



SOUTHERN CALIFORNIA  
ASSOCIATION OF GOVERNMENTS  
900 Wilshire Blvd., Ste. 1700  
Los Angeles, CA 90017  
T: (213) 236-1800  
www.scag.ca.gov

REGIONAL COUNCIL OFFICERS

President  
**Clint Lorimore, Eastvale**

First Vice President  
**Jan C. Harnik, Riverside County  
Transportation Commission**

Second Vice President  
**Carmen Ramirez, County of Ventura**

Immediate Past President  
**Rex Richardson, Long Beach**

COMMITTEE CHAIRS

Executive/Administration  
**Clint Lorimore, Eastvale**

Community, Economic &  
Human Development  
**Jorge Marquez, Covina**

Energy & Environment  
**David Pollock, Moorpark**

Transportation  
**Sean Ashton, Downey**

## REMOTE PARTICIPATION ONLY

# TRANSPORTATION COMMITTEE

**Thursday, January 6, 2022  
9:30 a.m. – 11:30 a.m.**

**To Attend and Participate on Your Computer:**  
**<https://scag.zoom.us/j/253270430>**

**To Attend and Participate by Phone:**  
**Call-in Number: 1-669-900-6833**  
**Meeting ID: 253 270 430**

***Please see next page for detailed  
instructions on how to participate in the meeting.***

### **PUBLIC ADVISORY**

Given the declared state of emergency (pursuant to State of Emergency Proclamation dated March 4, 2020) and local public health directives imposing and recommending social distancing measures due to the threat of COVID-19, and pursuant to Government Code Section 54953(e)(1)(A), the meeting will be held telephonically and electronically.

If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact Maggie Aguilar at (213) 630-1420 or via email at [aguilarm@scag.ca.gov](mailto:aguilarm@scag.ca.gov). Agendas & Minutes are also available at: [www.scag.ca.gov/committees](http://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) 630-1420. 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.



## Instructions for Public Comments

*You may submit public comments in two (2) ways:*

1. **In Writing:** Submit written comments via email to: [TCPublicComment@scag.ca.gov](mailto:TCPublicComment@scag.ca.gov) by 5pm on Wednesday, January 5, 2022. You are **not** required to submit public comments in writing or in advance of the meeting; this option is offered as a convenience should you desire not to provide comments in real time as described below.

All written comments received after 5pm on Wednesday, January 5, 2022 will be announced and included as part of the official record of the meeting.

2. **In Real Time:** If participating in real time via Zoom or phone, during the Public Comment Period (Matters Not on the Agenda) or at the time the item on the agenda for which you wish to speak is called, use the “raise hand” function on your computer or \*9 by phone and wait for SCAG staff to announce your name/phone number. SCAG staff will unmute your line when it is your turn to speak. Limit oral comments to 3 minutes, or as otherwise directed by the presiding officer. For purpose of providing public comment for items listed on the Consent Calendar, please indicate that you wish to speak when the Consent Calendar is called; items listed on the Consent Calendar will be acted on with one motion and there will be no separate discussion of these items unless a member of the legislative body so requests, in which event, the item will be considered separately.

If unable to connect by Zoom or phone and you wish to make a comment, you may submit written comments via email to: [TCPublicComment@scag.ca.gov](mailto:TCPublicComment@scag.ca.gov).

***In accordance with SCAG’s Regional Council Policy, Article VI, Section H and California Government Code Section 54957.9, if a SCAG meeting is “willfully interrupted” and the “orderly conduct of the meeting” becomes unfeasible, the presiding officer or the Chair of the legislative body may order the removal of the individuals who are disrupting the meeting.***

---

### OUR MISSION

To foster innovative regional solutions that improve the lives of Southern Californians through inclusive collaboration, visionary planning, regional advocacy, information sharing, and promoting best practices.

### OUR VISION

Southern California’s Catalyst for a Brighter Future

### OUR CORE VALUES

Be Open | Lead by Example | Make an Impact | Be Courageous



## Instructions for Participating in the Meeting

SCAG is providing multiple options to view or participate in the meeting:

### To Participate and Provide Verbal Comments on Your Computer

1. Click the following link: <https://scag.zoom.us/j/253270430>
2. If Zoom is not already installed on your computer, click “Download & Run Zoom” on the launch page and press “Run” when prompted by your browser. If Zoom has previously been installed on your computer, please allow a few moments for the application to launch automatically.
3. Select “Join Audio via Computer.”
4. The virtual conference room will open. If you receive a message reading, “Please wait for the host to start this meeting,” simply remain in the room until the meeting begins.
5. During the Public Comment Period, use the “raise hand” function located in the participants’ window and wait for SCAG staff to announce your name. SCAG staff will unmute your line when it is your turn to speak. Limit oral comments to 3 minutes, or as otherwise directed by the presiding officer.

### To Listen and Provide Verbal Comments by Phone

1. Call **(669) 900-6833** to access the conference room. Given high call volumes recently experienced by Zoom, please continue dialing until you connect successfully.
2. Enter the **Meeting ID: 253 270 430**, followed by #.
3. Indicate that you are a participant by pressing # to continue.
4. You will hear audio of the meeting in progress. Remain on the line if the meeting has not yet started.
5. During the Public Comment Period, press \*9 to add yourself to the queue and wait for SCAG staff to announce your name/phone number. SCAG staff will unmute your line when it is your turn to speak. Limit oral comments to 3 minutes, or as otherwise directed by the presiding officer.

---

#### OUR MISSION

*To foster innovative regional solutions that improve the lives of Southern Californians through inclusive collaboration, visionary planning, regional advocacy, information sharing, and promoting best practices.*

#### OUR VISION

*Southern California’s Catalyst for a Brighter Future*

#### OUR CORE VALUES

*Be Open | Lead by Example | Make an Impact | Be Courageous*



### TC - Transportation Committee *Members – January 2022*

1. **Hon. Sean Ashton**  
TC Chair, Downey, RC District 25
2. **Hon. Art Brown**  
TC Vice Chair, Buena Park, RC District 21
3. **Hon. Phil Bacerra**  
Santa Ana, RC District 16
4. **Hon. Kathryn Barger**  
Los Angeles County
5. **Hon. Elizabeth Becerra**  
Victorville, RC District 65
6. **Hon. Ben Benoit**  
Air District Representative
7. **Hon. Russell Betts**  
Desert Hot Springs, CVAG
8. **Hon. Lorrie Brown**  
Ventura, RC District 47
9. **Hon. Joe Buscaino**  
Los Angeles, RC District 62
10. **Hon. Michelle Chambers**  
Los Angeles County CoC
11. **Hon. Ross Chun**  
Aliso Viejo, OCCOG
12. **Hon. Jonathan Curtis**  
La Canada Flintridge, RC District 36
13. **Sup. Andrew Do**  
Orange County CoC
14. **Hon. Darrell Dorris**  
Lancaster, NCTC
15. **Hon. JJohn Dutrey**  
Montclair, SBCTA

---

#### OUR MISSION

*To foster innovative regional solutions that improve the lives of Southern Californians through inclusive collaboration, visionary planning, regional advocacy, information sharing, and promoting best practices.*

#### OUR VISION

*Southern California's Catalyst for a Brighter Future*

#### OUR CORE VALUES

*Be Open | Lead by Example | Make an Impact | Be Courageous*



## TRANSPORTATION COMMITTEE AGENDA

---

- 16. Hon. James Gazeley**  
Lomita, RC District 39
- 17. Hon. Jason Gibbs**  
Santa Clarita, NCTC
- 18. Sup. Curt Hagman**  
San Bernardino County
- 19. Hon. Ray Hamada**  
Bellflower, RC District 24
- 20. Hon. Jan C. Harnik**  
RCTC
- 21. Hon. Laura Hernandez**  
Port Hueneme, RC District 45
- 22. Hon. Lindsey Horvath**  
West Hollywood, WSCCOG
- 23. Hon. Mike Judge**  
VCTC
- 24. Hon. Trish Kelley**  
Mission Viejo, OCCOG
- 25. Hon. Paul Krekorian**  
RC District 49/Public Transit Rep.
- 26. Hon. Linda Krupa**  
Hemet, WRCOG
- 27. Hon. Richard Loa**  
Palmdale, NCTC
- 28. Hon. Clint Lorimore**  
Eastvale, RC District 4
- 29. Hon. Steven Ly**  
Rosemead, RC District 32
- 30. Hon. Steve Manos**  
Lake Elsinore, RC District 63
- 31. Hon. Ray Marquez**  
Chino Hills, RC District 10

---

### OUR MISSION

*To foster innovative regional solutions that improve the lives of Southern Californians through inclusive collaboration, visionary planning, regional advocacy, information sharing, and promoting best practices.*

### OUR VISION

*Southern California's Catalyst for a Brighter Future*

### OUR CORE VALUES

*Be Open | Lead by Example | Make an Impact | Be Courageous*



## TRANSPORTATION COMMITTEE AGENDA

---

- 32. Hon. Larry McCallon**  
Highland, RC District 7
- 33. Hon. Marsha McLean**  
Santa Clarita, RC District 67
- 34. Hon. L.Dennis Michael**  
Rancho Cucamonga, RC District 9
- 35. Hon. Fred Minagar**  
Laguna Niguel, RC District 12
- 36. Hon. Carol Moore**  
Laguna Woods, OCCOG
- 37. Hon. Ara Najarian**  
Glendale, SFVCOG
- 38. Hon. Maria Nava-Froelich**  
ICTC
- 39. Hon. Frank Navarro**  
Colton, RC District 6
- 40. Hon. Blanca Pacheco**  
Downey, GCCOG
- 41. Hon. Jonathan Primuth**  
South Pasadena, AVCJPA
- 42. Hon. Ed Reece**  
Claremont, SGVCOG
- 43. Hon. Crystal Ruiz**  
San Jacinto, WRCOG
- 44. Hon. Ali Saleh**  
Bell, RC District 27
- 45. Hon. Tim Sandoval**  
Pomona, RC District 38
- 46. Hon. Rey Santos**  
Beaumont, RC District 3
- 47. Hon. Zak Schwank**  
Temecula, RC District 5

---

### OUR MISSION

*To foster innovative regional solutions that improve the lives of Southern Californians through inclusive collaboration, visionary planning, regional advocacy, information sharing, and promoting best practices.*

### OUR VISION

*Southern California's Catalyst for a Brighter Future*

### OUR CORE VALUES

*Be Open | Lead by Example | Make an Impact | Be Courageous*



## TRANSPORTATION COMMITTEE AGENDA

---

- 48. Hon. Tim Shaw**  
OCTA
- 49. Hon. Marty Simonoff**  
Brea, RC District 22
- 50. Hon. Jeremy Smith**  
Canyon Lake, Pres. Appt. (Member at Large)
- 51. Hon. Ward Smith**  
Placentia, OCCOG
- 52. Hon. Jose Luis Solache**  
Lynwood, RC District 26
- 53. Sup. Karen Spiegel**  
Riverside County
- 54. Hon. Cynthia Sternquist**  
Temple City, SGVCOG
- 55. Hon. Jess Talamantes**  
Burbank, Pres. Appt. (Member at Large)
- 56. Hon. Steve Tye**  
Diamond Bar, RC District 37
- 57. Hon. Michael Vargas**  
Riverside County CoC
- 58. Hon. Cheryl Viegas-Walker**  
El Centro, RC District 1
- 59. Hon. Scott Voigts**  
Lake Forest, OCCOG
- 60. Sup. Donald Wagner**  
Orange County
- 61. Hon. Colleen Wallace**  
Banning, President's Appt. (Member at Large)
- 62. Hon. Alan Wapner**  
SBCTA
- 63. Hon. Alicia Weintraub**  
Calabasas, LVMCOG

---

### OUR MISSION

*To foster innovative regional solutions that improve the lives of Southern Californians through inclusive collaboration, visionary planning, regional advocacy, information sharing, and promoting best practices.*

### OUR VISION

*Southern California's Catalyst for a Brighter Future*

### OUR CORE VALUES

*Be Open | Lead by Example | Make an Impact | Be Courageous*



**64. Mr. Paul Marquez**

Caltrans, District 7, Ex-Officio Non-Voting Member

---

**OUR MISSION**

*To foster innovative regional solutions that improve the lives of Southern Californians through inclusive collaboration, visionary planning, regional advocacy, information sharing, and promoting best practices.*

**OUR VISION**

*Southern California's Catalyst for a Brighter Future*

**OUR CORE VALUES**

*Be Open | Lead by Example | Make an Impact | Be Courageous*



## TRANSPORTATION COMMITTEE AGENDA

---

Southern California Association of Governments  
Remote Participation Only  
**Thursday, January 6, 2022**  
**9:30 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 Sean Ashton, Chair)*

### **PUBLIC COMMENT PERIOD (Matters Not on the Agenda)**

This is the time for persons to comment on any matter pertinent to SCAG's jurisdiction that is **not** listed on the agenda. Although the committee may briefly respond to statements or questions, under state law, matters presented under this item cannot be discussed or acted upon at this time. Public comment for items listed on the agenda will be taken separately as further described below.

**General information for all public comments:** Members of the public are encouraged, but not required, to submit written comments by sending an email to: [TCPublicComment@scag.ca.gov](mailto:TCPublicComment@scag.ca.gov) by 5pm on Wednesday, January 5, 2022. Such comments will be transmitted to members of the legislative body and posted on SCAG's website prior to the meeting. Any writings or documents provided to a majority of the Transportation Committee regarding any item on this agenda (other than writings legally exempt from public disclosure) are available at the Office of the Clerk, located at 900 Wilshire Blvd., Suite 1700, Los Angeles, CA 90017 during normal business hours and/or by contacting the office by phone, (213) 630-1420, or email to [aguilarm@scag.ca.gov](mailto:aguilarm@scag.ca.gov). Written comments received after 5pm on Wednesday, January 5, 2022, will be announced and included as part of the official record of the meeting. Members of the public wishing to verbally address the Transportation Committee in real time during the meeting will be allowed up to a total of 3 minutes to speak on items on the agenda, with the presiding officer retaining discretion to adjust time limits as necessary to ensure efficient and orderly conduct of the meeting. The presiding officer has the discretion to equally reduce the time limit of all speakers based upon the number of comments received. If you desire to speak on an item listed on the agenda, please wait for the chair to call the item and then indicate your interest in offering public comment by either using the "raise hand" function on your computer or pressing \*9 on your telephone. For purpose of providing public comment for items listed on the Consent Calendar (if there is a Consent Calendar), please indicate that you wish to speak when the Consent Calendar is called; items listed on the Consent Calendar will be acted upon with one motion and there will be no separate discussion of these items unless a member of the legislative body so requests, in which event, the item will be considered separately.

### **REVIEW AND PRIORITIZE AGENDA ITEMS**



## CONSENT CALENDAR

### Approval Items

1. Minutes of the Meeting – November 4, 2021

### Receive and File

2. Transmittal to South Coast Air Quality Management District of Draft 2022 Air Quality Management Plan Appendix IV-C Regional Transportation Plan/Sustainable Communities Strategy and Transportation Control Measures
3. TDM Strategic Plan Implementation Status Update
4. Mobility as a Service (MaaS) Feasibility White Paper Update
5. Curb Space Management Study Update

## ACTION ITEM

6. Regional Transportation Safety Targets 2022 15 Mins.  
*(Courtney Aguirre, Program Manager)*

### **RECOMMENDED ACTION:**

Recommend that the Regional Council adopt the 2022 regional safety targets and the supporting Regional Safety Policy Resolution.

## INFORMATION ITEMS

7. Regional Express Lanes Concept of Operations Update Overview 15 Mins.  
*(Jaimee Lederman, Senior Regional Planner)*
8. Role of Electric Utilities in Medium/Heavy-Duty Transportation Electrification 20 Mins.  
*(Yuliya Shmidt, Advisor to Commissioner Rechtschaffen, California Public Utilities Commission)*
9. Accelerated Electrification Update on Two Studies 20 Mins.  
*(Alison Linder, Senior Regional Planner)*
10. 2021 Student Showcase 20 Mins.  
*(Lyle Janicek, Associate Regional Planner)*



## TRANSPORTATION COMMITTEE AGENDA

---

### **CHAIR'S REPORT**

*(The Honorable Sean Ashton, Chair)*

### **METROLINK REPORT**

*(The Honorable Art Brown, SCAG Representative)*

### **STAFF REPORT**

*(David Salgado, Regional Affairs Officer, SCAG Staff)*

### **FUTURE AGENDA ITEMS**

### **ANNOUNCEMENTS**

### **ADJOURNMENT**



Southern California Association of Governments  
Remote Participation Only  
January 6, 2022

**MINUTES OF THE REGULAR MEETING  
TRANSPORTATION COMMITTEE (TC)  
THURSDAY, NOVEMBER 4, 2021**

THE FOLLOWING MINUTES IS A SUMMARY OF ACTIONS TAKEN BY THE TRANSPORTATION COMMITTEE (TC). A VIDEO AND AUDIO RECORDING OF THE ACTUAL MEETING IS AVAILABLE AT: <http://scag.iqm2.com/Citizens/>

The Transportation Committee (TC) of the Southern California Association of Governments (SCAG) held its regular meeting virtually (telephonically and electronically), given the declared state of emergency (pursuant to State of Emergency Proclamation dated March 4, 2020) and local public health directives imposing and recommending social distancing measures due to the threat of COVID-19, and pursuant to Government Code Section 54953(e)(1)(A). A quorum was present.

**Members Present:**

Hon. Sean Ashton, Downey <b>(Chair)</b>	District 25
Hon. Phil Bacerra, Santa Ana	District 16
Hon. Liz Becerra, Victorville	District 65
Hon. Ben Benoit, Wildomar	South Coast AQMD
Hon. Russel Betts, Desert Hot Springs	CVAG
Hon. Art Brown, Buena Park <b>(Vice Chair)</b>	District 21
Hon. Michelle Chambers	City of Compton
Hon. Ross Chun, Aliso Viejo	OCTA
Hon. Andrew Do	Orange County
Hon. Darrell Dorris	Lancaster, NCTC
Hon. John Dutrey, Montclair	SBCTA
Hon. James Gazeley, Lomita	District 39
Hon. Jason Gibbs, Santa Clarita	NCTC
Hon. Curt Hagman	San Bernardino County
Hon. Ray Hamada, Bellflower	District 24
Hon. Jan Harnik, Palm Desert	RCTC
Hon. Laura Hernandez, Port Hueneme	District 45
Hon. Christian Horvath	Pres. Apt.
Hon. Lindsey Horvath	WSCCOG
Hon. Mike T. Judge, Simi Valley	VCTC
Hon. Trish Kelley, Mission Viejo	OCCOG



---

Hon. Linda Krupa, Hemet	WRCOG
Hon. Richard Loa, Palmdale	NCTC
Hon. Clint Lorimore, Eastvale	District 4
Hon. Steve Manos, Lake Elsinore	District 63
Hon. Ray Marquez, Chino Hills	District 10
Hon. Larry McCallon, SBCTA	District 7
Hon. Marsha McLean, NLAC	District 67
Hon. Fred Minagar, Laguna Niguel	District 12
Hon. Carol Moore, Laguna Woods	OCCOG
Hon. Maria Nava-Froelich	ICTC
Hon. Frank Navarro, Colton	District 6
Hon. Blanca Pacheco	GCCOG
Hon. Ed Reece	SGVCOG
Hon. Crystal Ruiz, San Jacinto	WRCOG
Hon. Ali Saleh, Bell	District 27
Hon. Tim Sandoval, Pomona	District 38
Hon. Rey Santos, Beaumont	District 3
Hon. Zak Schwank, Temecula	District 5
Hon. Tim Shaw	OCTA
Hon. Marty Simonoff, Brea	District 22
Hon. Jeremy Smith	Canyon Lake
Hon. Ward Smith, Placentia	OCCOG
Hon. Karen Spiegel	Riverside County
Hon. Cynthia Sternquist, Temple City	SGVCOG
Hon. Steve Tye	District 37
Hon. Michael Vargas	Riverside County
Hon. Cheryl Viegas-Walker, El Centro	District 1
Hon. Scott Voigts, Lake Forest	OCCOG
Hon. Don Wagner	Orange County
Hon. Colleen Wallace, Banning	Pres. Appt.
Hon. Alan Wapner, Ontario	SBCTA/SBCOG
Mr. Paul Marquez, Caltrans District 7	Ex-Officio Member

**Members Not Present:**

Hon. Kathryn Barger	Los Angeles County
Hon. Lorrie Brown	District 47
Hon. Joe Buscaino, Los Angeles	District 62
Hon. Jonathan Curtis, La Cañada-Flintridge	District 36
Hon. Paul Krekorian	District 49
Hon. Steven Ly, Rosemead	District 32



---

Hon. L. Dennis Michael	District 9
Hon. Ara Najarian, Glendale	AVCJPA
Hon. Jon Primuth, S. Pasadena	AVCJPA
Hon. Jose Luis Solache, Lynwood	District 26
Hon. Jess Talamantes, Burbank	Pres. Appt.
Hon. Alicia Weintraub, Calabasas	LVMCOG

**CALL TO ORDER & PLEDGE OF ALLEGIANCE**

Chair Sean Ashton, Downey, District 25, called the meeting to order at 9:30 a.m. Hon. Blanca Pacheco, Downey, Gateway Cities COG, led the Pledge of Allegiance. A quorum was present.

**PUBLIC COMMENT**

Chair Ashton opened the Public Comment Period and outlined instructions for public comments. He noted the total time period for all public comments related to items on the agenda and any other matter within the agency’s subject matter jurisdiction was five minutes and the public comment period would be held open for at least five minutes to afford the public the ability to comment on all items on this agenda.

David Salgado, SCAG staff, reported no public comments were received by email prior to the meeting and none were requested during the public comment period. The Public Comment period was open for five minutes.

Seeing there were no public comment speakers, Chair Ashton closed the Public Comment Period.

**CONSENT CALENDAR**

Approval Items

1. Minutes of TC Meeting, October 7, 2021

Receive and File

A MOTION was made (Harnik) to approve Consent Calendar Item 1. The motion was SECONDED (Wallace) and passed by the following votes.

**AYES:** ASHTON, BECERRA, BENOIT, BETTS, BROWN A., CHAMBERS, CHUN, DO, DUTREY, GAZELEY, GIBBS, HAGMAN, HAMADA, HARNIK, HERNANDEZ, HORVATH C., JUDGE, KELLEY, KRUPA, LOA, LORIMORE, MANOS, MARQUEZ, MCCALLON, MCLEAN, MINAGAR, MOORE, NAVARRO, PACHECO, REECE, RUIZ, SALEH, SANDOVAL, SANTOS,

SCHWANK, SHAW, SIMONOFF, SMITH J., SMITH W., SPIEGEL, STERNQUIST, TYE, VARGAS, VIEGAS-WALKER, WAGNER, WALLACE, WAPNER (47)

**NOES:** None (0)

**ABSTAIN:** DORRIS (1)

### **ACTION ITEM**

#### 2. Last Mile Freight Program: Phase 1 Selected Projects & Contingency List

Scott Strelecki, SCAG staff, reported on the Last Mile Freight Program selection of projects. Mr. Strelecki stated the program was developed with the Mobile Source Air Pollution Reduction Review Committee (MSRC) and reviewed the project guidelines and selection process. He noted 27 projects were selected for funding totaling \$10 million. Selected projects include the development of electric and natural gas technology for trucks used for last mile freight deliveries. Additionally, a list of contingency projects were compiled should additional funding become available.

A MOTION was made (Navarro) to recommend that the Regional Council (RC) approve the Last Mile Freight Program Phase 1 Selected Projects to be awarded \$10 million and, further, that the Contingency List Projects be considered for award should additional funding become available through the Mobile Source Air Pollution Reduction Review Committee. The motion was SECONDED (Voigts) and passed by the following votes.

**AYES:** ASHTON, BECERRA, BENOIT, BETTS, BROWN A., CHAMBERS, CHUN, DO, DORRIS, DUTREY, GAZELEY, GIBBS, HAGMAN, HAMADA, HARNIK, HORVATH C., JUDGE, KELLEY, KRUPA, LOA, LORIMORE, MANOS, MARQUEZ, MCCALLON, MCLEAN, MOORE, NAVARRO, PACHECO, REECE, RUIZ, SALEH, SANDOVAL, SANTOS, SCHWANK, SHAW, SIMONOFF, SMITH W., SPIEGEL, STERNQUIST, TYE, VARGAS, VIEGAS-WALKER, VOIGTS, WAGNER, WALLACE, WAPNER (46)

**NOES:** None (0)

**ABSTAIN:** None (0)

### **INFORMATION ITEMS**

#### 3. Southern California Goods Movement Communities Freight Impact Assessment

Alison Linder, SCAG staff, reported on an upcoming study examining community impacts of goods movement. Ms. Linder stated the assessment study was expected to start November 2021 and would combine analysis and outreach to understand the positive and negative impacts of goods movement particularly on local communities. Further, the study will focus on public health, workforce development and communications and outreach best practices. She noted increases in volumes of goods movement across the transportation system contribute to greater congestion, safety concerns and harmful emissions. The study aims to understand and address the positive and negative impacts of goods movement on communities and explore potential mitigation actions.

#### 4. Global Supply Chain Challenges, Port Congestion and Delays

David Libatique, Deputy Executive Director of Stakeholder Engagement, Port of Los Angeles provided an update on port activity and congestion. Mr. Libatique stated ports globally are seeing greater cargo volumes due to the pandemic and an increase in online purchasing. He noted typically a ship would arrive at the port and unload without delay. Currently the Port of LA is experiencing delays largely due to a lack of warehouse availability causing increased street dwell time for cargo containers. This causes delay in containers returning to the ports resulting in a system slowdown. He reviewed incentive measures intended to improve cargo flow.

#### 5. SCAG Integrated Passenger and Freight Rail Forecast Update

Scott Streleki, SCAG staff, provided an update on the integrated passenger and freight rail forecast study. He reported the study would examine future passenger and freight rail operations, capacity needs and costs with a view toward mutually beneficial public and private funding opportunities. He reviewed the objectives and project tasks. Steve Fox, SCAG staff, continued and reviewed rail tracking tools to monitor rail activity and inform projections and future rail volume simulations.

#### 6. Regional Express Lanes Concept of Operations Update Overview

Agenda Item No. 6 was deferred to a future meeting.

### **CHAIR'S REPORT**

Chair Ashton asked that a list of regional goods movement projects be prepared and forwarded to state and federal agencies in advance of anticipated infrastructure funding.

### **METROLINK REPORT**

Hon. Art Brown, Buena Park, District 21, reported that Metrolink had entered a marketing partnership with mobility solutions company Moovit, to help riders find the best route for their

---

destination. The Moovit app uses crowdsourced information, offering users quick, convenient trip planning options including Metrolink, light rail, buses, scooters, Uber and Lyft. Also, Brightline West the future high-speed rail service to Las Vegas, has signed agreements with the California State Transportation Agency, Caltrans and the California High-Speed Rail Authority for an extension of the service from Victor Valley to Rancho Cucamonga through the El Cajon pass. An extension from Victor Valley to Palmdale along the future High-Desert Corridor is also being studied. Train testing on the future 9-mile rail service between the downtown San Bernardino transit center and the University of Redlands should begin after the new year.

**FUTURE AGENDA ITEMS**

Hon. Marsha McLean, No. L.A. County, suggested an agenda item to explore infrastructure for transportation electrification.

**ANNOUNCEMENTS**

There were no announcements.

**ADJOURNMENT**

There being no further business, Chair Sean Ashton adjourned the Transportation Committee meeting at 11:34 a.m.

[MINUTES ARE UNOFFICIAL UNTIL APPROVED BY THE TRANSPORTATION COMMITTEE]

//

2021- 22																Total Mtgs Attended To Date
MEMBERS	CITY	Representing	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	
Ashton, Sean	Downey	District 25	1	1		1	1	1								5
Bacerra, Phil	Santa Ana	District 16	1	1		1	1	1								5
Barger, Kathryn		Los Angeles County		1		1	1									3
Becerra, Liz	Victorville	District 65	1	1		1	1	1								5
Benoit, Ben		South Coast AQMD	1	1		1	1	1								5
Betts, Russell	Desert Hot Springs	CVAG	1	1		1	1	1								5
Brown, Art	Buena Park	District 21	1	1		1	1	1								5
Brown, Lorrie	Ventura	District 47														0
Buscaino, Joe	Los Angeles	District 62														0
Chambers, Michelle	Compton							1								1
Chun, Ross	Aliso Viejo	OCTA	1	1		1	1	1								5
Curtis, Jonathan	La Cañada Flintridge	District 36														0
Do, Andrew		Orange County					1	1								2
Dorris, Darrell	Lancaster	NCTC	1	1		1		1								4
Dutrey, J. John	Montclair	SBCTA	1	1		1	1	1								5
Gazeley, James	Lomita	District 39	1	1		1	1	1								5
Gibbs, Jason	Santa Clarita	NCTC				1	1	1								
Hagman, Curt		San Bernardino Cnty				1	1	1								3
Hamada, Ray	Bellflower	Bellflower	1	1		1	1	1								5
Harnik, Jan	Palm Desert	RCTC	1	1		1	1	1								5
Hernandez, Laura	Prt Hueneme	District 45	1	1		1	1	1								5
Horvath, Christian	Redondo Beach	Pres. Apt.	1	1		1	1	1								5
Horvath, Lindsey	West Hollywood	WSCCOG	1					1								2
Judge, Mike	Simi Valley	VCTC	1			1	1	1								4
Kelley, Trish	Mission Viejo	OCCOG	1	1		1	1	1								5
Krekorian, Paul	Public Transit Rep	District 49														0
Krupa, Linda	Hemet	WRCOG	1	1		1	1	1								5
Loa, Richard	Palmdale	NCTC		1		1	1	1								4
Lorimore, Clint	Eastvale	District 4	1	1		1	1	1								5
Ly, Steven	Rosemead	District 32	1	1		1										3
Manos, Steve	Lake Elsinore	District 63	1	1			1	1								4
Marquez, Paul	Caltrans District 7	Ex-Officio	1	1		1	1	1								5
Marquez, Ray	Chino Hills	District 10	1	1		1	1	1								5
McCallon, Larry	Highland	SBCTA	1	1		1	1	1								5
McLean, Marsha	No. L.A. County	District 67	1	1		1	1	1								5
Michael, L. Dennis	Rancho Cucamonga	District 9	1	1		1										3
Minagar, Fred	Laguna Niguel	District 12	1	1		1	1	1								5
Moore, Carol	Laguna Woods	OCCOG	1	1		1		1								4
Najarian, Ara	Glendale	AVCJPA	1	1		1	1									4
Nava-Froelich, Maria		ICTC		1		1	1	1								4
Navarro, Frank	Colton	District 6	1	1		1		1								4
Pacheco, Blanca	Downey	GCCOG	1	1		1	1	1								5
Primuth, Jon	S. Pasadena	AVCJPA	1	1												2
Reece, Ed	Claremont	SGVCOG	1	1			1	1								4
Ruiz, Crystal	San Jacinto	WRCOG		1				1								2
Saleh, Ali	City of Bell	GCCOG	1	1			1	1								4
Sandoval, Tim	Pomona	District 38	1	1		1	1	1								5
Santos, Rey	Beaumont	District 3	1	1		1	1	1								5
Schwank, Zak	Temecula	District 5	1	1		1	1	1								5
Shaw, Tim		ICTC	1			1	1	1								4
Simonoff, Marty	Brea	District 22		1		1		1								3
Smith, Jeremy	Canyon Lake	Canyon Lake	1	1		1	1	1								5
Smith, Ward	Placentia	OCCOG	1	1		1	1	1								5
Solache, Jose Luis	Lynwood	District 26	1				1									2
Spiegel, Karen		Riverside County	1	1		1	1	1								5
Sternquist, Cynthia	Temple City	SGVCOG	1	1			1	1								4
Talamantes, Jess	Burbank	AVCJPA	1	1		1	1									4
Tye, Steve	Diamond Bar	District 37	1	1				1								3
Vargas, Michael		Riverside County				1	1	1								3
Viegas-Walker, Cheryl	El Centro	District 1	1	1		1	1	1								5
Voigts, Scott	Lake Forest	Orange County					1	1								2

Attachment: TCAttendance Sheet Nov 4, 2021 (Minutes of TC Meeting, November 4, 2021)

Wagner, Don	Orange County	Orange County	1			1	1	1									4
Wallace, Colleen	Banning	Banning	1	1		1	1	1									5
Wapner, Alan		SBCTA	1	1		1	1	1									5
Weintraub, Alicia	Catlabasas	LVMCOG	1	1													2



AGENDA ITEM 2  
REPORT

Southern California Association of Governments  
Remote Participation Only  
January 6, 2022

**To:** Community Economic & Human Development Committee (CEHD)  
Energy & Environment Committee (EEC)  
Transportation Committee (TC)  
Regional Council (RC)  
**From:** Rongsheng Luo, Program Manager II  
(213) 236-1994, luo@scag.ca.gov  
**Subject:** Transmittal to South Coast Air Quality Management District of Draft 2022  
Air Quality Management Plan Appendix IV-C Regional Transportation  
Plan/Sustainable Communities Strategy and Transportation Control  
Measures

EXECUTIVE DIRECTOR'S  
APPROVAL

**RECOMMENDED EEC ACTION:**

Recommend that the Regional Council (RC) approve transmittal to the South Coast Air Quality Management District of the Draft 2022 Air Quality Management Plan Appendix IV-C Regional Transportation Plan/Sustainable Communities Strategy and Transportation Control Measures.

