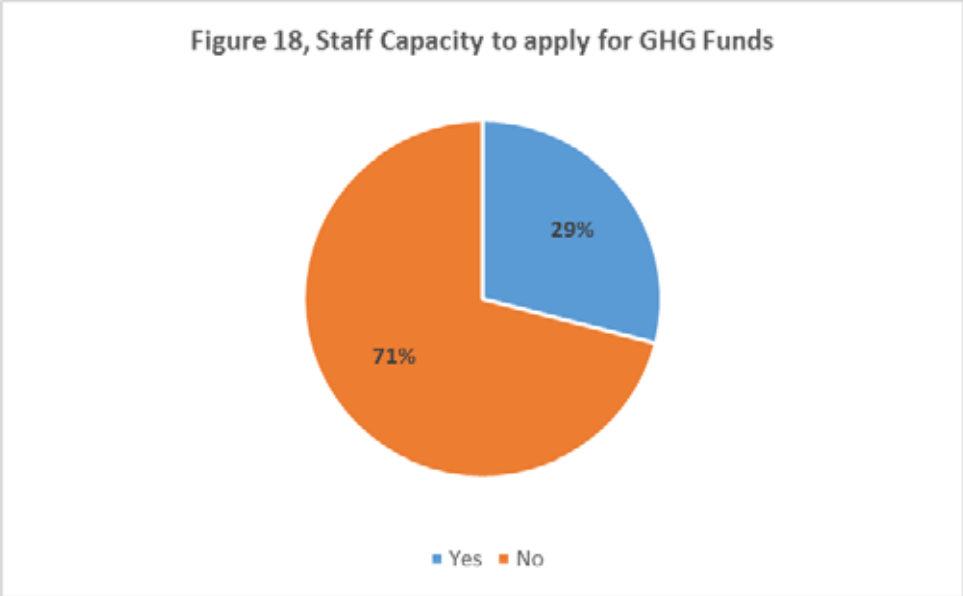
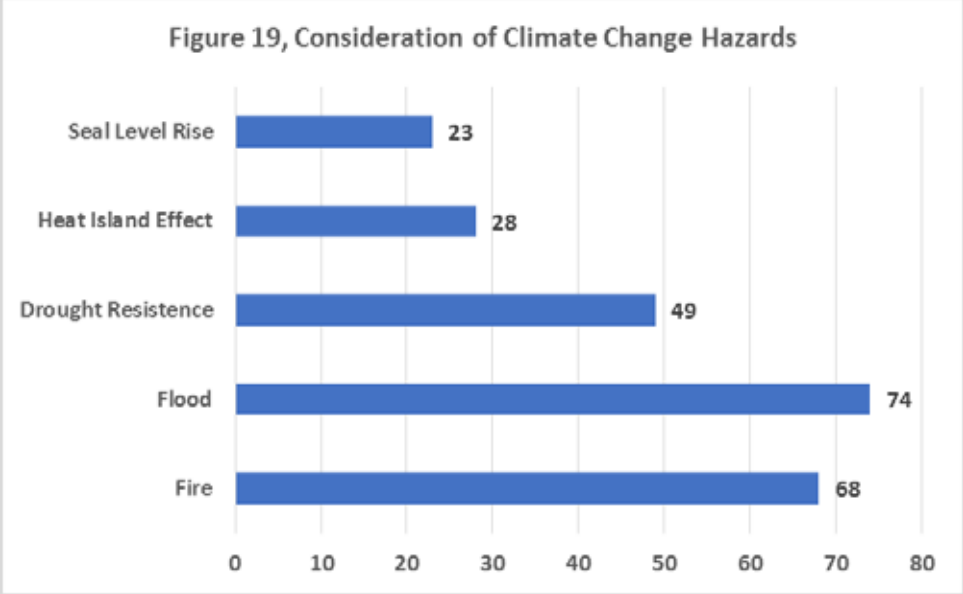


Figure 17, Jurisdictions with GHG Reduction Targets

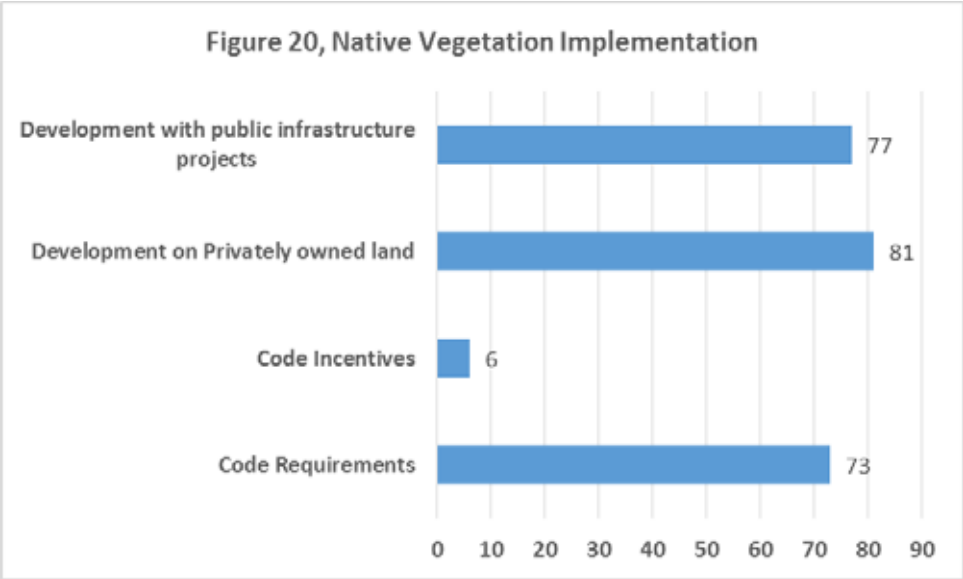






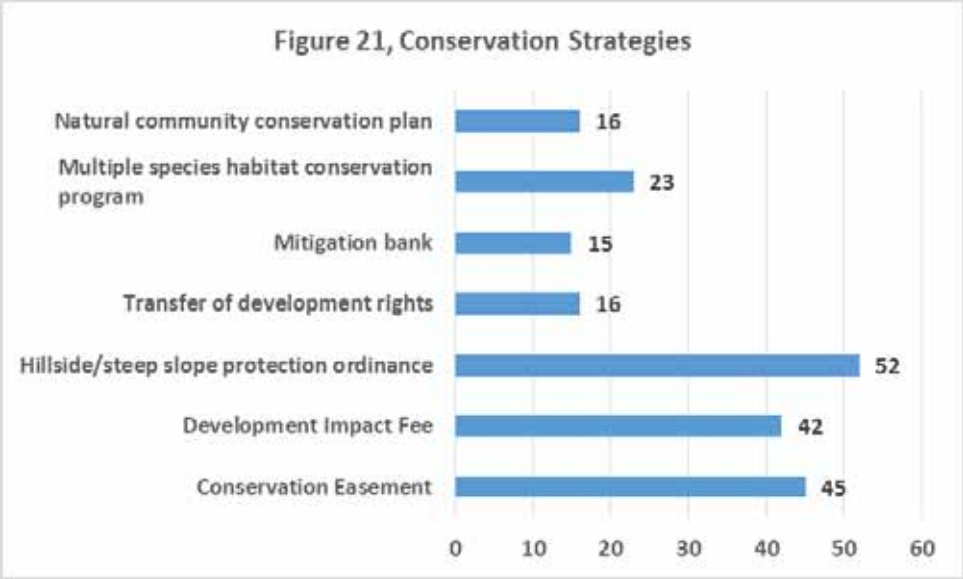
Native Vegetation:

- 85% (95 jurisdictions) of respondents have implemented various methods to support the use of native vegetation within their jurisdiction.
- Based on the responses from the 95 jurisdictions, the results regarding the implementation of Native Vegetation are as follows (*See Figure 20, Native Vegetation Implementation)*:
    - 85% (81 local jurisdictions) implement through the Development on Privately Owned Land.
    - 81% (77 local jurisdictions) implement through the Development of Public Infrastructure Projects.
    - 77% (73 local jurisdictions) implement and enforce Code Requirements.
    - 6% (6 local jurisdictions) offer Code Incentives.



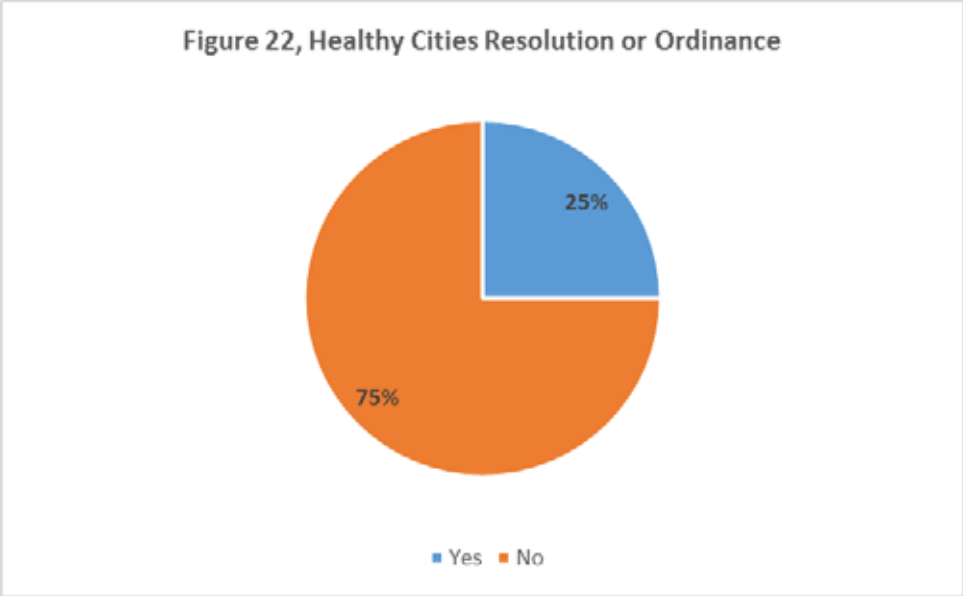
Conservation Strategies:

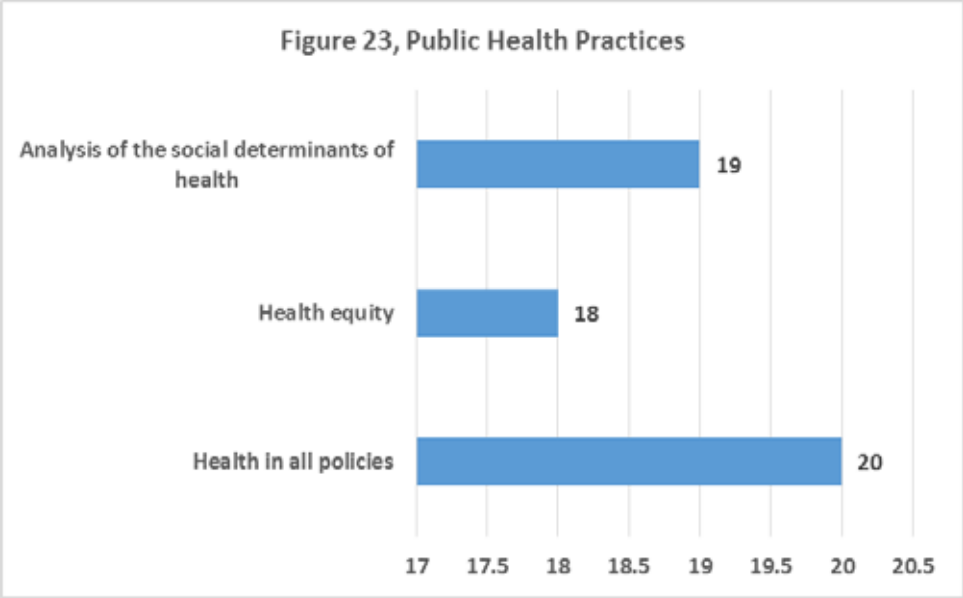
- 66% (74 jurisdictions) of respondents have implemented various conservation strategies.
- Based on the responses from the 74 jurisdictions, the results regarding the implementation of conservation strategies are as follows (*See Figure 21, Conservation Strategies)*
    - 70% (52 local jurisdictions) have implemented a Hillside/Steep Slope Protection Ordinance.
    - 61% (45 local jurisdictions) have implemented Conservation Easements.
    - 57% (42 local jurisdictions) have implemented a Development Impact Fee.
    - 31% (23 local jurisdictions) have implemented a Multiple Species Habitat Conservation Program.
    - 22% (16 local jurisdictions) have implemented a Natural Community Conservation Plan.
    - 22% (16 local jurisdictions) allow for a Transfer of Development Rights.
    - 20% (15 local jurisdictions) have implemented Mitigation Banks.



Public Health:

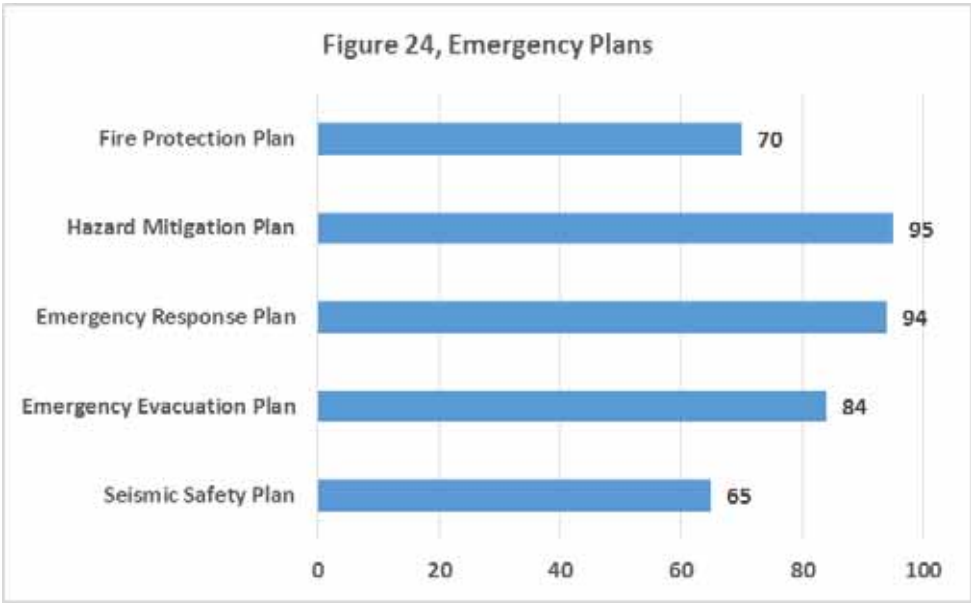
- 25% (28 jurisdictions) of respondents have adopted a Healthy Cities Resolution or Ordinance *(See Figure 22, Healthy Cities Resolution or Ordinance)*.
- 21% (24 jurisdictions) of respondents have implemented Public Health Practices.
- Based on the responses from the 24 jurisdictions, the results regarding the implementation of Public Health Practices are as follows (*See Figure 23, Public Health Practices):*
    - 83% (19 local jurisdictions) have implemented the Analysis of the Social Determinants of Health.
    - 79% (20 local jurisdictions) have implemented Health in all Policies Programs.
    - 75% (18 local jurisdictions) have implemented Health Equity Programs.





Emergency Plans:

- 90% (101 jurisdictions) of respondents have implemented Emergency Plans.
- Based on the responses from the 101 jurisdictions, the results regarding the implementation of Emergency Plans are as follows (*See Figure 24, Emergency Plans)*:
    - 94% (95 local jurisdictions) have implemented a Hazard Mitigation Plan.
    - 93% (94 local jurisdictions) have implemented an Emergency Response Plan.
    - 83% (84 local jurisdictions) have implemented an Emergency Evacuation Plan.
    - 69% (70 local jurisdictions) have implemented a Fire Protection Plan.
    - 64% (65 local jurisdictions) have implemented a Seismic Safety Plan.



FISCAL IMPACT:
Work associated with this item is included in the current Fiscal Year 2018-19 Overall Work Program (OWP), project number 020.0161.04 Regulatory Compliance.

ATTACHMENT(S):
1. SCAG Local Input Survey
2. PowerPoint Presentation - Local Input Survey

SCAG Local Input Survey

The Southern California Association of Governments (SCAG) is currently seeking input from local jurisdictions across the six-county area to begin a new long-range plan for the region, the 2020- 2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The 2020 RTP/SCS is a long-range visioning plan containing transportation projects and land use development strategies, that balances future mobility and housing needs with economic, environmental and public health goals. Additionally, per SB 375, land use strategies developed within the SCS will help the region achieve state greenhouse gas emission reduction goals.

SCAG is collecting information from local jurisdictions related to the implementation of the 2012 and 2016 RTP/SCS, as well as to inform development of the 2020 RTP/SCS. A copy of the 2016 RTP/SCS Local Input Survey from your jurisdiction has also been provided to facilitate the response process. Please respond to each question as it pertains to your jurisdiction. Due to the multidisciplinary nature of the questions, we encourage an interdepartmental collaboration to answer questions within the survey. Responses are due by October 1, 2018. A web version of the survey is available at: https://www.surveymonkey.com/r/FB6QFTT

PART I – LAND USE

General Plan

1. Please enter the year of your jurisdictions most recent general plan element update. Add information for any additional elements contained in the General Plan but not listed:

Element	Year	Web link	Comments
Land Use			
Circulation			
Housing			
Conservation			
Open space			
Noise			
Safety			
[Additional Element]			
[Additional Element]			
[Additional Element]			

[Other Comments]

2. Is your jurisdiction currently in the process of updating its General Plan? Yes ☐ No ☐ If yes, when do you expect to complete the update? Date: [Publish Date]

[Other Comments]

Attachment: SCAG Local Input Survey (Local Input Survey Results)

3. Which elements of the general plan will your jurisdiction plan to update within the next five years?

Element	**Year**	**Comments**
[Title]		
[Title]		
[Title]		
[Title]		
[Title]		

[Other Comments]

4. Does the most recently adopted general plan update support or intend to support any of the following Sustainable Communities Strategies (SCS)?

Strategies	**Yes**	**No**	**Intend**	**Elements**	**Web link**
Transit oriented development (TOD)	☐	☐	☐		
Infill	☐	☐	☐		
Complete communities	☐	☐	☐		
Non-residential mixed use	☐	☐	☐		
Infill along Livable corridors	☐	☐	☐		
Form based code	☐	☐	☐		
Other [Other]	☐	☐	☐		

[Other Comments]

5. Does the circulation element of your General Plan include the following:

Plans and Guidelines	**Yes**	**No**	**Web link**
Guidelines for freight movement and heavy duty vehicles	☐	☐	
Designated truck route system	☐	☐	
Truck circulation plan	☐	☐	
A plan for the development of multimodal transportation networks per the California Complete Streets Act (AB 1358)	☐	☐	

[Other Comments]

6. When was the zoning code last updated to reflect your most recent amendments?
Date: [Publish Date] Web link: [link]

Attachment: SCAG Local Input Survey (Local Input Survey Results)

[Other Comments]

7. Is your jurisdiction currently in the process of updating its land use designation and zoning code? Yes ☐ No ☐ If yes, when do you expect to complete the update? Date: [Publish Date]

[Other Comments]

8. Did your jurisdiction's most recent land use designation and/or zoning code update include provisions supporting any of these policies?

Land Use Designation and/or Zoning Code	Yes	No	Designation/Code	Web link
Transit oriented development (TOD)	☐	☐		
Infill	☐	☐		
Complete communities	☐	☐		
Non-residential mixed use	☐	☐		
Infill along Livable corridors	☐	☐		
Form based code	☐	☐		
Accessory dwelling units	☐	☐		
Other [Other]	☐	☐		

[Other Comments]

9. Does your jurisdiction have TOD building standards and design guidelines? Yes ☐ No ☐

[Other Comments]

10. Does your jurisdiction offer incentives for infill development? Yes ☐ No ☐
If yes, which of the following apply:

Incentives	Yes	No	Web link
Fast track permitting	☐	☐	
Fee Waivers	☐	☐	
Density bonus	☐	☐	
Increased floor area ratio	☐	☐	
Building height waivers	☐	☐	
Tax subsidies or other benefits	☐	☐	
Waived or reduced minimum parking requirement	☐	☐	
Reduced open space requirements	☐	☐	
Transfer of development rights	☐	☐	

Attachment: SCAG Local Input Survey (Local Input Survey Results)

Other [Other]	☐	☐	

[Other Comments]

11. Does your jurisdiction overlap with a High Quality Transit Area (HQTA) as included in the 2016 RTP/SCS? (Please refer to the HQTA Map located at SCAG's Scenario Planning Model (SPM)'s Data Management site at https://spmdm.scag.ca.gov to check out HQTA boundaries in your jurisdiction). Yes ☐ No ☐

[Other Comments]

12. Does your jurisdiction have policy incentives to encourage development of TODs? Yes ☐ No ☐
If yes, which of the following apply:

Incentives and Policies	Yes	No	Web link
Fast track permitting	☐	☐	
Fee waivers	☐	☐	
Density bonus	☐	☐	
Increased floor area ratio	☐	☐	
Building height waivers	☐	☐	
Tax subsidies or other benefits	☐	☐	
Waived or reduced minimum parking requirement	☐	☐	
Reduced open space requirements	☐	☐	
Affordable Housing Set aside	☐	☐	
Other [Other]	☐	☐	

[Other Comments]

13. Do any adopted specific plans and/or community plans with certified EIRs overlap with the existing Transit Priority Areas (TPAs)? Yes ☐ No ☐
If yes, please list their names and years of adoption below.

Name	**Year**	**Comments**
[Title]		
[Title]		
[Title]		
[Title]		
[Title]		

[Other Comments]

Attachment: SCAG Local Input Survey (Local Input Survey Results)

14. Are there any other adopted specific plans and/or community plans that do not overlap with the existing Transit Priority Areas (TPAs)? Yes ☐ No ☐
If yes, please list their name and years of adoption below.

Name	Year	Comments
[Title]		
[Title]		
[Title]		
[Title]		
[Title]		

[Other Comments]

15. Which of the following parking strategies are included in any of your existing specific plans or general plans?

Parking strategies	Yes	No	Web link
Right-sized parking	☐	☐	
Park-once districts	☐	☐	
Shared parking	☐	☐	
Unbundled parking	☐	☐	
Parking maximums in designated areas	☐	☐	
Innovative parking design (i.e. Sustainable features)	☐	☐	
Waived or reduced minimum parking requirement	☐	☐	
Bicycle Parking	☐	☐	
Other [Other]	☐	☐	

[Other Comments]

16. Does your jurisdiction have a small lot development policy? Yes ☐ No ☐ Date: [Publish Date]
Web link: [link]

[Other Comments]

17. Does your jurisdiction have any policies or programs in place to resolve potential impacts related to goods movement activities? Yes ☐ No ☐
If yes, please provide name and years of adoption below.

Policies or Programs	Year	Web link

Attachment: SCAG Local Input Survey (Local Input Survey Results)

[Title]		
[Title]		
[Title]		
[Title]		
[Title]		

[Other Comments]

18. Does your jurisdiction have any design guidelines in place for logistics center, warehouse or distribution facility development? Yes ☐ No ☐ Date: [Publish Date] Web link: [link]

[Other Comments]

19. Does your jurisdiction have any policies or programs in place for the design of industrial neighborhoods? Yes ☐ No ☐
If yes, please provide name and years of adoption below.

Policies or Programs	**Year**	**Web link**
[Title]		
[Title]		
[Title]		
[Title]		
[Title]		

[Other Comments]

20. Does your jurisdiction have a development/impact/linkage fee ordinance? Yes ☐ No ☐ Date: [Publish Date] Web link: [link]
If yes, which of the following does it fund?

Areas that receive funding	**Yes**	**No**	**Web link**
Parks	☐	☐	
Affordable housing	☐	☐	
Natural lands/Open space preservation	☐	☐	
Transit improvements/amenities	☐	☐	
Other [Other]	☐	☐	

[Other Comments]

Attachment: SCAG Local Input Survey (Local Input Survey Results)

21. Does your jurisdiction participate in the Mills Act in an effort to maintain, preserve or rehabilitate historically significant property? Yes ☐ No ☐

[Other Comments]

22. Does your jurisdiction use any of the following water management and efficiency strategies:

Strategies	Yes	No	Web link
Stormwater management best practices	☐	☐	
Greywater/reclaimed water (purple pipes)	☐	☐	
Ground water recharge	☐	☐	
Low impact development	☐	☐	
Green infrastructure	☐	☐	
Reduced impervious surface and/or lot coverage incentives	☐	☐	
Other [Other]	☐	☐	

[Other Comments]

Housing

23. Does your jurisdiction utilize or are considering any of the following zoning or land use strategies for housing?

Strategies	Yes	No	Web link
Inclusionary zoning ordinance	☐	☐	
- **Is there an in-lieu fee component?**	☐	☐	
Rent stabilization ordinance	☐	☐	
- **Maximum annual percentage rent increase allowed**	[Comments]		
Affordable housing preservation ordinance	☐	☐	
Mortgage down payment assistance program	☐	☐	
Special financing district (CRIA, EIFD, Others?)	☐	☐	
Incentives for affordable housing	☐	☐	
- **Fast track permitting**	☐	☐	
- **Fee waivers**	☐	☐	
- **Density bonus**	☐	☐	
- **Increased floor area ratio**	☐	☐	
- **Building height waivers**	☐	☐	
- **Tax subsidies or other benefits**	☐	☐	
- **Waived or reduced minimum parking requirements**	☐	☐	

Attachment: SCAG Local Input Survey (Local Input Survey Results)

- **Reduced open space requirements**	☐	☐	
- **Other relaxed requirements for affordable housing**	☐	☐	
Low-income housing tax credit (LITHC)	☐	☐	
Other [Other]	☐	☐	

[Other Comments]

24. Please fill in the number of affordable and non-affordable units <u>permitted</u> for each Regional Housing Needs Assessment (RHNA) category since the beginning of the reporting period for the current RHNA cycle (October 2013- October 2021). Affordable units are defined as affordable for households with incomes of 80% or less of county median income, or the very low and low income RHNA categories. Data can be found in your submitted annual progress report to the California Department of Housing and Community Development (HCD). (Please note that your housing permit data will not be used to determine the subsequent RHNA).