**RECOMMENDED CEHD, TC, AND RC 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:**

*Pursuant to the California Health and Safety Code, SCAG is responsible for preparing a portion of the Air Quality Management Plan (AQMP) for the South Coast Air Basin relating to the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and transportation control measures (TCMs), which is commonly known as "Appendix IV-C" of the AQMP. The Draft 2022 AQMP Appendix IV-C contains the key policies and strategies of the adopted Connect SoCal (2020 RTP/SCS) as well as a review of reasonably available TCMs. SCAG staff will present to the EEC an overview of the Draft Appendix IV-C and seek EEC's recommendation that the RC approve transmittal of the Draft Appendix IV-C to the South Coast Air Quality Management District (AQMD) for inclusion in the Draft 2022 AQMP, which is anticipated to be released for public review and comment in February 2022 and, pending EEC recommendation, will be presented to the RC to approve transmittal at its February 3, 2022 meeting.*

**BACKGROUND:**

Pursuant to the Federal Clean Air Act (CAA), the 2022 AQMP is being prepared primarily to attain the federal 2015 8-hour ozone national ambient air quality standard in the South Coast Air Basin. The 2022 AQMP is being jointly prepared by three responsible agencies: the South Coast Air Quality Management District (South Coast AQMD), the lead agency, the California Air Resources Board (ARB), and SCAG. The 2022 AQMP is required to be submitted to the U.S. Environmental Protection Agency (EPA) by August 3, 2022.

SCAG's role in the 2022 AQMP development process includes providing the socio-economic growth forecast and regional transportation demand model output data to the South Coast AQMD for use in estimating and forecasting emission inventories and airshed modeling; and vehicle activity data to the ARB for use in developing on-road emissions. SCAG has provided these data to the respective agencies. In addition to the technical data, SCAG is also responsible for writing a portion of the 2022 AQMP on the region's RTP/SCS and TCMs as they relate to air quality. The document, commonly referred to as "Appendix IV-C," primarily includes an overview of the adopted Connect SoCal (2020 RTP/SCS); a list of committed TCMs in the South Coast Air Basin that are federally enforceable and subject to timely implementation; and, pursuant to Clean Air Act requirements, an analysis of reasonably available TCMs. Appendix IV-C is attached to this staff report.

The Draft 2022 AQMP is anticipated to be released by SCAQMD in February 2022 for public review. Staff plans to invite South Coast AQMD staff to present to the EEC on the Draft 2022 AQMP in March or April 2022.

After the public review, the Draft Appendix IV-C will be revised as appropriate and the Final Appendix IV-C will be presented to the Regional Council for final adoption, anticipated in May or June of 2022. Upon adoption by the Regional Council, the Final Appendix IV-C will be transmitted to South Coast AQMD for inclusion into the Final 2022 AQMP.

Note that additional air quality plans are also being developed by the other four local air districts within the SCAG region in collaboration with ARB. Staff has been closely participating in and monitoring these air quality planning efforts and will report on any significant issues to EEC as appropriate.

**FISCAL IMPACT:**

Work associated with this item is included in the current FY 2021-22 Overall Work Program (22-025.0164.01: Air Quality Planning and Conformity).

**ATTACHMENT(S):**

1. Draft 2022 AQMP Appendix IV-C
2. PowerPoint Presentation - Draft 2022 AQMP Appendix IV-C

# **DRAFT 2022 Air Quality Management Plan (AQMP) APPENDIX IV-C**

## **Regional Transportation Plan/Sustainable Communities Strategy and Transportation Control Measures**

**JANUARY 2022**

## SCAG MISSION STATEMENT

*Under the guidance of the Regional Council and in collaboration with our partners, our mission is to foster innovative regional solutions that improve the lives of Southern Californians through inclusive collaboration, visionary planning, regional advocacy, information sharing, and promoting best practices.*

## SCAG REGIONAL COUNCIL

### OFFICERS

#### President

Hon. Clint Lorimore, Eastvale

#### First Vice President

Hon. Jan C. Harnik, Riverside County Transportation Commission

#### Second Vice President

Hon. Carmen Ramirez, County of Ventura

#### Immediate Past President

Hon. Rex Richardson, Long Beach

### MEMBERS

#### Imperial County

Hon. Maria Nava-Froelich

Hon. Luis Plancarte

Hon. Cheryl Viegas-Walker

#### Los Angeles County

Hon. Cindy Allen

Hon. Adele Andrade-Stadler

Hon. Sean Ashton

Hon. Kathryn Barger

Hon. Bob Blumenfield

Hon. Mike Bonin

Hon. Drew Boyles

Hon. Joe Buscaino

Hon. Juan Carrillo

Hon. Gilbert Cedillo

Hon. Jonathan C. Curtis

Hon. Kevin de Leon

Hon. Steve De Ruse

Hon. Paula Devine

Hon. Margaret E. Finlay

Hon. Alex Fisch

Hon. Eric Garcetti

Hon. James Gazeley

Hon. Ray Hamada

Hon. Marqueece Harris-Dawson

Hon. Mark E. Henderson

Hon. Paul Koretz

Hon. Paul Krekorian

Hon. John Lee

Hon. Steven Ly

Hon. Jorge Marquez

Hon. Nury Martinez

Hon. Marsha McLean

Hon. Holly Mitchell

Hon. Mitch O'Farrell

Hon. Curren D. Price, Jr.

Hon. Nithya Raman

Hon. Rex Richardson

Hon. Mark Ridley-Thomas

Hon. Monica Rodriguez

Hon. Ali Saleh

Hon. Tim Sandoval

Hon. David J. Shapiro

Hon. José Luis Solache

Hon. Steve Tye

Hon. Frank Aurelio Yokoyama

#### Orange County

Hon. Phil Bacerra

Hon. Arthur C. Brown

Hon. Wendy Bucknum

Hon. Michael C. Carroll

Hon. Letitia Clark

Hon. Diane B. Dixon

Hon. Peggy Huang

Hon. Joe Kalmick

Hon. Fred Minagar

Hon. Kim B. Nguyen

Hon. Trevor O'Neil

Hon. Mike Posey

Hon. Tim Shaw

Hon. Marty Simonoff

Hon. Donald P. Wagner

#### Riverside County

Hon. Megan Beaman Jacinto

Hon. Ben Benoit

Hon. Jan C. Harnik

Hon. Kathleen Kelly

Hon. Patricia Lock Dawson

Hon. Clint Lorimore

Hon. Marisela Magana

Hon. Steve Manos

Hon. Andrew Masiel, Sr.

Hon. Rey SJ Santos

Hon. Zak Schwank

Hon. Karen Spiegel

#### San Bernardino County

Hon. Elizabeth Becerra

Hon. Curt Hagman

Hon. Ray Marquez

Hon. Larry McCallon

Hon. L. Dennis Michael

Hon. Frank J. Navarro

Hon. Randall Putz

Hon. Deborah Robertson

Hon. Alan D. Wapner

#### Ventura County

Hon. Lorrie Brown

Hon. Laura Hernandez

Hon. Mike T. Judge

Hon. David Pollock

Hon. Carmen Ramirez

#### Tribal Government

##### Representative

Andrew Masiel, Sr.

##### Business Representative

Randall Lewis

## Executive Summary

This Appendix IV-C (Appendix) describes the Southern California Association of Government's (SCAG) Regional Transportation Plan/Sustainable Communities Strategy and Transportation Control Measures (TCMs) to address the 2015 8-hour ozone standards in the South Coast Air Basin as part of South Coast Air Quality Management District's (South Coast AQMD) Draft 2022 Air Quality Management Plan (AQMP). This Appendix IV-C is based on SCAG's Final 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (2020 RTP/SCS, also known as Connect SoCal) and 2021 Federal Transportation Improvement Program (FTIP) as amended. The RTP/SCS and FTIP were developed in consultation with federal, state and local transportation and air quality planning agencies and other stakeholders. The four County Transportation Commissions (CTCs) in the South Coast Air Basin, namely Los Angeles County Metropolitan Transportation Authority, Riverside County Transportation Commission, Orange County Transportation Authority and the San Bernardino Associated Governments, were actively involved in the development of the regional transportation measures of this Appendix.

This Appendix consists of the following three Sections.

### Section I. Introduction

As required by federal and state laws, SCAG is responsible for ensuring that the regional transportation plan, program, and projects are supportive of the goals and objectives of applicable AQMPs and State Implementation Plans (AQMPs/SIPs). SCAG is also required to develop demographic projections and regional transportation strategy and control measures for the South Coast AQMD's AQMP/SIP.

As the Metropolitan Planning Organization (MPO), SCAG develops the RTP/SCS every four years. The RTP/SCS is a long-range regional transportation plan that provides for the development and integrated management and operation of transportation systems and facilities that will function as an intermodal transportation network for the SCAG region. The RTP/SCS also outlines certain land use growth strategies that provide for more integrated land use and transportation planning, and enhance transportation investments to achieve regional greenhouse gas (GHG) reduction targets set by the California Air Resources Board (CARB) pursuant to SB 375 (codified in California Government Code §65080(b)(2)(B)). The RTP/SCS addresses GHG reductions, however it should be noted that there are co-benefits of criteria pollutants emission reductions that will contribute to the overall emission reductions needed for the draft 2022 AQMP.

In addition, SCAG develops the biennial FTIP. The FTIP is a list of multimodal capital improvement projects to be implemented over a six year period. The FTIP implements the programs and projects in the RTP/SCS.

### Section II. Regional Transportation Plan/Sustainable Communities Strategy and Transportation Control Measures (TCMs)

The SCAG region faces many critical challenges including demographics, transportation system preservation, transportation funding, goods movement, housing, air quality, climate change, and public health. Under the guidance of the goals and objectives adopted by SCAG's Regional Council, Connect SoCal was developed to provide a blueprint to integrate land use and transportation strategies to help

achieve a coordinated and balanced regional transportation system. Connect SoCal represents the culmination of more than three years of work involving dozens of public agencies, 197 local jurisdictions in the SCAG region, hundreds of local, county, regional and state officials, the business community, environmental groups, as well as various nonprofit organizations. Connect SoCal was adopted by SCAG's governing board, the Regional Council, on May 7, 2020 for transportation conformity purposes only and on September 3, 2020 for all purposes.

To realize a sustainable and connected region, Connect SoCal includes a Core Vision that centers on maintaining and better managing the transportation network for moving people and goods, while expanding mobility choices by locating housing, jobs and transit closer together and increasing investment in transit and complete streets; five Key Connections that augment the Core Vision to address trends and emerging challenges while closing the gap between what can be accomplished through intensification of core planning strategies alone and what must be done to meet increasingly aggressive greenhouse gas reduction goals; as well as action-oriented transportation strategies and Sustainable Communities Strategy.

### Core Vision

- Sustainable Development
- System Preservation and Resilience
- Demand & System Management
- Transit Backbone
- Complete Streets
- Goods Movement

### Key Connections

- Smart Cities and Job Centers
- Housing Supportive Infrastructure
- Go Zones
- Accelerated Electrification
- Shared Mobility and Mobility as a Service

### Transportation Strategies

- Preserve and Optimize Our Current System
  - Congestion Management
  - Congestion Pricing
  - Transportation Demand Management (TDM)
  - Transportation System Management (TSM)
- Completing Our Transportation System
  - Transit
  - Passenger Rail
  - Active Transportation
  - Transportation Safety
  - Highway and Arterial Network

- Regional Express Lane Network
- Goods Movement
- Aviation
- Technological Innovations and Emerging Technology

### **Sustainable Communities Strategy**

- Focus Growth Near Destinations & Mobility Options
- Promote Diverse Housing Choices
- Leverage Technology Innovations
- Support Implementation of Sustainability Policies
- Promote a Green Region

### **Transportation Control Measures (TCMs)**

Connect SoCal includes, as a subset of transportation strategies, SIP-committed transportation programs and projects that reduce vehicle use or change traffic flow or congestion conditions for the purposes of reducing emissions from transportation sources and improving air quality, better known as Transportation Control Measures or “TCMs.” In the South Coast Air Basin, TCMs include the following three main categories of transportation improvement projects and programs that have funding programmed for right-of-way and/or construction in the first two years of the 2021 FTIP:

1. Transit and non-motorized modes;
2. High Occupancy Vehicle (HOV) Lanes and their pricing alternatives; and
3. Information-based strategies.

Attachment A of Appendix IV-C is a list of transportation control measure projects that are from SCAG’s 2021 FTIP and specifically identified and committed to in the Draft 2022 AQMP/SIP. Per the federal Clean Air Act (CAA), these committed TCMs are required to receive funding priority and be implemented in a timely manner. In the event that a committed TCM cannot be delivered or will be significantly delayed, the TCM must be substituted for. It is important to note that as the SCAG’s FTIP is updated every two years, new committed TCMs are automatically added to the applicable SIP from the previous FTIP.

### **Plan Emissions Reduction Benefits**

If the future vehicle fleet mix and emission factors are held constant as those in the Connect SoCal base year 2016, Connect SoCal is estimated to yield a reduction in NOx emissions by about 1.5 tons per day (tpd) in 2025, 4.1 tpd in 2035, and 6.8 tpd in 2045 compared with their respective Baselines without Connect SoCal. However, if accounting for mandated future improvement in vehicle fleet mix and emission factors, the estimated NOx emission reduction from Connect SoCal is reduced by 60 to 73 percent, because the vehicles as a whole are becoming much cleaner and reduction of every vehicle mile traveled from Connect SoCal yields less reduction in NOx emissions.

### **Plan Investment**

The total expenditure for the various strategies in Connect SoCal is forecasted to be \$638.9 billion. Connect SoCal has identified the same amount of total revenues from both existing and several new funding sources that are reasonably expected to be available.

### Cost-Benefit Analysis

Implementation of Connect SoCal will secure a safe, efficient, sustainable and prosperous future for the SCAG region. To demonstrate how effective Connect SoCal would be toward achieving our regional goals, SCAG conducted a Connect SoCal vs. Connect SoCal Baseline cost-benefit analysis utilizing the Cal-B/C Model to calculate regional network benefits – essentially comparing how the region would perform with and without implementation of the Connect SoCal.

Compared with the alternative without the Plan, Connect SoCal would result in significant benefits to our region, not only with respect to mobility and accessibility, but also in the areas of air quality, economic growth and job creation, sustainability and environmental justice. Altogether, the transportation investments in Connect SoCal will provide a return of two dollars for every dollar invested compared with the Baseline alternative.

### Section III. TCM Reasonably Available Control Measure Analysis

As required by the CAA, a Reasonably Available Control Measure (RACM) analysis must be included as part of the overall control strategy in the ozone SIP to ensure that all potential control measures are evaluated for implementation and that justification is provided for those measures that are not implemented. This Appendix IV-C contains the TCM RACM component for the South Coast ozone control strategy. In accordance with the U.S. Environmental Protection Agency (EPA) procedures, this analysis considers TCMs in Connect SoCal, measures identified by the CAA, and relevant measures adopted in other ozone nonattainment areas of the country.

Based on this comprehensive review, it is determined that the TCMs being implemented in the South Coast Air Basin are inclusive of all TCM RACM.

## Section I. Introduction

### Federal and State Requirements

The transportation conformity requirements of the federal CAA establish a need to integrate air quality planning and regional transportation planning. This integration presents the challenge of balancing the real need for improved mobility and accessibility with the equally important goal of cleaner air. As the federally-designated MPO for the six-county Southern California region, SCAG is required by law to ensure that transportation activities “conform” to, and are supportive of, the goals of regional and state air quality plans to attain the National Ambient Air Quality Standards (NAAQS). In other words, transportation plans, programs, and projects are required to not create new violations, worsen the existing violations, or delay timely attainment of relevant NAAQS.

In addition, SCAG is a co-producer, with the South Coast AQMD and CARB, of the AQMP for the South Coast Air Basin. SCAG has the responsibility of providing the demographic projections and integrated regional land use, housing, employment, and transportation programs, measures, and strategies, as well as analyzing and providing travel activity data related to its planning responsibilities (California Health and Safety Code §40460).

### Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)

The SCAG Region is the largest metropolitan planning area in the United States, encompassing 38,000 square miles. The region is divided into 15 subregions and is one of the largest concentrations of population, employment, income, business, industry and finance in the world. The six-county SCAG Region is home to about 19 million people, nearly half of the population of the State of California.

Federal and State regulations require SCAG, as the MPO and Regional Transportation Planning Agency, to develop an RTP/SCS every four years in order for our region's transportation projects to qualify for federal and state funding and approval. The RTP/SCS is updated to reflect changes in trends, progress made on projects, and to adjust the growth forecast for population and employment changes. The long-range RTP/SCS integrates land use and transportation strategies that will achieve CARB greenhouse gas emissions reduction targets and provides a vision for transportation investments throughout the region. Using growth forecasts and economic trends that project out over a period of more than 20 years, the RTP/SCS considers the role of transportation in the broader context of land use, economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies and Sustainable Communities Strategy to address our mobility needs, air quality and climate change challenges.

The RTP/SCS is developed through a collaborative process, guided by SCAG’s governing board, the Regional Council, and its Policy Committees and Sub-committees, the Transportation Working Group, numerous technical advisory committees/working groups/task force, CTCs, subregions, local governments, state and federal agencies, environmental and business communities, tribal governments, non-profit groups, as well as the general public.

Adopted by SCAG’s Regional Council and approved by federal agencies, 2020 RTP/SCS or Connect SoCal is the currently conformity RTP/SCS for the SCAG region which includes the entire South Coast Air Basin.

### Federal Transportation Improvement Program (FTIP)

SCAG is also responsible for developing a biennial short-term (six year planning horizon) FTIP. SCAG develops the FTIP in partnership with the CTCs of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura, and Caltrans Districts 7, 8, 11, and 12. The FTIP is a multimodal list of capital improvement projects to be implemented over a six-year period. The FTIP identifies specific funding sources and fund amounts for each project. It is prioritized to implement the region’s overall strategy for providing mobility and improving both the efficiency and safety of the transportation system, while supporting efforts to attain federal and state air quality standards for the region by reducing transportation related air pollution. The FTIP must include all federally funded transportation projects in the region, as well as all regionally significant transportation projects for which approval from federal funding agencies is required, regardless of funding source. The FTIP is developed to incrementally implement the programs and projects in the RTP/SCS. TCMs that are committed to in the applicable SIP are derived from the first two years of the prevailing FTIP.

Adopted by SCAG’s Regional Council and approved for federal agencies, 2021 FTIP is the currently conformity FTIP for the SCAG region which includes the entire South Coast Air Basin.

## Section II. Regional Transportation Plan/Sustainable Communities Strategy and Transportation Control Measures (TCMs)

### Introduction

Connect SoCal is a long-range regional plan that provides a blueprint to integrate land use and transportation strategies to help achieve greater mobility and sustainable growth. Transportation projects in the SCAG region must be included in Connect SoCal in order to receive federal funding and approval. Connect SoCal is comprised of an Introduction, six Chapters and 20 Technical Reports listed below:

- Chapter 0: Making Connections
  - Chapter 1: About the Plan
  - Chapter 2: SoCal Today
  - Chapter 3: A Path to Greater Access, Mobility & Sustainability
  - Chapter 4: Paying Our Way Forward
  - Chapter 5: Measuring Our Progress
  - Chapter 6 Looking Ahead
- 
- Active Transportation Technical Report
  - Aviation and Airport Ground Access Technical Report
  - Congestion Management Technical Report
  - Demographics and Growth Forecast Technical Report
  - Economic and Job Creation Analysis Technical Report
  - Emerging Technology Technical Report
  - Environmental Justice Technical Report
  - Goods Movement Technical Report
  - Highways and Arterials Technical Report
  - Natural and Farm Lands Technical Report
  - Passenger Rail Technical Report
  - Performance Measures Technical Report
  - Project List Technical Report
  - Public Health Technical Report
  - Public Participation and Consultation Technical Report
  - Sustainable Communities Strategy (SCS) Technical Report
  - Transit Technical Report
  - Transportation Conformity Analysis Technical Report
  - Transportation Finance Technical Report
  - Transportation Safety and Security Technical Report

Connect SoCal represents the culmination of more than three years of work involving dozens of public agencies, 197 local jurisdictions in the SCAG region, hundreds of local, county, regional and state officials, the business community, environmental groups, as well as various nonprofit organizations, and was founded on a broad-based public outreach effort. The implementation of a comprehensive and coordinated public participation effort undertaken by SCAG is documented in the Public Participation and Consultation Technical Report<sup>1</sup>.

Connect SoCal was adopted by the SCAG Regional Council on May 7, 2020 for transportation conformity purposes only and on September 3, 2020 for all purposes. Connect SoCal constitutes the transportation control strategy portion of the Draft 2022 South Coast AQMP. A full list of the Connect SoCal projects can be found in the Project List Technical Report<sup>2</sup>.

### Key Challenges in the Region

Our region is facing many formidable challenges related to affordable housing, natural and farm land conservation, transportation safety and security, public health, transportation system preservation and resilience, transportation access and mobility, funding the transportation system, and planning for disruption. For example, the region experiences significant travel delays (the time an average motorist spends stuck in traffic is 100 hours per year) and approximately 15% of the region's bridges are in poor condition. The SCAG region lost 21 percent of its farmland between 1984 (the year the farmland tracking began) and 2016. There are approximately 1,500 traffic fatalities annually. The annual cost of treating chronic disease (such as heart disease, strokes, chronic lower respiratory disease & diabetes) is \$16.7 billion. Climate change adversely impacts traditionally underserved communities and 77% of residents in a flood hazard zones are minority.

Another regional challenge that is of key relevance to the 2022 AQMP is the region's inability to meet federal air quality standards. Although air quality has improved significantly over the past decades, the SCAG region still experiences the worst air quality in the country. Almost the entire SCAG region fails to meet the health-based federal air quality standards for one or more transportation-related air pollutants. In addition to public health impacts from unhealthy air quality, the challenge of meeting health based federal air quality standards has serious implications for the RTP/SCS, the Federal Transportation Improvement Program (FTIP) and transportation projects in the SCAG region.

A particularly pressing challenge is for the South Coast Region to meet the 2023 statutory deadline of attaining the 1997 ozone standard. Pursuant to the federal Clean Air Act, a Contingency Measure Plan was recently developed jointly by the South Coast Air Quality Management District (South Coast AQMD) and the California Air Resources Board (ARB) and subsequently submitted to the U.S. Environmental

---

<sup>1</sup>[https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial\\_public-participation-consultation.pdf?1606001825](https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial_public-participation-consultation.pdf?1606001825)

<sup>2</sup> [https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial\\_project-list\\_1.pdf?1606001744](https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial_project-list_1.pdf?1606001744)

Protection Agency (EPA). The Contingency Measure Plan<sup>3</sup> highlights the critical need for federal regulatory actions and/or funding to address emission sources under federal jurisdiction including aircraft, ships, trains and out-of-state trucks in order to meet the air quality standard. This is in addition to regulatory actions, programs and incentive funding South Coast AQMD and ARB have developed to achieve emission reductions.

If the U.S. EPA disapproves the Contingency Measure Plan, a federal sanctions clock will be triggered which will lead to federal highway sanctions if the underlying deficiency cannot be resolved within 24 months. Highway sanctions restrict federal funding to transportation projects that expand highway capacity, nonexempt project development activities and any other projects that do not explicitly meet exemption criteria. If imposed, highway sanctions have the potential to impact billions of dollars of federal funding and tens of billions of dollars of important transportation projects in the SCAG region.

Transportation, especially the goods movement sectors, contributes to the overwhelming majority of air pollutant emissions causing ozone pollution. A comprehensive and coordinated regional solution including aggressive regulations, advancements in clean technologies, innovative solutions, and integrated land use and transportation planning from all levels of government and all stakeholders will be required to achieve the needed emission reductions from the goods movement sectors.

Finally, the emission of air pollutants come from a wide range of sources and may be transported downwind. Therefore, a mitigation strategy should be in place to assist impacted communities, even if the emissions are not being locally produced.

## Regional Goals and Guiding Principles

The development of projects, programs, and strategies are guided by the following goals and guiding principles that help carry out Connect SoCal's vision for improved economy, mobility, environment and healthy/complete communities. The plan explicitly lays out goals related to housing, transportation technologies, equity and resilience in order to adequately reflect the increasing importance of these topics in the region, and where possible the goals have been developed to link to potential performance measures and targets. The plan's guiding policies take these goals and focus them, creating a specific direction for plan investments.

### **Connect SoCal Goals**

1. Encourage regional economic prosperity and global competitiveness
2. Improve mobility, accessibility, reliability, and travel safety for people and goods
3. Enhance the preservation, security, and resilience of the regional transportation system
4. Increase person and goods movement and travel choices within the transportation system

---

<sup>3</sup> South Coast AQMD, 2019, Contingency Measure Plan: Planning for Attainment of the 1997 80 ppb 8-Hour Ozone Standard in the South Coast Air Basin for the 1997 8-Hour Ozone NAAQS in the South Coast Air Basin, <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/1997-ozone-contingency-measure-plan/1997-8-hour-ozone-draft-contingency-measure-plan---120619.pdf?sfvrsn=10>

5. Reduce greenhouse gas emissions and improve air quality
6. Support healthy and equitable communities
7. Adapt to a changing climate and support an integrated regional development pattern and transportation network
8. Leverage new transportation technologies and data-driven solutions that result in more efficient travel
9. Encourage development of diverse housing types in areas that are supported by multiple transportation options
10. Promote conservation of natural and agricultural lands and restoration of habitats

### **Connect SoCal Guiding Principles**

1. Base transportation investments on adopted regional performance indicators and MAP-21/FAST Act<sup>4</sup> regional targets
2. Place high priority for transportation funding in the region on projects and programs that improve mobility, accessibility, reliability and safety, and that preserve the existing transportation system
3. Assure that land use and growth strategies recognize local input, promote sustainable transportation options, and support equitable and adaptable communities
4. Encourage RTP/SCS investments and strategies that collectively result in reduced non-recurrent congestion and demand for single occupancy vehicle use, by leveraging new transportation technologies and expanding travel choices
5. Encourage transportation investments that will result in improved air quality and public health, and reduced greenhouse gas emissions
6. Monitor progress on all aspects of the Plan, including the timely implementation of projects, programs, and strategies
7. Regionally, transportation investments should reflect best-known science regarding climate change vulnerability, in order to design for long term resilience

### **Plan Strategies and Transportation Control Measures**

To realize a more sustainable and connected region, Connect SoCal includes a Core Vision that centers on maintaining and better managing the transportation network for moving people and goods, while expanding mobility choices by locating housing, jobs and transit closer together and increasing investment in transit and complete streets; five Key Connections that augment the Core Vision to address trends and emerging challenges while closing the gap between what can be accomplished through intensification of core planning strategies alone and what must be done to meet increasingly aggressive greenhouse gas reduction goals; as well as action-oriented transportation strategies and Sustainable Communities Strategy.

---

<sup>4</sup> MAP-21 (The Moving Ahead for Progress in the 21st Century Act) was a two-year federal transportation authorization bill signed into law in 2012. Replacing MAP-21 in 2015, FAST Act (The Fixing America's Surface Transportation Act) authorizes \$305 billion over fiscal years 2016 through 2020 for highway, highway and motor vehicle safety, public transportation, motor carrier safety, hazardous materials safety, rail, and research, technology, and statistics programs.

## Core Vision

Rooted in the 2008 and 2012 RTP/SCS plans, Connect SoCal’s “Core Vision” centers on maintaining and better managing the transportation network we have for moving people and goods, while expanding mobility choices by locating housing, jobs and transit closer together and increasing investment in transit and complete streets. The Core Vision includes:

- **Sustainable Development:** Through our continuing efforts to better align transportation investments and land use decisions, we strive to improve mobility and reduce greenhouse gases by bringing housing, jobs and transit closer together.
- **System Preservation and Resilience:** “Fix it First” has been a guiding principle for prioritizing transportation funding in the RTP for the last decade. The cost of rebuilding roadways is eight times more than preventative maintenance. Preservation of the transportation system can extend the pavement life in a cost effective manner and can also improve safety
- **Demand & System Management:** Better managing the existing transportation system through demand management strategies and Intelligent Transportation Systems (ITS) yields significant mobility benefits in a cost-effective manner.
- **Transit Backbone:** Expanding the transit network and fostering development in transit-oriented communities is central to the region’s plan for meeting mobility and sustainability goals while continuing to grow the regional economy.
- **Complete Streets:** Creating “complete streets” that are safe and inviting to all roadway users is critical to increasing mobility choices, reducing traffic fatalities and serious injuries and meeting greenhouse gas reduction targets.
- **Goods Movement:** The efficient movement of goods is critical to a strong economy and improves quality of life in the SCAG region by providing jobs and access to markets through trade. However, increased volumes of goods moving across the transportation system contribute to greater congestion, safety concerns and harmful emissions. It is critical to integrate land use decisions and technological advancements to minimize environmental and health impacts while fostering continued growth in trade and commerce.

## Key Connections

Key Connections augment the Core Vision of the plan to address trends and emerging challenges while “closing the gap” between what can be accomplished through intensification of core planning strategies alone, and what must be done to meet increasingly aggressive greenhouse gas reduction goals. These Key Connections lie at the intersection of land use, transportation and innovation, aiming to coalesce policy discussions and advance promising strategies for leveraging new technologies and partnerships to accelerate progress on regional planning goals. The Key Connections include:

- **Smart Cities and Job Centers:** Smart Cities connect people, vehicles and infrastructure, allowing them to communicate in “real-time” through regional telecommunications networks. The Smart Cities and Job Centers strategy aims to catalyze investments across sectors to make “virtual access” a cost-effective and reliable option for all types of trips, expanding the air quality, congestion and VMT reduction benefits the region already realizes through teleworking. While Smart Cities strategies can be deployed universally, virtual access is particularly beneficial in rural communities where

destinations are far apart. Connect SoCal specifically envisions intensified deployment in sub-regional job centers to encourage more growth of both jobs and housing in areas with already high employment density. The Smart Cities and Job Centers strategy enables this by using integrated information and communication technologies to improve the efficiency and performance of the transportation system. It incorporates transit demand management (TDM) measures that encourage carpooling and transit, and parking strategies that reduce the cost to build new employment facilities within job centers. Also, this strategy builds upon promising trends in “co-working<sup>5</sup>” to promote alternatives for long-distance commuters who prefer not to telecommute. Strengthening these locally significant employment centers allows the region to capitalize on the economic and mobility benefits of compact development, where housing and jobs are closer together.

- **Housing Supportive Infrastructure:** The extraordinary cost of producing housing is a significant barrier to growth throughout Southern California, but also specifically, to achieving the level of infill and transit-oriented development anticipated in Connect SoCal. The Regional Housing Supportive Infrastructure strategy will help make it quicker for local jurisdictions to produce critically-needed housing. The costs of building parking, and sewer/water infrastructure through Development Fees can range from 10% to nearly 25% of construction costs. By implementing tax-increment finance districts, jurisdictions can plan and implement housing supportive infrastructure. With the increase in use of ridesourcing, right-sizing parking strategies, enabled by technology, can reduce the overall cost of housing construction in Connect SoCal’s Priority Growth Areas.
- **Go Zones:** Go Zones are geographic areas where a suite of mobility service options are provided together with incentives to reduce dependency on personal automobiles. This expanded mobility ecosystem can include increased transit, bike share, enhanced active transportation infrastructure and incentives—such as a fee on solo driving during peak traffic periods. Incentives would encourage the use of shared modes or shift less time sensitive trips to off-peak times. Revenues collected from the fee would be used to fund local transportation improvements and support sustainability goals by contributing to reductions in GHG emissions. Go Zones can be designed with policies and discounts that address equity concerns and promote mobility options for commuters of various income levels.
- **Accelerated Electrification:** The Accelerated Electrification strategy offers a holistic and coordinated approach to de-carbonizing or electrifying passenger vehicles, transit and goods movement vehicles. Through greater coordination and deeper collaboration, this strategy aims to go beyond benefits achieved through state mandates alone. In the light-duty sector, Connect SoCal plans for greater incentives to increase sales of electric vehicles and strategies to increase the availability of charging infrastructure. Electric vehicles (EVs) currently make up only seven percent of new car sales, but the growth is healthy: in 2013 EVs made up just 2.4 percent of all new car sales statewide. For transit, in 2018 the California Air Resources Board voted to mandate purchases of electric buses. We can facilitate that process by working with transit agencies to ensure adequate charging stations and electricity rates. In the goods movement sector, the goal is to achieve a zero-emissions system as soon as possible while fostering early adoption of near-zero-emissions technologies in the near-term.

---

<sup>5</sup> Co-working refers to the shared use of an office space by employees of several different firms as an alternative to a home office or traditional fixed workplace location.

- **Shared Mobility and Mobility as a Service:** The future of transportation, like so many aspects of living in our region, will be shaped by technology and the ability to customize our choices. The rise of shared mobility and mobility as a service will allow residents to choose how to travel, depending on the time, distance or goal of their trip. “Shared mobility” refers to a broad range of transportation options, such as rental e-scooters and e-bikes, ridesourcing services like Uber and Lyft that some transit operators are partnering to provide first/last mile services or replace low performing bus routes, and on-demand app-based transit connections provided by vans and shuttles. “Mobility as a service,” or MaaS, allows travelers to research and compare different transportation options from one screen and plan their trip accordingly. MaaS will also allow the traveler to book and pay for different segments of a multimodal trip with one click. This will make it increasingly critical that dense urban areas manage their curb space smartly, in order to ensure safe access for low-speed modes, ridesourcing providers, parking and local deliveries.

### Transportation Strategies

The transportation strategies described in Connect SoCal are divided into two broad categories: Preserving and optimizing the region’s current and future system and capital improvements by mode for completing the region’s transportation system. In all, Connect SoCal includes \$638.9 billion in transportation system investments through 2045.

#### *Preserve and Optimize Our Current System*

A top priority for Connect SoCal is to maintain and preserve the transportation infrastructure through a “Fix it First” principle. Funding provided by Senate Bill 1 offers an opportunity to strategically reinvest in the transportation network to realize an improvement in the conditions of the existing system. Connect SoCal allocates approximately \$68 billion over the plan period to ensure a well maintained and resilient system for generations to come. Connect SoCal also seeks to optimize the existing transportation system to meet increased demand levels through the use of innovative strategies that leverage the existing transportation infrastructure. Key preservation and optimization strategies are:

**Congestion Management Process.** The Congestion Management Process (CMP) aims to provide effective management of the regional transportation system through monitoring and maintenance, demand reduction, analysis of local land use decisions, operational management strategies and strategic capacity enhancements. The CMP requires that roadway projects that significantly increase the capacity for single-occupancy Vehicles (SOVs) be addressed through a CMP. The CMP should provide an appropriate analysis of reasonable, multimodal travel demand reduction and operational management strategies for the corridor. If alternative strategies are neither practical nor feasible, appropriate management strategies must be considered for roadway capacity improvement projects that would increase SOV capacity.