Year	Affordable Housing (very low and low)	Non-affordable housing (moderate and above moderate)
2014		
2015		
2016		
2017		

[Other Comments]

25. Please indicate if any of the following planning circumstances affect future household growth in your jurisdiction (While this section is not the official local planning survey of the RHNA process, SCAG will use responses to inform the formal local survey as part of the 6th RHNA cycle process, beginning in 2018)

Circumstances	Yes	No
Existing and projected job housing balance	☐	☐
Lack of capacity for sewer or water service due to federal and state laws, regulations or regulatory actions, or supply and distribution decisions made by a sewer or water service provider other than the local jurisdiction that preclude the jurisdiction from providing necessary infrastructure for additional development during the planning period.	☐	☐
Availability of land suitable for urban development or for conversion to residential use, the availability of underutilized land, and opportunities for infill development and increased residential densities.	☐	☐
Lands preserved or protected from urban development under existing federal and state programs, or both, designed to protect open space, farmland, environmental habitats and natural resources on a long-term basis.	☐	☐
County policies to preserve agricultural land within an unincorporated area.	☐	☐

Attachment: SCAG Local Input Survey (Local Input Survey Results)

Distribution of household growth assumed for purposes of a comparable period of regional transportation plans and opportunities to maximize the use of public transportation and existing transportation infrastructure.	☐	☐
Loss of low-income housing units in assisted housing developments due to contract expirations or termination of use restrictions.	☐	☐
Market demand for housing	☐	☐
Agreements between a county and cities in a county to direct growth toward incorporated areas of the county	☐	☐
High housing cost burdens	☐	☐
Housing needs of farm workers	☐	☐
Housing needs generated by the presence of a private university or a campus of the California State University or the University of California within any member jurisdiction	☐	☐
Demand for rural housing	☐	☐
Other [Other]	☐	☐

[Other Comments]

PART II – TRANSPORTATION

26. Has your jurisdiction adopted or plan to adopt any of the following (check I.D., if currently is in development):

Adopted Policies, Plans and Strategies	Yes	No	I.D.	Year	Web link
Complete streets policy	☐	☐	☐		
- **Does it include provisions for delivery vehicles or truck access?**	☐	☐	☐		
Safe routes to school program or plan	☐	☐	☐		
Active transportation plan	☐	☐	☐		
Bicycle master plan	☐	☐	☐		
Pedestrian master plan	☐	☐	☐		
Streetscape standards and design guidelines	☐	☐	☐		
Transportation master plan	☐	☐	☐		
Traffic calming measures	☐	☐	☐		
Transportation demand management program	☐	☐	☐		
Transportation demand management ordinance	☐	☐	☐		
Parking management plan/ordinance	☐	☐	☐		
- **Provisions for truck parking?**	☐	☐	☐		
- **Provisions for commercial vehicle access?**	☐	☐	☐		
Vision zero policy	☐	☐	☐		
Safety plan/safety targets	☐	☐	☐		
Industrial land use ordinance	☐	☐	☐		
Intelligent transportation systems plan/program	☐	☐	☐		

Intermodal facility plan	☐	☐	☐		
Truck Route/Truck prohibit route plan	☐	☐	☐		
Multimodal performance measures/targets	☐	☐	☐		
Transit overlay district	☐	☐	☐		
First/Last Mile Strategies	☐	☐	☐		
Scenic Roadway Plan	☐	☐	☐		

[Other Comments]

27. Has your jurisdiction or employers within your jurisdiction adopted or implemented any of the following Travel Demand Management (TDM) Strategies:

Adopted TDM strategies	**Yes**	**No**	**Year**	**Web link**
Ridesharing incentives and rideshare matching	☐	☐		
Vanpool programs	☐	☐		
Transit pass benefits	☐	☐		
Private employer shuttles or other transportation providers	☐	☐		
Parking cash-out policies	☐	☐		
Preferential parking or parking subsidies for carpoolers	☐	☐		
Intelligent parking programs	☐	☐		
Dynamic pricing for parking	☐	☐		
Programs or mobility services aimed at local tourism travel (e.g. Shuttle bus)	☐	☐		
Guaranteed ride home programs	☐	☐		
Incentives for telecommuting	☐	☐		
Designated pick-up/drop-off for ride sourcing or transportation network companies (Lyft or Uber)	☐	☐		
Bike share system	☐	☐		
Facilities or incentives for low speed modes (Neighborhood Electric Vehicles)	☐	☐		
Integrated mobility hubs	☐	☐		
Transportation management areas	☐	☐		

[Other Comments]

28. Is your jurisdiction currently in the process of or planning to address vehicle miles travelled (VMT) related development impacts? Yes ☐ No ☐
If yes, please list applicable projects and measures taken (or proposed) to mitigate VMT impacts.

Project Name	**Comments**

Attachment: SCAG Local Input Survey (Local Input Survey Results)

[Title]	
[Title]	
[Title]	
[Title]	
[Title]	

[Other Comments]

29. Does your jurisdiction provide or plan to provide any of the following Bus Rapid Transit (BRT) infrastructure:

BRT Infrastructure	Yes	No	Web link
Bus-only land	☐	☐	
Signal prioritization	☐	☐	
Ticket vending machines on sidewalks for expediting boarding	☐	☐	
First/Last mile connectivity improvements	☐	☐	
Other [Other]	☐	☐	

[Other Comments]

30. If applicable, please provide the estimated annual expenditures for the following:

Annual expenditures	Annual spending
Bus stops/shelters	
Wayfinding/signage	
Data/trip planner	

[Other Comments]

31. Does your jurisdiction receive local return funding (from a county transportation tax measure)? Yes ☐ No ☐

If yes, does your jurisdiction have an adopted policy for prioritizing spending of these funds? Yes ☐ No ☐ Date: [Publish Date] Web link: [link]

[Other Comments]

32. Does your jurisdiction use local return revenue to fund any of the following:

Funding	Yes	No

Attachment: SCAG Local Input Survey (Local Input Survey Results)

Bike Lanes	☐	☐
Pedestrian improvements	☐	☐
Repair (pavement, potholes)	☐	☐
Signal synchronization	☐	☐
Fixed route transit service	☐	☐
Dial-a-ride or other demand response service	☐	☐
Taxi scrip	☐	☐
Cool streets	☐	☐
Other [Other]	☐	☐

[Other Comments]

33. Does your jurisdiction have a vehicle idling reduction policy or use communication/signage to reduce idling, particularly in sensitive areas such as near schools or hospitals? Yes ☐ No ☐ Date: [Publish Date] Web link: [link]

[Other Comments]

34. Has your jurisdiction recently budgeted a portion of its municipal funding (from the general fund, capital improvement program, or other sources) for bicycle and/or pedestrian improvements? Yes ☐ No ☐ Date: [Publish Date]

[Other Comments]

PART III – ENVIRONMENTAL

Environmental Preferable Purchasing Policy

35. Does your jurisdiction have an environmentally preferable purchasing (EPP) Policy? (Includes office supplies, cleaning products, or electronics that are considered "green". Yes ☐ No ☐

    If yes, what percent of your municipal expenditures goes towards environmentally preferable purchases? Percent: [Comment]

    If no, is your jurisdiction interested in developing or have visions of including one in future general plan updates? Yes ☐ No ☐

CEQA Streamlining

36. Has your jurisdiction approved projects utilizing CEQA streamlining? (SB 743, SB 375, or SB 226) Yes ☐ No ☐
    If yes, please provide projects and approval year below.

Attachment: SCAG Local Input Survey (Local Input Survey Results)

Project	**Year**	**Web link**
[Title]		
[Title]		
[Title]		
[Title]		
[Title]		

[Other Comments]

Natural and Agricultural Lands

37. Does your jurisdiction encourage the use of vegetation native to Southern California? Yes ☐ No ☐

If yes, which of the following mechanisms does your jurisdiction use to promote native vegetation?

Mechanisms	**Yes**	**No**
Through code requirements	☐	☐
Code incentives	☐	☐
In conjunction with development on privately owned land	☐	☐
In conjunction with development on publicly owned land	☐	☐
In conjunction with the development with public infrastructure projects	☐	☐
Other [Other]	☐	☐

[Other Comments]

38. Does your jurisdiction participate in any of the following natural lands conservation strategies?

Natural lands conservation strategies	**Yes**	**No**	**Web link**
Conservation easement	☐	☐	
Development impact fee	☐	☐	
Hillside/steep slope protection ordinance	☐	☐	
Transfer of development rights	☐	☐	
Mitigation bank	☐	☐	
Multiple species habitat conservation program (MSHCP)	☐	☐	
Natural community conservation plan (NCCP)	☐	☐	
Other [Other]	☐	☐	

[Other Comments]

Attachment: SCAG Local Input Survey (Local Input Survey Results)

39. Does your jurisdiction participate in any of the following agricultural lands conservation strategies?

Agricultural Lands Conservation Strategies	Yes	No	Web link
Conservation easement	☐	☐	
In-lieu fee	☐	☐	
Agricultural land mitigation program	☐	☐	
Williamson act	☐	☐	
Cluster ordinance	☐	☐	
Other [Other]	☐	☐	

[Other Comments]

40. What kinds of funds (from your general fund, special allocations, or voter-approved taxes/bonds) or other funding mechanisms are available to implement natural/agricultural conservation programs? Please select all that apply.

Funds	Yes	No
General Fund	☐	☐
Grant Funds	☐	☐
Development impact fee	☐	☐
Other [Other]	☐	☐

[Other Comments]

41. Do you have any pending or future plans to develop natural/agricultural programs or policies in your jurisdiction in the near future? Yes ☐ No ☐
If yes, please provide projects and approval year below:

Project	Year	Web link
[Title]		
[Title]		
[Title]		
[Title]		
[Title]		

[Other Comments]

42. Do you face any barriers to implementing conservation programs in your jurisdiction? Yes ☐ No ☐
If yes, please indicate which barriers from the list below:

Attachment: SCAG Local Input Survey (Local Input Survey Results)

Barriers	Yes	No
Funding	☐	☐
Capacity (staff time)	☐	☐
Lack of interest from constituents	☐	☐
Other [Other]	☐	☐

[Other Comments]

43. Is your jurisdiction interested in applying for conservation grants through the California Greenhouse Reduction Fund (i.e. Cap and Trade)? Yes ☐ No ☐
    If yes, which of the following would be most helpful to your jurisdiction:

Grants	Yes	No
Sustainable agricultural lands conservation program	☐	☐
Urban greening grant program	☐	☐
Wetlands restoration for greenhouse gas reduction program	☐	☐
Other [Other]	☐	☐

[Other Comments]

44. Are there any additional data, resources, tools or examples you need for considering conservation planning or mitigation? What types of data would be useful to have?
    Please list: [Comments]

[Other Comments]

45. What other agencies, non-profits, or private entities are particularly active in conservation planning, mitigation and conservation in your jurisdiction? Who else should we talk to?
    Please list: [Comments]

[Other Comments]

Environmental Justice

46. Does your jurisdiction have any disadvantaged areas? Yes ☐ No ☐
    If no, please skip to question 52.

[Other Comments]

47. Does your jurisdiction take into account disadvantaged areas in planning, when seeking grant funding? Yes ☐ No ☐

Attachment: SCAG Local Input Survey (Local Input Survey Results)

[Other Comments]

48. Does your jurisdiction make use of the CalEnviroScreen tool developed by CalEPA to help identify disadvantaged communities within your jurisdiction? Yes ☐ No ☐

[Other Comments]

49. Does your jurisdiction have a program to mitigate air quality in environmentally sensitive areas (for example: hospitals, schools, hospices, or daycare facilities located within 500 feet of a freeway)? Yes ☐ No ☐ Date: [Publish Date] Web link: [link]

[Other Comments]

50. Which of the following strategies does your jurisdiction employ to engage low-income, minority groups and Tribal Governments when pursuing community infrastructure projects?

Strategies	**Yes**	**No**
We host community workshops in targeted locations to solicit feedback from low-income and minority residents	☐	☐
We regularly engage community groups that have a large membership from low-income and minority residents	☐	☐
We advertise in media outlets that aim to serve low income and minority residents	☐	☐
We go out to community events and activities to engage residents who may not be able to attend workshops	☐	☐
All of the above	☐	☐
Other [Other]	☐	☐

[Other Comments]

51. If your jurisdiction leads federally funded infrastructure or transportation programs, how do you identify and resolve potential severe and adverse impacts to low income and minority populations?

Strategies	**Yes**	**No**
We conduct an environmental justice impacts analysis and seek input from community residents to minimize, mitigate, or avoid potentially severe or adverse impacts for low income and minority communities	☐	☐
We engage low income and minority residents early in the planning process to avoid impacts	☐	☐

We work with our County Transportation Commission to address impacts	☐	☐
Other [Other]	☐	☐

[Other Comments]

52. Does your jurisdiction promote the use of New Markets Tax Credit Benefits to revitalize the community? Yes ☐ No ☐

[Other Comments]

Environmental Sustainability

53. Has your jurisdiction adopted or plan to adopt a Climate Action Plan? Yes ☐ No ☐ Date: [Publish Date] Web link: [link]
    If yes, what is your greenhouse gas reduction target and anticipated horizon year? Target/Horizon Year: [Year]

[Other Comments]

54. Does your jurisdiction have plans or policies in place to implement a local version of the State's climate goal of reducing greenhouse gases by 40% below 1990 levels by 2030? Yes ☐ No ☐
    Date: [Publish Date] Web link: [link]

[Other Comments]

55. Does your jurisdiction have the capacity (i.e. staffing and resources) to apply for Greenhouse Gas Reduction Fund (cap-and-trade) or other federal, state or local grants? Yes ☐ No ☐

[Other Comments]

56. Does your general plan and/or specific plan consider implications resulting from any of the following climate change hazards:

Topics	Yes	No	Web link
Fire	☐	☐	
Flood	☐	☐	
Drought resistance	☐	☐	
Heat island effect	☐	☐	
Sea level rise	☐	☐	
Other [Other]	☐	☐	

Attachment: SCAG Local Input Survey (Local Input Survey Results)

[Other Comments]

57. Does your jurisdiction monitor energy use in order to employ energy efficiency measures? Yes ☐ No ☐

If yes, how frequently is energy use reviewed?