**Congestion Pricing.** SCAG’s planning efforts have focused on integrating pricing strategies to optimize operation, improve travel time reliability and offer travelers greater choices. Connect SoCal has identified three promising congestion pricing strategies: 1) Develop a network of express lanes to accommodate growing inter-county travel; 2) Establish a mileage-based user fees to generate a funding source for aging infrastructure and construction of other travel options; and 3) Develop Cordon/Area Pricing which involves charging a variable or fixed fee to drive into or within a highly congested area.

**Transportation Demand Management.** Transportation Demand Management (TDM) is a set of strategies that aims to reduce the demand for roadway travel, particularly from single-occupancy Vehicles (SOVs). Connect SoCal allocates \$7.3 billion through 2045 to implement TDM strategies throughout the region, including ridesharing and providing first/last mile services to and from transit, supporting telecommuting and alternative work schedules, as well as use of other modes such as transit, rail, bicycling, and walking, or other micro-mobility modes.

**Transportation Systems Management.** Transportation Systems Management (TSM) employs a series of techniques designed to maximize the capacity and efficiency of the existing transportation system. Examples of TSM strategies include Corridor System Management Plans (CSMPs) and system management initiatives (e.g., variable speed limits, signal synchronization, ramp metering, etc.), High Occupancy Toll (HOT) lanes, collision avoidance systems, universal transit fare cards and improved data collection.

### *Complete Our Transportation System*

Strategies for improving and expanding the many modes of transportation that make up the regional network must be integrated closely with our strategies for how we use land. The success of transit, passenger rail, walking, bicycling and other forms of active transportation, our highways and arterials, the efficient movement of goods and our regional airport system all depend on a close relationship with how our region uses land and how we grow. This is particularly true when it comes to improving and building a transit system that can best serve people in communities throughout our region.

**Transit.** Since 1991, the region has spent more than \$77 billion on transit (in 2016 dollars). This trend is expected to continue, as the combined costs for transit capital projects and operations and maintenance (O&M) total nearly half of the investments in Connect SoCal. Connect SoCal includes significant investment across all transit modes, with \$66.8 billion toward transit capital projects, \$53.3 billion toward passenger rail, \$173.9 billion for transit O&M, and \$22.6 billion for passenger rail O&M from 2020 through 2045.

**Passenger Rail.** Connect SoCal vision for passenger rail in the SCAG region consists of four main elements: grow ridership, provide more frequent and new services, improve connectivity, and secure funding for Metrolink (commuter rail), Amtrak (intercity rail), and California High-Speed Rail and Southern California to Las Vegas (interregional rail).

**Transportation Safety.** Connect SoCal prioritizes the safety and mobility of the region's residents, including drivers and passengers, transit riders, pedestrians, and bicyclists. SCAG's Safety strategies are largely grounded in the State's Strategic Highway Safety Plan that helps member agencies interested in pursuing safety initiatives and strategies at the local level. SCAG outlines detailed strategies and actions that local jurisdictions and county transportation commissions can undertake to enhance safety in our region in the transportation safety and security report.

**Active Transportation.** Connect SoCal is expected to increase the number of people making active transportation trips by more than two million, increasing the mode share from 7.8 percent in 2016 to 10.4 percent in 2045. In order to achieve these outcomes, planned future investments are nearly doubled from \$12.9 billion in the 2016 RTP/SCS to \$22.5 billion in Connect SoCal. The active transportation investments

in Connect SoCal are allocated across a range of active transportation strategies that address planning, policy making and implementation for both short and regional trips. Additionally, they are designed to improve environmental justice outcomes and enhance the safety and comfort of people walking and bicycling.

**Highway and Arterial Network.** Connect SoCal includes capital improvements that will address the choke points and gaps in the system, to ensure the system is operating optimally and provides adequate and equitable access to opportunities. Connect SoCal emphasizes working with partner implementing agencies to prioritize projects that preserve and optimize the existing highway and arterial network. Projects include interchange improvements, auxiliary lanes, general purpose lanes, carpool lanes, toll lanes and Express/HOT lanes.

**Regional Express Lane Network.** The regional express lane network integrates congestion pricing to optimize existing capacity on freeways and offer users greater travel time reliability and choices. The regional express lane network included in Connect SoCal builds on the successful implementation of the I-10 and I-110 Express Lanes in Los Angeles County and the recent extension of the SR-91 Express Lanes between Orange and Riverside Counties. Additional efforts underway include planned express lanes on the I-105 in Los Angeles County, the I-15 in Riverside County, the I-15 and the I-10 in San Bernardino County and the I-405 in Orange County and Los Angeles County.

**Goods Movement.** SCAG has developed key strategies to realize a regional vision that maintains regional economic competitiveness, promotes job creation and retention, increased freight mobility and safety, and mitigating environmental impacts. The key strategies include:

- Infrastructure investments to improve freight mobility
- Last mile freight
- Workforce development
- Truck bottleneck relief strategies
- Goods movement warehouse distribution
- Goods movement environmental strategies

Specific details of these goods movement strategies can be found in the Goods Movement Technical Report<sup>6</sup>.

**Aviation.** Connect SoCal focuses on air passenger and cargo activity from the perspective of how the traffic coming and going from the airports affects the region's roads, highways, and transit systems, and how to improve ground transportation access to the airport. Strategies include working with airports and transportation agencies on airport ground access projects, effective analysis and planning, and facilitating ongoing communication and collaboration between airports, transportation agencies and government.

---

<sup>6</sup> [https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial\\_goods-movement.pdf?1606001690](https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial_goods-movement.pdf?1606001690).

**Technological Innovations and Emerging Technologies.** Emerging technologies in transportation and mobility are primarily developed and advanced by the private sector but can be accelerated and promoted by government regulation and incentives, and it is important that public agencies monitor the development of such innovations. Emerging technology in transportation and mobility are themes threaded throughout Connect SoCal. SCAG has completed wide-ranging analysis of recent and emerging technologies principally associated with light-duty vehicles that could potentially impact travel behavior and location choices in the region over the next 25 years.

SCAG recognizes that many new technologies provide consumer solutions and have made inroads in public acceptance due to advancements in smartphones, mobile banking, navigational apps and social networking. Improvements in regional mobility will therefore be derived from how technology is used rather than from any individual technological development. Moreover, strategies to use the benefits of emerging technologies to advance Connect SoCal goals should be viewed through the lens of improving health, safety, equity and mobility outcomes.

### Sustainable Communities Strategy

As part of the state’s mandate to reduce per-capita GHG emissions from automobiles and light trucks, Connect SoCal presents strategies and tools that are consistent with local jurisdictions’ land use policies and incorporate best practices for achieving the state-mandated reductions in GHG emissions at the regional level through reduced per-capita vehicle miles traveled (VMT). The following strategies are intended to be supportive of implementing the regional Sustainable Communities Strategy. Several are directly tied to supporting related GHG reductions while others support the broader goals of Connect SoCal:

#### Focus New Growth Near Destinations and Mobility Options

- Emphasize land use patterns that facilitate multimodal access to work, educational and other destinations
- Focus on a regional jobs/housing balance to reduce commute times and distances and expand job opportunities near transit and along center-focused main streets
- Plan for growth near transit investments and support implementation of first/last mile strategies
- Promote the redevelopment of underperforming retail developments and other outmoded nonresidential uses
- Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods
- Encourage design and transportation options that reduce the reliance on and number of solo car trips (this could include mixed uses or locating and orienting close to existing destinations)
- Identify ways to “right size” parking requirements and promote alternative parking strategies (e.g. shared parking or smart parking)

#### Promote Diverse Housing Choices

- Preserve and rehabilitate affordable housing and prevent displacement
- Identify opportunities for new workforce and affordable housing development

- Create incentives and reduce regulatory barriers for building context-sensitive accessory dwelling units to increase housing supply
- Provide support to local jurisdictions to streamline and lessen barriers to housing development that supports reduction of greenhouse gas emissions

#### Leverage Technology Innovations

- Promote low emission technologies such as neighborhood electric vehicles, car sharing, bike sharing and scooters by providing supportive and safe infrastructure such as dedicated lanes, charging and parking/drop-off space
- Improve access to services through technology such as telework and telemedicine as well as commuter incentives such as a “mobility wallet”, an app-based system for storing transit and other multi-modal payments
- Identify ways to incorporate “micro-power grids” in communities, for example solar energy, hydrogen fuel cell power storage and power generation

#### Support Implementation of Sustainability Policies

- Pursue funding opportunities to support local sustainable development implementation projects that reduce greenhouse gas emissions
- Support statewide legislation that reduces barriers to new construction and that incentivizes development near transit corridors and stations
- Support cities in the establishment of Enhanced Infrastructure Financing Districts (EIFDs), Community Revitalization and Investment Authorities (CRIAs), or other tax increment or value capture tools to finance sustainable infrastructure and development projects
- Work with local jurisdictions/communities to identify opportunities and assess barriers to implement sustainability strategies
- Enhance partnerships with other planning organizations to promote resources and best practices in the SCAG region
- Continue to support long range planning efforts by local jurisdictions
- Provide educational opportunities to local decisions makers and staff on new tools, best practices and policies related to implementing the Sustainable Communities Strategy

#### Promote a Green Region

- Support development of local climate adaptation and hazard mitigation plans, as well as project implementation that improves community resiliency to climate change and natural hazards
- Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration
- Integrate local food production into the regional landscape
- Promote more resource efficient development focused on conservation, recycling and reclamation
- Preserve, enhance and restore regional wildlife connectivity
- Reduce consumption of resource areas, including agricultural land
- Identify ways to improve access to public park space

## Transportation Control Measures (TCMs)

Connect SoCal includes, as a subset of transportation strategies, SIP-committed transportation programs and projects that reduce vehicle use or change traffic flow or congestion conditions for the purposes of reducing emissions from transportation sources and improving air quality, better known as Transportation Control Measures or “TCMs.” TCMs are either one of the types listed in CAA section 108, or any other measures for the purpose of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions. Pursuant to U.S. EPA’s Transportation Conformity Regulations, vehicle technology-based, fuel-based, and maintenance-based measures which control the emissions from vehicles under fixed traffic conditions are not TCMs. In the South Coast Air Basin, TCMs include the following three main categories of transportation improvement projects and programs that have funding programmed for right-of-way and/or construction in the first two years of the 2021 FTIP:

1. Transit and non-motorized modes;
2. High Occupancy Vehicle (HOV) Lanes their pricing alternatives; and
3. Information-based Transportation Strategies.

Connect SoCal includes TCM type projects throughout the entire planning horizon (i.e., 2045) and are all part of the regional transportation strategy for the 2022 South Coast AQMP. Those TCM type projects which have funding programmed for right of way or construction in the first two years of the prevailing FTIP are considered “committed” for air quality planning purposes in the applicable SIP. Per US EPA’s Transportation Conformity Regulations, these committed TCMs are required to receive funding priority and be implemented in a timely manner. In the event that a committed TCM cannot be delivered or will be significantly delayed, the TCM must be substituted for. It is important to note that as the SCAG’s FTIP is updated every two years, new committed TCMs are automatically added to the applicable SIP from the previous FTIP. As a result of the TCM “rollover process,” thousands of committed TCM projects have been implemented over the last two decades. The “rollover” of TCMs updates the AQMPs/SIPs to include new projects in addition to ongoing projects from previous FTIPs. As the FTIP gets adopted every two years, new TCMs emerge and completed TCMs get removed.

## Plan Emissions Reduction Benefits

Based on the travel activity projections generated from SCAG’s Regional Travel Demand Model, an estimate of emissions associated with on-road mobile sources can be generated using CARB’s Emission Factor Model (EMFAC). Through this process, future emissions from on-road mobile sources can be compared for the regional transportation system assuming implementation of the Connect SoCal versus the baseline (without Connect SoCal implementation). It is generally understood that potential future improvements in air quality deriving from Connect SoCal will likely be much smaller, since motor vehicle emissions have and will continue to be substantially reduced through technology (i.e., emission standards for new engines and in-use standards for existing fleets).

Under two different assumptions on future vehicle technology, Tables 1-1 and 1-2 compare VOC (ROG) and NOx emissions between implementation of Connect SoCal and the Connect SoCal Baseline<sup>7</sup> for the following years: 2025, 2035, and 2045. Specifically, the emission reduction benefits shown in Table 1-1 are based on the assumption that the EMFAC2017 vehicle fleet mix and emission factors in the future years remain the same as in 2016 (the Connect SoCal base year); while the emission reduction benefits shown in Table 1-2 factor in the future improvements in the fleet mix and emission factors as reflected in the EMFAC2017. Note that the Connect SoCal emission reductions in Tables 1-1 and 1-2 are not double-counted toward the emission reductions presented in the main report of the 2022 AQMP because Connect SoCal is considered in the AQMP air quality modeling baseline.

As shown in Table VI-C 1-1, if the future vehicle fleet mix and emission factors are held constant as those in the Connect SoCal base year 2016, Connect SoCal is estimated to yield a reduction in NOx emissions by about 1.5 tons per day (tpd) in 2025, 4.1 tpd in 2035, and 6.8 tpd in 2045 compared with their respective Baselines without Connect SoCal. However, if accounting for mandated future improvement in vehicle fleet mix and emission factors, the estimated NOx reduction from Connect SoCal is reduced by more than half, as shown in Table VI-C 1-2, because the vehicles as a whole are becoming much cleaner and reduction of every vehicle mile traveled from Connect SoCal yields less NOx reduction.

**TABLE VI-C-1-1. Regional Transportation Emissions (annual average) (tons per day)  
Assuming Constant 2016 Vehicle Fleet Mix and Emission Factors**

	VOC (ROG)			NOx		
	2025	2035	2045	2025	2035	2045
<b>Connect SoCal</b>	97.2	99.9	103.4	227.2	248.9	280.5
<b>Connect SoCal Baseline</b>	99.0	104.2	110.0	228.8	253.0	287.3
<b>Connect SoCal Reduction</b>	1.8	4.4	6.5	1.5	4.1	6.8

Note: Calculated with EMFAC2017 Emission Model

<sup>7</sup> Connect SoCal Baseline is defined as the future transportation system that will result from current programs without Connect SoCal’s land use and transportation strategies. For Connect SoCal, the Baseline is based upon the adopted 2019 FTIP.

**TABLE VI-C1-2. Regional Transportation Emissions (annual average) (tons per day)  
Based on Vehicle Fleet Mixes and Emission Factors as Reflected in EMFAC2017**

	VOC (ROG)			NOx		
	2025	2035	2045	2025	2035	2045
<b>Connect SoCal</b>	51.1	36.5	31.8	80.7	66.6	71.5
<b>Connect SoCal Baseline</b>	52.0	38.1	33.8	81.4	67.7	73.4
<b>Connect SoCal Reduction</b>	0.9	1.6	2.0	0.6	1.1	2.0

Note: Calculated with EMFAC2017 Emission Model

### TCM Emissions Reduction Benefits

To estimate the emission benefits of TCMs, the socio-economic data variables of Connect SoCal were held constant while the transportation network was modified to account for the TCMs in Connect SoCal (both TCM-type projects and committed TCMs). In other words, the TCM emissions reduction benefits are the difference between Connect SoCal with TCMs and Connect SoCal without TCMs. It should be noted that this analysis is done for illustrative purposes, as the regional transportation strategy is appropriately viewed on a systems-level basis, and not by its components since each of the individual transportation improvements and strategies affect each other and the system. Further, it should be noted that the TCM emission reductions in Tables VI-C 2-1 and VI-C 2-2 are not double-counted toward the emission reductions presented in the main report of the Draft 2022 AQMP because the TCMs are part of Connect SoCal which is considered in the AQMP air quality modeling baseline.

Under the same two different assumptions on future vehicle technology, Tables VI-C 2-1 and VI-C 2-2 show the results of the TCM modeling analysis for years 2021 and 2035 (between the 2008 8-hour ozone attainment year of 2031 and the 2015 8-hour ozone attainment year of 2037). Specifically, the emission reduction benefits shown in Table VI-C 2-1 are based on the assumption that the EMFAC2017 vehicle fleet mix and emission factors in the future years remain the same as in 2016 (the Connect SoCal base year); while the emission reduction benefits shown in Table VI-C 2-2 factor in the future improvement in the fleet mix and emission factors as reflected in the EMFAC2017.

As shown in Tables VI-C 2-1 and VI-C 2-2 and compared to previous AQMPs/SIPs, potential future improvements in air quality deriving from TCMs are consistently diminishing for two reasons. On one hand, motor vehicle emissions have and will continue to be substantially reduced through technology. On the other hand, most of the TCM projects in the South Coast Air Basin have been adopted into the SIP and have already been implemented. Thus, the emission reductions associated with these projects are now included in the Connect SoCal baseline emissions and no longer show up in the TCM benefit values.

**TABLE 2-1. TCM Emissions (annual average) (tons per day)  
Assuming Constant 2016 Vehicle Fleet Mix and Emission Factors**

	VOC (ROG)		NOx	
	2021	2035	2021	2035
<b>Connect SoCal</b>	96.6	99.9	215.8	268.0
<b>Connect SoCal without TCM</b>	97.1	101.1	216.2	269.3
<b>TCM Reduction</b>	0.5	1.2	0.4	1.3

Note: Calculated with EMFAC2017 Emission Model

**TABLE 2-2. TCM Emissions (annual average) (tons per day)  
Based on Vehicle Fleet Mixes and Emission Factors as Reflected in EMFAC2017**

	VOC (ROG)		NOx	
	2021	2035	2021	2035
<b>Connect SoCal</b>	63.9	36.5	119.7	66.6
<b>Connect SoCal without TCM</b>	64.2	36.9	120.0	66.9
<b>TCM Reduction</b>	0.3	0.4	0.3	0.3

Note: Calculated with EMFAC2017 Emission Model

### Plan Investment

To accomplish the ambitious goals of Connect SoCal through 2045, SCAG forecasts expenditures of \$638.9 billion. Forecasted revenues comprise both existing and several new funding sources that are reasonably expected to be available for Connect SoCal through its horizon year of 2045, which together total \$638.9 billion. Reasonably available revenues include adjustments to federal gas tax rates, and replacement of gas taxes with more direct mileage-based user fees (or equivalent fuel tax adjustment). These and other categories of funding sources were identified as reasonably available on the basis of their potential for revenue generation, historical precedence and the likelihood of their implementation within the time frame of Connect SoCal. In accordance with federal guidelines, the Connect SoCal includes strategies for ensuring the availability of these sources.

## Cost-Benefit Analysis

Implementation of Connect SoCal will secure a safe, efficient, sustainable and prosperous future for the SCAG region. To demonstrate how effective Connect SoCal would be toward achieving our regional goals, SCAG conducted a Connect SoCal vs. Connect SoCal Baseline cost-benefit analysis – essentially comparing how the region would perform with and without implementation of the Connect SoCal.

The cost-benefit analysis utilizes the Cal-B/C Model to calculate regional network benefits. It calculates and aggregates scenario benefits after travel impacts are evaluated using a regional travel demand model. SCAG’s regional travel demand model data for Connect SoCal was summarized in one mile per hour (1-mph) speed bins to facilitate analysis. The benefit/cost ratio compares the incremental benefits with the incremental costs of multimodal transportation investments. The benefits are divided into the following four categories:

- Travel time savings resulting from reduced travel delay
- Air quality improvements
- Safety improvements
- Reductions in vehicle operating costs

For these categories, the economic values and parameters found in Cal-B/C Model are utilized in conjunction with SCAG’s regional travel demand model outputs to estimate the benefits of Connect SoCal compared with the Baseline alternative. Most of these benefits are a function of changes in VMT and Vehicle Hours Traveled (VHT). Not all impacts are linear, as reductions in congestion may potentially either increase or decrease vehicle operating costs and emissions. Delay savings are reflected directly in the VHT statistics.

To estimate the benefit/cost ratio, the benefits in each category are converted into dollars and added together. These are then divided by the total incremental costs of the Connect SoCal transportation system investments to generate a ratio.

The results of the benefit/cost analysis indicate that the investments contained in Connect SoCal provide a return of \$2.06 for every dollar invested. For this analysis, all benefits and costs are expressed in 2016 dollars. Benefits are estimated over the 25-year Connect SoCal planning period from 2020 to 2045. The user benefits are estimated using the Cal-B/C benefit/cost framework and incorporate SCAG Regional Travel Demand Model outputs. The costs include the incremental capital expenditures over the entire Connect SoCal planning period. Further information on the economic values represented in the Cal-B/C Model can be found at the following:

<https://dot.ca.gov/programs/transportation-planning/economics-data-management/transportation-economics>

Compared with the alternative without the Plan, Connect SoCal would result in significant benefits to our region, not only with respect to mobility and accessibility, but also in the areas of air quality, economic growth and job creation, sustainability and environmental justice. Some of the benefits of Connect SoCal implementation include:

- Increase the combined percentage of work trips made by carpooling, active transportation, and public transit by 3 percent, with a commensurate reduction in the number of commuters traveling by single-occupancy vehicle.
- Reduce VMT per capita by 5 percent and vehicle hours traveled per capita by 9 percent (for automobiles and light/medium-duty trucks) as a result of regional transit service.
- Increase transit use for work trips by 2 percent, as a result of improved transit service and more transit-oriented, mixed-use development.
- Reduce travel delay per capita by 26 percent.
- Create more than 264,500 new jobs annually due to enhanced economic competitiveness and improved overall regional economic performance. This more competitive economic environment would be the result of an improved regional transportation system and reduced levels of congestion.
- Reduce greenfield development by 29 percent. Conservation of open space and agricultural lands are achieved by focusing new residential and commercial development in higher density areas already equipped with the requisite urban infrastructure.
- Increase the share of new regional household growth occurring in High Quality Transit Areas (HQTAs) by 6 percent, and increase the share of new job growth in HQTAs by about 15 percent. With more people living and working in locations near convenient and efficient transit options, congestion levels will be reduced accordingly.

Connect SoCal prioritizes the attainment of all applicable federal and state performance requirements. The plan meets all federal and state performance requirements. The plan meets all federal provisions for transportation conformity as defined under the federal Clean Air Act and therefore demonstrates transportation conformity. Connect SoCal achieves per capita GHG emission reductions relative to 2005 levels of eight percent in 2020, and 19 percent in 2035, thereby meeting the GHG reduction targets established by the California Air Resources Board (ARB) for the SCAG region.

For more details of the cost-benefit analysis of Connect SoCal, please refer to 1) Chapter 5: Measuring Our Progress, 2) Economic and Job Creation Analysis Technical Report, and 3) Performance Measures Technical Report (<https://scag.ca.gov/read-plan-adopted-final-plan>).

## Section III. Reasonably Available Control Measure Analysis

### Introduction

Clean Air Act Section 172(c)(1) requires SIPs to provide for the implementation of all reasonably available control measures (RACM) as expeditiously as practicable. Guidance on interpreting RACM requirements in the context of the 1990 Amendments was set forth in the General Preamble (57 FR 13498, 13560) in 1992. In the General Preamble, U.S. EPA interpreted section 172(c)(1) as imposing a duty on States to consider all available control measures and to adopt and implement measures that are reasonably available for implementation in a specific nonattainment area. It also retained an earlier interpretation of RACM that it would not be reasonable to require the implementation of measures that do not advance the date for attainment.

With regard to TCMs, U.S. EPA's guidance indicates that it is inappropriate to presume that all Section 108(f)(1)(A) measures of the CAA are available in all nonattainment areas. Instead, States should consider Section 108(f)(1)(A) measures as potential options that are not exhaustive, but indicative of the types of measures that should be considered. In addition, any measure identified as reasonably available during the public comment period should also be considered for implementation. In addition, States could reject measures as not reasonably available for reasons related to local conditions. States are required to justify why available measures were not considered RACM and not adopted in the SIP. As codified for the 2008 8-hour ozone NAAQS at 40 CFR 51.1312(c), U.S. EPA is retaining the existing general RACM requirements for purposes of the 2015 8-hour ozone NAAQS.<sup>8</sup>

To meet the RACM requirements articulated in the U.S. EPA guidance described above, this RACM analysis was performed following a four-step process. The first step is a description of the process by which SCAG and related transportation agencies in the South Coast Air Basin identify, review, and make enforceable commitments to implement TCMs. The second step is the assembly and review of a list of control measures recently implemented in other Serious, Severe, and Extreme ozone nonattainment areas. This effort involved a review of measures implemented in California nonattainment areas as well as those located in other states, and the organization of those measures in the 16 categories specified in CAA §108(f)(1)(A). The third step is the determination of RACM by contrasting the list of candidate measures with measures implemented to date in the South Coast Air Basin, as well as any new TCMs in the current AQMP. Finally, the fourth step is the provision of reasoned justification for any of the available measures that have yet been implemented. These justifications must address criteria described in the above-cited guidance.

---

<sup>8</sup> <https://www.govinfo.gov/content/pkg/FR-2018-12-06/pdf/2018-25424.pdf>

## Step 1. SCAG RACM/TCM Rollover Development Process

While the SCAG Region has an extensive, systematic TCM development program continually updated through the FTIP process, Serious and worse nonattainment areas are obligated during SIP preparation to evaluate TCMs and determine whether they qualify as RACM.

The RACM process relies predominantly on a continuous process of updating and adding TCMs in the South Coast Air Basin. The current TCM “Rollover Process” was established for the South Coast Air Basin to replace a process that developed TCMs each time a SIP was produced with a continuous, ongoing TCM process. This process continues to govern the selection and implementation of TCMs today. TCMs are continuously identified and reviewed throughout the transportation planning process. SCAG’s ongoing public outreach effort, including an involved interagency input process via SCAG’s Transportation Conformity Working Group (TCWG), helps ensure that the process to identify and review TCMs is robust, inclusive, and comprehensive. Development of TCMs arises from multiple processes and multiple sources including CTCs, subregional agencies, task forces, committees, and the public. As part of the RTP and FTIP development process, the transportation project funding and scheduling procedures ensure that TCMs are developed, sponsored, and clearly identified throughout the process and implemented on schedule.

## Step 2. Assembly and Review of Candidate TCM RACM

U.S. EPA and related court decisions have maintained that TCMs considered RACM must be measures that (a) advance the attainment date, typically by at least one year and (b) are technologically and economically feasible. Measures must pass both the advance attainment and technological/economic feasibility tests to be deemed RACM.

U.S. EPA guidance documents identify the types of measures to be considered. CAA §108(f)(1)(A) provides a list of the following sixteen categories of TCMs that are potential options and should be considered indicative types of TCMs:

- i. *Programs for improved use of public transit;*
- ii. *Restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or high occupancy vehicles;*
- iii. *Employer-based transportation management plans, including incentives;*
- iv. *Trip-reduction ordinances;*
- v. *Traffic flow improvement programs that achieve emission reductions;*
- vi. *Fringe and transportation corridor parking facilities, serving multiple occupancy vehicle programs or transit service;*
- vii. *Programs to limit or restrict vehicle use in downtown areas or other areas of emission concentration, particularly during periods of peak use;*
- viii. *Programs for the provision of all forms of high-occupancy, shared-ride services, such as the pooled use of vans;*
- ix. *Programs to limit portions of road surfaces or certain sections of the metropolitan area to the use of non-motorized vehicles or pedestrian use, both as to time and place;*
- x. *Programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of bicyclists, in both public and private areas;*

- xi. Programs to control extended idling of vehicles;*
- xii. Programs to reduce motor vehicle emissions, consistent with Title II of the Clean Air Act, which are caused by extreme cold start conditions;*
- xiii. Employer-sponsored programs to permit flexible work schedules;*
- xiv. Programs and ordinances to facilitate non-automobile travel, provision and utilization of mass transit, and to generally reduce the need for single-occupant vehicle travel, as part of transportation planning and development efforts of a locality, including programs and ordinances applicable to new shopping centers, special events, and other centers of vehicle activity;*
- xv. Programs for new construction and major reconstruction of paths, tracks or areas solely for the use by pedestrian or other non-motorized means of transportation, when economically feasible and in the public interest; and*
- xvi. Programs to encourage the voluntary removal from use and the marketplace of pre-1980 model year light duty vehicles and pre-1980 model light duty trucks.*

U.S. EPA guidance states that these sixteen categories are an illustrative, but not exhaustive list. The General Preamble also states that U.S. EPA does not presume that “control measures are reasonably available in any or all areas,” therefore, TCMs need to be evaluated on an area-by-area basis to determine which are reasonably available. In addition to the measures listed above, the General Preamble cites other sources to include TCMs that were (a) suggested during public comments (e.g. at workshops, public hearings, in written comments, etc.); (b) adopted in other nonattainment areas of the country; and (c) specifically identified by the U.S. EPA (i.e., U.S. EPA TCM database, support documents for rulemaking, etc.).<sup>9</sup> It is important to note that, pursuant to U.S. EPA’s Transportation Conformity Regulations, vehicle technology-based, fuel-based, and maintenance-based measures which control the emissions from vehicles under fixed traffic conditions are not TCMs.

To develop a list of candidate RACMs, SCAG performed a comprehensive review of available TCMs in California, as well as in other states. SCAG reexamined the candidate RACM identified during the comprehensive RACM analysis performed for the 2016 AQMP and updated TCMs based on new ozone SIPs developed since the last RACM analysis. The SIPs reviewed by SCAG include all applicable SIPs from Serious, Severe, and Extreme nonattainment areas under the 2008 8-hour ozone standards<sup>10</sup> that were not available for review in the previous 2016 AQMP. Tables VI-C-4 lists these additional ozone nonattainment area SIPs that SCAG reviewed for candidate measures as part of this analysis.

Additionally, TCMs were discussed and reviewed at numerous TCWG meetings as part of the 2019 FTIP, 2021 FTIP, Connect SoCal, and 2022 AQMP. Further, SCAG has an extensive and robust public participation process for the development of the RTP and the FTIP through ongoing public meetings, and technical, advisory, and policy committees. These groups generally meet on a monthly or quarterly basis and provide explicit opportunities for the public to participate and contribute.

---

<sup>9</sup> Seitz, John S. (December 2, 1999). Memo from John Seitz: Guidance on the Reasonably Available Control Measures (RACM) Requirement and Attainment Demonstration Submissions for Ozone Nonattainment Areas. Available at: <http://www.epa.gov/ttn/oarpg/t1/memoranda/revracm.pdf>.

<sup>10</sup> U.S. EPA’s ozone standard nonattainment area designations are available at <https://www.epa.gov/green-book>

<b>TABLE VI-C-4. 8-Hour Ozone Standard Nonattainment Areas Reviewed for RACM</b>		
<b>Region</b>	<b>Designation</b>	<b>Applicable SIP</b>
Chicago-Naperville, Illinois-Indiana-Wisconsin	Serious	Draft Redesignation Request and Maintenance Plan for the Illinois Portion of the Chicago Ozone Nonattainment Area for the 2008 Ozone Standard
Coachella Valley, California	Severe 15	Final 2016 Air Quality Management Plan
Dallas-Fort Worth, Texas	Serious	Dallas-Fort Worth Serious Classification Attainment Demonstration State Implementation Plan Revision for the 2008 Eight-Hour Ozone National Ambient Air Quality Standard
Denver-Boulder-Greeley-Ft, Colorado	Serious	Serious State Implementation Plan for the Denver Metro and North Front Range Ozone Nonattainment Area, December 18, 2020
Eastern Kern, California	Severe 15	2017 Ozone Attainment Plan For 2008 Federal 75 ppb 8-Hour Ozone Standard
Houston-Galveston-Brazoria, Texas	Serious	Houston-Galveston-Brazoria Serious Classification Attainment Demonstration State Implementation Plan Revision for the 2008 Eight-Hour Ozone National Ambient Air Quality Standard
New York-Northern New Jersey- Long Island, Connecticut	Serious	Revision to Connecticut’s State Implementation Plan Ozone Attainment Demonstration for Areas Classified Serious Nonattainment for the 2008 Ozone Standards, October 2021  8-Hour Ozone Attainment Demonstration for the Connecticut Portion of the New York-Northern New Jersey-Long Island (NY-NJ-CT) Nonattainment Area Technical Support Document
New York-Northern New Jersey- Long Island, New York	Serious	New York State Implementation Plan for the 2008 Ozone National Ambient Air Quality Standards – New York-N. New Jersey-Long Island, NY-NU-CT Serious Nonattainment Areas, 2021
San Diego, California	Severe 15	2020 Plan for Attaining the National Ambient Air Quality Standards for Ozone in San Diego County
San Joaquin Valley, California	Extreme	2016 Ozone Plan for 2008 8-Hour Ozone Standard
Sacramento, California	Severe 15	Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan, 2017
Ventura, California	Serious	Final 2016 Ventura County Air Quality Management Plan
Western Mojave	Severe 15	MDAQMD Federal 75 ppb Ozone Attainment Plan (Western Mojave Desert Nonattainment Area)
Western Nevada County, California	Serious	Ozone Attainment Plan, Western Nevada County, State Implementation Plan for the 2008 Primary Federal 8-Hour Ozone Standard of .075 ppm, 2018

In summary, SCAG performed the RACM analysis based on information reviewed from the following sources:

- CAA Section 108(f)(1)(A)
- 2016 South Coast AQMP TCM RACM Analysis
- Other Serious and worse ozone nonattainment areas in California
- Other Serious and worse ozone nonattainment areas outside California
- SCAG RTP and FTIP Updates since adoption of 2016 RTP/SCS
- Interagency Consultation (TCWG)
- Transportation Committee, Energy and Environment Committee, and Active Transportation Working Group meeting materials and input

SCAG reviewed the candidate measures to determine which could be considered RACMs. As discussed above, the RACM TCM requirement consists of two core criteria that must be satisfied: (a) TCMs must advance attainment of the air quality standards; and (b) TCMs must be both technologically and economically feasible. U.S. EPA has not provided specific definitions on these core criteria, but has preferred to allow flexibility in each region's determination.