Frequency	Yes	No
Weekly	☐	☐
Monthly	☐	☐
Quarterly	☐	☐
Annually	☐	☐
Other [Other]	☐	☐

[Other Comments]

58. Please indicate if your jurisdiction promotes the usage of Electrical Vehicles and/or Alternative Fuel Fleet stations or strategies:

Stations/Fleet	Yes	No	Comments
Electrical Vehicle Station	☐	☐	
- **Heavy Duty Vehicles**			
- **Passenger/Light Duty Vehicles**			
- **How many in municipal fleet?**			
Alternative Fuel Fleet	☐	☐	
- **Heavy Duty Vehicles**			
- **Passenger/Light Duty Vehicles**			
- **How many in municipal fleet?**			
Other [Comments]	☐	☐	

[Other Comments]

PART IV – PUBLIC HEALTH AND SAFETY

59. Does your jurisdiction have a 'Healthy Cities' resolution or ordinance? Yes ☐ No ☐ Date: [Publish Date] Web link: [link]

[Other Comments]

Attachment: SCAG Local Input Survey (Local Input Survey Results)

60. Does your jurisdiction have a Health Element as part of its general plan or has your jurisdiction incorporated health as a consideration into the general plan? Yes ☐ No ☐ Date: [Publish Date] Web link: [link]

[Other Comments]

61. Has your jurisdiction incorporated any of the following planning practices?

Planning practices	Yes	No	Web link
Health in all policies	☐	☐	
Health equity	☐	☐	
Analysis of the social determinants of health	☐	☐	

[Other Comments]

62. Does your jurisdiction have any of the following plans to address emergencies caused by natural disasters?

Emergency and Natural Disaster Plans	Yes	No	Web link
Seismic safety plan	☐	☐	
Emergency evacuation plan	☐	☐	
Emergency response plan	☐	☐	
Hazard mitigation plan	☐	☐	
Fire protection plan	☐	☐	
Other [Other]	☐	☐	

[Other Comments]

PART V – DATA

63. Does your jurisdiction have or collect any of the following:

Data	Yes	No	Contact Name	Email
Bicycle or pedestrian volume data	☐	☐		
Sidewalk data	☐	☐		
Traffic counts	☐	☐		
Truck traffic counts	☐	☐		
Automated traffic counters	☐	☐		
Warehousing/distribution centers	☐	☐		
Number of manufacturing firms	☐	☐		

Attachment: SCAG Local Input Survey (Local Input Survey Results)

Local road pavement management and performance data	☐	☐		
Public health data	☐	☐		
Bike lane mileage data (bike lane, bike path, Class 3 bike routes, separated bike lanes (cycle tracks))	☐	☐		
Collision data	☐	☐		
Bridge condition data	☐	☐		
Pavement condition index (PCI) or International roughness index (IRI) data for local roads.	☐	☐		
Open data portal	☐	☐		
New Housing starts data	☐	☐		
Allowed parking and restricted parking areas	☐	☐		

[Other Comments]

Highlights of the 2020 Local Input Survey Results

Roland Ok, Senior Regional Planner
June 6, 2019

SCAG
INNOVATING FOR A BETTER TOMORROW
WWW.SCAG.CA.GOV

2020 Local Input Survey

- Survey Objectives
- Process
- Survey Questions
- Key Findings

Attachment: PowerPoint Presentation - Local Input Survey (Local Input Survey Results)

Survey Objectives

- SCAG developed a Local Input Survey to assist in the development of Connect SoCal
- Document and track the implementation of 2012 and 2016 RTP/SCS
- Establish baseline conditions to develop Connect SoCal
- Utilize information to develop and/or bolster new and/or existing programs to assist local jurisdictions

Process

- Surveys were distributed to local jurisdictions in October 2017
- Surveys discussed with jurisdictions during Local Input one-on-one meetings
- Multiple follow-ups to encourage submittal
- Responses were due by October 2018

Attachment: PowerPoint Presentation - Local Input Survey (Local Input Survey Results)

Survey Questions

- Local Input Survey was comprised of 62 questions within 5 categories
  - Land Use Policies
  - Transportation Policies
  - Environmental Sustainability Policies
  - Public Health and Safety
  - Data

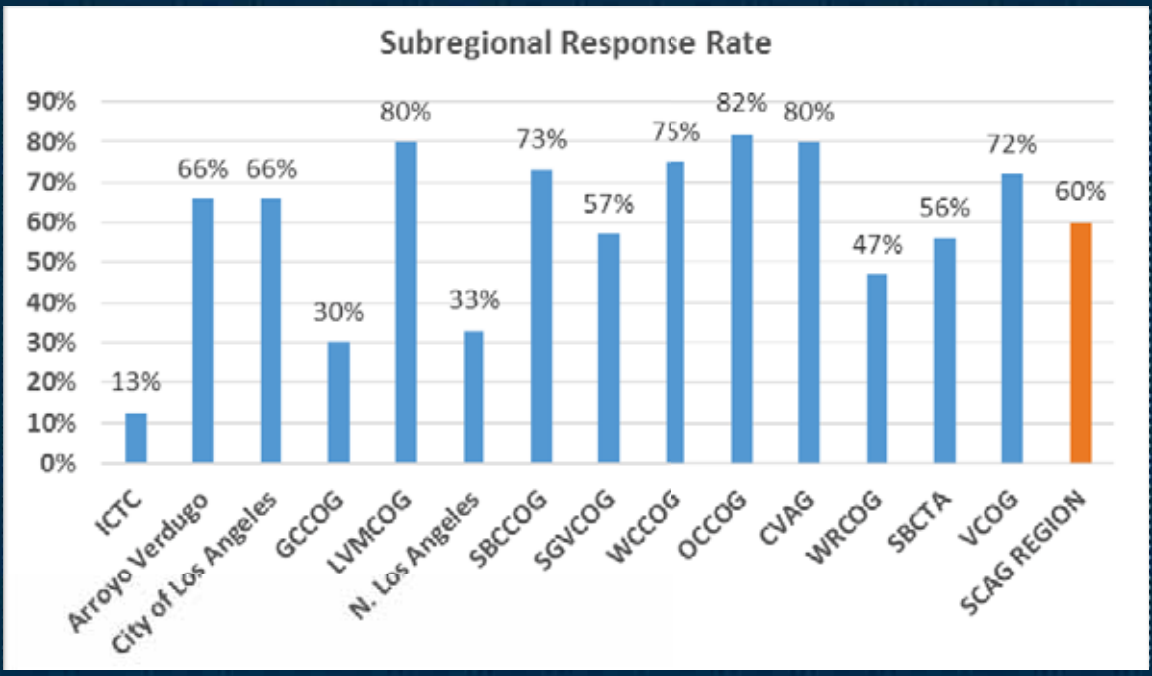
KEY FINDINGS

Attachment: PowerPoint Presentation - Local Input Survey (Local Input Survey Results)

Response Rate and General Overview

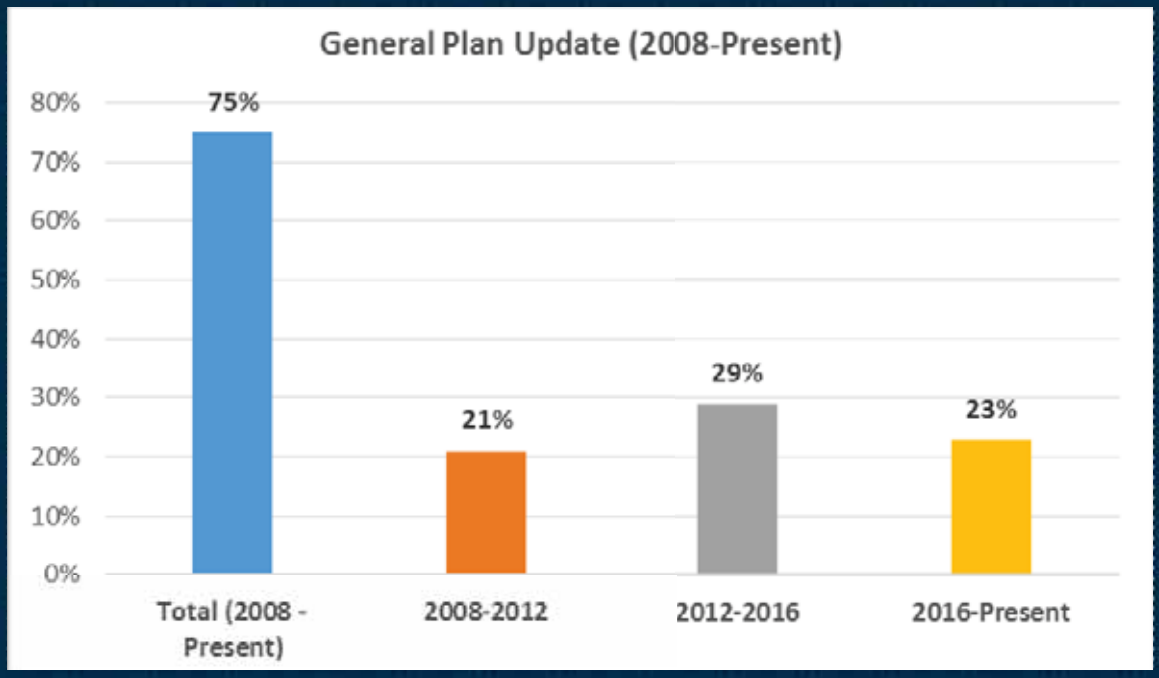
- Approximately 60% (112 out of 197 local jurisdictions) provided responses
  - Response rates per topic area and questions differed amongst respondents
- SCAG found that several strategies noted in the previous plans (2012 and 2016) have been successfully implemented throughout the region
- Whereas others were not as frequently implemented and are key indicators for improvement opportunities

Subregional Response Rate

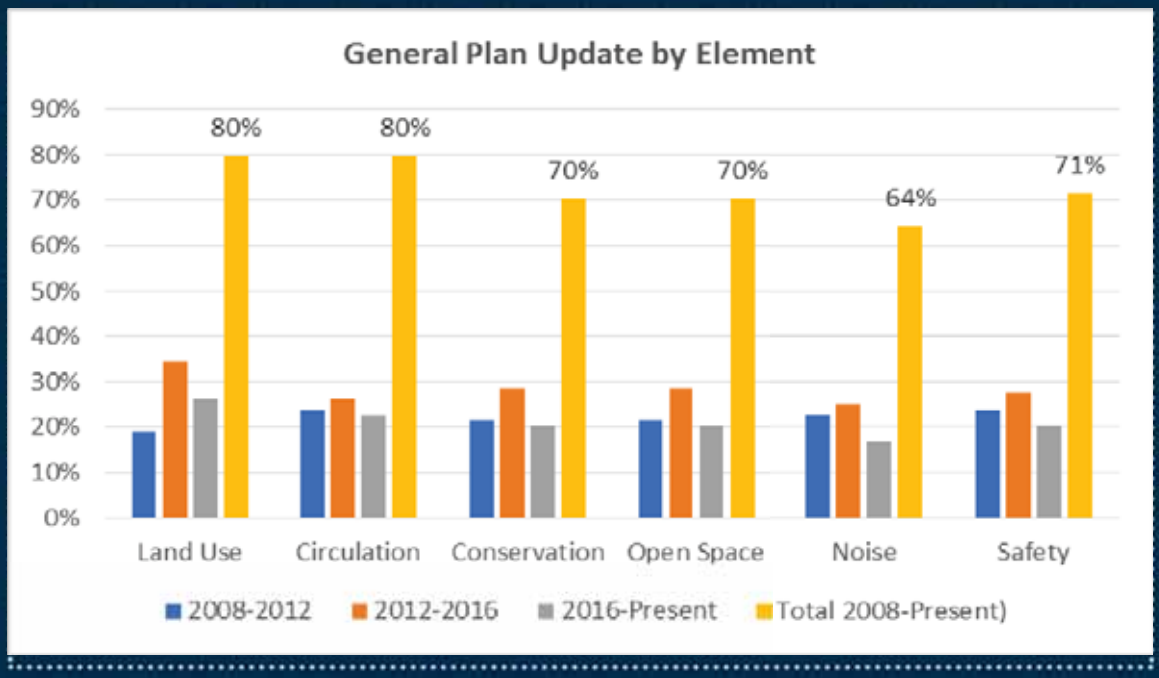


Attachment: PowerPoint Presentation - Local Input Survey (Local Input Survey Results)

General Plan Updates (Part 1)

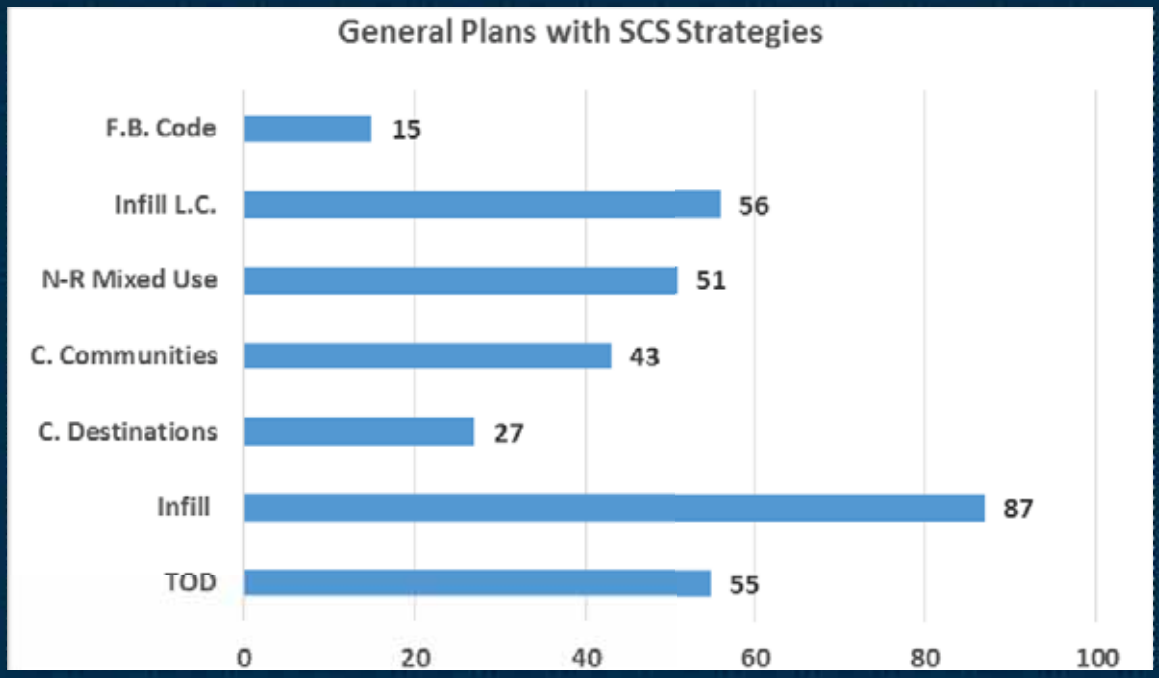


Key Findings – General Plan Updates (Part 2)