In practice, agencies have based their determination of the first criteria on whether a measure, or group of measures, would help an area achieve attainment one year earlier than in the absence of the measure, or group of measures. In other words, TCM implementation must significantly reduce emissions to facilitate attainment of the NAAQS one year earlier than without the TCMs. Considering the magnitude of the emissions reductions necessary to demonstrate attainment in the South Coast Air Basin, the implementation of every possible TCM is not expected to meet this criterion. Technological feasibility has been determined in terms of local factors, such as environmental impacts, availability of control measures, and ability to achieve the emission reductions. Project cost-effectiveness has been considered a determining factor for economic feasibility.

### [Step 3. Determining RACM Measures](#)

For this step of the RACM analysis, SCAG compared the list of measures implemented within the South Coast Air Basin with those implemented in other areas. SCAG then organized measures, including candidate measures and those measures currently implemented in the region, into the sixteen categories specified in CA §108(f)(1)(A). There is no formal requirement on how to organize TCMs. However, SCAG utilized this organization scheme as a way to highlight those measures that fall within the sixteen CAA categories, which are formally recognized as "TCMs" and subject to CAA and federal conformity requirements. In addition, a category titled "Other Measures" includes TCMs that do not fall in any of the sixteen CAA §108(f)(1)(A) categories. SCAG found a small number of candidate measures that were not currently implemented in the region and not included in the 2016 AQMP TCM RACM analysis. New measures added to those reviewed as part of the 2016 RACM analysis are highlighted in bold font in Attachment B.

## Step 4. Reasoned Justification

The fourth and last step is to provide a reasoned justification for any of the available measures that have yet been implemented or will not be implemented. In 1999, U.S. EPA issued a memorandum of guidance<sup>11</sup> which states that in order to determine whether a state has adopted all RACMs necessary for attainment and as expeditiously as practicable, the state must explain why the selected implementation schedule is the earliest schedule based on the circumstances of the area. This indicates that states can reject measures as not reasonably available for reasons related to local conditions. In such cases, states are obligated to provide justification as to why potentially reasonable measures have not been adopted. Valid reasons for rejecting a measure include: (a) it would not advance the attainment date, (b) it is economically infeasible, or (c) it is technologically infeasible.

The complete listing of all candidate measures evaluated for RACM determination is included in Attachment B. A “Measure Number” is assigned for each strategy for ease of discussion (not rank in priority). The “Description” column provides a brief description of the relevant measure in discussion. “Has It Been Implemented?” confirms whether the measure is currently implemented in the SCAG region. The final “Reasoned Justification for Not Implementing” column provides a reasoned justification for those measures that were not considered RACM. SCAG appropriately considered a number of factors that included technological and economic feasibility, enforceability, geographic applicability, and ability to provide emission reductions. Of the TCMs that were deemed candidate measures, none were found to meet the criteria for RACM implementation of advancing attainment and technological/economic feasibility.

## Conclusion

CAA Section 172(c)(1) requires SIPs to provide for the implementation of all TCM RACM as “expeditiously as practicable.” U.S. EPA and related court decisions have maintained that TCMs considered RACM must be measures that 1) advance the attainment date, typically by at least one year and 2) are technologically and economically feasible. Measures must pass both the advance attainment and technical/economic feasibility tests to be deemed RACM.

Based on a comprehensive review of TCMs in other Serious or worse ozone nonattainment areas or otherwise identified, it is determined that the TCMs being implemented in the South Coast Air Basin are inclusive of all TCM RACM. None of the candidate measures reviewed herein that have not been implemented meet the criteria for RACM implementation.

SCAG and the local transportation agencies have established a comprehensive, formal process for identifying, evaluating, and selecting TCMs. The regular RTP, FTIP, and AQMP/SIP public update processes ensure that TCM identification and implementation is a routine consideration that helps SCAG and the South Coast AQMD in the effort to demonstrate attainment of applicable NAAQS.

---

<sup>11</sup> Seitz, John S. (December 2, 1999). *Memo from John Seitz: Guidance on the Reasonably Available Control Measures (RACM) Requirement and Attainment Demonstration Submissions for Ozone Nonattainment Areas*. Available at: <http://www.epa.gov/ttn/oarpg/t1/memoranda/revracm.pdf>

## Attachment A: Committed Transportation Control Measures (TCMs)<sup>12</sup>

TABLE IV-C-A-1. LOS ANGELES COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
ARCADIA	LATP16S004	7.7-mile Class 2 bike lanes on Highland Oaks Dr, 1st Av, Baldwin Av, Sierra Madre Blvd, Sycamore Av, Colorado Blvd, Santa Clara St, and Huntington Dr, El Monte Av, Centennial Wy, Live Oak Av, and Sunset Blvd; 13.30- mile Class 3 bike routes on 1st Av (sharrows), 2nd Av, Sierra Madre Blvd, Orange Grove Av, Campus Dr, Camino Real Av, and Longden Av, Holly Av, Highland Oaks Dr, Virginia Dr, Elevado Av, Golden West Av, Lemon Av, Duarte Rd, & Sunset Blvd; Bike detection & parking	Completed
ARTESIA	LATP17M023	Promote multi-modal connections to other major thoroughfares by incorporating bike lanes, upgrading ADA ramps, repairing uplifted or uneven sidewalks, and enhancing traffic calming by installing safety pedestrian refuge along Norwalk Boulevard to reduce speed limit. Improvements along Norwalk (1.24 miles) and Artesia (1.15 miles) Boulevards between city limits to city limits.	Completed
AVALON	LAF9600	City of Avalon Five-Corner Comprehensive Pedestrian Project: The project proposes to construct new-permanent sidewalks, median safety islands, traffic calming (round-about) and lighting in order to provide safer access for pedestrians. The total project is approximately .25 miles in length.	Completed
AZUSA	LAF5309	City of Azusa Traffic Management System. This project will upgrade traffic signals at 43 intersections in the City of Azusa. The project will fund the design and construction/implementation of controllers, wiring, detection, conduit, fiber optic, countdown pedestrian heads, signals, video detection, CCTV cameras and traffic control and monitoring upgrades at the 43 intersections.	Completed
BALDWIN PARK	LATP17S029	Construct 2.3 miles of Class I shared-use path ("trail"). Develop conceptual designs for 6.8 mile Class I trail along Walnut Creek and 15.3 miles of on-street Class II and Class III bikeways.	6/6/2022
BEVERLY HILLS	LAF9537	Beverly Hills Bike Share Program: Regionally-compatible, public bicycles for local/regional non vehicle mobility, first/last miles connection to bus and Purple Line rail transit, reduce air pollutants, promote healthy lifestyles	12/31/2022
BURBANK	LAF5701	Burbank Traveler Information and Wayfinding System -Installation of real-time bus arrival system on BurbankBus buses. The project will also completing wayfinding signage on major Bike corridors to help identify destination and travel distance for bicyclists.	4/30/2022
BURBANK	LAF5306	Burbank Traffic Responsive Signal System; upgrade 20 signals on Hollywood Way and 18 on Buena Vista St., connect 38 signals to the fiber-optic cable-trunk line, and purchase fiber-optic modems. Includes a demand-responsive traffic signal system along Hollywood Way and Buena Vista St., license, system integration and testing of the Quick Track Adaptive Control Software.	Completed

<sup>12</sup> Projects may include TCM and non-TCM portions. Committed TCMs include only that portion of the projects that meets the definition of TCMs.

TABLE IV-C-A-1. LOS ANGELES COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
BURBANK	LAF9315	Traffic responsive system involving advanced traffic controllers, communications, video surveillance, and bicycle and system detection for 33 intersections in the City of Burbank	12/21/2021
BURBANK	LAF1502	San Fernando Bikeway. Implement a Class I Bikeway along San Fernando Blvd, Victory Place and Burbank Western Channel to complete the Burbank leg of a 12 mile bikeway.	12/31/2021
CALTRANS	LA0B951	Route 71: ROUTE 10 TO 0.14 MILE SOUTH SAN BERNARDINO COUNTY LINE - EXPRESSWAY TO FREEWAY CONVERSION - ADD 1 HOV LANE AND 1 MIXED FLOW LANE . (2001 CFP 8349, TCRP #50) (EA# 210600, PPNO 2741=EA 21060, PPNO 2741 + EA 21061, PPNO 2741N, EA 21062, PPNO 1741S) (TCRP #50) (Use Toll Credits as Local Match).	11/21/2028
CALTRANS	LA0D73	Route 005: LA MIRADA, NORWALK & SANTA FE SPRINGS-ORANGE CO LINE TO RTE 605 JUNCTION. WIDEN FOR HOV & MIXED FLOW LNS, RECONSTRUCT VALLEY VIEW (EA 2159A0 = 21591, 21592+31320=2159U, 21593, 21594, 21595 PPNO 2808 = 4153, 2808, 4154, 4155, 4156, 4841). TCRP#42.2&42.1 (USE TOLL CREDITS AS LOCAL MATCH)	10/31/2022
CALTRANS	LAF9301	Route 210: Implementation of I-210 Connected Corridors transportation management system that integrates freeway ramp meters, arterial signal systems, transit systems and traveler information [EA 32910].	12/30/2021
CALTRANS	LA000358	Route 005: --- FROM ROUTE 134 TO ROUTE 170 HOV LANES (8 TO 10 LANES) (CFP 346)(2001 CFP 8355). (EA# 12180, 12181,12182+12183=1218w,12184, 13350 PPNO 0142F,151E,3985,3986,3987) SAFETEA LU # 570. CONSTRUCT MODIFIED IC @ I-5 EMPIRE AVE, AUX LNS NB & SB BETWEEN BURBANK BLVD & EMPIRE AVE; AND MODIFY EXISTING STRUCTURES. ADD AUXILIARY LANE BETWEEN ALAMEDA AND OLIVE FROM PM 28.43 to PM 29.78	7/30/2022
CALTRANS	LA0B875	Route 10: HOV LANES AND PAVEMENT REHAB FROM CITRUS TO ROUTE 57 (EA# 11934 + 31120 = 1193U, PPNo 0310B+4812=0310B). USE TOLL CREDIT AS LOCAL MATCH.	12/3/2021
CARSON, CITY OF	LATP17M024	Design and construct a 1.8 mile bike and pedestrian path (Class 1 facility) along the top of the Dominguez Channel levee between Avalon Boulevard and 223rd Street / Wilmington Avenue in Carson.	9/1/2022
COMMERCE	LA0G1704	Project includes traffic signal upgrades, signal interconnect installation, adoptive signal detection, control system, software, signal sync, traffic lane alignments, traffic signage, freeway on and off ramp improvements, and other items to improve traffic flow and capacity. 4 intersections will receive signal sync: 1) Triggs St, Telegraph Rd, Atlantic Blvd, Goodrich Blvd, and Ferguson Dr; 2) Telegraph Rd and Atlantic Blvd; 3) Atlantic Blvd and Eastern Ave; and 4) Eastern Ave and Stevens Pl.	6/30/2026
COMPTON	LA0G1711	This Wilmington Avenue Regional Bikeway Corridor connects existing bikeways and lanes at Rosecrans Ave on the north and continues south to Victoria St. This project will provide bicycle elements including Class II bike lanes, pedestrian lighting, and missing sidewalks gaps to provide safe travels for pedestrians and bicyclists. This corridor will eventually connect the Compton Creek bike path at El Segundo with the Metro Blue Line Artesia Station. Project is 2.5 miles long.	3/31/2025

TABLE IV-C-A-1. LOS ANGELES COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
COMPTON	LATP17S012	This project is the final design and construction of 29.68 miles of gap closure in the bike lane network in the Cities of Compton and Carson. Project elements include Class I, II, and III bike lane improvements including striping, bike sharrows, directional painted green lines and wayfinding signage. Utilizing Toll Credits to match ATP.	12/31/2022
COMPTON	LAF9530	Enhance safety/improve non-motorized transportation travels along Central Av by installing protective buffered bike lanes, improving intersection crossings and closing sidewalk gaps	8/1/2021
COMPTON	LAOG1713	This project aims to develop and upgrade the existing and obsolete citywide traffic signal system to a state of the art intelligent transportation system that synchronizes traffic signal along Rosecrans Av from city limits to city limits. There are 20 signal intersections planned for synchronization.	6/30/2025
CUDAHY	LAF9605	The Cudahy City Wide Complete Streets Improvement Project focuses on the Atlantic Avenue Corridor and City Wide multimodal transportation improvements for the first/last mile. Project is approximately 1.1 miles long.	12/1/2021
CULVER CITY	LAF7303	NETWORK-WIDE SIGNAL SYNC WITH VID & ARTERIAL PERFORMANCE MEASUREMENT SYSTEM FOR ATCS : (1) Optimizes signal coordination timing network-wide. (2) Upgrades major intersections with enhanced system detection and arterial performance measurement capabilities along Washington Bl, Sepulveda Bl, Jefferson Bl, and others. (16 signals that are synched)	12/31/2021
DOWNEY	LAF9525	This project implements 17 miles of Class II bike lanes on eight roadways (seven of them with Road Diets) providing enhanced access to activity centers and multi-modal assets such as the Green Line and bike paths.	12/1/2021
DOWNEY	LAOG1254	Old River School Rd Pavement Rehab includes sawcut, removal and full depth reconstruction of pavement, cold milling of existing pavement, asphalt rubber hot mix (ARHM) pavement overlay, reconstruction of damaged or missing curb and gutter, sidewalk, cross gutters, and ramps, utility adjustments, traffic signal detector loop replacements, traffic striping, traffic control, and install Class II bike lane (2 miles). Utilizing \$215,000 in toll credits for FFY 2020.	Completed
DOWNEY	LAF5114	Telegraph Road Traffic Throughput and Safety Enhancement between the Rio Hondo River Channel to the San Gabriel River Channel, a distance of 2.2 miles. Project involves the construction of raised median islands, minor widening at intersections, transit priority system and bike (2.2 miles in length) and pedestrian circulation improvements.	6/30/2021
DOWNEY	LAF7311	DOWNEY CITYWIDE TRANSIT PRIORITY SYSTEM PROGRAM : (1) Synchronizes traffic signals along existing transit routes. (2) Installs new fiber optic communication along 5.5 miles of arterial streets to connect signals to the central traffic management center. (3) Installs and integrates transit priority system with the traffic signal system.	8/1/2024
EL MONTE	LAF3125	Ramona Corridor Transit Center Access Project. Construct a new underpass structure on Ramona Blvd under Santa Anita Ave to access the lower level of the El Monte Transit Center. The proposed bus tunnel ramps will begin east of the Santa Anita Avenue and Ramona Boulevard Intersection on Ramona Boulevard and the tunnel will continue under Santa Anita Avenue (along Romona Boulevard) to the lower level of the El Monte Transit Center and includes 1 "bus only" lane in each direction.	12/31/2021

TABLE IV-C-A-1. LOS ANGELES COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
EL MONTE	LAOG1180	A 0.5 mile Class III bike route with sharrows, a 0.7 mile Class II green-painted bike lane, and a 2 mile a Class II bike lane with buffer pavement stenciling. Improvements includes roadway resurfacing, highlighting, crosswalk improvements, camera installation at intersections, and wayfinding signage. The project runs 3.2 miles along Santa Anita from ELLIOT AVENUE (South) to WEST HONDO PARKWAY (North).	6/30/2022
EL SEGUNDO	LA9918809	Existing pavement shows widespread signs of deterioration throughout the corridor which constitutes a need for rehabilitation. Existing conditions on El Segundo Boulevard are missing ADA compliant curb ramps, larger traffic signal poles, dedicated bicycle facilities including bicycle detection, and adequate pedestrian crossings which will be addressed at specific locations as part of the project. 12,000 linear feet of bike lanes (Class II and Class III) will be installed.	11/15/2026
FOOTHILL TRANSIT ZONE	LAOG1501	Construct Bus Layover Facilities Jointly by AVTA, LADOT & Foothill Transit	12/31/2023
FOOTHILL TRANSIT ZONE	LAOG1234	Mt. San Antonio College (MSAC) Transit Center. The Transit Center includes 10 bus bays, 2 chargers for electric buses, a transit store, lighted sheltered wait areas, real-time bus arrival kiosks, and upgraded ADA and pedestrian access.	12/31/2022
GARDENA	LATRO2020	Implement transit signal priority for 8.4 miles from the Harbor Gateway Transit Station to 120th Street in the city of Gardena. Also implementing real time arrival information through variety of media including smart phones, SMS texts, call centers, and website. Computer aided dispatching (CAD) system and automated vehicle location (AVL) system will also be implemented.	12/31/2021
GARDENA	LAOG1175	Computer Automated Dispatching/Automated Vehicle Location (CAD/AVL)Solution with Real Time Passenger Information Network. Adding TDC in construction phase to match 5307 in FY18/19 for \$400.	12/31/2021
GLENDALE	LAF5307	Glendale Sub-regional traffic management center. Project will connect to the traffic signal network citywide and will design and implement a subregional Traffic Management Center(TMC)., System will be integrated with Metro's Regional Integration of ITS (RIITS) and the County Information Exchange Network (IEN) systems.	Completed
GLENDALE	LAF7709	GLENDALE REGIONAL BIKE PARKING NETWORK : Provides 2 high capacity bike parking facilities and 20 wayfinding signs for bicycle users within the City of Glendale, specifically Glendale Larry Zarian Transportation Center and the Glendale Marketplace/Public Library.	12/31/2021
GLENDALE	LAOG1411	Honolulu Ave and Montrose Ave at Pennsylvania Ave Traffic Signal Modification (Route I-210 Fwy Connectivity)	12/31/2022
HAWTHORNE	LAF9102	5 intersection locations; Signal improvement include Upgrade traffic signal controller and cabinet enabling, Rewiring of the signalized intersection to ensure communication between signal equipment; Upgrade pedestrian signals to count down type and push buttons, Install battery backup system to minimize disruption of traffic during power outage new vehicle detection including bicycle loops/sensors; new bike lane will be one mile (each way).	10/18/2021

TABLE IV-C-A-1. LOS ANGELES COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
HAWTHORNE	LAF7101	PRAIRIE AVENUE MOBILITY PROJECT : (1) Widens Prairie Av intersections at El Segundo Bl and at Rosecrans Av to construct double left-turn pockets for traffic flow improvement and to install Class III bike routes on both sides. (2) Traffic signal upgrade and synchronization of 8 intersections between 118th and Marine. (3) Installs Class III bike equipment, improves pedestrian facilities, and upgrades ADA access ramps, new median curbs and landscaping at intersections.	12/31/2021
HAWTHORNE	LAOG1548	Widen intersections modify and upgrade four traffic signal system, traffic striping, adjustment of utilities, excavation and removal of existing pavement, concrete, asphalt and construction of curb, gutter, sidewalks, driveways and ADA ramps. Signal Synchronization at: El Segundo Blvd at Ramona Ave. El Segundo Blvd. at Aviation Ave. El Segundo Blvd. at Isis Ave. El Segundo Blvd. at Van Ness Ave.	11/30/2022
HAWTHORNE	LAOG1547	Widen intersections, upgrade 6 traffic signal (including ADA ramps where signal upgrade impacts adjacent ramp), turn lane, striping, utilities, concrete, asphalt, curb, gutter, sidewalks, driveways, retaining walls, and raised medians. Rosecrans Avenue at Hawthorne Boulevard Rosecrans Avenue at Inglewood Avenue Rosecrans Avenue at Ocean Gate Avenue Rosecrans Avenue at Hindry Avenue Rosecrans Avenue at Isis Avenue Rosecrans Avenue at Aviation Boulevard	6/30/2022
HAWTHORNE	LAOG1546	Imperial Hwy Signal Improvements and Intersection. PA/ED, PS&E, ROW, Construction. Modify and upgrade 5 traffic signal, traffic striping, utilities, excavation, removal of existing pavement, concrete, asphalt and construction of curb, gutter, sidewalks and driveways. Signal Synchronization at: Imperial Highway at Prairie Avenue Imperial Highway at Freeman Avenue Imperial Highway at Hawthorne Boulevard Imperial Highway at Ramona Avenue Imperial Highway at Inglewood Avenue	6/20/2022
HUNTINGTON PARK	LAOG1669	This project will include new signal poles, conduit, wiring, controller cabinets and video detection. The locations include Slauson Ave at Alameda St, Slauson Ave at Santa Fe Ave, Slauson Ave at Miles Ave/Soto St, Slauson Ave at Boyle Ave/State St, Slauson Ave at Downey Rd/Malburg Way.	2/1/2023
INGLEWOOD	LAF9307	City of Inglewood ITS phase VI project: 5,280 feet of fiber optic along Pincay Drive; Replace 170 controllers with Type 2070 controllers at twelve intersections; Traffic signal synchronization along Pincay Drive between Prairie and Crenshaw; Install changeable message sign at Century/Prairie; and Modernizing City Hall TMC to provide Adaptive Traffic Control and meet current standards.	6/30/2022
INGLEWOOD	LAF7319	Inglewood ITS - PHASE V : (1) Designs and constructs computerized traffic control and monitoring systems. (2) Expands central traffic control and advance traffic management at 39 intersections (3) improves 6.13 miles of fiber optic communications, (4) expands Closed Circuit Television Cameras (CCTV) at 10 intersections, (5) installs Changeable Message Signs (CMS) at 2 intersections, and (6) installs new communication hubs at 3 intersections.	8/31/2021
LA CANADA-FLINTRIDGE	LAF5522	Foothill Blvd. Link Bikeway & Pedestrian Greenbelt Project, Briggs Ave. to Alta Canyon Rd, construct 1.5 miles of Class II Bike Lanes, bike and bus facilities, raised median and 0.5 miles of pedestrian beltway with lighting and hardscape.	1/31/2022

TABLE IV-C-A-1. LOS ANGELES COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
LAKESWOOD	LAOG1262	Lakewood BI Regional Corridor Capacity Enhancement project (Del Amo BI to north City limit) - Class II bike lanes (1.9 mile) in each direction, new sidewalk, street resurfacing, ADA & stormwater compliance, traffic signal modifications, drought resistant landscaping & irrigation, signing & striping, and utility undergrounding within the existing City right of way.	12/31/2021
LAWNDALE	LAF7500	HAWTHORNE BOULEVARD CLASS II BICYCLE LANES: (1) Installs 1.0 mile of Class 2 bike lanes on Hawthorne Blvd for both directions. (2) Provides bicycle parking.	6/30/2021
LONG BEACH	LAF9314	The project consists of signal enhancements that will include synchronization and communications. Also are included are bicycle and pedestrian improvements and inclusion of the corridor into an Adaptive Traffic Control System	12/31/2022
LONG BEACH	LAF9130	Establishing a Great Street (Or Multimodal Corridor) in Long Beach - implementing the City's street prioritization framework. Improvement includes round-about, bus shelter upgrade, bulb-out, enhanced crossing, and Class II bike lane (3 miles)	5/1/2024
LONG BEACH	LAF7522	Delta Avenue Bicycle Boulevard. This north-south bicycle boulevard on Delta Ave (approximately 3 miles) in West Long Beach will consist of Class II lane segments and sharrow markings, traffic circles, traffic signal, and wayfinding signage to nearby Metro Blue Line stations and LA River Bike Path.	12/31/2021
LONG BEACH	LAF7316	ARTESIA CORRIDOR ATCS ENHANCEMENT PROJECT : (1) Upgrades traffic signals along Artesia BI between Long Beach BI and Downey Av to connect with Adaptive Traffic Control System (ATCS). (2) Installs CCTV and CMS on Artesia BI. (3) Installs fiber optic cable and devices to connect signals to each other and traffic management center (TMC). (4) Two new traffic signals in Compton (5) Installs Class II bike lane in both directions from Atlantic Av to Susana Rd. (6) Pedestrian improvements.	12/31/2021
LONG BEACH	LATP16M011	South Water Front/Pier J Bike and Pedestrian Path. The Pier J Bike Path will connect the Port to Downtown Long Beach via the Queensway Bridge bikeway (approximately 1.5 miles - project segments 2-6). Pedestrians and bike improvements in the Port will provide additional safety and mobility for non-motorized users and connect to Pier J.	Completed
LOS ANGELES COUNTY	LAOG1486	The Project consists of design and construction of 1.86 miles of Class I bike path along Puente Creek and 0.37 miles of enhanced Class III bike route along Rimgrove and Witzman Drive adjacent to the Rimgrove County Park. The non-infrastructure portion of the Project includes bicycle and pedestrian safety education and encouragement training workshops and rodeos to students at 3 elementary, 1 middle, and 1 high school located near the proposed bikeway.	6/30/2023
LOS ANGELES COUNTY	LA0D461	RECONSTRUCT- THE OLD ROAD FROM HILLCREST PARKWAY TO LAKE HUGHES RD & WIDEN FROM 40' TO 68', 2 VEH. LANES and a 5' CLASS II BIKELANE IN EA DIR & STRIPPED MEDIAN (FROM 2 TO 4 LNS 2 EA DIR) for 2.1 miles.	6/30/2022
LOS ANGELES COUNTY	LAF5316	South Bay Forum Traffic Signal Corridors Project - systemwide coordination, timing and operational improvements and traffic signal synchronization, equipment upgrades and intersection operational improvements in South Bay region. 25 signals system wide. Additionally, this project will install any warranted and feasible roadway improvements along the routes to improve overall progression.	12/31/2021

TABLE IV-C-A-1. LOS ANGELES COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
LOS ANGELES COUNTY	LAF5315	San Gabriel Valley Forum Traffic Signal Corridors Project. This project includes 6 intersections at Myrtle Av/Peck Rd between Huntington Dr and Clark St and provides for system wide coordination, timing and operational improvements and traffic signal synchronization, equipment upgrades and intersection operational improvements. (approx.. 20+ signals)	12/31/2021
LOS ANGELES COUNTY	LAF5310	Ramona Boulevard/Badillo Street/Covina Boulevard TSSP/BSP. Implementation of a Traffic Signal Synchronization Project (TSSP) on Ramona Bl/Badillo St/Covina Bl from Santa Anita Av to the 57 Freeway. A Bus Signal Priority (BSP) project will be implemented on Ramona Bl/Badillo St from Tyler Av to Grand Av to give transit priority for Foothill Transit operations (approx.. 48 signal locations)	12/31/2021
LOS ANGELES COUNTY	LAF1321	San Gabriel Valley Forum Traffic Signal Corridors Project. Design & construction of multijurisdictional traffic signal synchronization, intersection operational improvements, and intelligent transportation system components. Synchronizes 83 consecutive intersections.	12/31/2021
LOS ANGELES COUNTY	LAF1312	Gateway Cities Forum Traffic Signal Corridors, Phase V. Design and construction of multijurisdictional traffic signal synchronization and intersection operational improvements on regional arterials in the Gateway Cities region. Includes 86 consecutive intersections.	12/30/2021
LOS ANGELES COUNTY	LAF1311	South Bay Forum Traffic Signal Corridors Project. Design & construction of multijurisdictional traffic signal synchronization, intersection operational improvements, and intelligent transp. system components on regional arterials. Synchronizes 50 consecutive intersections.	6/30/2022
LOS ANGELES COUNTY	LA0G1291	Huntington Dr - San Gabriel Bl to 132' w/o Michillinda Ave: Construct approx. 7200ft buffered Class II bike lanes, upgrade curbs & sidewalks to meet standards. Add pedestrian access through the median @S San Gabriel. Add drought tolerant landscaping/hardscape inside median. Install new traffic signal at Huntington Dr & Madre St/Muscatel Av which may require tree removal.	9/30/2022
LOS ANGELES COUNTY	LAF3310	South Bay Forum Traffic Signal Corridors Project. Design and construction of multijurisdictional traffic signal synchronization, operational improvements & ITS components on arterials in the South Bay area of LA County. (approx. 40+ signals)	12/31/2021
LOS ANGELES COUNTY	LAF3309	Gateway Cities Forum Traffic Signal Corridors Proj, Phase VI. Design and construct multijurisdictional traffic signal synchronization, intersection operational improvements & ITS components on regional arterials in Gateway Cites area. (approx.. 126 signals)	12/31/2021
LOS ANGELES COUNTY	LAF3308	San Gabriel Valley Forum Traffic Signal Corridors Project. Design and construction of multijurisdictional traffic signal synch, intersection operational improvements, and intelligent transportation system components on regional arterials. Approx. 183 signals total.	12/31/2021
LOS ANGELES COUNTY	LAF9304	The design and construction of traffic signal synchronization and intelligent transportation system improvements and installation of performance measurement devices in the Gateway Cities area. There are 39 intersections in the TSSP route.	6/30/2027
LOS ANGELES COUNTY	LAF9303	SOUTH BAY FORUM TRAFFIC SIGNAL CORRIDOR PROJECT. This project includes traffic signal synchronization on Crenshaw Boulevard between 120th Street and Rosecrans Avenue and Del Amo Boulevard between Avalon Boulevard and Susana Road (approx. 15+ signals) and also includes systemwide coordination timing, operational improvements and ITS.	6/30/2027

TABLE IV-C-A-1. LOS ANGELES COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
LOS ANGELES COUNTY	LAF7610	Aviation /LAX Green Line Station Community Linkages. The project includes improvements on corridors near the Metro Aviation/LAX Station including pedestrian and bicycle facilities, wayfinding signs, landscaping and traffic calming. An approximate total of 2 miles of bikeway and 2.5 miles of upgraded pedestrian facilities will be implemented.	6/1/2021
LOS ANGELES COUNTY	LAF7508	Vincent Community Bikeways. Install 2 miles of bike paths along the Big Dalton Wash between Irwindale Ave and Lark Ellen Ave and between Arrow Hwy and Citrus Ave, and 1.3 miles of bike lanes and 1.4 miles of bike routes to connect to the existing and proposed bikeways in the surrounding areas.	12/1/2021
LOS ANGELES COUNTY	LAF7308	EAST LOS ANGELES TRAFFIC SIGNAL CORRIDOR PROJECT : (1) Synchronizes traffic signals and implements upgrades at 13 signalized intersections along 3.5 mile segment of Eastern Av. between Medford St and Olympic Blvd. (2) Installs Fiber Optic Communications along Cesar Chavez Av, Ramona Bl, and Atlantic Bl to connect traffic signals to LADPW Advanced Transportation Management System (ATMS).	6/30/2022
LOS ANGELES COUNTY	LAF9511	South Whittier Community Bikeway Access Improvements: Construction of Class II & Class III bike facilities in the unincorporated County area of South Whittier along with various pedestrian intersection improvements	6/30/2022
LOS ANGELES COUNTY	LAF9504	E. Pasadena & E. San Gabriel Bikeway Access Improvements: Install approximately 4.8 miles of bike lanes and enhanced bike routes in the East Pasadena and East San Gabriel communities	12/31/2022
LOS ANGELES COUNTY	LAF7700	WILLOWBROOK INTERACTIVE INFORMATION KIOSKS : Provides information to public transit users by installing 3 interactive kiosks displaying transit, neighborhood, and cultural information. The project will serve the Willowbrook area at Martin Luther King Jr. Hospital, Kenneth Hahn Plaza, and the Metro Willowbrook/Rosa Parks Blue and Green Line Station.	6/30/2022
LOS ANGELES COUNTY	LAF7310	SOUTH BAY FORUM TRAFFIC SIGNAL CORRIDORS PROJECT : Project area is Normandie Av between 92nd St and El Segundo Bl, Manhattan Beach Bl between Manhattan Av and Van Ness Av, and Hawthorne Bl between Imperial Highway and Manhattan Beach Bl. Project scope includes (1) Synchronization and retiming traffic signals, equipment upgrades, system detection, CCTV cameras, changeable message signs. (2) Upgrade traffic signal operations to be capable of time-based coordination.	6/30/2022
LOS ANGELES COUNTY	LAF7307	SAN GABRIEL VALLEY FORUM TRAFFIC SIGNAL CORRIDOR PROJECT : Implements ITS enhancements including synchronization and retiming of traffic signals, equipment upgrades, system detection, CCTV cameras, and changeable message signs to expand Advanced Transportation Management System (ATMS).	6/30/2022
LOS ANGELES COUNTY	LAF7306	FOOTHILL BOULEVARD TRAFFIC SIGNAL CORRIDOR PROJECT : (1) Traffic signal synchronization, equipment upgrades and intersection operational improvements for 28 intersections along Foothill Bl between Lowell Av and Crown Av. (2) Installs two (2) Closed Circuit Television (CCTV) cameras and wireless network communications infrastructure which will provide for expansion of Advanced Transportation Management System (ATMS) along Foothill Bl.	6/30/2022

TABLE IV-C-A-1. LOS ANGELES COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
LOS ANGELES COUNTY	LAF7305	GATEWAY CITIES FORUM TRAFFIC SIGNAL CORRIDOR PROJECT : Designs and constructs ITS improvements along Norwalk Bl, San Antonio Dr, Pioneer Bl between Beverly Bl and Carson St including synchronization and retiming of traffic signals, equipment upgrades, system detection, CCTV cameras (up to 14 CCTVs), and changeable message signs.	6/30/2022
LOS ANGELES COUNTY	LATRO2018	The Whittier Boulevard Transit Signal Priority Project (Project) includes the deployment of ITS infrastructure to enhance arterial operations and monitoring in East Los Angeles. Wireless communications and upgraded controller equipment will be deployed along a critical segment of Whittier Blvd. that serves Metro Rapid Line 720 and provides parallel capacity to the 1-10 ExpressLanes.	12/31/2021
LOS ANGELES COUNTY	LATP17M026	Install new raised bike lanes and sidewalks on an existing 4-lane, 0.8-mile roadway segment of Temple Avenue, between the cities of Walnut and Pomona. This gap closure project will connect bike and pedestrian facilities, two large colleges and employers in to adjacent cities. Sidewalk and bike lane are both 0.8 miles.	3/16/2022
LOS ANGELES COUNTY	LATP17M025	Install a 1.6 mile long and 17-foot wide walkway adjacent to existing Marvin Braude Bike Trail to close the gap between the existing walkways connecting Pacific Palisades and the City of Santa Monica. This will increase safety for cyclists/pedestrians which will increase usage and physical activity opportunities.	12/30/2021
LOS ANGELES COUNTY	LAF9302	The design and construction of traffic signal synchronization and intelligent transportation system improvements and installation of performance measurement devices in the San Gabriel Valley area.	12/31/2023
LOS ANGELES COUNTY MTA	LA0G1247	The Project consists of bicycle and pedestrian transportation linkage improvements to the Rail to Rail Active Transportation Corridor (ATC) Connector Project Segment A along an approximately 5.6-mile long corridor from the future Metro Crenshaw/LAX Fairview Heights Station to the existing Metro Blue Line Slauson Station.	12/31/2021
LOS ANGELES COUNTY MTA	LA0G635	Design and construction of pedestrian and transit enhancements along the public right-of-way of the Metro Gold Line Eastside Extension to surrounding neighborhood. Transit enhancements are within 3 miles of Eastside Goldline Extension station.	6/30/2021
LOS ANGELES COUNTY MTA	LA0G1169	Brighton to Roxford double track: This project adds 11 miles of 2nd track between Burbank and Sylmar on Metrolink's Antelope Valley Line (AVL). The project will eliminate the current bottleneck and improve on time performance and operational reliability on the AVL. This project will be designed to be compatible with the potential future high speed rail alignment.	12/31/2021
LOS ANGELES COUNTY MTA	LA0G1375	This is a large-scale deployment of the Freight Advanced Traveler Information System (FRATIS) Program to deploy advanced congestion management technologies which can achieve significant reductions in truck congestion, improve air quality, and reduce the use of fossil fuels in the Los Angeles region.	12/30/2023
LOS ANGELES COUNTY MTA	LA0G1167	Design and construction of streetscape, pedestrian and bicycle access improvements in the Little Tokyo and Arts District neighborhood of Downtown Los Angeles within a one-mile radius of the 1st/Central Station of the Regional Connector light rail line.	12/31/2021

TABLE IV-C-A-1. LOS ANGELES COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
LOS ANGELES COUNTY MTA	2018FBX00	Los Angeles County; software modifications and hardware upgrades of fare collection equipment at Metro rail stations and on Metro and Municipal Operator buses to address equipment obsolescence, enhance system security, communicate in near real-time, and support future TAP mobile app and other new payment technologies.	12/31/2023
LOS ANGELES COUNTY MTA	LATP17S022	The USC Bike Share Project will increase bike modal share by installing a bike-share kiosk network and bike fleet throughout many key locations within project area. Project is within 3 neighborhoods near Downtown Los Angeles where 5 Metro Rail stations are located- includes key destinations such as USC, the LA Coliseum and Sports Arena, LA Trade Technical College, and museums within Exposition Park. An encouragement and education effort is included. Utilizing Toll Credits to match ATP funds.	3/1/2021
LOS ANGELES COUNTY MTA	LA0G1550	The Patsaouras Plaza Busway Station project - a new transit busway station for the Metro Silver Line and other transit buses operating on the El Monte Busway.	6/30/2023
LOS ANGELES COUNTY MTA	LA0D198	CRENSHAW/LAX TRANSIT CORRIDOR - The Crenshaw/LAX Transit Corridor Project is an 8.5-mile light rail transit (LRT) line extending from the intersection of Crenshaw and Exposition Boulevards allowing for transfer to the Exposition Light Rail Transit line to a connection with the Metro Green Line at the Aviation/LAX Station (PPNO 4027A)	6/30/2022
LOS ANGELES COUNTY MTA	LA0G447	Metro Purple Line Westside Subway Extension Section 1 - Wilshire/Western to La Cienega	12/31/2023
LOS ANGELES COUNTY MTA	LATP19S011	Doran Street Grade Separations Active Transportation Access Project: This project will construct two bridges for shared use by pedestrians and cyclists across Verdugo Wash, San Fernando Road, railroad tracks, and SR-134. Linked to LA0G1050 (Doran Street and Broadway/Brazil safety and access project). The current estimated approximate bridge span lengths are 300 ft for the River Access Bridge and approximately 400 ft for the River Walk Bridge.	12/31/2024
LOS ANGELES COUNTY MTA	LA0G440	The project will extend the HOV lanes on I-5 from the SR-14 interchange to just south of the Parker Road interchange (I-5 PM 45.4 - 59.0), incorporating an additional northbound truck climbing lane from SR 14 to Calgrove Boulevard and an additional southbound truck climbing lane from Pico Canyon Road/Lyons Avenue to SR-14. Includes ITS HUB (I-5 PM 41.4 - 43.8) and extended project limits related to pavement delineation and advanced signage (I-5 PM 45.0 - 59.6).	12/31/2024
LOS ANGELES COUNTY MTA	LA0G010	Regional Connector - Light Rail in Tunnel allowing through movements of trains, Blue, Gold, Expo Lines. From Alameda / 1st Street to 7th Street/Metro Center	6/30/2022
LOS ANGELES COUNTY MTA	LA0G642	Metro Purple Line Westside Subway Extension Section 3	6/30/2027
LOS ANGELES COUNTY MTA	LA0G640	Pacific Surfliner Corridor - Raymer/Bernson Double Track Improvements - upgrade the rail corridor from a single track to a double track, install concrete ties on both tracks, install four new special trackwork turnouts, nine at-grade crossings and two bridges, a new second platform & new fencing at Northridge and a new pedestrian underpass. Other enhancements include signal relocation, utility relocation and drainage improvements.(PPNO 2098)	12/31/2021

TABLE IV-C-A-1. LOS ANGELES COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
LOS ANGELES COUNTY MTA	LA0G1052	Metro Purple Line Westside Subway Extension Section 2 - Wilshire/La Cienega to Century City	6/30/2026
LOS ANGELES COUNTY MTA	LATP17S023	The San Gabriel Valley Bike Share will increase bicycle modal share by installing a network of bike-share kiosks with a fleet of bicycles throughout 15 of the 30 San Gabriel Valley cities. The project will expand LA Metro's existing bike share network in Downtown Los Angeles and will include 840 bicycles at 84 bike share stations near transit hubs, employment centers, and colleges. A public education and awareness campaign is included.	2/25/2021
LOS ANGELES, CITY OF	LAF5518	This project is located in the City of Los Angeles in the West San Fernando Valley. Construction of a bicycle/pedestrian path from Owensmouth Av to Mason Av (1.25 miles) along the south bank of the LA River. Includes underpasses at De Soto Av and Canoga Av/Busway bridges. The project will include lighting, railing, striping and signage and a connection structure to the Metro Orange Line bikeway.	6/30/2021
LOS ANGELES, CITY OF	LAF3171	De Soto Ave Widening: Ronald Reagan Fwy to Devonshire St.. Minor widening of De Soto Ave fr SR-118 to Devonshire St to provide uniform roadway width in each direction as well as installing 10' sidewalk, curb and gutter. Sidewalk is 1.1 miles, 90% of the sidewalks along the project limits will be new.	6/30/2021
LOS ANGELES, CITY OF	LAF3647	Menlo Ave/MLK Vermont Expo Station Pedestrian Improvements. Improve pedestrian access to the new Expo station on Vermont Ave by installing sidewalks, landscaping, and lighting along Menlo Ave. and MLK Jr. Blvd. plus a median on MLK Blvd.	6/30/2022
LOS ANGELES, CITY OF	LAF3515	San Fernando Rd. Bike Path Ph. IIIB Construction. Construct 2.75 mile Class I bike path within METRO right-of-way along San Fernando Rd. between Tuxford St. and Cohasset St. to complete 12-mile bikeway.. The project is located within the City of Los Angeles, in the community of Sun Valley. The project consists of a Class I facility 12 feet in width and 2.75 miles in length between Tuxford St. and Cohasset St. (Burbank City limit).	6/30/2021
LOS ANGELES, CITY OF	LA0G901	Historic Los Angeles Streetcar	12/30/2021
LOS ANGELES, CITY OF	LAF5525	To design and construct curb-side bicycle parking (bicycle corral) that will serve each Council District. The project requires surface modifications to curbside parking areas for installing at least 150 bike racks.	6/30/2022
LOS ANGELES, CITY OF	LATP17S005	The City of Los Angeles will be implementing complete street treatments to improve Jefferson Boulevard between Vermont Avenue and Western Avenue, which includes buffered Class II (0.35 mi) and Class IV (0.65 mi) bicycle facilities, curb extensions, pedestrian refuge areas, path improvements, pedestrian lighting, and additional shade trees with Road Diet from 4 to 2 lanes (1 mile).	5/15/2023
LOS ANGELES, CITY OF	LATP17M014	Arts District Pedestrian & Cyclist Safety Project. The project will establish critical pedestrian and cyclist connections to and within the Arts District in Downtown Los Angeles which is a historic industrial neighborhood with a complex street system that challenges the mobility of all users whether they are on foot, on a bike or in a vehicle. Utilizing Toll Credits to match ATP funds.	4/26/2022
LOS ANGELES, CITY OF	LATP16S006	Boyle Heights Pedestrian Linkages. Pedestrian infrastructure improvements including sidewalk repairs, 3,400 linear feet of new sidewalk, and installation of pedestrian lighting, continental crosswalks, and curb ramps to improve connectivity within community and to 6th Street Viaduct Replacement Project. Utilizing Toll Credits.	10/1/2022

TABLE IV-C-A-1. LOS ANGELES COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
LOS ANGELES, CITY OF	LAF9422	LADOT will procure seven (7) 30-ft Electric clean fuel vehicles to reduce headways on six selected DASH routes	4/30/2022
LOS ANGELES, CITY OF	LA0G1566	Purchase of up to 120 electric 30' to 35' buses for the DASH program expansion	9/26/2022
LOS ANGELES, CITY OF	LAF9527	Project will construct a 3.1 mile cycletrack along Chandler Boulevard, connecting the Chandler and Orange Line Bike Paths and bridging a gap in the low-stress bicycle network	1/1/2023
LOS ANGELES, CITY OF	LAF7814	LADOT STREETS FOR PEOPLE: TRANSIT CORRIDOR PARKLETS AND PLAZAS: Installs 12 parklets and 3 plazas. The limits of the parklets will be equal to two curbside parking spaces (approx. 40x 6). The plaza limit varies ranging from 2,000 to 6,000 SF.	12/31/2021
LOS ANGELES, CITY OF	LA0G1380	Purchase of 170 solar-powered, real-time bus arrival information signs for bus stop improvement in the Los Angeles Promise Zone	6/30/2022
LOS ANGELES, CITY OF	LARE1701A	Implementing Dynamic Corridor Ramp Metering System (DCRMS) in I-405 Sepulveda Pass Corridor (Interstate 405 from I-10 to SR101), a system-wide adaptive ramp metering strategy which simultaneously coordinates with arterial traffic signal operation. The system will dynamically adjust traffic according to current capacity restrictions caused by incidents or recurrent congestion. Improve traffic movement and access to freeway and major arterial including transit operation.	12/31/2022
LOS ANGELES, CITY OF	LA0G1349	Purchase 35 alternative-fuel 30-foot buses to expand DASH fleet and increase service hours and headways.	12/31/2022
LOS ANGELES, CITY OF	LAE3764	Sepulveda Boulevard Closed-Circuit Television Traffic Signal Improvement Signal Sync	4/30/2025
LOS ANGELES, CITY OF	LA0C53	HOLLYWOOD INTERMODAL TRANSPORTATION AND PUBLIC PARKING CENTER ON HAWTHORNE AVE. BETWEEN HIGHLAND AVENUE AND NORTH ORANGE DRIVE (EXIST 500 SP PARK STRUCTURE).TCRP#49.2	10/1/2020
LOS ANGELES, CITY OF	LAF3644	Broadway Historic Theater District Pedestrian Improvements 4th-6th Streets. The project will improve pedestrian safety by installing curb extensions, widening sidewalks, improving pedestrian lighting, enhancing crosswalks, and provide pedestrian amenities; benches, street trees, landscaped buffers from traffic and 10 bike racks. Utilizing Toll Credits to match ATP funds.	6/30/2023
LOS ANGELES, CITY OF	LAF1524	San Fernando Rd. Bike Path Ph. IIIA - Construction. Recommend Phase IIIA-Construction of a Class I bike path within Metro owned rail right-of-way along San Fernando Rd. between Branford St. and Tuxford St incl bridge. 2 mile bikepath.	6/30/2021
MALIBU	LA0G1748	This project aims to improve safety and traffic flow by providing striping and signage for bicycles, a connecting bike path along the beach, separation of pedestrians and bicycles from the active roadway, connectivity to Pacific Coast Highway, a safe pathway for pedestrians, a sand wall, and driveways for Lifeguard Tower access. The proposed bicycle facility will include 1,200 ft of Class I, 1,800 ft of Class II, and 3,800 ft of Class III bike lanes. The pedestrian path is 1,350 ft.	6/30/2021
MALIBU	LA0G910	Pacific Coast Highway Regional Traffic Message Systems. The project will enable the City of Malibu and other agencies to notify travelers of critical regional traffic and safety information and facilitate traffic flow throughout the region. The project will install a maximum of 4 permanent changeable message signs at strategic locations along PCH/SR-1 corridor in the City of Malibu.	3/31/2021

TABLE IV-C-A-1. LOS ANGELES COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
Metro Gold Line Foothill Extension Construction Au	LA29212XY	METRO RAIL GOLD LINE FOOTHILL EXTENSION - AZUSA TO CLAREMONT (LA County Line) 12 MILE, 5 STATION LRT EXTENSION. SAFETEA-LU # 285 LEAD AGENCY WILL CHANGE TO METRO GOLD LINE.	6/30/2025
MONTEBELLO	LATP17M028	The project consists of dedicated Class II bike lanes, sidewalk construction, ADA-compliant corner ramps, and pedestrian lighting and traffic signal improvements along Montebello Boulevard to connect retail/employment centers with low/moderate income housing to increase active transportation-related activities. 1.4 miles from Lincoln Ave to Paramount Blvd.	3/16/2022
MONTEREY PARK	LAF9502	Monterey Pass Road Complete Streets Bike Project is a 1.6 mile corridor providing multimodal transportation alternatives increasing ped, bike & transit use for the first last mile.	12/31/2023
NORWALK	LAOG1342	Imperial Highway ITS Project, from San Gabriel River to Shoemaker Road: Traffic Signal Synchronization	3/31/2021
NORWALK	LATP17S028	Design and construct 12,000 LF of Class 2 bicycle lanes and improve 2,000 LF of sidewalk on Alondra Blvd. This is part of a long-range project identified in the Gateway Cities 2014 Strategic Transportation Plan to create over 14 miles of bike lanes along this corridor.	6/1/2026
PASADENA	LATP17M021	The City of Pasadena will install a 1.5-mile, two-way, protected cycle track (Class I) on Union Street from Hill Avenue to Arroyo Parkway, including necessary signal upgrades with Road diet from 3 to 2 lanes. Also installing bike boulevard (0.3 miles, Class III) along Holliston Avenue between Union St and Cordova St (no Road Diet.)	12/31/2022
PASADENA	LAF3522	Cordova Street Complete Streets Project. Convert the vehicular-oriented street to a complete street by removing 2 vehicular traffic lanes to accommodate bike and pedestrian facilities. City of Pasadena - Hill Street to Arroyo Parkway.	7/30/2023
PASADENA	LAF3701	Pasadena ARTS Enhanced Passenger Information. Enhancement of the Pasadena Area Rapid Transit System Vehicle Arrival Information System via telephone and 26-50 wayside signs..	12/31/2021
PICO RIVERA	LAF7502	Regional Bikeway Project. The project will install a bicycle/pedestrian bridge, Class II bicycle lanes, a Class I shared- use path, traffic calming medians, sidewalks, curb ramps, signal modifications, and wayfinding signage, connecting to two regional Class I routes.	12/31/2021
POMONA	LATP19S009	Priority projects of the Pomona Active Transportation Plan, including 10.2 miles of bike lanes, 1.8 miles of traffic calming measures, and 14 intersections of bike/ped improvements.	9/24/2024
POMONA	LAF9526	Pomona ATP Phase 2 Bicycle Network for Community Assets: Nearly 9 miles of bikeways along 5 roads, improving access to community destinations and assets, enhancing access to the local and regional multi-modal transportation network.	12/1/2026
REDONDO BEACH	LAOG1423	Purchase and install a Real Time Passenger Information System on Beach Cities Transit fixed route buses.	6/30/2022
REDONDO BEACH	LAF3502	Redondo Beach Bicycle Transportation Plan Implementation. Implement Class II and III bike facilities identified in the City of Redondo Beach's adopted Bicycle Transportation Plan. Approximately 2.1 centerline miles of bike lanes and 15.8 centerline miles of bike routes throughout the City of Redondo Beach.	6/30/2022

TABLE IV-C-A-1. LOS ANGELES COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
REDONDO BEACH	LAF5301	Grant Avenue Signal Improvements. This project is located in Redondo Beach in the South Bay subregion on Grant Av between Inglewood Av and Aviation Bl. The project will upgrade six existing traffic signals. The project involves synchronization, bike detection, signal replacement, video detection, adaptive signal coordination, wireless connection and integration into the Redondo Beach Traffic Management Center (TMC).	6/30/2022
REDONDO BEACH	LAF7521	BICYCLE TRANSPORTATION PLAN IMPLEMENTATION PHASE II: (1) Road diet with bidirectional Class 2 bike lanes on Prospect Av (3.33mi) and on Catalina Av (1.63mi). (2) Installs bulbouts at stop-controlled intersections on Catalina. (3) Installs roundabout on North Harbor Dr at Yacht Club Wy and at Herondo St. (4) Installs high-visibility crosswalks at all-way controlled intersections and at crossings approaching the roundabout.	12/31/2023
REDONDO BEACH	LA0D29	CITY BUS TRANSFER STATION. Relocate existing transit terminal & construct new transit center w/12 bus bays, pax waiting area & info center, & driver lounge. Property provides 339 public pkg spaces (plus 2 for staff maint & security) & bicycle facilities. Location 1521 Kingsdale Ave, RB, CA 90278. Project also includes minor surface street improvements on Kingsdale Ave and 182nd : Kingsdale widening adds dedicated right turn lane and 182nd restriping removes bus layover and adds a bike lane.	12/31/2021
SAN FERNANDO	LAF9313	This project improves operation of 6 major arterials by synchronizing 35 intersections along 6 corridors, minor lane/signal modification & installation of 3 changeable message signs.	3/31/2023
SANTA CLARITA	LA0G774	Vista Canyon Ranch Transit Center - relocate the existing, temporary Via Princessa Metrolink Station to the Vista Canyon project site; includes Metrolink Station and Bus Transfer Station, a pedestrian overpass or undercrossing of the tracks and an adjacent parking structure with up to 750 parking spaces.	6/30/2022
SANTA CLARITA	LAF9118	LYONS AV/DOCKWEILER DR EXTENSION (2 of 2): Construct Dockweiler Drive gap closure between 12th St. and existing terminus of Dockweiler Dr, just west of Valle Del Oro. Constructs 8-ft sidewalks and Class II bike lanes on both sides.	12/31/2024
SANTA CLARITA	LAF9513	Railroad Avenue Class I Bike Path: Project will add 1.45 miles of Class I bike path on Railroad Avenue and enhance connectivity to the Jan Heidt newhall Metrolink Station to the City's bicycle trail network	6/30/2023
SANTA MONICA	LAF7320	This project will enhance the existing Traffic Management System with the installation of video detection systems. The new equipment will facilitate detection of bicycles at intersections resulting in enhanced multi-modal signal timing. The detection of bicycles at intersections would optimize signal timing and create shorter call times for the transit corridors. New traffic signal poles may be required to install the video equipment.	12/31/2021
SIGNAL HILL	LATP17S010	The project will install approximately 2.0 lane miles of bike lanes (Class II) on Spring Street, repave roadway to minimize drainage to bike lanes/level surface, revised striping, signing, modified pedestrian walkways/ramps, signal pedestrian countdown heads, safety lighting, and install bio-retention stormwater quality devices.	9/15/2026

TABLE IV-C-A-1. LOS ANGELES COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
SOUTH EL MONTE	LAF5516	Installation of Class II bike lanes on Santa Anita Ave from Klingerman St to end of City Limits south of Merced Ave (1.5 mi) and on Merced Ave from Fern Ave to Santa Anita Ave (1.3 mi) while Class III bike routes with shared-lane markings will be installed on Lerma Ave from Merced Ave to SW City Limits (0.3 mi) and on Thienes Ave from Tyler Ave to SE City Limits (1 mi). The scope of work also includes installation of bike parking at the Civic Center and wayfinding/signage.	6/30/2022
SOUTH GATE	LA9918774	Construct raised median included in the scope of work is Timing and Coordination and Intelligent Transportation System for existing three (3) traffic signals.	12/31/2023
SOUTH GATE	LAF7309	TWEEDY BOULEVARD SIGNAL SYNCHRONIZATION PROJECT : (1) Interconnects 18 traffic signals using fiber optic cable and wireless communications (2) synchronizes signal timing to improve traffic flow, and reduces delays along the 2.7-mile arterial. (3) Install a Closed Circuit Television Camera (CCTV) at the intersection of Long Beach Bl to support the Advance Transportation Management Systems (ATMS).	4/30/2022
SOUTH GATE	LATP17S006	Install a Class I bike path (750 ft), Class II bike lanes (2.65 miles), and Class III bike routes (1.61 miles) along with pedestrian improvements including sidewalk, curb extensions, ADA curb ramps, high visibility crosswalks, rectangular rapid flashing beacon, bus shelters, and bike racks.	5/24/2026
SOUTH PASADENA	LAF5308	South Pasadena's ATMS, Central TCS and FOIC for Fair Oaks Av. This project is located in South Pasadena on Fair Oaks Av between Columbia St and Huntington Dr. It will establish a fiber-optic backbone communication system connection between 12 signals on Fair Oaks Av and City Hall and install the ATMS/central management/control system at its City Hall Building. Funds are for design and construction costs.	12/31/2021
SOUTHERN CALIF REGIONAL RAIL AUTHORITY	LA0G1596	San Fernando Road Bike Path Phase III - Crossings Safety Improvement. The project is located along San Fernando Road between Branford Street in the City of Los Angeles to CP Hollywood in the City of Burbank and includes 4.2 mile of bike path and 5 at-grade crossings.	12/31/2023
SOUTHERN CALIF REGIONAL RAIL AUTHORITY	LA0G1298	Procurement of two (2) new locomotives to increase Metrolink service frequency and reduce headways. The locomotives will be EPA Tier-4 F-125 units that will improve emissions, reliability and performance relative to the F59 locomotives currently in service.	12/31/2022
TORRANCE	LA0G358	South Bay Regional Intermodal Transit Center Project at 465 N. Crenshaw Blvd., Torrance, CA 90503.	6/30/2022
TORRANCE	LA0G1589	Anza Ave from Del Amo Blvd to Sepulveda Blvd; asphalt pavement rehabilitation, repair damaged sidewalks and curb and gutter, traffic signal improvements to increase capacity and throughput (video detection, pedestrian actuation), installation of emergency vehicle preemption. \$258k of Toll Credits being used to match STPL funds in CON for FY20/21.	12/31/2021
TORRANCE	LA0G1280	Purchase of seven (7) all electric buses for a new circulator service. Rubber-wheel trolley service will operate in Old Town area, as well as hotel and financial district on Hawthorne Blvd. Origin/terminus is at the Torrance Transit Park and Ride Regional Terminal (465 Crenshaw Blvd).	12/31/2022
VERNON	LATP17M018	The project will install one-way protected cycle tracks (Class II - 1.13 miles) with a raised curbed buffer on Pacific Boulevard between Santa Fe Avenue and Fruitland Avenue and install safety improvement at signalized and uncontrolled crosswalk locations along Pacific Boulevard and at the uncontrolled cross location at Santa Fe Avenue and 52nd Street.	11/1/2022

TABLE IV-C-A-1. LOS ANGELES COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
WESTLAKE VILLAGE	LAOG1682	The project consists of a one (1) mile curvilinear pedestrian walkway extending along Lindero Canyon Rd from Agoura Road to Foxfield Drive, creating a safe corridor for pedestrians by eliminating the need to walk in the street, which has a 45mph speed limit and had a history of pedestrian/vehicular accidents. The project includes bioswales and infiltration elements, site lighting, seat walls, landscape improvements.	12/31/2022
WHITTIER	LAF7519	WHITTIER GREENWAY TRAIL EAST EXTENSION : This project is located in the City of Whittier. It will implement a two-mile Class I bike/pedestrian path on a City-controlled easement along the Union Pacific Railroad corridor from Mills Av to Leffingwell Rd, and it will also provide a trailhead east of Mills Av. The project promotes a regional bikeway corridor by extending the 4.5-mile Whittier Greenway Trail east at the City and LA County limits. \$247 in Toll Credits added in FY 19 to match CMAQ	1/31/2022
WHITTIER	LAF5314	Gateway Cities Forum Traffic Signal Corridors Project - improve traffic signal operations by upgrading each traffic signal to federal and state standards, providing additional vehicle detection to enable operation as a fully traffic-actuated signal, installing the appropriate components to enable each signal to be capable of time-based coordination and retiming signals to improve the overall progression of traffic.(approximately 17 signals included)	6/30/2021
WHITTIER	LATP16S011	Whittier Greenway Trail East Extension Gap Closure. Acquisition of final 0.5 mile and construction/completion of final 2.8 miles of the 7.3-mile Whittier Greenway Trail, a Class I bicycle and pedestrian trail along southern boundary of Whittier, connecting LA & Orange County.	6/30/2021

TABLE IV-C-A-2. ORANGE COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
ANAHEIM	ORA151509	West Street and Citron Street Sidewalk Gap Closure - Construction of sidewalk gap closures to create new 5-ft-wide sidewalk, curb and gutter, and drainage facilities along West and Citron Streets, as well as non-infrastructure activities. Toll Credit for ATP-MPO.	2/1/2023
ANAHEIM	ORA152211	Nohl Ranch Open Space Trail - project will consist of a 10-foot wide Class I bikeway and a 3 to 10-foot wide pedestrian trail (pending clearance), in compliance with Caltrans standards. The project alignment would be approximately 5,100 LF and connect Anaheim Hills Road to the signalized crossing on the east side of Avenida Bernardo North. Ancillary features of the project include lighting, lane markings, signs, bicycle parking and pedestrian amenities.	6/30/2023
LA HABRA	ORA113011	La Habra Union Pacific Railroad Bikeway. ENG for Union Pacific Railroad ROW between La Habra West City Limits and La Habra East City Limits. ROW for La Habra West City Limits to Beach Boulevard. Toll Credit Match for ATP-MPO - Split project with ORA190920 for ROW.	7/1/2025

TABLE IV-C-A-2. ORANGE COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
ORANGE COUNTY	ORA170205	HAZARD AVENUE BIKEWAY PROJECT between Goldenwest Street and Euclid Avenue. Construct approximately 4 miles of a Class IV (paved, on-road protected) Bikeway in the cities of Westminster and Garden Grove.	12/1/2023
ORANGE COUNTY	ORA172202	OC Loop El Cajon Bikeway Gap Closure (Segment H) - Install Class II, III & IV bikeway facilities within the City of Yorba Linda, Anaheim & unincorporated Orange County spanning 1.2 miles from Fairlynn Blvd to the terminus of the existing Santa Ana River Regional Riding & Hiking Trail and Bikeway.	10/31/2026
ORANGE COUNTY TRANS AUTHORITY (OCTA)	ORA130099	Purchase (15) Expansion Paratransit Vans (OCTA)	12/31/2022
ORANGE COUNTY TRANS AUTHORITY (OCTA)	ORA171401	Six 40' Compressed Natural Gas Expansion Buses (Route 529)	9/30/2024
ORANGE COUNTY TRANS AUTHORITY (OCTA)	ORA080909	OC STREETCAR BETWEEN SARTC AND A NEW TRANSIT CENTER IN GARDEN GROVE, NEAR THE INTERSECTION OF HARBOR BOULEVARD AND WESTMINSTER AVENUE. (Transit Development Credit Match for FHWA Transfer FY16/17 is \$306k & TDC Match for FHWA Transfer FY18/19 is \$2.822M)	12/31/2022
ORANGE COUNTY TRANS AUTHORITY (OCTA)	ORA030605	I-405 FROM SR-73 TO I-605. Add 1 MF lane in each direction and additional capital improvements (by 2022), convert existing HOV to HOT. Add 1 additional HOT lane each direction. Combined with ORA045, ORA151, ORA100507, ORA120310, and ORA030605A. Signage from PM 7.6 to 24.2	12/31/2026
ORANGE COUNTY TRANS AUTHORITY (OCTA)	ORA085004	Anaheim Canyon Station project will add double track and another platform as well as extend the existing platform to be in conformance with the Metrolink standards for passenger platform length. (TDCs in FY18/19 \$136 for DES, \$29 for ROW and \$2,532 for CON; 5307 FHWA Transfer: \$43 in FY19/20 from Orange Parking Structure savings already in FTA grant CA-2017-072)	12/31/2022
ORANGE COUNTY TRANS AUTHORITY (OCTA)	ORA030612	PLACENTIA TRANSIT STATION - E OF SR-57 AND MELROSE ST AND N OF CROWTHER AVE. CONSTRUCT NEW METROLINK STATION AND RAIL SIDING PPNO 9514	12/31/2022
ORANGE COUNTY TRANS AUTHORITY (OCTA)	ORA190701	Orange County Traffic Signal Synchronization Projects: El Toro Road, Magnolia Street and Brookhurst Street. El Toro Road (Bridger Road to Orange Street): 9 miles and includes 20 traffic signals. Magnolia Street (Banning Avenue to Commonwealth Avenue): The 16.2 miles and includes 50 traffic signals. Brookhurst Street (PCH to Commonwealth Avenue): The 16.5 miles and includes 58 traffic signals	1/31/2022
ORANGE COUNTY TRANS AUTHORITY (OCTA)	ORA112702	Rideshare Vanpool Program - Capital Lease Cost FY12/13 - FY20/21. This project includes subsidy, marketing, database, ride guide and associated costs for the Rideshare/Vanpool program. Transit Development Credits: FY18/19 FTA 5307 Transfer @ \$516, FY20/21 CMAQ @ \$516 and FY21/22 CMAQ @ \$516	9/30/2024
SANTA ANA	ORA190901	Freemont Elementary and Spurgeon Intermediate SRTS - Pedestrian/bicyclist traffic safety improvements for Fremont Elementary and Spurgeon Intermediate safe routes to school. Work includes bulbouts, curb ramps, 2,383 linear feet (lf) of new sidewalk, 10,824 lf of class 3 bikeways and a road diet with 5,280 lf of class 2 bikeways. State only funds.	12/15/2024
SANTA ANA	ORA152212	Bristol Street Protected Bicycle Lanes - Install 1.25 mile protected bike lane on Bristol Street from Edinger Avenue to 1st Street.	6/30/2023

TABLE IV-C-A-2. ORANGE COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
SANTA ANA	ORA170802	First Street Pedestrian Improvements - Widen existing sidewalks by three feet, narrow the vehicle lanes, construct ADA improvements on sidewalks and wheel chair ramps, provide high visibility marked crosswalks, and add a signal controlled pedestrian crossing along First Street, 1.1 mile corridor.	12/14/2026
SANTA ANA	ORA152210	Bristol Street - Edinger Avenue Class II Bike Lanes - Install a 1.25 mile Class II Bike Lane on Bristol Street from Sunflower Avenue to Central Avenue and install a .5 mile Class II Bike Lane on Edinger Avenue from Bristol Street to Flower Street.	6/30/2023
SANTA ANA	ORA151502	Santa Ana and Fifth Protected Bike Lane - Install median protected bike lanes on Santiago, Sixth, Brown, Garfield, French, Fifth and Santa Ana with all applicable signage, striping, and signal improvements. ATP State only funding.	12/1/2026
SANTA ANA	ORA151503	The Edinger Ave Protected Bike Lanes Project - Install bike lanes down the 1.7 mile corridor passing through residential homes, schools, parks, and small business shopping centers. The Project includes a Safe Routes to School program at 3 schools. ATP State-Only funded.	12/1/2026
SANTA ANA	ORA190905	Standard Avenue Class IV Protected Bike Lane and Class II Buffered Bike Lane from 3rd Street to Warner Avenue and Protected Intersection Project at McFadden in the City of Santa Ana. Project includes 9,900 linear feet (lf) of road diets, 4,000 lf class II, 1,700 lf class III, and 5,900 lf class IV bikeways. ATP toll credits.	12/15/2024
SANTA ANA	ORA190904	McFadden Ave. Protected Bike Lane and Bicycle Blvd. Project - McFadden Ave. 15,050 linear feet of class IV protected bike lanes and road diets and 6,365 linear feet of class III Bicycle Blvd from Harbor Blvd to Grand Ave in the City of Santa Ana. ATP toll credits.	12/15/2024
TCA	10254	SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR (SJHTC - SR 73). 15 MI TOLL RD BETWEEN I-5 IN SAN JUAN CAPISTRANO & RTE 73 IN IRVINE, CONSISTENT WITH SCAG/TCA MOU 4/5/01. EXISTING 3 M/F EA DIR. 1 ADDITIONAL M/F EA DIR, PLUS CLIMBING & AUX LANES BY 2022.	12/31/2022
TCA	ORA051	FOOTHILL TRANSPORTATION CORRIDOR-NORTH (FTC-N - SR 241). 12.7 MI TOLL ROAD BETWEEN OSO PKWY AND ETC, CONSISTENT WITH SCAG/TCA MOU 4/05/01. EXISTING 2 M/F IN EA DIR. 2 ADDITIONAL M/F, PLS CLIMBING & AUX LANES BY 2022.	12/31/2022
TCA	ORA050	EASTERN TRANSPORTATION CORRIDOR (ETC- SR 241/261/133) 26.4 MI TOLL ROAD CONNECTS SR 91 to I-5 via SR 261 and SR 133, CONSISTENT WITH SCAG/TCA MOU 4/05/01. EXISTING 2 M/F EA DIR. 2 ADDITIONAL M/F IN EA DIR, PLUS CLIMBING AND AUX LANES BY 2022.	12/31/2022
VARIOUS AGENCIES	ORA111207	241/91 EXPRESS LANES (HOT) CONNECTOR: NB SR-241 TO EB SR-91, WB SR-91 TO SB SR-241.	12/31/2035
VARIOUS AGENCIES	ORA100511	SR-55 WIDENING BETWEEN I-405 AND I-5 - ADD 1 MF AND 1 HOV LANE EACH DIRECTION AND FIX CHOKEPOINTS FROM I-405 TO I-5; ADD 1 AUX LANE EA DIR BTWN SELECT ON/OFF RAMP AND NON-CAPACITY OPERATIONAL IMPROVEMENTS THROUGH PROJECT LIMITS. Toll Credit for RSTP and CMAQ. (Including street traffic signal improvement at I-5/Newport Avenue onramp for mitigation. non-capacity)	4/30/2027
VARIOUS AGENCIES	ORA111801	I-5 (Alicia Parkway to El Toro Road) Segment 3 - The project will add one general purpose lane on the I-5 in each direction between Alicia Parkway and El Toro Road (approximately 1.7 miles), Extend the 2nd HOV lane in both directions and add auxiliary lanes where needed.	9/30/2025