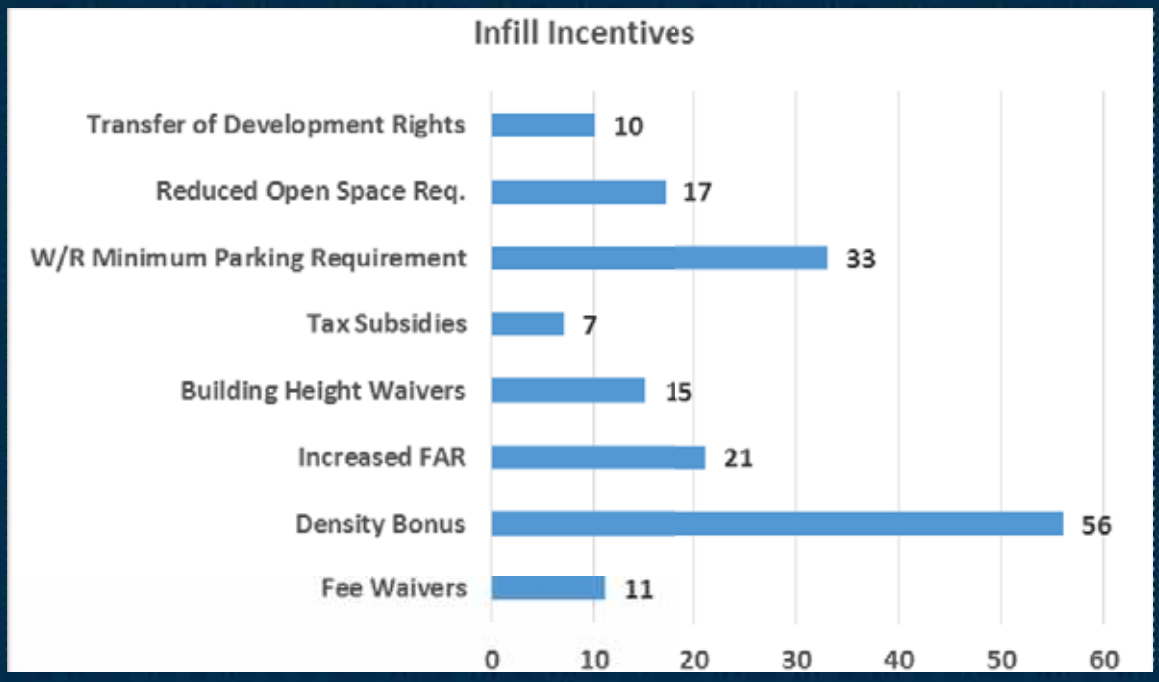


Attachment: PowerPoint Presentation - Local Input Survey (Local Input Survey Results)

General Plan with SCS Strategies

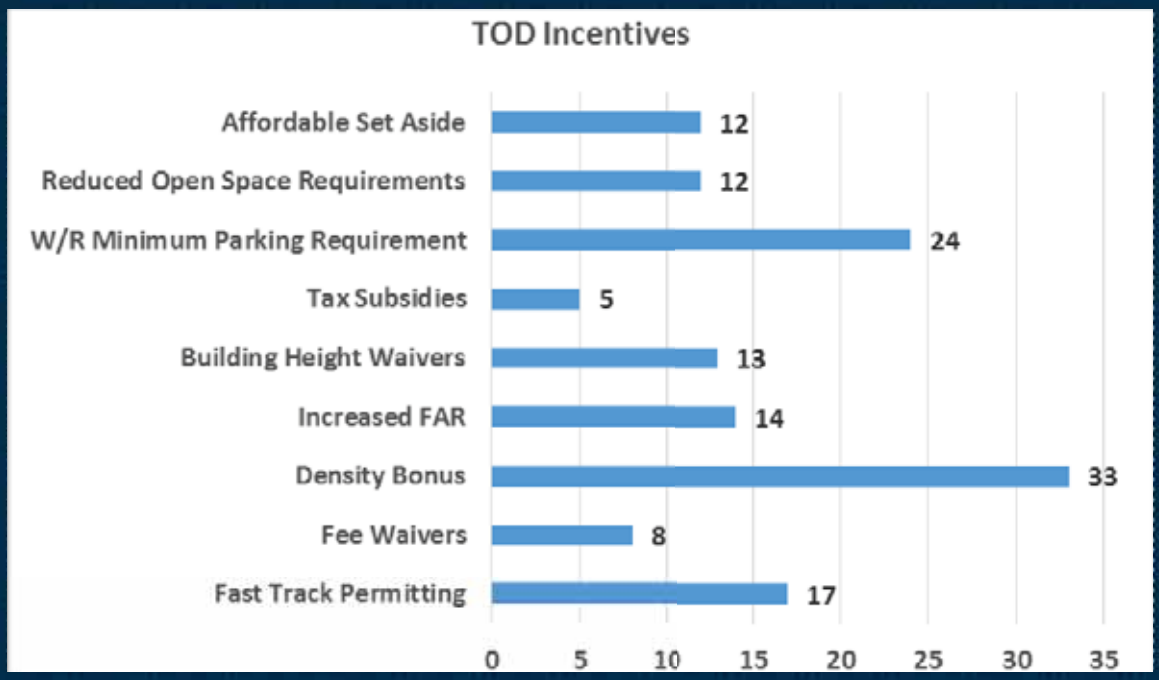


Infill Incentives

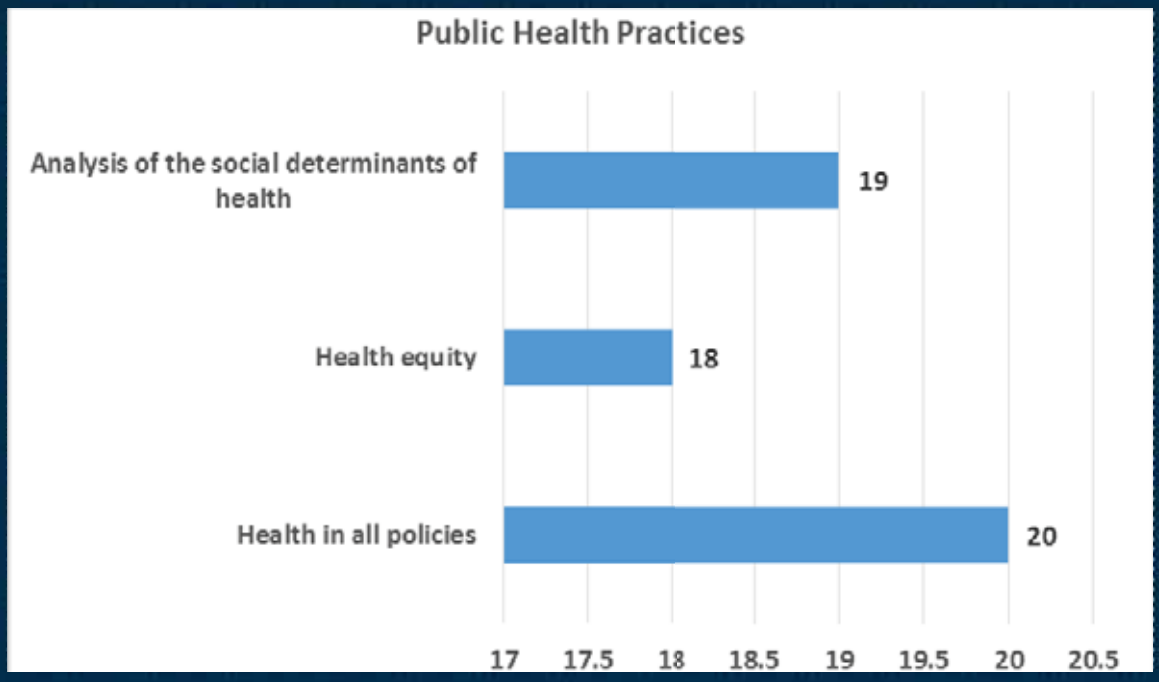


Attachment: PowerPoint Presentation - Local Input Survey (Local Input Survey Results)

Transit Oriented Development Incentives

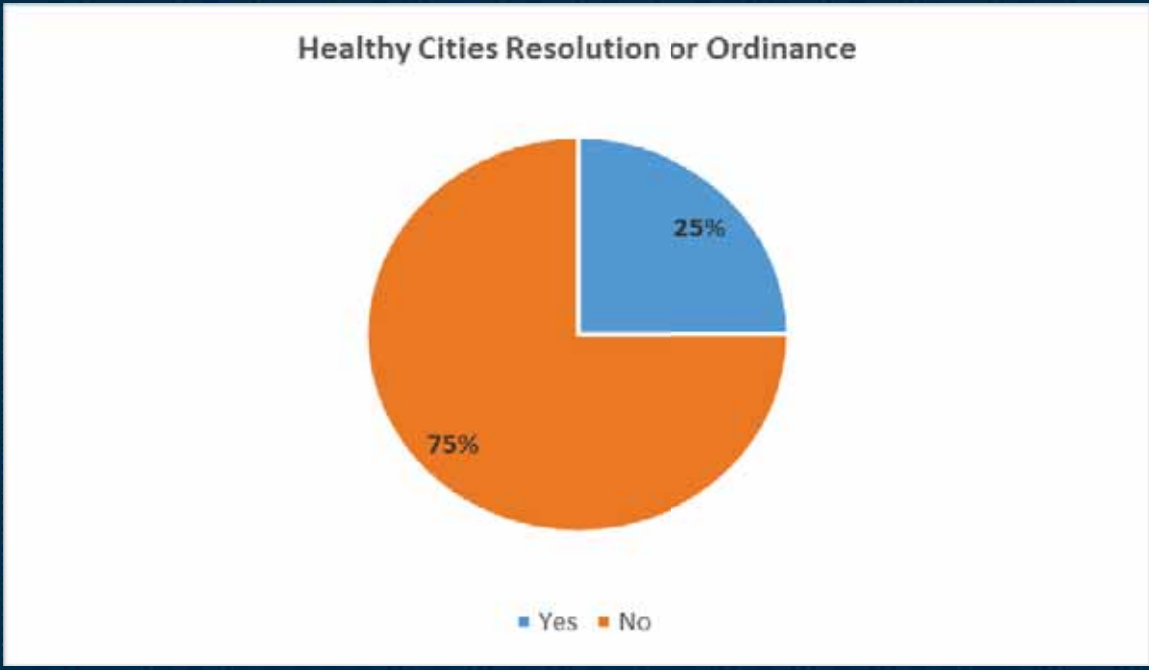


Public Health Practices

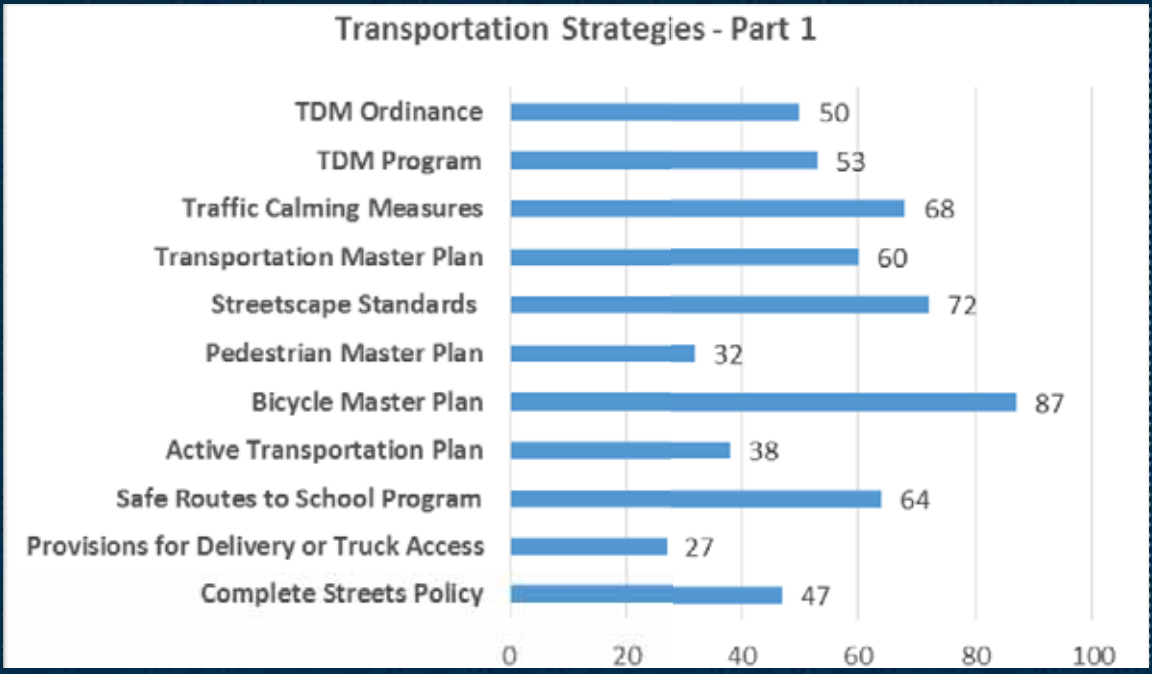


Attachment: PowerPoint Presentation - Local Input Survey (Local Input Survey Results)