TABLE IV-C-A-2. ORANGE COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
VARIOUS AGENCIES	ORA111209	LAGUNA NIGUEL TO SAN JUAN CAPISTRANO PASSING SIDING - ADD 1.8 MILES OF NEW RAILROAD TRACK ADJACENT TO THE EXISTING MAIN TRACK. (INCLUDES SLOPE STABILIZATION/RETAINING WALL) MP 193.9 - MP 195.7 (project will utilize TDC Match - 5307 FHWA Transfer: \$438 in FY13/14; \$2,125 in FY16/17. CMAQ: \$264 in FY21/22. 5307 FHWA Transfer: \$47 in FY19/20 from Orange Parking savings already in grant CA-2017-072)(PPNO 2107)	2/28/2023
VARIOUS AGENCIES	ORA111210	I-5 FROM SR 55 TO SR 57 - ADD 1 HOV LANE EACH DIRECTION (PPNO 2883A). Signage from PM 31.1 to 37.7. (Utilize toll credit match)	12/31/2021

TABLE IV-C-A-3. RIVERSIDE COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
CITY OF EASTVALE	RIV210402	in the City of Eastvale: Pedestrian Safety Improvement Project - Construction of sidewalk along Hall Avenue between Chandler Street and Walters (approximately 2,000 sf), Citrus Street between Scholar Way and Carrollton Place (1,420 ft) and handicap ramp at the intersection of Schleisman Road and Sumner Avenue.	12/31/2021
CITY OF JURUPA VALLEY	RIV160504	IN WESTERN RIVERSIDE COUNTY FOR THE CITY OF JURUPA VALLEY - SRTS PROJECT TO PROVIDE CURB, GUTTER, SIDEWALK, AND DIRT TRAILS ALONG MARTIN ST, 48TH ST, AND TROTH ST, INCLUDING LED CROSSWALK FLASHERS AT THE MARTIN/BELLEGRAVE INTERSECTION AND CURB BUMP OUTS AT THE MARTIN ST INTERSECTIONS.	12/31/2024
HEMET	RIV181010	IN CITY OF HEMET - HEMET VALLEY BIKEWAY CONX: INSTALL CLASS II (1,200 LF), III (10,500 LF) BIKE LNS, NEW S/W (4,000 LF) W/ ADA RAMP, XING IMP., ON PALM BW ESPLANDE & JOHNSTN, WHITTIER BW PALM & GILBERT, JOHNSTN BW PALM & GILBERT, GILBERT BW WHITTIER & CHAMBERS, CHAMBERS BW GILBERT & STATE; BIKE STAGING W/ DETECTION, LOCKERS, REPAIR AREA; INCL OUTREACH. (ATP-3 AUG STATE) TC UTILIZ FOR FY19, FY20.	9/1/2023
RIVERSIDE COUNTY	RIV181007	IN WEST RIV CO IN UNINCORPORATED CABAZON : CABAZON SRTS SIDEWALK SAFETY IMPROVEMENTS: INSTALL 3,000 LF OF NEW S/W, CURB&GUTTER, PAVEMENT WIDENING, ADA CURB RAMP, DRIVEWAY APPROACHES, SIGNS, MARKINGS ALONG THE EAST SIDE OF BROADWAY ST. (B/W CARMEN AVE & 400 FT. S/O MAIN ST) & ALONG THE S/S OF CARMEN AVE (B/W ALMOND ST & CABAZON ELEMENTARY) (ATP-3 AUG-STATEWIDE) (STATE-ONLY FUNDS)	12/31/2022
RIVERSIDE COUNTY TRANS COMMISSION (RCTC)	RIV200105	In Western Riverside County - Continue the implementation of subsidies for eligible vanpools commuting to worksites in Western County.	12/30/2030

TABLE IV-C-A-3. RIVERSIDE COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
RIVERSIDE COUNTY TRANS COMMISSION (RCTC)	RIV160101	IN WESTERN RIVERSIDE COUNTY ON SR-91/I-15: On I-15 - ADD TOLL EXPRESS LANE MEDIAN DIRECT CONNECT FROM SB15 TO WB91 & EB91 TO NB15, 1 TOLL EXPRESS LANE EACH DIRECTION FROM HIDDEN VALLEY TO SR91 DIRECT CONNECTOR. CONSTRUCT OPERATIONAL IMPROVEMENT BY EXTENDING THE EB91 EXPRESS LANE AND AUXILARY LANE ALONG SR91. CONSTRUCT ADDITIONAL SIGNAGE ALONG SR91 AT PM R18.0 IN OR COUNTY.	6/30/2023
RIVERSIDE COUNTY TRANS COMMISSION (RCTC)	RIV111207	IN WESTERN RIVERSIDE COUNTY - CONTINUE THE IMPLEMENTATION OF PARK & RIDE FACILITIES THROUGH PROPERTY LEASES (VARIOUS LOCATIONS THROUGHOUT THE WESTERN COUNTY).	12/30/2028
RIVERSIDE COUNTY TRANS COMMISSION (RCTC)	RIV151104	FREEWAY SERVICE PATROL (FSP) – CONTINUED IMPLEMENTATION OF FSP ON SR-91 (ORANGE COUNTY LINE TO 60/91/215 INTERCHANGE), SR-60 (MILLKEN TO THEODORE), I-215 (SAN BERNARDINO COUNTY LINE TO MURRIETA HOT SPRINGS), I-15 (SR-60 TO SR-79/TEMECULA PARKWAY).	12/31/2028
RIVERSIDE TRANSIT AGENCY	RIV180131	IN WESTERN RIV CO IN THE CITY OF HEMET FOR RTA - CONSTRUCTION OF THE HEMET MOBILITY HUB ON 2 ACRE PARCEL LOCATED EAST OF RAIL ROW, SOUTH OF EAST DATE STREET, W/O NORTH JUANITA ST, AND NORTH OF EAST DEVONSHIRE AVE TO INCLUDE: 10 BUS BAYS, 10 SHELTERS/CANOPIES, 20 PARKING SPACES, 1 TRAFFIC SIGNAL AT DEVONSHIRE & CARMALITA, 1 CONTROLLED INTERSECTION AT DEVONSHIRE AND JUANITA; STORAGE AND RESTROOM FACILITY. (FTA 5339: FY15 \$1,626 (URBAN) ; FY16 \$317 AND FY17 \$326 (SMALL URBAN).	12/31/2030
RIVERSIDE, CITY OF	RIV181012	IN WESTERN RIVERSIDE COUNTY IN THE CITY OF RIVERSIDE - LA SIERRA NEIGHBORHOOD SIDEWALK IMP: INSTALLATION OF 1.28 MILE OF ADA-COMPLIANT SIDEWALK ON CARMINE ST, RICHMOND ST, NORWOOD AVE. FROM COLLEGE AVENUE TO SIERRA VISTA AVE., ON DOVERWOOD DR. FROM BUTLER DR. TO LA SIERRA AVE., ON A PORTION OF BUTLER DR. AND ON COLLEGE AVE FROM DOVERWOOD DR. TO NORWOOD AVE. (ATP-3 AUG STATEWIDE, SOF)	3/30/2023
RIVERSIDE, CITY OF	RIV140841	IN WESTERN RIVERSIDE COUNTY FOR CITY OF RIVERSIDE-IOWA AVE & MLK BLVD BIKE IMPROVEMENTS: CONSTRUCT 0.8 MI 10 FT WIDE TWO DIR MULTI-USE PATH ON N.SIDE OF MLK BLVD B/W CANYON CREST DR & CHICAGO AVE & WIDENING IOWA AVE B/W MLK BLVD & EVERTON PL INCLUDES GRADING, ASPHALT PAVING, SIGNS, & RESTRIPIING & INSTALL 6 FT CLASS II BIKE LNS FOR 0.8 MI WITH 2 FT BUFFERS	12/31/2020
RIVERSIDE, CITY OF	RIV160404	IN WESTERN RIVERSIDE COUNTY FOR THE CITY OF RIVERSIDE - CITYWIDE BIKE AND PEDESTRIAN IMPROVEMENTS INCLUDING: INSTALL OF 5.5 MI OF CLASS II BIKE LANES ON CENTRAL AVE; 2.4 MI OF CYCLE TRACKS ON WATKINS DR AND CANYON CREST; SHARROW PAVEMENT MARKINGS AROUND FAIRMOUNT PARK; 20 BIKE RACKS THROUGHOUT DOWNTOWN AREA; & HAWK SIGNALS AT 3 UNCONTROLLED CROSSWALKS.	12/31/2024

TABLE IV-C-A-4. SAN BERNARDINO COUNTY			
LEAD AGENCY	PROJECT ID	PROJECT DESCRIPTION	COMPLETION DATE
FONTANA	20131506	IN FONTANA: SAN SEVAINE TRAIL (PHASE 1, SEG 2) North/South 1.25 mile long, 12 ft wide paved multi-use trail from Banyan St. to the Pacific Electric Trail in Fontana	6/30/2022
OMNITRANS	20151301	REDLANDS PASSENGER RAIL PROJECT (RPRP): NEW PASSENGER RAIL SERVICE FROM RIALTO / E ST IN SAN BERNARDINO TO REDLANDS. (SBCTA is sub recipient of FTA funds & is actual project Lead Agency)(TD Credits: 5307-TR FTA FUNDS FY19/20 \$3,998) (THE PROJECT MANAGEMENT COST OF APPROX \$20M IN LOCAL FUNDS IS NOT INCLUDED IN FTIP TOTAL COST.)(Includes locomotive purchase from study project 20151303)	12/31/2021
OMNITRANS	20150307	COUNTY-WIDE VANPOOL PROJECT (Ongoing)(TDC: FY16/17 CMAQ CON \$460k)	6/30/2023
SAN BERNARDINO COUNTY TRANSPORTATION AUTHORITY	201186	AT SR-210/BASE LINE IC: RECONSTRUCT/WIDEN BASE LINE BETWEEN CHURCH AVE AND BOULDER AVE FROM 4 TO 6 THROUGH LANES AND EXTEND LEFT TURN LANES, WIDEN RAMPS : WB EXIT 1 TO 3 LANES, WB AND EB ENTRANCES 1 TO 3 LANES INCLUDING HOV PREFERENTIAL LANES (EA 1C970)	12/31/2022
SAN BERNARDINO COUNTY TRANSPORTATION AUTHORITY	20190702	SBCTA Metrolink Station Accessibility Improvement Project - Phase II: Bicycle and pedestrian accessibility improvements near five Metrolink transit stations (Montclair, Upland, Rancho Cucamonga, Fontana, and San Bernardino). Toll Credit to match ATP	5/21/2024
SAN BERNARDINO COUNTY TRANSPORTATION AUTHORITY	20159901	I-15 Express Lanes (Contract 1): Construct 1 Exp. Lane in each direction between Cantu-Galleano Ranch Rd. and SR-60 and 2 Exp. Lanes in each direction between SR-60 and north of Foothill Blvd. Additional improvements to AUX LN widening, undercrossing, and reconstruction of ramps and lane transitions where needed.	10/1/2026
VARIOUS AGENCIES	20159902	I-10 CORRIDOR EXPRESS LANE WIDENING (Contract 1): FROM SAN ANTONIO AVE TO I-10/I-15 IC; IMPLEMENT 2 EXPRESS LNS IN EACH DIRECTION FOR A TOTAL OF 4 GENERAL PURPOSE AND 2 EXPRESS LNS IN EACH DIRECTION AND AUX LANE WIDENING, UNDERCROSSINGS, OVERCROSSINGS, AND RECONSTRUCTION OF RAMPS AND LANE TRANSITIONS WHERE NEEDED. (Toll Credits to match STP, CMAQ) (Toll System Provider (TSP) split as 20159902a)	10/1/2023

## Attachment B: Reasonably Available Control Measure (RACM) Analysis - TCMs

Section 108 (f) 1. Programs for Improved Public Transit					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
1.1	Regional Express Bus Program	Purchase of buses to operate regional express bus services.	Yes		CTCs (MTA, OCTA), Transit Operators
1.2	Transit access to airports	Operation of transit to airport to serve air passengers.	Yes		Transit Operators, Burbank Glendale Pasadena Airport, CTCs (MTA, SCRRA)
1.3	Accelerate Bus Retrofit Program	Accelerate application of retrofit of diesel-powered buses to achieve earlier compliance with state regulations.	Yes		CTCs (MTA, OCTA), Transit Operators
1.4	Mass transit alternatives	Major change to the scope and service levels.	Yes		SCAG, CTCs
1.5	Expansion of public transportation systems	Expand and enhance existing public transit services.	Yes		CTCs
1.6	Transit service improvements in combination with park-and-ride lots and parking Management	Local jurisdictions and transit agency improve the public transit system and add new park-and-ride facilities and spaces on an as needed basis.	Yes		CTCs (MTA, SCRRA)

Section 108 (f) 1. Programs for Improved Public Transit					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
1.7	Free transit during special events	Require free transit during selected special events to reduce event-related congestion and associated emission increases.	No	<p>The Legislature significantly reduced authority of SOUTH COAST AQMD to implement indirect source control measures through revisions to the Health &amp; Safety Code (HSC 40717.8).</p> <p>Transit agencies should decide individually whether this measure is economically feasible for them.</p> <p>Note that the Mobile Source Air Pollution Reduction Review Committee (MSRC) has been co-funding free event center shuttle service projects.</p>	
1.8	Require that government employees use transit for home to work trips, expand transit, and encourage large businesses to promote transit use	Require all government employees use transit a specified number of times per week, or expand transit, and encourage business to promote transit use.	Yes		CTCs
1.9	Increase parking at transit centers or stops	Encourage transit convenience by providing additional parking at transit centers.	Yes		CTCs
1.10	Expand regional transit connection ticket distribution	Provides interchangeability of transit ticket.	Yes		CTCs, Metrolink
1.11	Bus Signal Priority	Wireless bus signal priority system on bus fleets for increased operation efficiency and travel time savings.	Yes		Transit Agencies

Section 108 (f) 1. Programs for Improved Public Transit					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
1.12	Passenger rail improvements	Installation of additional platforms, double tracks, concrete ties, bridges, signal relocation.	Yes		Cities, Transit Agencies
1.13	Alternative Fuel Buses	Self-explanatory.	Yes		Cities, Transit Agencies
1.14	Intermodal Centers	Improved transit connection of various travel modes	Yes		Cities, Transit Agencies
1.15	Maglev	Construct regional low-speed magnetic levitation transit	No	Though considered in past SCAG transportation plans, Maglev has never been a committed TCM; in addition, the region is already being serviced by light rail; Not Cost-effective.	
1.16	High Speed Rail	Construct high speed rail connecting large metropolitan centers in the state	Yes		HSRA
1.17	Public transit facility improvements and operating assistance	Construct and/or improve bus and rail terminals, stations, and maintenance facilities	Yes		CTCs, Transit Agencies
1.18	Paratransit Service	Self-explanatory	Yes		CTCs, Cities, Transit Agencies
1.19	Express Busways/Dedicated Bus Lanes	Construct bus-only lanes	Yes		CTCs

Section 108 (f) 2. Restriction of Certain Roads or Lanes to, or Construction of Such Roads or Lanes for Use By, Passenger Buses or High Occupancy Vehicles					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
2.1	Update High Occupancy Vehicle (HOV) Lane Master Plan	Analysis of increased enforcement, increasing occupancy requirements, conversion of existing HOV lanes to bus only lanes and/or designation of any new carpool lanes as bus-only lanes; utilization of freeway shoulders for peak-period express bus use; commercial vehicle buy-in to HOV lanes; and appropriateness of HOV lanes for corridors that have considered congestion pricing or value pricing.	Yes		SCAG, Caltrans, CTCs
2.2	Fixed lanes for buses and carpools on arterials	Provide fixed lanes for buses and carpools on arterial streets where appropriate.	Yes		CTCs (MTA, OCTA), LA City
2.3	Expand number of freeway miles available, allow use by alternative fuel vehicles, changes to HOV lane requirements and hours	Various measures evaluated in many ozone nonattainment areas. Specifics vary according to freeway system, use patterns and local characteristics.	Yes		CARB, Caltrans
2.4	Express toll lanes/High Occupancy Toll (HOT) Lanes	Self-explanatory.	Yes		Caltrans, CTCs

Section 108 (f) 3. Employer-Based Transportation Management Plans, Including Incentives					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
3.1*	Commute solutions	The federal <i>Commuter Choice Program</i> provides for benefits that employers can offer to employees to commute to work by methods other than driving alone.	Yes		Employer, SOUTH COAST AQMD
3.2*	Parking cash-out	State law requires certain employers who provide subsidized parking for their employees to offer a cash allowance in lieu of a parking space.	Yes		Employer, CARB
3.3*	Employer Rideshare Program Incentives	Employer rideshare incentives and introduction of strategies designed to reduce single occupant vehicle trips. Implementation includes information systems and marketing. Examples include: employee awareness campaigns, Transportation Management Associations (TMA) membership, alternative work hours, and financial incentives.	Yes		CTCs, Caltrans, Employer, SOUTH COAST AQMD
3.4*	Implement Parking Charge Incentive Program	Evaluate feasibility of an incentive program for cities and employers that convert free public parking spaces to paid spaces. Review existing parking policies as they relate to new development approvals.	Yes		Cities, Counties, Employer

\* This measure relates to SOUTH COAST AQMD Rule 2202, *On-Road Motor Vehicle Mitigation Options*. Administered by AQMD, Rule 2202 provides a menu of options for employers in choosing how they will comply. Individual employers implement the mitigation option(s) that they have chosen. Note: Rule 2202 is subject to change through the South Coast AQMD rule amendment process.

Section 108 (f) 3. Employer-Based Transportation Management Plans, Including Incentives					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
3.5*	Preferential parking for carpools and vanpools	This measure encourages public and private employers to provide preferential parking spaces for carpools and vanpools to decrease the number of single occupant automobile work trips. The preferential parking could include covered parking spaces or close-in spaces.	Yes		Employer, SOUTH COAST AQMD
3.6*	Employee parking fees	Encourage public and private employers to charge employees for parking.	Yes		Employer, SOUTH COAST AQMD
3.7	Merchant transportation incentives	Implement “non-work” trip reduction ordinances requiring merchants to offer customers mode shift travel incentives such as free bus passes and requiring owners/managers/developers of large retail establishments to provide facilities for non-motorized modes.	No	Require state legislation.	
3.8*	Purchase/lease/third-party vans for vanpool programs	Provide a specified number of vans for use in employee commute travel.	Yes		Employer, SOUTH COAST AQMD
3.9*	Encourage regulated employers to subsidize the cost of transit for employees	Provide outreach and possible financial incentives to encourage local employers to provide transit passes or subsidies to encourage less individual vehicle travel.	Yes		Employer, SOUTH COAST AQMD

\* This measure relates to SOUTH COAST AQMD Rule 2202, On-Road Motor Vehicle Mitigation Options. Administered by South Coast AQMD, Rule 2202 provides a menu of options for employers in choosing how they will comply. Individual employers implement the mitigation option(s) that they have chosen. Note: Rule 2202 is subject to change through the South Coast AQMD rule amendment process.

Section 108 (f) 3. Employer-Based Transportation Management Plans, Including Incentives					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
3.10*	Compressed work weeks	Work 80 hours in 9 days, or 40 hours in 4 days, or 36 hours in 3 days in lieu of working 40 hours in 5 days.	Yes		Employer, SOUTH COAST AQMD
3.11*	Telecommuting	Goal of specified percentage of employees telecommuting at least one day per week.	Yes		Employer, SOUTH COAST AQMD
3.12	Income Tax Credit to Telecommuters	Provide tax relief to employees who participate in telecommuting programs.	No	Requires State legislation.	
3.13*	Extend parking cash-out rule to more employers	Self-explanatory	No	Requires State legislation.	
3.14	Bike to Work Day/Month	Encourage biking to work during bike awareness month. Provide outreach activities, education on the bike-to-work option, and provide assistance in trying to bike to work.	Yes		Employers, Cities, Counties, VCAPCD, CTCs

\* This measure relates to SOUTH COAST AQMD Rule 2202, On-Road Motor Vehicle Mitigation Options. Administered by SOUTH COAST AQMD, Rule 2202 provides a menu of options for employers in choosing how they will comply. Individual employers implement the mitigation option(s) that they have chosen. Note: Rule 2202 is subject to change through the South Coast AQMD rule amendment process.

**Section 108 (f) 4. Trip Reduction Ordinance**

In December 1995, Congress changed the Clean Air Act Amendments to make the Employee Commute Option program voluntary (no longer mandatory). California State Law prohibits mandatory employer based trip reduction ordinance programs (SB437). (HSC 40717.9) To account for these restrictions, SOUTH COAST AQMD Rule 2202 provides employers with a menu of options to reduce mobile source emissions generated from employee commutes. Rule 2202 complies with federal and state Clean Air Act requirements, HSC 40458, and HSC 182(d)(1)(B) of the federal Clean Air Act. Nevertheless, some jurisdictions continue to implement Trip Reduction Ordinances. For example, the City of Santa Monica requires new and existing non-residential development projects to adopt Emission Reduction Plans and pay transportation impact fees to reduce traffic congestion and improve air quality in the city.

**Section 108 (f) 5. Traffic Flow Improvement Programs That Achieve Emissions Reductions**

Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
5.1	Develop Intelligent Transportation Systems	The term “Intelligent Transportation Systems” includes a variety of technological applications intended to produce more efficient use of existing transportation corridors. Includes measures like ramp-metering, and real-time transit information systems.	Yes		CTCs, Caltrans, and Cities
5.2	Coordinate traffic signal systems	This measure implements and enhances synchronized traffic signal systems to promote steady traffic flow at moderate speeds.	Yes		CTCs, Counties, and Cities
5.3	Reduce traffic congestion at major intersections	This measure implements a wide range of traffic control techniques designed to facilitate smooth, safe travel through intersections. These techniques include signalization, turn lanes or median dividers. The use of grade separations may also be appropriate for high volume or unusually configured intersections.	Yes		CTCs, Counties, and Cities

Section 108 (f) 5. Traffic Flow Improvement Programs That Achieve Emissions Reductions					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
5.4	Site-specific transportation control measures	This measure could include geometric or traffic control improvements at specific congested intersections or at other substandard locations. Another example might be programming left turn signals at certain intersections to lag, rather than lead, the green time for through traffic.	Yes		CTCs, Counties, and Cities
5.5	Removal of on-street parking	Require all commercial/industrial development to design and implement off-street parking.	Yes		CTCs, Counties, and Cities
5.6	Reversible lanes	Implement reversible lanes on arterial streets to improve traffic flow where appropriate.	Yes		CTCs, Counties, and Cities
5.7	One-way streets	Redesignate streets (or portions of in downtown areas) as one-way to improve traffic flow.	Yes		CTCs, Counties, and Cities
5.8	On-Street parking restrictions	Restrict on-street parking where appropriate.	Yes		CTCs, Counties, and Cities
5.9	Bus pullouts in curbs for passenger loading	Provide bus pullouts in curbs, or queue jumper lanes for passenger loading and unloading.	Yes		CTCs, Counties, and Cities
5.10	Additional freeway service patrol	Operation of additional lane miles of new roving tow truck patrols to clear incidents and reduce delay on freeways during peak periods.	Yes		CTCs, CHP
5.11	Fewer stop signs, remove unwarranted and "political" stop signs and signals	Improve flow-through traffic by removing stop signs and signals. Potential downside in safety issues.	Yes		CTCs, Counties, and Cities

Section 108 (f) 5. Traffic Flow Improvement Programs That Achieve Emissions Reductions					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
5.12	Ban left turns	Banning all left turns would stop the creation of bottlenecks although slightly increase travel distances.	No	Left turns are not allowed in some heavy-traffic streets. No clear demonstration of emission reduction benefits.	
5.13	Changeable lane assignments	Increase number of one-way lanes in congested flow direction during peak traffic hours.	Yes		Caltrans, CTCs, Counties, and Cities
5.14	Adaptive traffic signals and signal timing	Self-explanatory.	Yes		Counties, Counties, and Cites
5.15	Freeway bottleneck improvements (add lanes, construct shoulders, etc.)	Identify key freeway bottlenecks and take accelerated action to mitigate them.	Yes		Caltrans, SCAG
5.16	Minimize impact of construction on traveling public. Have contractors pay when lanes are closed as an incentive to keep lanes open.	Prohibit lane closures during peak hours, limit work to weekends and/or nights.	Yes		Caltrans
5.17	Internet provided road and route information	Reduce travel on highly congested roadways by providing accessible information on congestion and travel.	Yes		CTCs, Caltrans, Counties, Cities
5.18	Regional route marking systems to encourage underutilized capacity	Encourage travel on local roads and arterials by better route marking to show alternatives.	Yes		Caltrans, Counties, Cities
5.19	Congestion management field team to clear incidents	Self-explanatory.	Yes		CTCs, CHP
5.20	Use dynamic message signs to direct/smooth speeds during incidents	Self-explanatory.	Yes		Caltrans

Section 108 (f) 5. Traffic Flow Improvement Programs That Achieve Emissions Reductions					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
5.21	Get real-time traffic information to trucking centers and rental car agencies	Reduce travel in congested areas by providing information directly to high volume travelers.	Yes		CTCs, Caltrans
5.22	55 mph speed limit during ozone season	Self-explanatory	No	Reductions in freeway speeds are governed by California Vehicle Code 22354, which authorizes Caltrans to lower speeds after doing an engineering and traffic survey, which shows that the legislatively-set maximum speed of 65 mph, is more than is reasonable or safe. No consideration of emissions reductions is contemplated under this statute. This measure is not feasible until the statute is changed.	
5.23	Require 40 mph speed limit on all facilities	Depends on area's emission factors.	No	The California Vehicle Code Sections 22357 and 22358 mandates a methodology for setting speed limits for local areas. This measure is not feasible until the statute is changed.	

Section 108 (f) 5. Traffic Flow Improvement Programs That Achieve Emissions Reductions					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
5.24	Require lower speeds during peak periods	Self-explanatory.	No	The California Vehicle Code Sections 22357 and 22358 mandates methodology for setting speed limits for local areas. This measure is not feasible until the statute is changed.	
5.25	On-street parking restrictions	Restrict on-street parking where appropriate.	Yes		State, Counties, and Cities
5.26	Roundabouts at low traffic intersections	Construct roundabouts and remove stop signs as appropriate	Yes		Counties, Cities
5.27	Eco-Driving educational program	Education program to improve vehicle efficiency by improving driving habits	No	No clear demonstration of emission reduction benefits.	

Section 108 (f) 6. Fringe and Transportation Corridor Parking Facilities Serving Multiple Occupancy Vehicle Programs or Transit Service					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
6.1	Park-and-ride lots	Develop, design, and implement new park-and-ride facilities in locations where they are needed, particularly free parking near transit facilities.	Yes		Caltrans, CTCs, Transit Operators, SCRRA

Section 108 (f) 6. Fringe and Transportation Corridor Parking Facilities Serving Multiple Occupancy Vehicle Programs or Transit Service					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
6.2	Park-and-ride lots serving perimeter counties	Specific to a locality.	Yes		Caltrans, CTCs, Transit Operators, SCRRA

Section 108 (f) 7. Programs to Limit or Restrict Vehicle Use in Downtown Areas or Other Areas of Emission Concentration Particularly During Periods of Peak Use					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
7.1	Off-peak goods movement	Restrict truck deliveries by time or place in order to minimize traffic congestion during peak periods.	Yes		PierPass (A non-profit organization of marine terminal operators at the Ports of Los Angeles and Long Beach)
7.2	Truck restrictions during peak periods	Restrict truck travel during peak periods in order to minimize traffic congestion.	Yes		See Measure 7.1
7.3	Involve school districts in encouraging walking/bicycling to school	Decrease vehicle emissions associated with school trips by reducing these trips through education and out-reach programs.	Yes		School Districts

Section 108 (f) 7. Programs to Limit or Restrict Vehicle Use in Downtown Areas or Other Areas of Emission Concentration Particularly During Periods of Peak Use					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
7.4	Adjust school hours so they do not coincide with peak traffic periods and ozone seasons	Measure to reduce travel during peak periods and ozone-contributing periods in the early morning.	No	School hours are dictated by many variables, including overcrowding and year-round schooling. This measure is not feasible.	
7.5	Area-wide tax for parking	Reduce driving by limiting parking through implementation of pricing measures.	Yes		Counties, Cities
7.6	Increase parking fees	Reduce driving by limiting parking spaces through pricing measures.	No	Attorney General ruled South Coast AQMD lacks authority to implement this measure.	
7.7	Graduated pricing starting with highest in Central Business District (CBD)	Increase parking charge in the CBD or other high volume areas in a city to discourage vehicle travel in these areas.	Yes		Market Driven
7.8	Purchase parking lots and convert into other land uses	Limit parking by converting available parking to other land uses to discourage driving.	Yes		Counties and Cities

Section 108 (f) 7. Programs to Limit or Restrict Vehicle Use in Downtown Areas or Other Areas of Emission Concentration Particularly During Periods of Peak Use					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
7.9	Limit the number of parking spaces at commercial airlines to support mass transit	Reduce airport travel by limits on parking at airports.	No	Regulatory agencies do not have the legal authority to make local land use decisions. It is at the discretion of the regional or local airport authority to make local land use decisions pertaining to airports.  Additionally, It is necessary to have significant mass transit available at airports before this measure can be implemented.	
7.10	No CBD vehicles unless LEV, alternative fuel, or electric	Define high-use area and ticket any vehicles present unless they are low emitting, alternative fueled or electric.	No	The Legislature significantly reduced authority of the SOUTH COAST AQMD to implement indirect source control measures through revisions to the Health & Safety Code (40717.6, 40717.8, and 40717.9).	
7.11	Auto restricted zones	No vehicles allowed in certain areas where high emissions, congestion or contribution to ozone problems.	Yes		Counties and Cities
7.12	Incentives to increase density around transit centers	Lower travel by increasing residential and commercial density in areas near transit.	Yes		Counties and Cities
7.13	Land use/air quality guidelines	Guidelines for developments that contribute to achieving air quality goals.	Yes		CARB, SOUTH COAST AQMD, SCAG

Section 108 (f) 7. Programs to Limit or Restrict Vehicle Use in Downtown Areas or Other Areas of Emission Concentration Particularly During Periods of Peak Use					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
7.14	Cash incentives to foster jobs/housing balance	Specific to locality – encouraged by California Clean Air Plan.	No	Has never been a committed TCM. No dedicated source of funding for this measure.	
7.15	Trip reduction oriented development	Land use decisions that encourage trip reductions.	Yes		Counties, Cities, CTCs
7.16	Transit oriented development	Land use decisions that encourage walkable communities and multi-modal transit systems.	Yes		Counties, Cities, CTCs
7.17	Sustainable development	Land use decisions that create equitable standards of living to satisfy the basic needs of all peoples, all while taking the steps to avoid further environmental degradation.	Yes		Counties, Cities, CTCs
7.18	Smart Parking Detection System	Utilize mobile communication devices to access the parking availability at multiple lots and provide real-time inventory of parking spaces.	Yes		Cities
7.19	Programs to encourage goods movement by rail	Self-explanatory	Yes		CARB
7.20	Divert Trucks from Nonattainment Areas	Require pass-through trucks to choose routes away from the SCAG region	No	No authority to implement; Not feasible because whole South Coast region is nonattainment area under one or more NAAQS.	
7.21	Buy parking lots and convert to other land use	Limit parking by converting available parking to other land uses to discourage driving	Yes		Counties, Cities

Section 108 (f) 8. Programs For the Provision of All Forms of High-Occupancy, Shared-Ride Services					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
8.1*	Financial Incentives, Including Zero-Bus Fares	Provide financial incentives or other benefits, such as free or subsidized bus passes and cash payments for not driving, in lieu of parking spaces for employees who do not drive to the workplace.	Yes		SOUTH COAST AQMDSOUTH COAST AQMD, Employer
8.2	Internet ride matching services	Provide match-lists, route info, hours and contact information over the internet to assist individuals in joining or developing carpools.	Yes		CTCs, Employer
8.3*					
8.4*	Credits and incentives for carpoolers	Self-explanatory – form depends on locality.	Yes		SOUTH COAST AQMD, Employer
8.5*	Employers provide vehicles to carpoolers for running errands or emergencies	Having vehicles available for workday errands makes it easier to go to work without one.	Yes		SOUTH COAST AQMD, Employer
8.6	Subscription services	Free van services to provide transportation for the elderly, handicapped or other individuals who have no access to transportation.	Yes		County, CTCs, Employer
8.7	School carpools	Self-explanatory and voluntary.	Yes		School Parents

\* This measure relates to SOUTH COAST AQMD Rule 2202, On-Road Motor Vehicle Mitigation Options. Administered by South Coast AQMD, Rule 2202 provides a menu of options for employers in choosing how they will comply. Individual employers implement the mitigation option(s) that they have chosen. Note: Rule 2202 is subject to change through the South Coast AQMD rule amendment process.

Section 108 (f) 8. Programs For the Provision of All Forms of High-Occupancy, Shared-Ride Services					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
8.8*	Guaranteed ride home	Self-explanatory.	Yes		CTCs, SOUTH COAST AQMD, Employer
8.9	Transit Voucher Program	Transit vouchers for elderly and low income commuters.	Yes		CTCs, Cities, Counties
8.10	Rideshare and vanpool services	Non-employer based rideshare and vanpool option near transit stations.	Yes		CTCs, Transit Agencies, Cities and Counties

Section 108 (f) 9. Programs to Limit Portions of Road Surfaces or Certain Sections of the Metropolitan Area to the Use of Non-Motorized Vehicles or Pedestrian Use, Both as to Time and Place					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
9.1	Establish Auto-Free Zones and pedestrian malls	Establish auto free zones and pedestrian malls where appropriate.	Yes		Counties and Cities

\* This measure relates to SOUTH COAST AQMD Rule 2202, On-Road Motor Vehicle Mitigation Options. Administered by SOUTH COAST AQMD, Rule 2202 provides a menu of options for employers in choosing how they will comply. Individual employers implement the mitigation option(s) that they have chosen. Note: Rule 2202 is subject to change through the South Coast AQMD rule amendment process.

Section 108 (f) 9. Programs to Limit Portions of Road Surfaces or Certain Sections of the Metropolitan Area to the Use of Non-Motorized Vehicles or Pedestrian Use, Both as to Time and Place					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
9.2	Encouragement of pedestrian travel	This measure involves encouraging the use of pedestrian travel as an alternative to automobile travel. Pedestrian travel is quite feasible for short shopping, business, or school trips.	Yes		CTCs, Counties, Cities, SCAG
9.3	Bicycle/Pedestrian Program	Fund high priority projects in countywide plans consistent with funding availability.	Yes		CTCs, Counties, and Cities
9.4	Close certain roads for use by non-motorized traffic	During special events, weekends, or certain times of the day, close some roads to all but non-motorized traffic.	Yes		Counties, and Cities
9.5	Encourage bicycle travel	Promotion of bicycle travel to reduce automobile use and improve air quality. Bikeway system planning, routes for inter-city bike trips to help bicyclists avoid other, less safe facilities. Another area for potential actions is the development and distribution of educational materials, regarding bicycle use and safety.	Yes		SCAG, CTCs, Counties, Cities, and Employer
9.6	Free bicycles	Provide free bikes in the manner of Boulder, CO. Simple utilitarian bikes that can be used throughout the metro area and dropped off at destination for use by anyone desiring use.	No	Bike share is being implemented in the South Coast region; free bikes are not cost-effective; Evidence suggests that bicycle theft is a problem in other programs and renders the measure technologically and economically infeasible.	

Section 108 (f) 9. Programs to Limit Portions of Road Surfaces or Certain Sections of the Metropolitan Area to the Use of Non-Motorized Vehicles or Pedestrian Use, Both as to Time and Place					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
9.7*	Cash rebates for bikes	Provide financial incentives to purchase bicycles and thereby encourage use.	Yes		Employer
9.8	Close streets for special events for bikes and pedestrians	Self-explanatory.	Yes		Counties and Cities
9.9	Use condemned dirt roads for bike trails	Self-explanatory.	No	Not applicable because there are no condemned dirt roads in the region.	
9.10	Safe Routes to School programs	Encourage educational and encouragement programs with families and schools and support policies to improve pedestrian and bicycle safety.	Yes		State, Counties, CTCs, and Cities

\* This measure relates to SOUTH COAST AQMD Rule 2202, On-Road Motor Vehicle Mitigation Options. Administered by SOUTH COAST AQMD, Rule 2202 provides a menu of options for employers in choosing how they will comply. Individual employers implement the mitigation option(s) that they have chosen. Note: Rule 2202 is subject to change through the South Coast AQMD rule amendment process.

Section 108 (f) 10. Programs for Secure Bicycle Storage Facilities and Other Facilities, Including Bicycle Lanes, for the Convenience and Protection of Bicyclists, in Both Public and Private Areas					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
10.1*	Bike racks at work sites	Self-explanatory.	Yes		SOUTH COAST AQMD, Employer
10.2	Bike racks on buses	Bike racks would be placed on a to-be-determined number of buses to increase bicycle travel.	Yes		CTCs, Transit Operators, SCRRRA
10.3	Regional bicycle parking	Bike Transit Centers	Yes		CTCs
10.4	Develop bicycle travel facilities	Encourages a variety of capital improvements to increase bicycle use. Off-street bikeways where high-speed roadways preclude safe bicycling. Clearly mark travel facilities with signs and provide adequate maintenance.	Yes		CTCs, Transit Operators, SCRRRA
10.5	Expedite bicycle projects from RTP/SCS	Create bicycle and pedestrian master plan and build out at an accelerated rate to achieve benefits in advance of attainment deadline.	Yes		SCAG, CTCs, Counties, Cities
10.6	Provide bike/pedestrian facilities safety patrols	Self-explanatory.	Yes		Counties and Cities
10.7	Inclusion of bicycle lanes on thoroughfare projects	Self-explanatory.	Yes		State, CTCs, Counties, and Cities

\* This measure relates to SOUTH COAST AQMD Rule 2202, On-Road Motor Vehicle Mitigation Options. Administered by SOUTH COAST AQMD, Rule 2202 provides a menu of options for employers in choosing how they will comply. Individual employers implement the mitigation option(s) that they have chosen. Note: Rule 2202 is subject to change through the South Coast AQMD rule amendment process.

Section 108 (f) 10. Programs for Secure Bicycle Storage Facilities and Other Facilities, Including Bicycle Lanes, for the Convenience and Protection of Bicyclists, in Both Public and Private Areas					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
10.8	Bicycle lanes on arterial and frontage roads	Self-explanatory.	Yes		State, Counties, and Cities
10.9	Bicycle route lighting	Self-explanatory.	Yes		State, Counties, Cities
10.10	Complete Streets	Install bicycle and pedestrian facilities, upgrade traffic control systems, urban design improvements, street lights and transit connections.	Yes		Cities, Counties, CTCs, Transit Agencies
10.11	Bike Share	Provide bike-share and neighborhood electric vehicle transit services in downtown areas.	Yes		Cities, Counties, Transit Agencies
10.12	Bike Purchase Incentives	Cash incentives to transit riders to purchase collapsible or electric bikes.	Yes		Cities
10.13	Longer Bike Racks on Buses	Install or modify bike rack on transit buses to accommodate up to three bikes	Yes		Transit Agencies
10.14	Greenway Network	Use riverbeds and other rights-of-way for bike and pedestrian paths to separate them from auto traffic	Yes		Cities, Counties
10.15	First Mile/Last Mile Program	Variety of strategies to encourage active transportation including wayfinding, sidewalk improvements, pedestrian priority signalization, and bike/pedestrian facilities near transit.	Yes		CTCs, Transit Agencies

Section 108 (f) 11. Programs to Control Extended Idling of Vehicles					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
11.1	Limit excessive car dealership vehicle starts	Require car dealers to limit the starting of vehicles for sale on their lot(s) to once every two weeks. Presently, a number of new and used car dealers start their vehicles daily to avoid battery failure and assure smooth start-ups for customer test drives.	No	This measure was investigated by the SOUTH COAST AQMD and it was determined that in contrast to colder climates where vehicles are started on a daily basis, vehicles in the South Coast started much less frequently. For this reason it was determined not to be technologically feasible. No clear demonstration of emission reduction benefits.	
11.2	Encourage limitations on vehicle idling	Encourage limitations to limit extended idling operations.	Yes		CARB
11.3	Turn off engines while stalled in traffic	Public outreach or police-enforced program.	No	This measure raises safety and congestion concerns.  No clear demonstration of emission reduction benefits.	
11.4	Outlaw idling in parking lots	Self-explanatory and police-enforced program.	No	Enforcement of idle restrictions is a low priority for police relative to their other missions. The cost effectiveness of this measure has not been demonstrated. It is not economically feasible. No clear demonstration of emission reduction benefits.	
11.5	Reduce idling at drive-throughs; ban drive-throughs	Mandate no idling or do not allow drive-through windows during ozone season.	No	No clear demonstration of emission reduction benefits.	

Section 108 (f) 11. Programs to Control Extended Idling of Vehicles					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
11.6	Promote use of pony engines	Use special battery engines to keep air conditioning and other truck systems working while truck not in use.	Yes		CARB
11.7	Idle restrictions at airport curbsides	Self-explanatory and police-enforced.	Yes		Airport Authority
11.8	Truck Stop Electrification	Provide electric charging stations for at truck stops to power heating/AC units and other on-board equipment.	Yes		CARB
11.9	Reduce idling at schools	Self-explanatory	Yes		CARB

Section 108 (f) 12. Program to Reduce Motor Vehicle Emissions Consistent with Title II, Which Are Caused by Extreme Cold Start Conditions	
Not applicable. The definition of an "extreme cold start" specifies temperatures below 20 degrees Fahrenheit.	Not applicable in the South Coast - No extreme cold start conditions

Section 108 (f) 13. Employer-sponsored programs to permit flexible work schedules					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
13.1*	Alternative work schedules	Enables workers to choose their own working hours within certain constraints. Flextime provides the opportunity for employees to use public transit, ridesharing, and other Nonmotorized transportation. A related strategy, staggered work hours, is designed to reduce congestion in the vicinity of the workplace. Alternative workweeks have been implemented extensively by large private and public employers.	Yes		SOUTH COAST AQMD, Employer
13.2*	Modifications of work schedules	Implement alternate work schedules that flex the scheduled shift time for employees. Encourage the use of flexible or staggered work hours to promote off-peak driving and accommodate the use of transit and carpooling.	Yes		SOUTH COAST AQMD, Employer
13.3*	Telecommunications-Telecommuting/Teleconferencing	Encourage telecommuting and use of telecommuting/teleconferencing equipment in place of motor vehicle use where appropriate. Set-up satellite work centers closer to where employees live to reduce motor vehicle use where appropriate.	Yes		SOUTH COAST AQMD, Employer

\* This measure relates to SOUTH COAST AQMD Rule 2202, On-Road Motor Vehicle Mitigation Options. Administered by SOUTH COAST AQMD, Rule 2202 provides a menu of options for employers in choosing how they will comply. Individual employers implement the mitigation option(s) that they have chosen. Note: Rule 2202 is subject to change through the South Coast AQMD rule amendment process.

Section 108 (f) 14. Programs and Ordinances to facilitate Non-automotive travel, provision to and utilization of mass transit, and to generally reduce the need for single-occupant vehicle travel, as part of transportation planning and development efforts					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
14.1	Areawide public awareness programs	This measure focuses on conducting ongoing public awareness programs throughout the year to provide the public with information on air pollution and encourage changes in driving behavior and transportation mode use.	Yes		SOUTH COAST AQMD
14.2	Special event controls	This measure would require new and existing owners/operators of the special event centers to reduce mobile source emissions generated by their events. A list of optional strategies would be available that reduce mobile source emissions.	Yes		Counties, Cities, Special Event Operators
14.3	Land Use/development alternatives	This measure includes encouraging land use patterns, which support public transit and other alternative modes of transportation. In general, this measure would also encourage land use patterns designed to reduce travel distances between related land uses	Yes		CARB, SCAG, SOUTH COAST AQMD, Counties, Cities
14.4	Voluntary No-Drive Day Programs	Conduct voluntary No-Drive Day Programs during the ozone season through media and employer based public awareness activities.	Yes		CTCs
14.5**	New Development Air Quality Impact Evaluation	Evaluate air quality impacts of new development and recommend or require mitigation for significant adverse impacts.	Yes		SOUTH COAST AQMD, Counties, Cities, CEQA Lead Agencies

\*\* SOUTH COAST AQMD and SCAG recommend mitigation as commenting agencies on new development projects; cities and counties require mitigation under their discretionary authority as lead agency.

Section 108 (f) 14. Programs and Ordinances to facilitate Non-automotive travel, provision to and utilization of mass transit, and to generally reduce the need for single-occupant vehicle travel, as part of transportation planning and development efforts					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
14.6	Transportation for Livable Communities (TLC)/Housing Incentive program	Program provides planning grants, technical assistance, and capital grants to help cities and Nonprofit agencies define and implement transportation projects that support community plans including increased housing near transit.	Yes		SCAG, State
14.7	Incentives to increase density around transit centers	Lower travel by increasing residential and commercial density in areas near transit.	Yes		Counties, Cities, CTCs
14.8	Incentives for cities with good development practices	Provide financial or other incentives to local cities that practice air quality-sensitive development.	Yes		CTCs, Counties, Cities
14.9	Increase State gas tax	Self-explanatory.	No	Need State legislation. State gas tax has been increased by SB 1.	
14.10	Pay-As-You-Drive Insurance	Self-explanatory.	No	Need State legislation. No clear demonstration of emission reduction benefits and does not advance attainment date.	

Section 108 (f) 15. Programs for new construction and major reconstructions of paths, tracks or areas solely for the use by pedestrian or other Non-motorized means of transportation when commercially feasible and in the public interest					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
15.1 <sup>13</sup>	Encourage Pedestrian Travel	Promote public awareness and use of walking as an alternative to the motor vehicle.	Yes		SOUTH COAST AQMD, SCAG, CTCs, Counties, Cities, Employer
15.2	Pedestrian and bicycle overpasses where safety dictates	Ongoing implementation as development occurs.	Yes		Counties, Cities

Section 108 (f) 16. Program to encourage the voluntary removal from use and the marketplace of pre-1980 model year light duty vehicles and pre-1980 model light duty trucks					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
16.1	Counties assess ten dollar license plate fee to fund repair/replacement program for high-emitters	Self-explanatory.	Yes		CARB, BAR <sup>14</sup>

<sup>13</sup> This measure relates to SOUTH COAST AQMD Rule 2202, On-Road Motor Vehicle Mitigation Options. Administered by SOUTH COAST AQMD, Rule 2202 provides a menu of options for employers in choosing how they will comply. Individual employers implement the mitigation option(s) that they have chosen. Note: Rule 2202 is subject to change through the South Coast AQMD rule amendment process.

<sup>14</sup> Similar program administered with different funding source as part of smog check

Section 108 (f) 16. Program to encourage the voluntary removal from use and the marketplace of pre-1980 model year light duty vehicles and pre-1980 model light duty trucks					
16.2	Offer incentives for retirement and replacement of vehicles for participants meeting specific requirements	Self-explanatory.	Yes		CARB, SOUTH COAST AQMD <sup>15</sup>
16.3	Demolish impounded vehicles that are high emitters	Self-explanatory.	No	SOUTH COAST AQMD Rule 1610 issues mobile source emission reduction credits in exchange for the scrapping of old, high emitting vehicles.	
16.4	Do whatever is necessary to allow cities to remove the engines of high emitting vehicles (pre-1980) that are abandoned and to be auctioned	Self-explanatory.	No	SOUTH COAST AQMD Rule 1610 issues mobile source emission reduction credits in exchange for the scrapping of old, high emitting vehicles	
16.5	Accelerated retirement program	Identify high-emitting vehicle age groups and develop a program to remove them from use.	Yes		CARB, SOUTH COAST AQMD

17. Other					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
17.1	Truck-Only Lanes	Self-explanatory.	Yes		Caltrans, CTCs

<sup>15</sup> Voluntary car scrapping programs to generate credits. Note: South Coast AQMD rules are subject to change through an amendment process.

17. Other					
17.2	Promote business closures on high ozone days	Non-employer-based strategy to require local business to close on bad air quality days, thereby reducing travel.	No	No authority to implement; not economically feasible	
17.3	Clean Fleet Vehicles for Government Employees	Provide alternative fuel vehicles for government employees.	Yes		CARB, SOUTH COAST AQMD, Counties, Cities

# Draft South Coast AQMD 2022 Air Quality Management Plan Appendix IV-C Regional Transportation Plan/Sustainable Communities Strategy and Transportation Control Measures

A Presentation to the Energy and Environment Committee

Rongsheng Luo  
Planning Strategy Department  
January 6, 2022

[www.scag.ca.gov](http://www.scag.ca.gov)



## Background

- South Coast AQMD 2022 Air Quality Management Plan (AQMP)
  - ✓ 2015 8-hour Ozone National Ambient Air Quality Standard
- SCAG Portion:
  - Appendix IV-C Regional Transportation Plan/Sustainable Communities Strategy and Transportation Control Measures

## Draft 2022 AQMP Appendix IV-C Outline

- Executive Summary
- Three Sections
  - Section I. Introduction
  - Section II. Regional Transportation Plan/Sustainable Communities Strategy and Transportation Control Measures (TCM)
  - Section III. TCM Reasonably Available Control Measure (RACM) Analysis
- Two Attachments
  - Attachment A. Committed Transportation Control Measures (TCMs)
  - Attachment B. Reasonably Available Control Measure (RACM) Analysis – TCMs

## Executive Summary

- Purpose of Appendix IV-C
- Overview of the Three Sections

## Section I. Introduction

- Federal and State Requirements
- Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)
  - 2020 RTP/SCS (Connect SoCal)
- Federal Transportation Improvement Program (FTIP)
  - 2021 FTIP

## Section II. Regional Transportation Plan/Sustainable Communities Strategy and Transportation Control Measures

### A Summary of Connect SoCal (2020 RTP/SCS)

- Key Challenges in the Region
- Regional Goals and Guiding Principles
- Plan Strategies and Transportation Control Measures
- Plan Emissions Reduction Benefits
- TCM Emission Reduction Benefits
- Plan Investment
- Cost-Benefit Analysis

## Section III. TCM RACM Analysis

- Four-Step Analysis

1. SCAG RACM/TCM Development Process
2. Assembly and Review of Candidate TCM RACM
3. Determining RACM Measures
4. Reasoned Justifications

- Conclusion:

TCMs being implemented in the South Coast Air Basin are inclusive of all TCM RACM.

## Two Attachments

- Attachment A. Committed Transportation Control Measures (TCMs)
- Attachment B. Reasonably Available Control Measure (RACM) TCM Analysis – TCMs

## Next Steps

- February 2022: Transmittal of Draft Appendix IV-C to South Coast AQMD for Inclusion in Draft 2022 AQMP for Public Review pending Approval by EEC and RC
- May/June 2022: Transmittal of Final Appendix IV-C to South Coast AQMD for inclusion in Final 2022 AQMP pending Approval by EEC and RC
- August 3, 2022: Submittal to US EPA as part of Final 2022 AQMP

## Questions?

Rongsheng Luo  
Air Quality and Conformity Program Manager  
(213) 236-1994, [luo@scag.ca.gov](mailto:luo@scag.ca.gov)  
[www.scag.ca.gov](http://www.scag.ca.gov)





AGENDA ITEM 3  
REPORT

Southern California Association of Governments  
Remote Participation Only  
January 6, 2022

**To:** Transportation Committee (TC)  
**From:** Philip Law, Manager of Mobility Planning & Management  
(213) 236-1841, law@scag.ca.gov  
**Subject:** TDM Strategic Plan Implementation Status Update

EXECUTIVE DIRECTOR'S  
APPROVAL

**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 2019, SCAG completed the Transportation Demand Management (TDM) Strategic Plan which was incorporated into and adopted as part of Connect SoCal, SCAG's 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). This TDM Strategic Plan is intended as a guiding document for both SCAG staff and local agencies and stakeholders, and informs the development and implementation of TDM to support regional goals for improved mobility and sustainability. In September 2021 staff briefed the Transportation Committee on current efforts to implement the TDM Strategic Plan and this report provides an update on progress.*

**BACKGROUND:**

The Federal Highway Administration (FHWA) defines Transportation Demand Management (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.

In 2019, SCAG completed the TDM Strategic Plan (Plan), which outlined dozens of strategies to expand the effectiveness and use of TDM to achieve regional goals. To begin implementing the Plan, SCAG staff have initiated two of the recommended strategies—TDM Trainings and TDM Data Standards-- aimed at increasing TDM adoption and strengthening TDM programs.

## TDM Trainings

The “TDM Trainings” strategy aims to introduce or strengthen knowledge of how to develop and implement TDM programs in SCAG’s member agencies. Many agencies in the SCAG region maintain robust TDM programs, and some examples are the cities of Santa Monica, Anaheim, Burbank, and the Playa Vista area of Los Angeles and Culver City. However, far more communities lack programs and the resources necessary to develop them. Thus, SCAG is working with the consulting firm Steer to develop and conduct TDM training sessions made available to current and prospective TDM stakeholders in the region. These training sessions are designed as a two-phased approach: 1) a “TDM 101,” which serves as an introduction to developing and implementing new TDM programs, and 2) “TDM Deep Dives” which will explore specific types of TDM programs, such as mobility hubs, teleworking and micromobility, among others.

TDM 101. Eight (8) TDM 101 training sessions were held in October and November that garnered TDM stakeholder representation from all six counties in the SCAG region. Stakeholder engagement and outreach was extensive via email blasts, social media, fact sheets, flyers, etc., resulting in a total attendance of 144 individuals. Of the attendees, 32% defined themselves as having no TDM experience and 37% as having limited TDM experience. In addition, a follow-up survey to attendees showed that over 60% of respondents “strongly agreed” that the training helped them better understand TDM in Southern California; and among attendees who currently have no TDM program, 50% of survey respondents said they were “likely” or “very likely” to start a TDM program in the next few years.

TDM Deep Dives. The TDM Deep Dive training will include six sessions taking place in February and March of 2022. These will focus on specific topics such as TDM mode, strategy or geography type. The training content is currently being finalized but potentially could include:

- Mobility Hubs 101
- TDM Program Funding
- Low-Cost and Free TDM
- TDM in a Post COVID-19 Context
- Regional TDM Strategy Coordination
- TDM Strategies for Suburban and Rural Communities
- TDM Ordinance Development and Maintenance
- Incorporating TDM into General Plans
- How to Create and Maintain Transportation Management Organizations (TMOs)

---

### TDM Data Standards

The other TDM Strategic Plan implementation effort underway concerns regional TDM data standards. Generally, TDM programs provide a wealth of data that can help implementors and planners to make these programs more efficient and effective. However, there is no standardized way to collect, document, visualize or even quantify this data. Each agency uses its own system for data collection and analysis, making it difficult for one agency to learn the lessons of another. This project seeks to develop standards for data collection and reporting which will lead to the creation of a regional clearinghouse where agencies and stakeholders can report their data for SCAG to compile and analyze as a resource for the region.

Progress to Date. Since the September 2021 update to the TC, the project team has conducted a series of interviews and surveys of TDM practitioners and stakeholders to inventory current TDM data collection practices and assess TDM data needs. Interviewees included representatives from several cities in the region with TDM programs, the county transportation commissions, the South Coast Air Quality Management District and TMOs; and national councils of government (COG) such as Metro Washington COG and Denver Regional COG, among others. Lessons learned from these interviews include:

- Data collection practices should be clear and simple, with a well-defined terminology
- Data should be stored in a centralized platform with standardized formatting
- Data collection and reporting systems should be simple and easy to understand
- Data collection and reporting by TDM implementers is often tied to funding made available by regional agencies
- Data collection systems should be designed with a goal and purpose

A project technical advisory committee (TAC) has been formed and includes representatives from the agencies and stakeholders listed above. Four TAC meetings are scheduled for the project and the first TAC meeting was held on November 9, 2021. Topics of discussion included a project overview, existing TDM data collection efforts, TDM stakeholder interviews and a general discussion on TDM data standards. The next TAC meeting is scheduled for February 2022.

Based on project research and stakeholder interviews, the project team will begin developing draft regional standards for TDM data collection and reporting in consultation with the TAC. This effort will include identifying strategies and incentives to promote participation in a regional TDM database. A final report is scheduled to be completed in early 2023.

#### **NEXT STEPS:**

Staff will return periodically to the Transportation Committee with updates as the two TDM strategies progress towards completion.



**FISCAL IMPACT:**

This project is included in the current OWP under Task 21-010.1631.06, TDM Strategic Plan Phase 2 – Implementation.



AGENDA ITEM 4  
REPORT

Southern California Association of Governments  
Remote Participation Only  
January 6, 2022

**To:** Transportation Committee (TC)  
**From:** Priscilla Freduah-Agyemang, Senior Regional Planner  
(213) 236-1973, agyemang@scag.ca.gov  
**Subject:** Mobility as a Service (MaaS) Feasibility White Paper Update

EXECUTIVE DIRECTOR'S  
APPROVAL

**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 Mobility as a Service (MaaS) Feasibility White Paper will assess the feasibility of implementing MaaS within the SCAG region, including the identification of challenges and opportunities, key policy issues and potential solutions, leading to the development of an implementation guide, to advance Connect SoCal's goals of improving mobility, sustainability, and air quality.*

**BACKGROUND:**

Staff previously presented a summary of the MaaS Feasibility White Paper to the Transportation Committee (TC) on September 21, 2021. Connect SoCal identified Key Connections that lie at the intersection of land use, transportation and innovation meant to advance policy discussions and strategies to leverage new technologies and create better partnerships to increase progress on the regional goals. One of these Key Connections is shared mobility and MaaS, emphasizing that the future of travel will be shaped by technology and the ability of residents to easily choose from and use a variety of travel options.

MaaS will allow travelers to research and compare different transportation options from one screen and plan, book and pay for their trip and encourage use of multi-modes including access to buses, bikes, trains, taxis, ride-hailing, ridesharing and new micro-mobility options such as e-scooters. MaaS can equitably offer customized mobility options for all persons – if effectively implemented, and can help to address some of the equity challenges related to mobility, access to opportunities, trip payment and trip planning for low-income residents.

Study progress to date includes the draft literature review and case studies analysis, existing conditions, and feasibility, challenges and opportunities. These reports will inform the development of goals, objectives and key strategies that provide a framework the implementation guide and the white paper recommendations.

### **MaaS Definition**

To provide clarity and build a strong framework and for the purposes of the white paper, the project team sought input from the study's Advisory Group on developing a MaaS definition. The working definition is, "*MaaS integrates transportation services into a single mobility platform that provides competitive alternatives over private vehicles, to promote universal basic mobility, encourage mode shift, and foster sustainable travel choices.*" The project team will continue to refine the definition as the study progresses, and based on feedback from the Advisory Group.

### **Preliminary Findings**

Staff identified key framework elements in the scope of work to guide the study, which also serves as the building blocks for MaaS implementation in the SCAG region. These include, infrastructure, data and technology, management and operations, governance, institution, finance, and equity and public engagement. These framework elements informed the preliminary findings of the literature review, case studies and existing conditions analysis.

### Literature Review and Case Studies

The study examined MaaS case studies in Manchester, UK; West Midlands, U.K; Helsinki, Finland; Vienna, Austria; Gothenburg/Stockholm, Sweden; Dublin, Ireland; and Pittsburgh, US. While MaaS has been developed in several European countries, there are only a few examples in the US. The literature review focused on characteristics of successful implementation but also included case studies where MaaS implementations failed, to provide valuable insights and lessons learned that might be applicable to the SCAG region. The summary of key findings is discussed below:

- **Infrastructure:** A well-established infrastructure is key to the successful implementation of MaaS (EU, West Midlands, Helsinki, City of Pittsburgh). MaaS will meet most people's needs when there are a variety of robust and attractive alternative mobility options to private vehicles in place (Vienna). Investing in mobility hubs can facilitate transfers between modes and support the implementation of MaaS.
- **Data and Technology:** The ability to integrate different modes and level of integration using open Application Programming Interface (API) and user interface determines the success of MaaS (Vienna, West Midlands, Manchester). One of the main requirements of a MaaS system is real-time data (Stockholm & Gothenburg). A private company can help develop the digital platform and streamline the implementation of MaaS.

- **Management and Operations:** A balance of flexible policies to encourage a wide range of operators to participate and regulate the MaaS market is critical (West Midlands). Similarly, management model selected needs to be adaptable and dynamic to meet an eclectic mix of user needs. Each of the successful deployments of MaaS (Helsinki, Vienna, and Stockholm) used a different managerial structure. Helsinki and Stockholm are privately operated while Vienna is publicly operated. There are advantages and disadvantages to each of the managerial structures, and it is important to consider the political, stakeholder, and public environment of the SCAG region to determine the right structure. In addition, the private companies operating the MaaS does not mean the public agencies would lose control of the system, effective communication and partnership between both sectors is crucial to make this system function.
- **Governance and Finance:** Legislation to streamline essential data requirements from all mobility providers to make services, ticket sales and reservations accessible from an API can streamline the development of MaaS. Regulations should be balanced to also meet the needs of both private and public entities. Public agencies lead in the integration of MaaS can mean a foundation to address equity concerns. Financing from the public agencies can also ensure control over the MaaS system regardless of system operator types. Funding availability and significant funding to support MaaS deployment and implementation are critical.
- **Institutional Practices:** Strong coordination with key partners is vital to the successful implementation of MaaS. Some MaaS systems, including SMILE in Vienna and other MaaS programs in West Midlands and Manchester, have failed or have been put on hold due to stakeholder coordination issues. MaaS implementation tends to succeed where there are mutually beneficial agreements in place between public and private entities. In Pittsburgh, UbiGO and Spin created an institutional cooperation, Stockholm and Gothenburg as well.
- **Equity and Public Engagement:** Engaging the public throughout the development of MaaS helps create a system that people would want to use. People are always reluctant to accept new technologies and use them (eg. West Midlands). Offering different subscription plan options can allow people to find a plan that meets their needs and preferences. Forming a subsidy program such as Universal Basic Mobility (UBM) programs in Stockholm and Gothenburg, for low-income residents can address some of the equity concerns related to MaaS.

#### Existing Conditions

The existing conditions assessment provides key preliminary findings about the SCAG region and sets the stage for opportunities to enable a successful MaaS implementation.

- **Existing infrastructure:** Infrastructure for integrated payment systems and multimodal travel have been in development in the SCAG region. Currently, transit agencies across Los Angeles (LA) County, Orange County, Riverside County, San Bernardino County and Ventura County, including Metrolink, LA Metro, Orange County Transportation Authority (OCTA), Riverside Transit Agency (RTA), Ventura County Transportation Commission (VCTC), Gold Coast Transit, Mountain Transit, and Omnitrans, have implemented mobile fare payment, and some agencies have installed contactless validation readers on their transit system. LA Metro's TAP card is an example of a payment system that can be used on multiple transit systems in LA County.

Other infrastructure includes mobility hubs, curbside space, charging stations and parking to enable multimodal integration. SCAG's Smart Cities and Mobility Innovations (SCMI) call for projects provides funding resource for such programs.

- **Data and Technology:** There are existing data standards for transit service and micromobility services already developed and promoted through the California Integrated Travel Program (Cal-ITP) and local jurisdictions like City of LA to facilitate data sharing and related requirement for MaaS. Some data compliance such as the California Consumer Privacy Act (CCPA) and European Union's General Data Protection Regulation (GDPR) exist to guide data privacy practices. Trip planning technologies exist and particularly, transit agencies have led the efforts to launch trip planning applications to encourage multimodal travel. Such technologies are usually associated with payment technologies, with recent deployment keen on contactless payment systems.
- **Management and Operations:** Some transit agencies in the SCAG region are participating in coordination efforts at the regional level to streamline agreements between providers. Other efforts include coordination to modernize payment systems especially as it relates to creating equitable systems for the underbanked and unbanked communities.
- **Governance and Finance:** Some federal, state and local legislation exists to assist MaaS implementation. At the state level, the Government Code section 10436.6 was amended in 2004 to include integrated payment systems which led to the formation of Cal-ITP. Similarly, in 2020 the Executive Order N-79-20, identified an integrated, seamless transportation system across the state as a key component of addressing the current climate crisis. The City of LA Department of Transportation (LADOT) published a Technology Action Plan in early 2020 to achieve its vision outlined in the Urban Mobility in a Digital Age Plan which establishes its role in innovative mobility.

While funding for mobility innovations such as MaaS are limited, there exist a few sources that can be leveraged for MaaS implementation. The Federal Transit Administration (FTA) announced \$3.5 million of Fiscal Year 2021 funds for the Innovative Coordinated Access and Mobility (ICAM) pilot program. One of the programs that is funded through the California Climate Investments (CCI) initiative through Cap-and-Trade Program is the Clean Mobility Options Voucher Pilot Program (CMO) which funds “zero-emission car-sharing, carpooling/vanpooling, bikesharing/scooter-sharing, innovative transit services, and ride-on-demand services in California’s historically underserved communities.

- **Equity and Public Engagement:** Community-based outreach strategies such as peer-to-peer communications are not ubiquitous for new mobility solutions in the SCAG region. MaaS is still new to a large segment of the population, especially in the US, it is therefore critical to understand how the public feels about this concept and to gather input from all demographics in the SCAG region. Efforts towards removal of payment barriers to transportation options is imperative in addressing equity concerns. Some mobility pilots such as Metro Micro and LADOT’s LAnow have targeted low-income communities and needs to include more education to increase awareness and use of technology and these mobility options.

#### MaaS Advisory Group

Since the staff introduction to TC in September, the project team has completed all of the interviews with the Advisory Group members to solicit input to guide the research and analysis. Two (2) meetings have also been conducted in August and October with the Advisory Group to seek their input on study analysis and findings. Key takeaways have been incorporated in the white paper to the extent applicable. Below are the key highlights from the Advisory group interviews and meetings.