Public Health – Healthy Cities Resolution/Ordinance

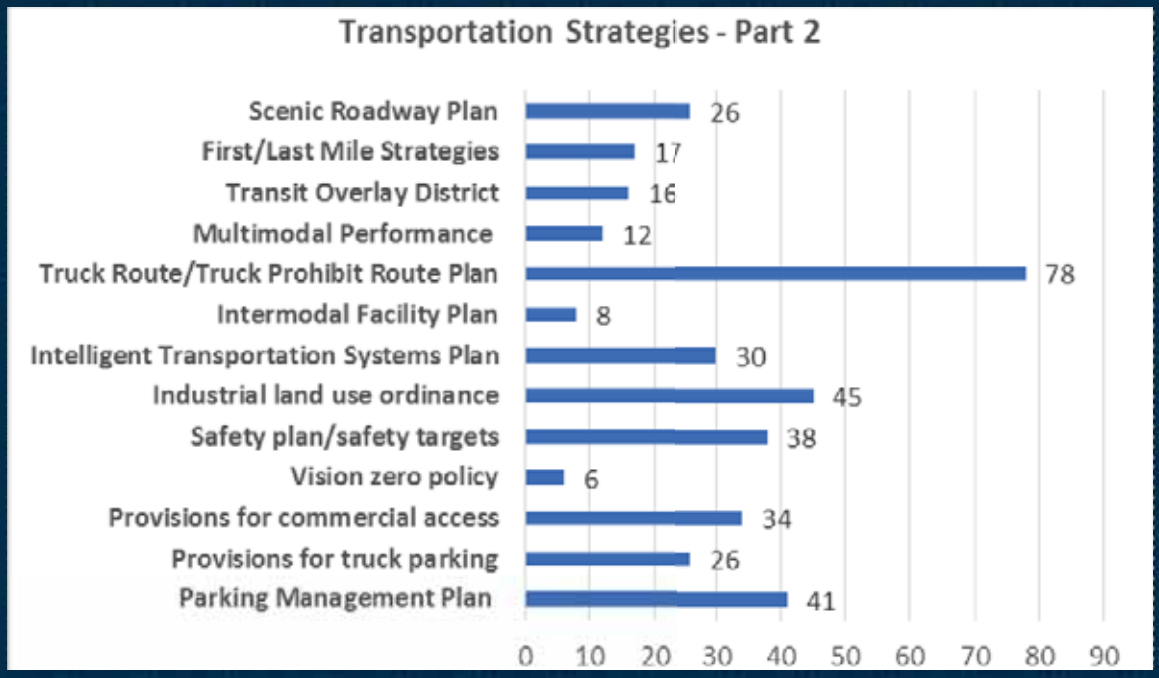


Transportation Strategies – Part 1

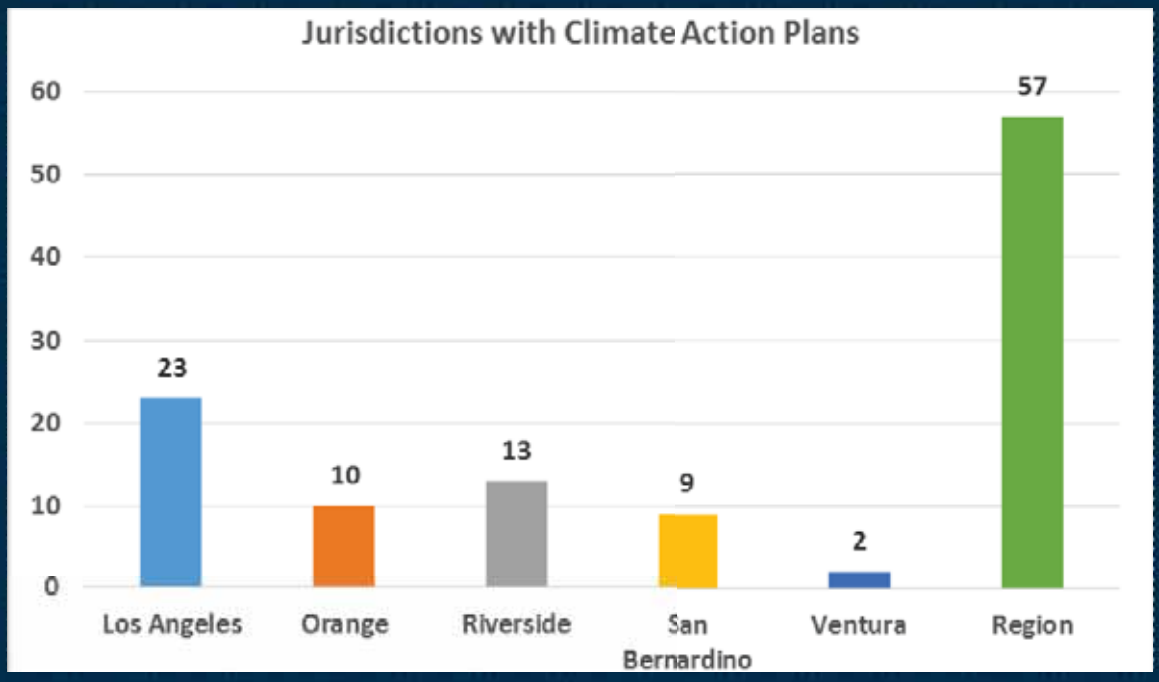


Attachment: PowerPoint Presentation - Local Input Survey (Local Input Survey Results)

Transportation Strategies – Part 2

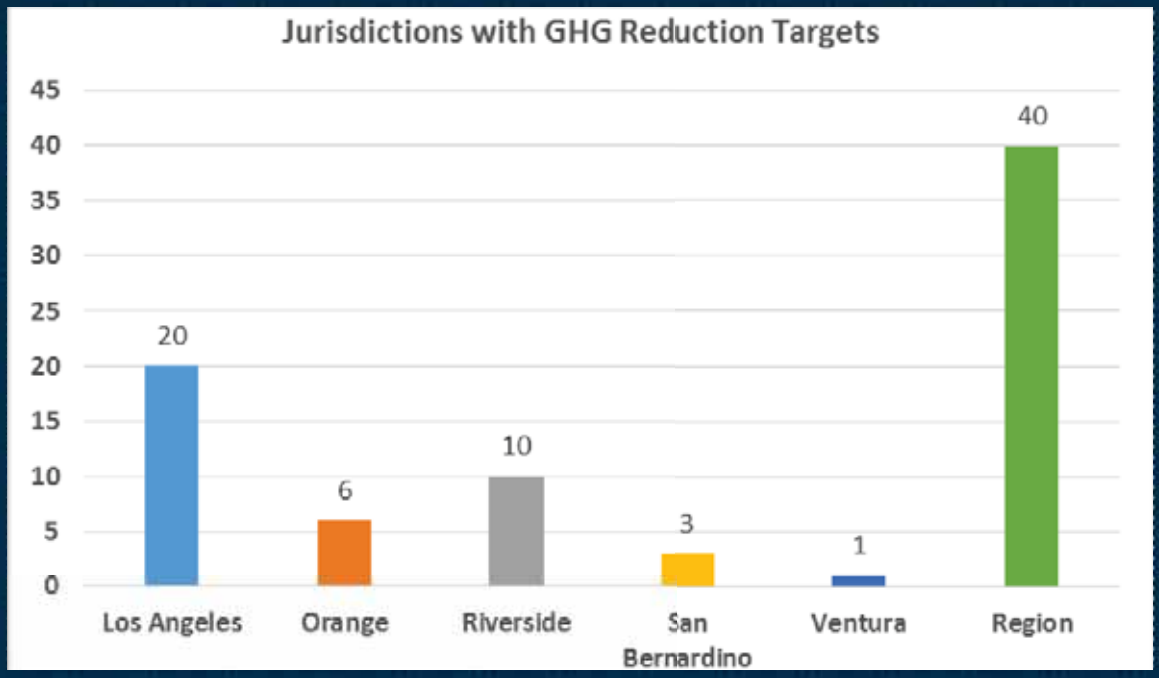


Climate Action Plans

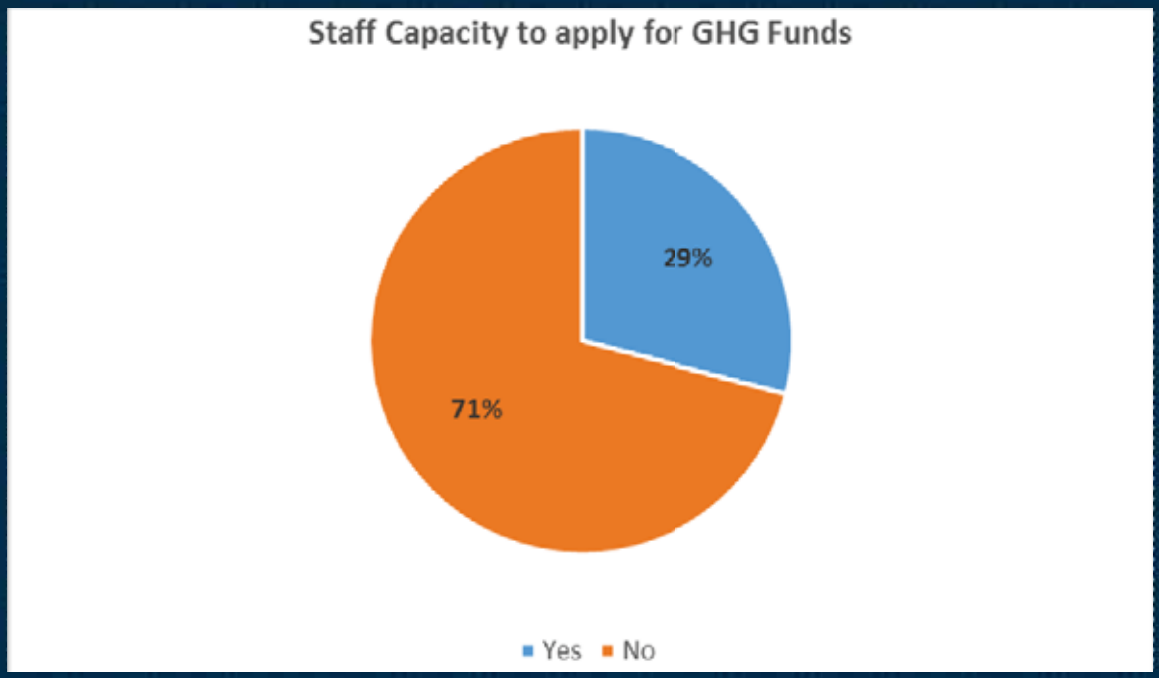


Attachment: PowerPoint Presentation - Local Input Survey (Local Input Survey Results)

Greenhouse Gas Reduction Targets

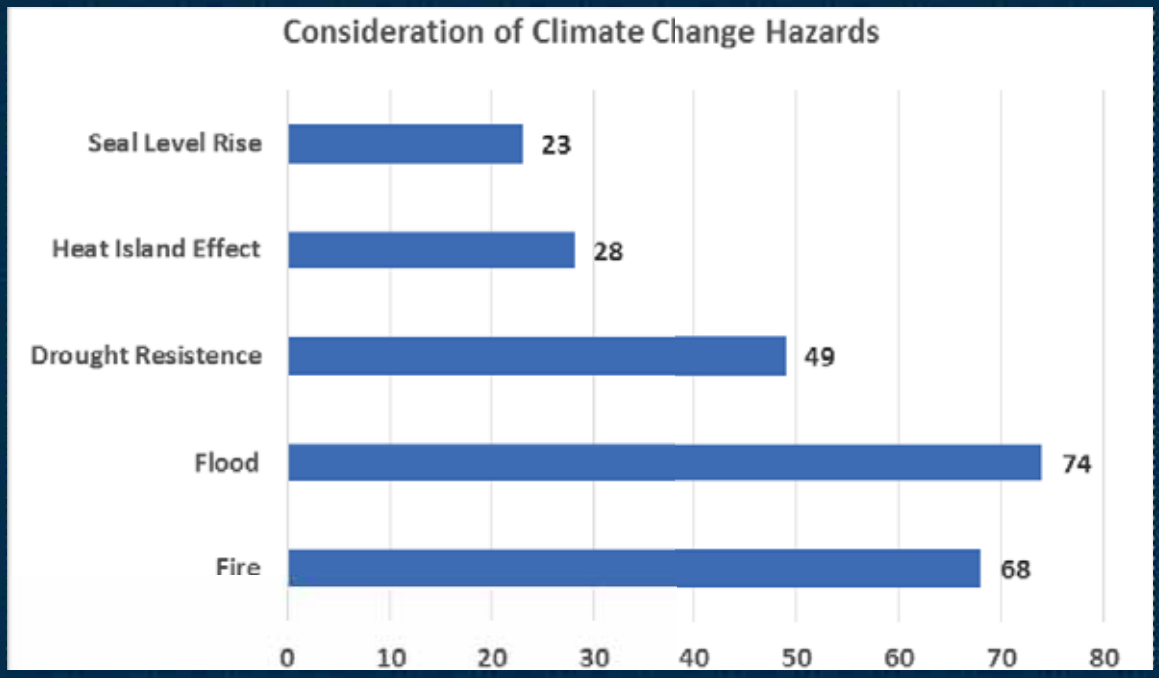


Staff Capacity to Apply for GHG Funds

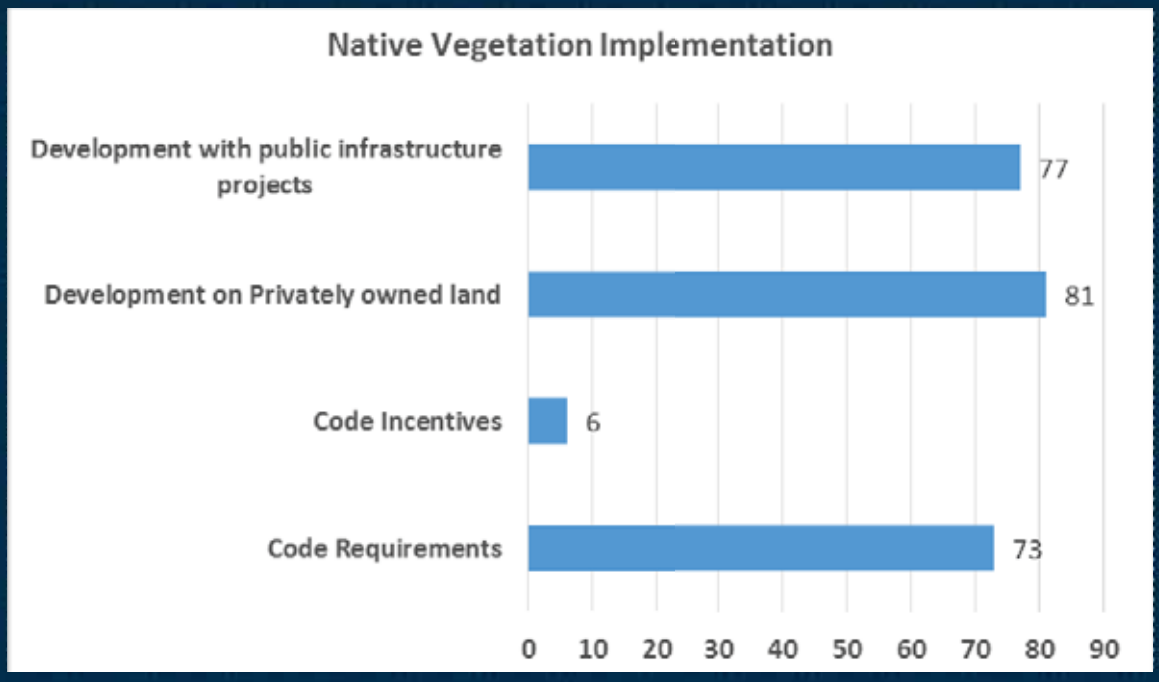


Attachment: PowerPoint Presentation - Local Input Survey (Local Input Survey Results)

Consideration of Climate Change Hazards

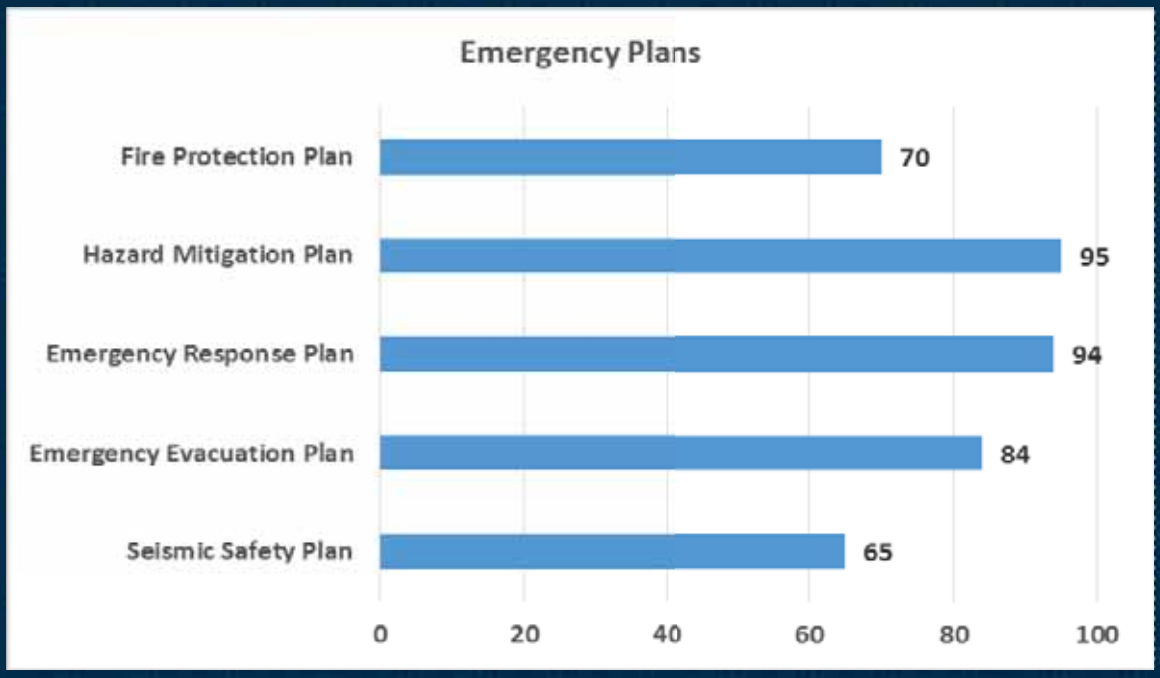


Native Vegetation



Attachment: PowerPoint Presentation - Local Input Survey (Local Input Survey Results)

Emergency Plans



Next Steps

- Data received from the survey has been used in developing Connect SoCal
- SCAG will continue to promote successful policies and strategies
- It's important to note that low implementation rates for certain policies and strategies should not be seen as failures but as opportunities
  - There are many factors that could account for low implementation rates
  - Opportunities for new programs and workshops
  - Opportunities for tailoring or suggesting revisions to existing policies and strategies

Attachment: PowerPoint Presentation - Local Input Survey (Local Input Survey Results)

Conclusion

Thank you
Any Questions?

Attachment: PowerPoint Presentation - Local Input Survey (Local Input Survey Results)

AGENDA ITEM NO. 8

REPORT

Southern California Association of Governments
900 Wilshire Boulevard, Suite 1700, Los Angeles, California 90017
June 6, 2019

To: Transportation Committee (TC)

EXECUTIVE DIRECTOR'S APPROVAL

From: Annie Nam, Manager of Goods Movement, Goods Movement & Transportation Finance, 213-236-1827, Nam@scag.ca.gov

Subject: Connect SoCal Financial Plan Development Update

RECOMMENDED ACTION:
Information Only – No Action Required.

STRATEGIC PLAN:
This item supports the following Strategic Plan Goal 1: Produce innovative solutions that improve the quality of life for Southern Californians.

EXECUTIVE SUMMARY:
A financial plan is a critical element of a Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) that identifies the source of funds from public and private sectors that can reasonably be expected to be available to support the region's surface transportation investments. This presentation will provide an update of the 2020 RTP/SCS financial plan development.

BACKGROUND:
The 2020 RTP/SCS must include a financial plan that estimates how much funding will be needed to implement recommended improvements, as well as operate and maintain the transportation system as a whole, over the minimum 20-year planning horizon. This includes information on how the region reasonably expects to fund the projects included in the RTP/SCS, including anticipated revenues from federal, state, local, and private sources and user charges. The plan must demonstrate that there is a balance between the expected revenues sources for transportation investments and the estimated costs of the projects and programs described in the RTP/SCS, ensuring that the plan is fiscally (or financially) constrained.

This presentation will provide an update of 2020 RTP/SCS financial plan development, including the working draft revenue forecast. This presentation covers the initial core revenue forecast, which comprises projections of existing federal, state, and local revenue sources only. Staff will report back in the near future on the estimated costs of projects and programs under consideration for inclusion in the 2020 RTP/SCS and identification of potential sources of new revenue and innovative financing strategies that may be necessary to address the region's transportation needs.

FISCAL IMPACT:
Work associated with this item is included in the Fiscal Year 2018-2019 Overall Work Program (015.SCG0159.01: RTP Financial Planning).

ATTACHMENT(S):

1. PowerPoint Presentation - Connect SoCal Financial Plan Development

Connect SoCal Financial Plan Development Update

Annie Nam
Goods Movement & Transportation Finance Department
June 6, 2019

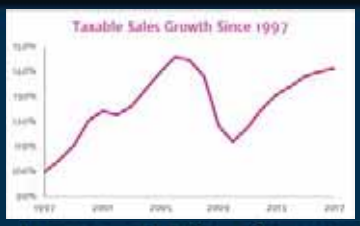
www.scag.ca.gov

Key elements of a financial plan

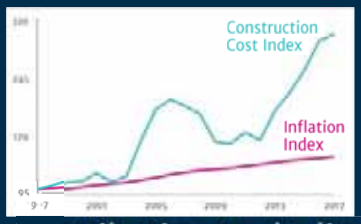
- Federal RTP requirement
  - Estimate of funding needed over 20-years life of RTP to implement recommended improvements, operate and maintain the transportation system
  - Reasonably available revenue sources
    - Existing sources (federal, state, local, private, user charges)
    - New sources / innovative financing
  - Balance expected revenue sources versus estimated costs
    - Financial constraint
- Assumptions
  - Builds off of county transportation commissions, state forecasts, federal apportionments, and others

Attachment: PowerPoint Presentation - Connect SoCal Financial Plan Development (Connect SoCal Financial Plan Development Update)

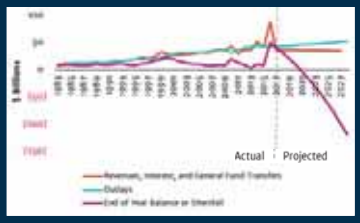
Issues impacting Connect SoCal financial plan



With 8 transportation sales tax measures in SCAG region, changes in consumer behavior significantly impact available revenue for transportation investments



Long-term inflation is projected to grow at 2.2 percent annually, while capital costs are projected to grow at 4.5 percent—contributing to decline in purchasing power of transportation revenue sources

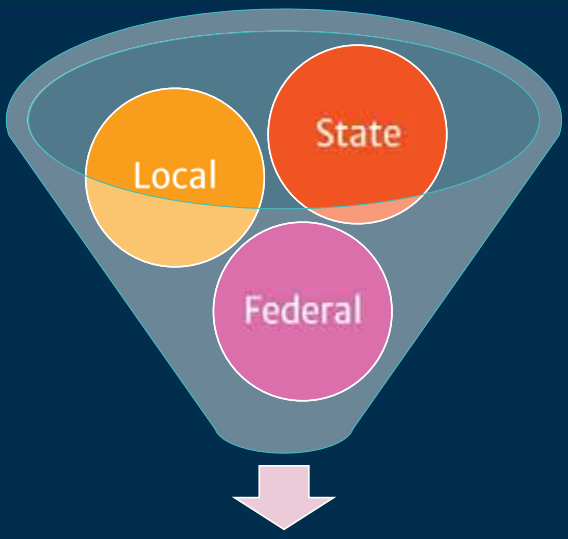


Since 2008, the Federal Highway Trust Fund has required over $141 billion in General Fund transfers to remain solvent

Financial plan development process overview

Attachment: PowerPoint Presentation - Connect SoCal Financial Plan Development (Connect SoCal Financial Plan Development Update)

Core revenue forecast



We begin by forecasting existing transportation revenue sources

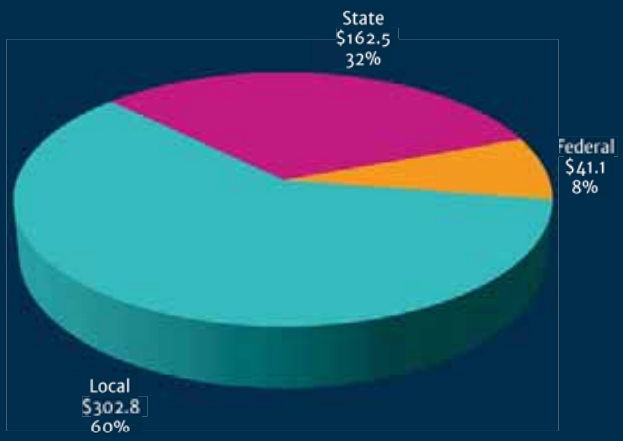
Key changes since last forecast

- Los Angeles County Measure M (although added into 2016 RTP/SCS in subsequent amendment)—providing LA County 4 effectively permanent local option sales tax measures
- Planning horizon (2045) extends beyond some local option sales tax measures
  - OC Measure M: 2041
  - RC Measure A: 2039
  - SBC Measure I: 2040
- Senate Bill 1
  - Especially new funds for SHOPP, State Transit Account, Road Maintenance and Rehabilitation Account

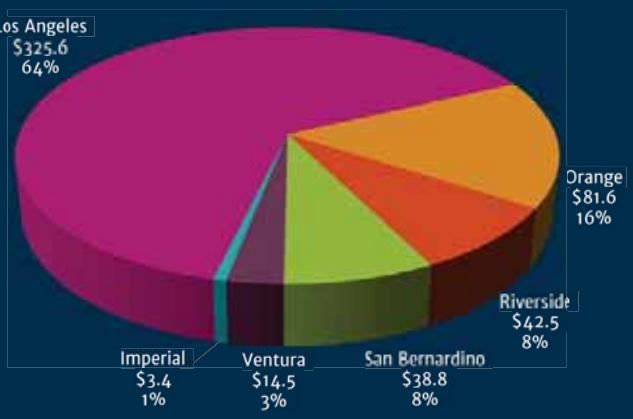
Attachment: PowerPoint Presentation - Connect SoCal Financial Plan Development (Connect SoCal Financial Plan Development Update)

Working draft core revenue forecast

Core revenues (in nominal dollars): $506.4 billion



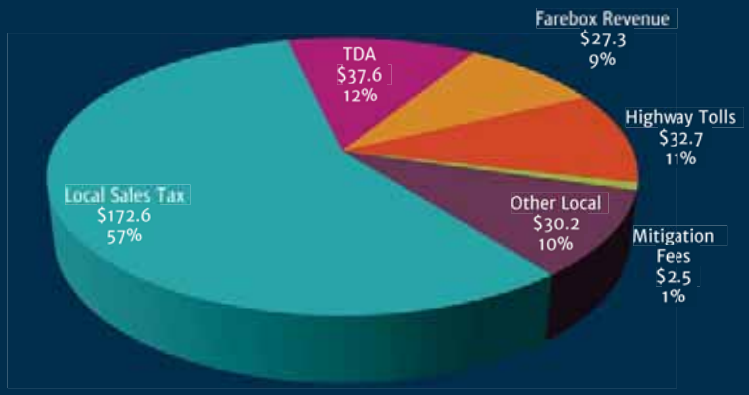
Core revenues by county (in nominal dollars): $506.4 billion



Numbers may not sum to total due to rounding

Working draft core revenue forecast

Core revenues, local sources (in nominal dollars): $302.8 billion

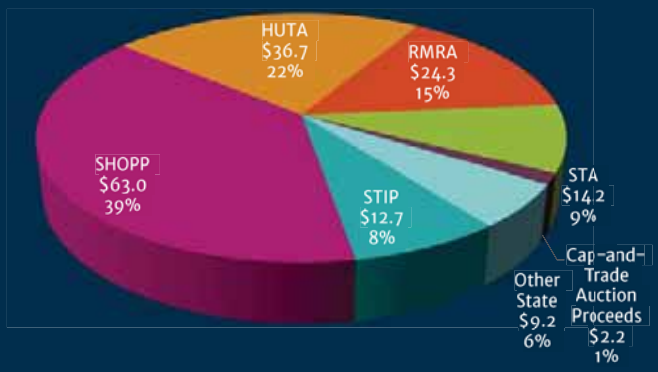


Numbers may not sum to total due to rounding

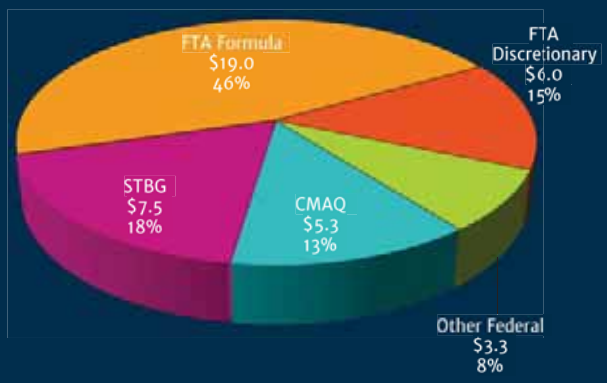
Attachment: PowerPoint Presentation - Connect SoCal Financial Plan Development (Connect SoCal Financial Plan Development Update)

Working draft core revenue forecast

Core revenues, state sources (in nominal dollars): $162.5 billion



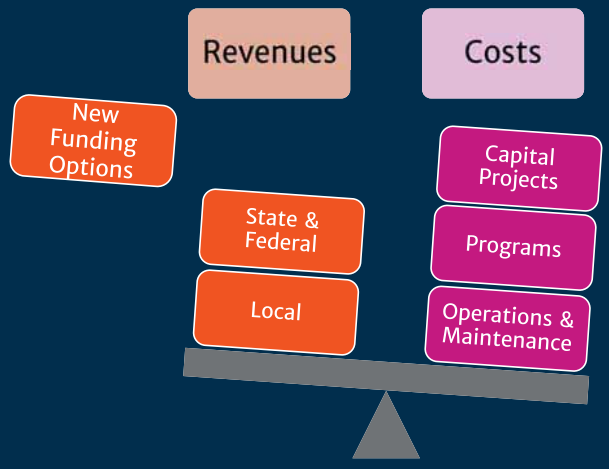
Core revenues, federal sources (in nominal dollars): $41.1 billion



Numbers may not sum to total due to rounding

Next steps

- Continue to refine core revenue forecast
- Continue to analyze program and project costs
- Continue to assess financial capacity and additional funding needs
- Identify options for new revenue sources and opportunities for innovative financing



Attachment: PowerPoint Presentation - Connect SoCal Financial Plan Development (Connect SoCal Financial Plan Development Update)

Thank you

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Attachment: PowerPoint Presentation - Connect SoCal Financial Plan Development (Connect SoCal Financial Plan Development Update)

AGENDA ITEM NO. 9

REPORT

Southern California Association of Governments
900 Wilshire Boulevard, Suite 1700, Los Angeles, California 90017
June 6, 2019

To: Energy & Environment Committee (EEC)
Transportation Committee (TC)

EXECUTIVE DIRECTOR'S APPROVAL

Kome Ajise

From: Stephen Fox, Senior Regional Planner, Transit/Rail, (213) 236-1855, fox@scag.ca.gov

Subject: SCAG Transportation Demand Management Strategic Plan Update

RECOMMENDED ACTION:
For Information Only – No Action Required

STRATEGIC PLAN:
This item supports the following Strategic Plan Goal 1: Produce innovative solutions that improve the quality of life for Southern Californians.

EXECUTIVE SUMMARY:
SCAG staff initiated work on a Transportation Demand Management (TDM) Strategic Plan in the summer of 2018. This TDM Plan will be a guiding document for SCAG's future TDM planning and coordination activites, and will inform the development of Connect SoCal, the forthcoming 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Staff will brief TC members on the study's draft recommendations.

OVERVIEW:
The Federal Highway Administration (FHWA) defines TDM as "a set of strategies aimed at reducing the demand for roadway travel, particularly in single occupancy vehicles (SOVs)." TDM investments reduce congestion and shift trips from SOVs to other modes through projects that often cost significantly less than roadway or transit capital expansion projects. TDM strategies and options add transportation choices that improve sustainability, public health and the quality of life by reducing congestion, air pollution and greenhouse gases. Traditional TDM strategies include carpooling, vanpooling, and telecommuting, but new technology-enabled mobility innovations have emerged in recent years such as transportation network companies (TNCs), carshare, bikeshare, and multi-modal trip planning smart phone apps.

<u>TDM Strategic Plan Goals and Objectives</u>

The study is developing a long-range TDM Strategic Plan for the SCAG region that provides an objectives-driven, performance-based planning process that identifies and promotes TDM strategies and programs that increase the efficiency of the transportation system through alternative modes of travel to the SOV. The TDM Strategic Plan will help guide short, medium and long-term TDM initiatives, updated the Connect SoCal toolbox of TDM strategies, and develop TDM-specific performance measures to evaluate the cost effectiveness and benefits of TDM strategies.

The TDM Strategic Plan will build off TDM strategies, programs and planning processes in the current 2016 RTP/SCS and directly support development of Connect SoCal. Major study tasks include:

- assess the current state of TDM planning and implementation in the region,
- identify best practices and opportunities for improvement and expansion of TDM,
- understand the impact and opportunities provided by new mobility and technology innovations,
- develop regional TDM goals and objectives that align with state and federal mandates including congestion reduction, air quality, and sustainability; and
- develop performance measures to evaluate the effectiveness of corridor level, local and regional TDM strategies.

Technical Advisory Committee

A TDM Technical Advisory Committee (TAC) has been convened to provide stakeholder input and review project deliverables. TAC members include TDM professionals from county transportation commissions, subregions and local jurisdictions, and representatives from the private sector.

Study Progress to Date

At the February 2019 TC meeting, SCAG staff briefed TC members on the existing conditions of TDM in the SCAG region, including findings from stakeholder interviews, a survey effort, a literature review, and a strengths, weaknesses, opportunities and threats (SWOT) analysis. Since that time, the study team has developed regional TDM goals, objectives, and performance measures; updated the SCAG TDM Toolbox to incorporate new mobility and technology innovations (now includes 32 strategies); and has produced draft recommendations to increase the effectiveness and prevalence of TDM strategies in the SCAG region.

The existing conditions and SWOT analysis effort resulted in several key findings. They are:

1. Regulation, when enforced, is a major driver in shaping TDM strategy and the level of investment put forth by both the public and private sectors.
2. Lack of sufficient of standardized data collection makes evaluation of program effectiveness very difficult.
3. Technological advances provide an opportunity to collect better data and improve user experience for TDM programs in the SCAG region.

Strategies to address these issues include establishing a regional standard for performance measurement and helping agencies collect useful data; providing guidance to municipalities and transit agencies that want to partner with the private sector; and supporting updates to municipal programs that require regular monitoring and enforcement of TDM requirements.

Draft Recommendations

The draft recommendations were developed based on regional and national best practices and consultation with the TDM TAC, and are grouped into five TDM categories: Dissemination, Measurement, Partnerships, Policy, and Programming, and are listed below.

Dissemination

1. Create a dedicated page on SCAG's website to share the TDM Strategic Plan's deliverables, such as the updated TDM Toolbox of Strategies, their potential application to congested corridors and areas; and TDM best practices.

2. Convene periodic TDM training sessions/seminars in each of SCAG's six counties for various stakeholders including city and employer staff.

Measurement

1. Establish a TDM regional data clearinghouse.

2. Formalize performance metrics and facilitate data collection and reporting.

Partnerships

1. Convene regional forums designed for TDM policymakers and implementers.

2. Support county efforts to consolidate ridematching databases.

3. Facilitate partnerships between the public and private sectors, through trainings and template agreements, to support collaboration between local governments/agencies and private providers of technology and new mobility services.

4. Facilitate the development of Transportation Management Agencies (TMAs) and Transportation Management Organizations (TMOs).

Policy

1. Provide training workshops for local jurisdictions on best practices to incorporate TDM into different policy instruments such as general plans, specific plans, overlay districts; and how to update legacy TDM ordinances. Also provide training workshops to developers and property managers who must comply with local requirements.

2. Support development of new or updated TDM ordinances with stronger monitoring and enforcement elements, and share best practices and lessons learned.

3. Support development of state and national policy to encourage TDM delivery

Programming

1. Conduct study to develop comprehensive understanding of incentives on mode choice and behavior change to support identification of the most effective TDM incentive programs.

2. Encouragement of telework policy in the region.

3. Recognize successful TDM programs through an annual TDM award.

4. Support the consideration of goods movement/delivery services in TDM planning.

5. Provide and promote TDM grant opportunities.

NEXT STEPS:
SCAG staff will incorporate TC comments received on the draft recommendations in to the draft SCAG TDM Strategic Plan. The study is expected to conclude in August 2019.

FISCAL IMPACT:
Staff work related to this project is included in the current OWP under Work Element No. 19-010.1631.05 TDM Strategic Plan

ATTACHMENT(S):
1. PowerPoint Presentation-TDM Strategic Plan June 6, 2019

SCAG Transportation Demand Management Strategic Plan

Transportation Committee

Steve Fox
Senior Regional Planner
June 6, 2019

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Attachment: PowerPoint Presentation-TDM Strategic Plan June 6, 2019 [Revision 1] (SCAG Transportation Demand Management Strategic Plan

TDM Strategic Plan

Source: Mobility Lab.org

- FHWA defines TDM as "a set of strategies aimed at reducing the demand for roadway travel, particularly in single occupancy vehicles (SOVs)."
- TDM investments reduce congestion and shift trips from SOVs to other modes through projects that often cost significantly less than roadway or transit capital expansion projects.

TDM Strategic Plan

Road space occupied by 60 people in cars, a bus, and on bicycles
Source: City of Munster, Germany

- Traditional TDM strategies include carpooling, vanpooling, and telecommuting.
- New technology-enabled mobility innovations such as transportation network companies (TNCs), carshare, bikeshare, and multi-modal trip planning smart phone apps need to be incorporated.

Strategic Plan Goals and Objectives

- Assess current state of TDM planning and implementation in the region.
- Identify best practices and opportunities for improvement and expansion of TDM.
- Understand the impact and opportunities provided by new mobility and technology innovations.
- Develop regional TDM goals and objectives that align with state and federal mandates including congestion reduction, air quality, and sustainability.
- Develop performance measures to evaluate the effectiveness of corridor level, local and regional TDM strategies.

Attachment: PowerPoint Presentation-TDM Strategic Plan June 6, 2019 [Revision 1] (SCAG Transportation Demand Management Strategic Plan

Existing Conditions Key Findings

Existing conditions and strengths/weaknesses analysis resulted in several key findings.

- Regulation, when enforced, is a major driver in shaping TDM strategy and investment put forth by both the public and private sectors.
- Lack of sufficient standardized data collection makes evaluation of program effectiveness very difficult.
- Technological advances provide an opportunity to collect better data and improve user experience for TDM programs in the SCAG region.

Draft Recommendations

Dissemination

- Create a dedicated page on SCAG's website to share the TDM Strategic Plan's deliverables, such as the updated TDM Toolbox of Strategies, their potential application to congested corridors and areas; and TDM best practices.
- Convene periodic TDM training sessions/seminars in each of SCAG's six counties for various stakeholders including city and employer staff.

Attachment: PowerPoint Presentation-TDM Strategic Plan June 6, 2019 [Revision 1] (SCAG Transportation Demand Management Strategic Plan

Draft Recommendations

Measurement

- Establish a TDM regional data clearinghouse.
- Formalize performance metrics and facilitate data collection and reporting.

Draft Recommendations

Partnerships

- Convene regional forums designed for TDM policymakers and implementers.
- Support county efforts to consolidate ridematching databases.
- Facilitate partnerships between the public and private sectors through trainings and template agreements, to support collaboration between local governments/agencies and private providers of technology and new mobility services.
- Facilitate the development of Transportation Management Agencies (TMAs) and Transportation Management Organizations (TMOs).

Attachment: PowerPoint Presentation-TDM Strategic Plan June 6, 2019 [Revision 1] (SCAG Transportation Demand Management Strategic Plan

Draft Recommendations

Policy

- Provide training workshops for local jurisdictions on best practices to incorporate TDM into different policy instruments. Also provide training workshops to developers and property managers who must comply with existing or future TDM requirements.
- Support development of new or updated TDM ordinances with stronger monitoring and enforcement elements, and share best practices and lessons learned.
- Support development of state and national policy to encourage TDM delivery.

Draft Recommendations

Programming

- Conduct study to develop comprehensive understanding of incentives on mode choice and behavior change to support identification of the most effective TDM incentive programs.
- Encouragement of telework policy in the region.
- Recognize successful TDM programs through an annual TDM award.
- Support the consideration of goods movement/delivery services in TDM planning.
- Provide and promote TDM grant opportunities.

Attachment: PowerPoint Presentation-TDM Strategic Plan June 6, 2019 [Revision 1] (SCAG Transportation Demand Management Strategic Plan

Next Steps

- Incorporate TC comments received on the draft recommendations in to the draft SCAG TDM Strategic Plan.
- Study expected to conclude in August 2019.

Thank you

Steve Fox

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Attachment: PowerPoint Presentation-TDM Strategic Plan June 6, 2019 [Revision 1] (SCAG Transportation Demand Management Strategic Plan

AGENDA ITEM NO. 10

REPORT

Southern California Association of Governments
900 Wilshire Boulevard, Suite 1700, Los Angeles, California 90017
June 6, 2019

To: Energy & Environment Committee (EEC)
Transportation Committee (TC)

EXECUTIVE DIRECTOR'S APPROVAL

Kome Ajise

From: Kevin Kane, Senior Regional Planner, Research & Analysis, (213) 236-1828, kane@scag.ca.gov

Subject: The Future of the Workplace: Regional Summary and Travel Impacts

RECOMMENDED ACTION:
Information Only - No Action Required

STRATEGIC PLAN:
This item supports the following Strategic Plan Goal 3: Be the foremost data information hub for the region.

EXECUTIVE SUMMARY:
As part of SCAG's Future Communities Initiative, SCAG undertook the Future of the Workplace study to better understand both teleworking behavior in the SCAG region and emerging trends in the nature of employment such as the use of co-working space, the rise of the gig economy, and the impacts of workplace automation. Study results helped to inform travel demand model assumptions and are geared toward improving SCAG's overall understanding of how these changes in the nature of employment will impact travel patterns in the region.

BACKGROUND:
Cambridge Systematics will provide a presentation covering key findings from the Future of the Workplace Study, including:

- An overview of teleworking trends in the region and available data sources for understanding them.
- Results from a first-of-its-kind in-person survey of co-working, or shared workplace locations in the SCAG region.
- Preliminary results from an online panel survey of SCAG region teleworkers which seeks to understand the demographic and travel characteristics of telecommuters, home workers, and those in home-based businesses.
- A review of the potential impacts of the gig economy and workplace automation on employment and work travel in the SCAG region.

FISCAL IMPACT:
Work associated with this item is included in the FY 2018-19 Overall Work Program (OWP) budget under project number 280.4831.01.