#### Infrastructure

- MaaS will require significant investment in transit and mobility hubs
- Information infrastructure needed such as construction and maintenance of the cloud

#### Data & Technology

- Discounts need to be applied to other modes as they are applied to transit
- Data and information should be managed as assets
- Smaller/developing counties do not generate strong attraction for private service providers such as on-demand vendors
- Public agencies need to compete with tech giants in hiring software engineers
- There is need for a common payment platform
- There is need for data privacy and consideration for Freedom of Information Act requests
- MaaS must address cost barriers and needs of the unbanked

### Management & Operations

- A resilient system needs to be designed for multiple operators.
- A MaaS system would need to have both public and private operators
- Vendor lock-in can be an issue for closed-loop systems

### Governance

- Agencies need a toolbox of best practices
- Establishment of statewide, regional, and city policy framework is critical
- Revenue collection and distribution among all operators need to comply with regulations and existing agreements

### Institution

- SCAG has the ability to convene agencies and lead policy discussions
- There is lack of philosophical alignment across sectors
- There is the need to educate future public agency staff and empower them to make decisions

### Finance

- Funding is critical and must be available, including a dedicated funding source
- Universal Basic Mobility should serve as a goal of MaaS
- Congestion pricing revenue should be explored further
- There is need to develop better value-capture mechanisms instead of relying on Venture Capital money for technologies
- Smaller agencies will need additional resources and funding for implementation

### Equity and Public Engagement

- MaaS should be clearly defined and include direct community engagement to address equity related barriers that can be associated with its implementation
- There exists an uneven attitude regarding new modes across the region
- There is need to define the bottom line for a digital solution

### **NEXT STEPS**

The project team is currently identifying challenges and opportunities, and draft goals and objectives for MaaS implementation. Staff will continue to provide study updates to the Transportation Committee at key milestones.

### **FISCAL IMPACT:**

Funding for staff work on this issue is included in FY21-22 OWP 140.0121.10.



AGENDA ITEM 5  
REPORT

Southern California Association of Governments  
Remote Participation Only  
January 6, 2022

**To:** Transportation Committee (TC)  
**From:** Scott Strelecki, Senior Regional Planner  
(213) 236-1893, strelecki@scag.ca.gov  
**Subject:** Curb Space Management Study Update

EXECUTIVE DIRECTOR'S  
APPROVAL

**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. 2: Advance Southern California’s policy interests and planning priorities through regional, statewide, and national engagement and advocacy. 3: Be the foremost data information hub for the region. 4: Provide innovative information and value-added services to enhance member agencies’ planning and operations and promote regional

**EXECUTIVE SUMMARY:**

*The primary purpose of the Curb Space Management Study (CSMS) is to take a comprehensive and multimodal review of some of the most congested and complicated curb space locations within the SCAG region. With improved mobility, reduced congestion and vehicle miles travelled (VMT)/vehicle hours travelled (VHT), and air quality benefits such as Greenhouse Gas (GHG) emissions, and now COVID-related impacts being critical to the region and its localities, a clear need exists to assess policies, strategies, and infrastructure investments, and their impacts on curb space activity. This is due to the simple fact that all users of the local and regional transportation networks have a first and last mile component of their trip. The study commenced in August 2021 and will be completed by June 2022.*

*The CSMS directly supports one of the Key Connections in Connect SoCal, SCAG’s adopted 2020 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS). Called Shared Mobility & Mobility as a Service, this Key Connection acknowledges that it is increasingly critical for cities to manage their curb space to ensure safe access for all people, and involving low-speed modes, ridesourcing, parking and local deliveries. Additionally, subsequent to adoption of Connect SoCal, SCAG completed work on the Last Mile Freight Delivery Study (LMFS). While the LMFS was mostly focused on the delivery and pick up of shipments via commercial vehicle*

*operators and their relationships with retail/receiver customers, the confluence of vehicles utilizing curb space adjacent to loading zones and other commercial parking areas has quickly become a pertinent issue.*

*The CSMS is a regional level collaborative effort divided into three parts:*

- *Engagement: Outreach, participation and engagement with local jurisdictions, other agencies, education institutes, private stakeholders, community-based organizations, and communities.*
- *Assessment: Understanding the needs of the region through multiple cities in terms of curb space.*
- *Policy & Strategies Consideration: Provide regional resources to support member agency curb space management interests/needs and insights on strategies related to curb space management.*

*The study commenced in August 2021 and will be completed by June 2022.*

#### **BACKGROUND:**

The curb space has gradually become recognized as some of the most valuable and in demand public space in cities today. It is where movement meets access and is used in some way or form by every single resident and business.

The COVID-19 pandemic has highlighted the imbalanced nature of current curbside allocation, such as the over prioritization of personal vehicles, and the confluence of regulations. The pandemic provides a unique opportunity to promote novel and engaging discussions about the curbside, including who has “rights” to the curb space, accessibility and equity concerns, the impact the use of curb space has on every aspect of city life, and how changes to curbside regulations can influence the desired streetscape.

The primary purpose of the Curb Space Management Study (CSMS) is to “reclaim” this valuable space through a comprehensive and multi-modal review of some of the most congested and complicated curb space locations within the SCAG region. Core objectives of the study are to provide strategies and recommendations for curb space management, and to develop pilot project concepts or analysis plans for pilot projects currently under way. Benefits include improved mobility, reduced congestion and vehicle miles travelled (VMT)/vehicle hours travelled (VHT), air quality improvements, improved economic activity, and reduced conflicts between users.

The CSMS will build off previous work conducted by the Southern California Association of Governments (SCAG), namely the Last Mile Freight Delivery Study (LMFS). While the LMFS was mostly focused on the delivery and pick up of shipments via commercial vehicle operators and their relationships with retail/receiver customers, the confluence of vehicles utilizing curb space adjacent to loading zones and other commercial parking areas has quickly become a pertinent issue.

Through the LMFS, groundwork has been laid for stakeholder engagement, existing conditions analyses, data collection, and identification of strategies, recommendations, and pilot project concepts, as it relates to curb space activities. The CSMS will incorporate these previous work efforts and go much further working directly with key stakeholders such as cities, transit operators, private TNC and other shared-ride companies, as well as gain further insights from commercial operators.

Stakeholder engagement and analysis will be focused on identifying and reconciling multiple perspectives on curb space, and considering multimodal characteristics such as:

- Relationships between transit services and TNCs at high volume station locations,
- Assessments of bus lanes and station infrastructure enhancements and their impacts on multimodal use of curb space areas,
- Equity issues such as competing transit and TNC use within disadvantaged and environmental justice communities,
- Active transportation and shared mobility uses such as bike lanes, shared-bike and dockless bike/scooter enhancements and impacts on curb space locations,
- Safety challenges including incidents and observed behavior,
- Potential for VMT reductions resulting from optimal curb space management,
- Curb management through asset valuation and potential pricing mechanisms, among others.

The CSMS has multiple goals and objectives for consideration:

- Reduce VMT/VHT and GHG emissions. There are multiple opportunities to reduce VMT/VHT and GHG emissions at the first- and last-mile level.
- Reduce congestion. By taking a comprehensive and multimodal approach within complicated curb space areas, the study will consider optimal strategies managing demand and reducing congestion.
- Promote a balanced transportation system by better understanding first- and last-mile relationships between TNCs and existing transit and active transportation systems.
- Establish key collaboration and partnerships with public agency and private sector stakeholders.
- Improve quality of life.

The current workplan outlines and details multiple components of the study including agency & stakeholder coordination plan, existing conditions of selected sites, and pilot project concepts.

Multiple study initiatives are already underway. An engagement plan has been completed including four City Advisory Teams cities (Anaheim, Riverside, Santa Ana, and Santa Monica). Each city will review and recommend on multiple stages of the project including existing conditions assessments

and, analysis, site selection for more extensive data collection and analysis, and best practices, policy relationships, and pilot project developments. To date, the study has been working closely with these cities on data inputs, inclusion of key stakeholders, and utilized surveys to frame expectations, and incorporated parametric and other resources to inform site selection locations. The Project Advisory Committee (PAC)/Peer Exchange Sessions are targeted to provide a platform to discuss best practices and visionary efforts happening in the SCAG region. The first PAC/Peer Exchange was held on November 3, 2021, including cities beyond the City Advisory Teams. Two regional workshops will be held over the course of the project as part of information and educational efforts, involving local jurisdictions, curbside vendors, and interested community-based organizations. These workshops are meant to more broadly educate and bring attention to curbside issues and best practices. The first regional workshop was held on December 14, 2021, including over 70 participants.

Staff will continue to provide the Transportation Committee with updates as the study progresses.

**FISCAL IMPACT:**

Funding for this project is included in the FY 22 Overall Work Program (OWP) in 145.4867.01 Curbside Space Management Study.



AGENDA ITEM 6  
REPORT

Southern California Association of Governments  
Remote Participation Only  
January 6, 2022

To: Transportation Committee (TC)

EXECUTIVE DIRECTOR'S  
APPROVAL

From: Courtney Aguirre, Program Manager II  
(213) 236-1990, aguirre@scag.ca.gov

Subject: Regional Transportation Safety Targets 2022

**RECOMMENDED ACTION:**

Recommend that the Regional Council adopt the 2022 regional safety targets and the supporting Regional Safety Policy Resolution.

**STRATEGIC PLAN:**

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

**EXECUTIVE SUMMARY:**

*The Federal Highway Administration (FHWA) issued a Final Rule, effective April 14, 2016, to establish performance measures for state departments of transportation (DOTs) to carry out the Highway Safety Improvement Program (HSIP) as required by the Moving Ahead for Progress in the 21st Century Act (MAP-21). The Final Rule calls for state DOTs, working with Metropolitan Planning Organizations (MPOs), to establish targets for reducing the numbers and rates of transportation fatalities and serious injuries. The California Department of Transportation (Caltrans) established statewide safety targets in August 2021 for the calendar year 2022. SCAG has until February 28, 2022, to establish regional safety targets.*

*SCAG staff recommend adopting region-specific targets consistent with SCAG's new safety models, which take into account traffic, socioeconomic, and other trends. The corresponding adopting resolution reaffirms SCAG's commitment to providing regional leadership and comprehensive efforts to achieve these targets through implementation of safety strategies in Connect SoCal and a Regional Safety Policy to guide the work, with a focus on data-driven decision-making, equity, and partnerships with local and state agencies.*

**BACKGROUND:**

Safety Performance Management Measures Final Rule

The Federal Highway Administration (FHWA) issued the National Performance Management Measures: Safety Performance Management Measures Final Rule, effective April 14, 2016, to

establish performance measures for state departments of transportation (DOTs) to carry out the Highway Safety Improvement Program (HSIP). State DOTs and Metropolitan Planning Organizations (MPOs) are expected to use the information and data generated as a result of the regulations to inform their transportation planning and programming decision-making and link investments to performance outcomes. FHWA expects that the performance measures will help state DOTs and MPOs make investment decisions that will result in the greatest possible reduction in fatalities and serious injuries. The Final Rule is aligned with California Department of Transportation (Caltrans) support of Zero Deaths (ZD, formerly Caltrans referred to their goal as Toward Zero Deaths), which has also been adopted by many state DOTs and municipalities.

The Final Rule calls for state DOTs, working with MPOs, to assess fatalities and serious injuries on all public roads, regardless of ownership or functional classification. Specifically, the Final Rule establishes the following five performance measures for five-year rolling averages for:

- Number of Fatalities;
- Rate of Fatalities per 100 million Vehicle Miles Traveled (VMT);
- Number of Serious Injuries;
- Rate of Serious Injuries per 100 million VMT; and
- Number of Non-motorized Fatalities and Serious Injuries.

The Final Rule also establishes the process for DOTs and MPOs to establish and report their safety targets, and the process that FHWA will use to assess whether state DOTs have met or made significant progress toward meeting their safety targets.

Caltrans is required to establish statewide targets on an annual basis, beginning in August 2021 for calendar year 2022 targets. SCAG is required to establish targets for the same five safety performance measures up to 180 days after Caltrans establishes the statewide targets (i.e., the end of February each year). Calendar year 2022 is the fifth year for which safety targets are being established pursuant to the requirements under MAP-21. SCAG has the option to agree to support the statewide targets, establish numerical targets specific to the SCAG region, or use a combination of both. In the first three years of target setting, SCAG supported the statewide targets and adopted SCAG-specific targets based on Caltrans' target setting methodology. However, in 2021 SCAG adopted targets based on Caltrans' prior target setting methodology that was supportive of achieving Toward Zero Deaths. This meant that SCAG committed to working towards achieving annual reductions of 3.5 percent in fatalities and serious injuries until 2050 (roughly aligning with the horizon year of Connect SoCal, 2045), at which time the region would be anticipated to experience zero traffic-related fatalities. SCAG provides regular updates on its progress towards achieving these targets, including within Connect SoCal, and the Federal Transportation Improvement Program.

FHWA considers whether Caltrans has met or made significant progress toward meeting its safety targets when at least four of the five targets are met or the outcome for the performance measure is better than the baseline performance the year prior to the target year. The met or made significant progress determination only applies to state DOT targets, not MPOs. In March 2021, FHWA notified Caltrans that California had not met or made significant progress towards its calendar year 2019 safety targets, the most recent year that could be evaluated. In response to this determination, California is required to obligate Authority equal to the State's Fiscal Year 2018 HSIP apportionment for HSIP projects in Fiscal Year 2022 (Caltrans was already doing this). Caltrans was also required to submit an HSIP Implementation Plan to FHWA this past fall. The purpose of the HSIP Implementation Plan is to identify tangible actions for California to take in federal Fiscal Year 2022 to make progress toward achieving the targets. Similar to the state, SCAG was not successful in achieving its 2019 safety targets. However, there are no federal or state repercussions. SCAG anticipates that because California has not met its targets, even greater coordination between Caltrans and MPO safety activities will occur going forward.

#### **CURRENT CONDITIONS**

Each year, on average, nearly 1,500 people die, 5,500 people are seriously injured, and 124,000 people sustain injuries in traffic collisions in our region. The numbers and rates of fatal and serious injury collisions have continued to climb in the pandemic. Based on preliminary data from the National Highway Traffic Safety Administration (NHTSA), more Americans died in traffic collisions during the first half of 2021 than any other six-month period on record.<sup>1</sup> According to NHTSA's report, there were an estimated 20,160 motor vehicle fatalities in the first half of 2021, up from 17,020 fatalities reported in the first half of 2020 – an 18.4 percent increase. All 10 NHTSA regions reported increases in fatalities, and NHTSA Region 9, which includes California, Arizona, Hawaii and the U.S. territories of American Samoa, Guam and Northern Mariana Islands, reported a 25 percent increase in estimated fatalities in the first half of 2021 compared to the previous year. However, in Southern California, based on provisional data for 2021 compared to the prior year, collisions are up roughly 11 percent, fatal and serious injury collisions are up by about 2 percent, and VMT is up about 4 percent. Some experts believe that the increases are due to changed behaviors during the pandemic (e.g., higher rates of speeding, driving under the influence, and forgoing seatbelts).<sup>2</sup> The recently passed infrastructure bill will encourage some safety improvements, including technology to prevent intoxicated people from operating a vehicle and better crash tests to address risk to people outside a vehicle. However, a great deal of work remains for California, local jurisdictions, and other stakeholders.

---

<sup>1</sup> US Department of Transportation, National Highway Traffic Safety Administration, *Traffic Safety Facts*, October 2021: <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813199>.

<sup>2</sup> <https://www.latimes.com/world-nation/story/2021-12-08/traffic-deaths-surged-during-covid-19-pandemic-heres-why>

## TARGET SETTING APPROACHES

There are two main approaches to target setting, vision-based target setting and evidence-based target setting. When developing aspirational, vision-based targets, agencies use the term “target” to refer to a long-term vision for future performance, their ultimate goal. Many agencies, including Caltrans and SCAG, have in the past established vision-based targets for zero fatalities (e.g., Vision Zero, Toward Zero Deaths, or Zero Deaths) and for progress towards a vision (e.g., reduce fatalities by one-half within 20 years). Evidence-based targets take a narrower approach to target setting, focused specifically on what can be achieved within the context of a set of investments, policies, and/or strategies defined within an implementation plan and subject to a shorter timeframe. While these two approaches are distinct, they are not necessarily in conflict. A vision-based target is useful for galvanizing support around a planning effort and for ensuring successful strategies are considered and/or implemented while keeping the focus on a clear goal. Evidence-based targets promote accountability in the near term. Being able to demonstrate the benefits of different levels of investment in safety can help strengthen understanding of the implications of investment decisions. Many agencies choose to adopt interim hard targets based on a broader vision (e.g., Zero Deaths or Vision Zero).

## STATEWIDE SAFETY TARGETS

Caltrans used a vision-based approach to establish the calendar year 2018, 2019, and 2020 statewide safety targets. Starting in 2018, the statewide targets were supportive of Toward Zero Deaths, a core objective of California’s Strategic Highway Safety Plan (SHSP), the statewide transportation safety plan, which provides a framework for reducing fatalities and serious injuries on all public roads. Towards Zero Deaths (also known as Safe Systems or Zero Deaths) is an approach that is based on the understanding that even one traffic-related fatality is unacceptable. In the United States, the Toward Zero Deaths National Strategy was launched in 2014, adopting the zero-focused imperative along with a strong commitment to a safety culture. The principles underpinning the approach include:

1. People make mistakes which can lead to crashes; however, no one should die or be seriously injured on the road as a result of these mistakes;
2. The human body has a limited physical ability to tolerate crash forces;
3. Road safety is a shared responsibility amongst everyone, including those that design, build, operate and use the road system; and
4. All parts of the road system must be strengthened in combination to multiply the protective effects and if one part fails, the others will still protect people.

At the center of the system is people – people that are fragile and will at times make mistakes that can lead to collisions. With that understanding, the road system needs to put layers of protection in

the form of safe roads, vehicles, speeds, and people (safe road users) around the fallible and vulnerable human in order to prevent fatalities and serious injuries.

The State's approach to target setting in 2021 and 2022 represents a departure from prior years in that Caltrans is no longer forecasting that it will reach zero fatalities in a future year (previously, 2030, then 2050). Instead, Caltrans is using a trend line approach that extrapolates the existing changes in fatalities and serious injuries into the future and assumes impacts of external factors and safety improvements (e.g., development and implementation of Local Road Safety Plans and distribution of Office of Traffic Safety grants). Caltrans does not currently use a safety model for target setting, and it is challenging to deduce forecasted impacts of investments on safety. For 2022 targets, for the number of fatalities, the statewide target assumes an annual reduction of 3.61 percent. For the rate of fatalities per 100 million VMT, the statewide target assumes an annual reduction of 2.00 percent, and for serious injuries (both the number and rate), it assumes an annual reduction of 1.66 percent. The statewide targets for calendar year 2022, all of which reflect five-year rolling averages, are as follows:

- Number of Fatalities: 3,491.8
- Rate of Fatalities per 100 million VMT: 1.042
- Number of Serious Injuries: 16,704.2
- Rate of Serious Injuries per 100 million VMT: 4.879
- Number of Non-motorized Fatalities and Serious Injuries: 4,684.4

For additional details regarding the State's target setting methodology, please review Attachment 1: Safety Performance Management Targets for 2022.

### REGIONAL SAFETY TARGETS

Collisions and collision severity are impacted by many factors, such as vehicle safety features, weather, and the state of the economy. Some research suggests that in California, 70 percent of the collision variation can be taken into account from only considering the unemployment rate and per capital Gross Domestic Product (GDP).<sup>[1]</sup> Other factors to consider include continued population growth; demographic changes (e.g., increasing share of older or younger adults); the changing mode mix on the roadways; mobility innovations; and the availability of funding for safety-related projects and programs, among others. Changes in law can also impact the number of collisions. For example, past research has found that California's teenage graduated driver licensing law, which has been in effect since 1998, has significantly reduced fatal and injury collisions for novice drivers.<sup>3</sup> Marijuana has been legal for recreational use since 2016, and there have been many questions on

---

<sup>[1]</sup> National Cooperative Highway Research Project 17-67, "Identification of Factors Contributing to the Decline of Fatalities in the United States."

<sup>3</sup> Automobile Club of Southern California: <http://news.aaa-calif.com/news/study:-teen-driving-law-reduced-crashes-by-68-percent>.

its impacts as a potential factor leading to collisions. However, recent studies have found that the legalization of marijuana seems to have little or no effect on traffic collisions and fatalities.<sup>4</sup>

A subset of these factors are integrated into SCAG's new safety target setting models. In late 2020, SCAG staff began working with FHWA to develop a series of predictive models for safety planning and target setting. The work resulted in the development of safety target setting models that predict fatalities, serious injuries, and non-motorized fatalities and serious injuries. These model outcomes correspond with the federal safety target requirements. SCAG's current safety models take into account the factors listed below. A plus or minus sign (+/-) is included in cases where there is research to support a correlation to increases or decreases in fatalities and/or serious injuries.

- Vehicle Miles Traveled (VMT):
  - Annual VMT (+)
  - Proportion of VMT on specific types of roadways (urban interstates, principal arterials, major collectors (+), and local roads (+))
  
- Demographics:
  - Total population
  - Proportion of population aged 65+ (+)
  - Proportion of population aged 15-24 (+)
  - Proportion of population aged 18-24 (+)
  
- Modes:
  - Proportion of population that commutes via transit, bicycle, or walk (-)
  
- Socioeconomics:
  - Median household income (-)
  - Total employment (corresponds to unemployment)
  - Unemployment rate (-)
  - Gas prices (-)
  
- Miscellaneous
  - Distilled spirit consumption per capita (+)

Using the models, SCAG staff developed the calendar year 2022 safety targets. The models forecasts trends through 2025, which reflect moderate increases in fatalities as well as more

---

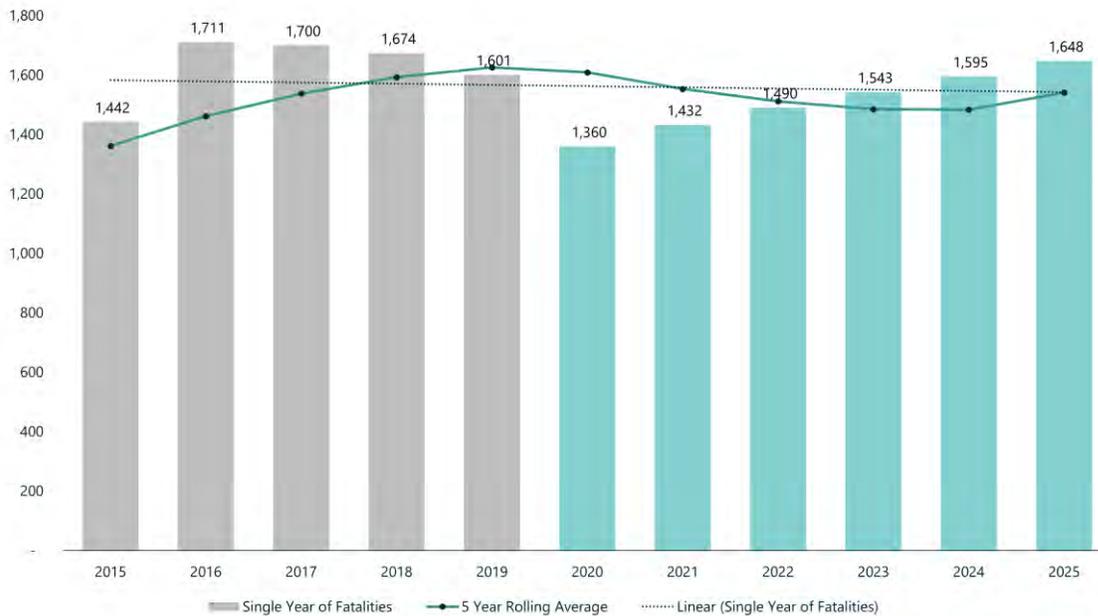
<sup>4</sup> National Bureau of Economic Research, "Early Evidence on Recreational Marijuana Legalization and Traffic Fatalities." [https://www.nber.org/papers/w24417?utm\\_source=npr\\_newsletter&utm\\_medium=email&utm\\_content=20210311&utm\\_term=5237211&utm\\_campaign=money&utm\\_id=7043805&orgid=305&utm\\_att1=money](https://www.nber.org/papers/w24417?utm_source=npr_newsletter&utm_medium=email&utm_content=20210311&utm_term=5237211&utm_campaign=money&utm_id=7043805&orgid=305&utm_att1=money)

---

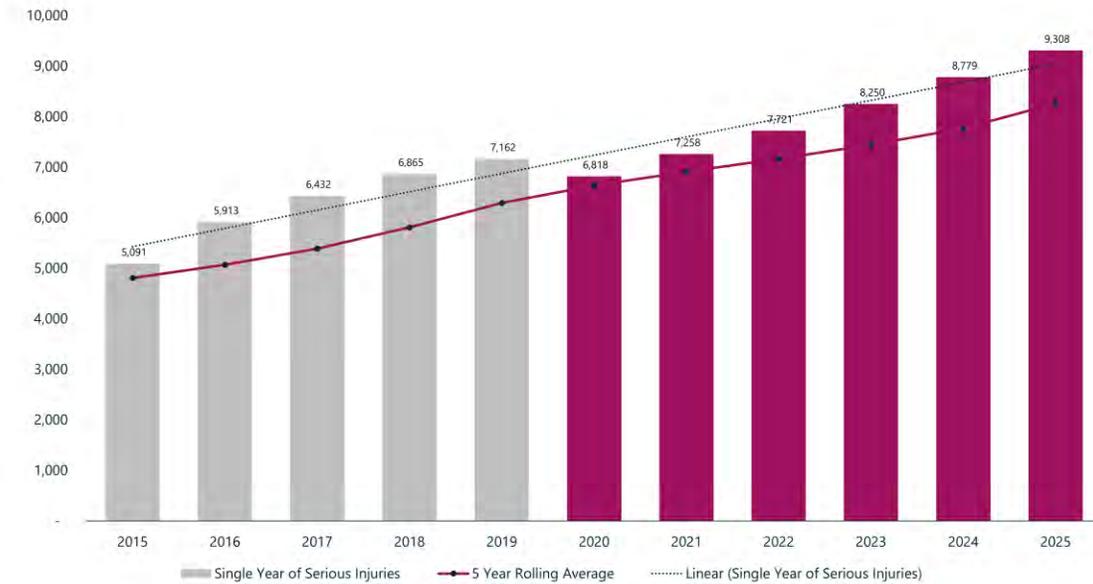
significant increases serious injuries (see **Figures 1-3** that follow). Based on our modeled safety targets, for 2022 we are forecasting a 2.7 percent increase in fatalities, a 3.7 percent increase in serious injuries, and a 4.6 percent increase in non-motorized fatalities and serious injuries. For calendar year 2022, SCAG staff is recommending maintaining a broader vision (Zero Deaths), while adopting evidence-based near-term targets. The regional targets for calendar year 2022, all of which reflect five-year rolling averages, are as follows:

- Number of Fatalities: 1,511.4
- Rate of Fatalities per 100 million VMT: 0.95
- Number of Serious Injuries: 7,164.7
- Rate of Serious Injuries per 100 million VMT: 4.5
- Number of Non-motorized Fatalities and Serious Injuries: 2,140

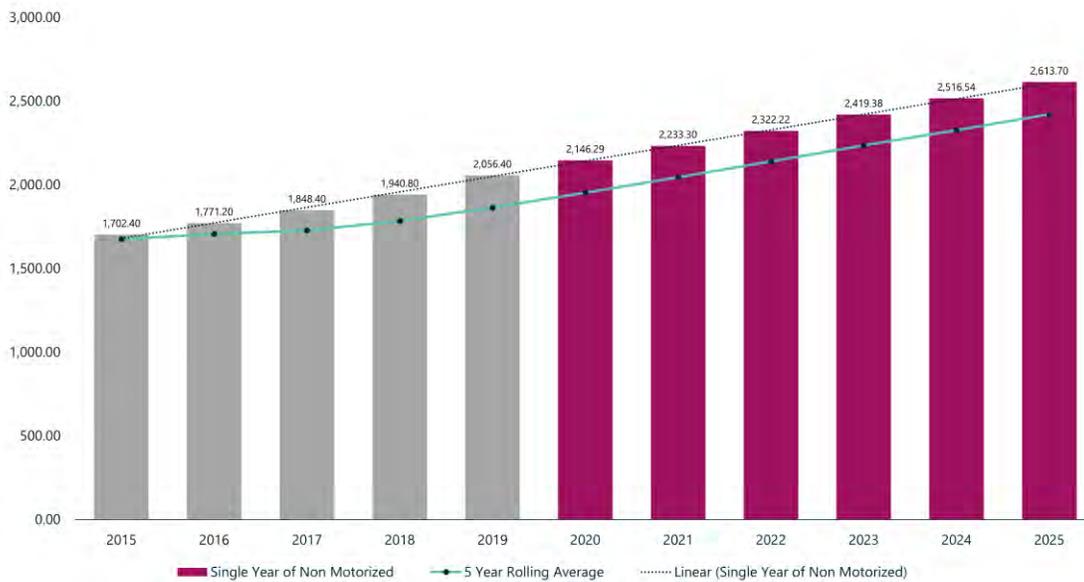
**Figure 1: Projected Fatalities**



**Figure 2: Projected Serious Injuries**



**Figure 3: Projected Non-Motorized Fatalities and Serious Injuries**



**REGIONAL SAFETY STRATEGY**

To achieve the region’s safety targets, significant effort is needed. SCAG recognizes that there are numerous actions that can be taken to eliminate traffic fatalities and serious injuries, and that as an

MPO, SCAG can work to motivate and facilitate action across the region. Over the course of the past several years and as a significant policy element in Connect SoCal, SCAG has developed a regional safety strategy that includes safety policy and planning; data collection and analysis; and support of local level efforts. These components are described below.

#### *Safety Policy and Planning*

- **Develop the nationwide safety framework:** As a part of the long-range plan, Connect SoCal, SCAG develops a Transportation Safety Technical Report which includes a safety framework for the region, including strategies local jurisdictions can implement to improve transportation safety in their communities.
- **Support and collaborate on California’s Strategic Highway Steering (SHSP) Committee:** SCAG serves on the SHSP Steering Committee, which establishes the strategies and processes to implement California’s statewide transportation safety framework. This past year SCAG led a subgroup that developed statewide guidance on High Injury Networks. The resulting report is posted [online](#) and Caltrans is now considering the recommendations as it initiates efforts to implement [AB 43](#) (described more below).
- **Support safety legislation:** As documented in SCAG’s legislative platform, SCAG supports legislation that implements the recommendations of the [State’s Zero Traffic Fatalities Task Force](#), which would provide jurisdictions with greater local control to combat rising traffic-related fatalities and serious injuries. SCAG worked with Assemblymember Friedman’s office on legislation (AB 43), which was signed into law on October 8, 2021. AB 43 will allow local jurisdictions to lower speeds on established safety corridors (e.g., High Injury Networks). It will also allow traffic engineers to take pedestrian and bicyclist safety into account when establishing speed limits. The law will allow California cities to lower speed limits on their streets in 5 mph increments and reduce the need to conduct as many traffic surveys as before. To support implementation of AB 43, SCAG staff is serving on a California Traffic Control Devices Subcommittee to review Caltrans’ proposal to revise California Manual on Uniform Traffic Control Devices (MUTCD) Section 2B.13 Speed Limit Policy and related documents to comply with AB 43 requirements that become effective on January 1, 2022.

#### *Data Collection and Analysis*

- **Establish annual safety targets:** Federal guidance requires SCAG to adopt regional targets for road safety on an annual basis. SCAG has adopted four rounds of regional safety targets to date, starting in 2018.
- **Safety modeling:** As described above, in November 2020 SCAG secured technical assistance from FHWA to develop a data-driven safety target setting methodology and safety planning models. Phase 1 of the modeling work was completed this past year and this work supported development of this year’s safety targets. Moving forward, FHWA is supporting a

portion of Phase 2 modeling work, which is anticipated to result in an interactive tool for community safety modeling.

- **Maintain the Regional High Injury Network:** To motivate reductions in serious injuries and fatalities, SCAG developed a regional High Injury Network (HIN) to help local jurisdictions focus improvements on where they are most needed. The regional HIN is currently being updated to include additional years of data, and SCAG staff anticipate sharing an updated version in spring 2022.
- **Analyze, interpret, and share regional data:** In June 2021, SCAG published an updated [Transportation Safety Regional Existing Conditions Report](#) and accompanying [fact sheets](#) and [Story Map](#). In the next year, SCAG staff are working to develop an online safety dashboard to better support local jurisdictions as they engage in more data-driven decision-making.

#### *Supporting Local Safety Efforts*

- **Leading and Collaborating on Safety Education Campaigns:** To heighten awareness of the region's transportation safety challenges and opportunities, and to eliminate collisions resulting in serious injuries or fatalities, SCAG launched the [Go Human](#) campaign in 2015. *Go Human* is a 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. The campaign provides advertising and educational resources to partners and implements temporary safety demonstration projects to showcase innovative transportation designs and help cities re-envision their streets as safer, more accessible places for walking and biking. Other strategies have included distribution of mini grants to local partners to implement safety engagement activities, safety workshops and symposiums, among others. In 2021, *Go Human* revamped and relaunched the [Go Human Safety Pledge](#). Stakeholders, residents, businesses and leaders are invited to take action to improve traffic safety in communities across the region.
- **Safety planning technical assistance:** Starting in 2018, SCAG began offering technical assistance to local jurisdictions interested in developing safety plans through its Sustainable Communities Program. Resulting safety plans are intended help further the region's efforts to eliminate fatalities and serious injuries and achieve regional safety targets. SCAG is currently working with the City of El Monte and Omnitrans on safety plans, and is in the early stages of working with the Cities of Duarte, Montebello, and Santa Ana on issuing solicitations for additional safety plans to kick off in spring 2022.
- **Convening policymakers and practitioners:** On at least a quarterly basis, SCAG convenes local jurisdictions and agencies to achieve better coordination and uplift best practices via its Safe and Active Streets Working Group and *Go Human* Steering Committee.

**RECOMMENDATION**

For calendar year 2022, SCAG staff is recommending maintaining a broader vision (Zero Deaths), while adopting evidence-based near-term targets. SCAG staff recommend adopting SCAG-specific targets based on the results of SCAG's predictive safety. Based on our modeled safety targets, for 2022 we are forecasting a 2.7 percent increase in fatalities, a 3.7 percent increase in serious injuries, and a 4.6 percent increase in non-motorized fatalities and serious injuries. Because targets will be updated annually, SCAG will have the opportunity to revisit and update its targets each calendar year. The corresponding adopting resolution reaffirms SCAG's regional leadership role and commitment to advance activities outlined in Connect SoCal and the Regional Safety Strategy, as reflected above, and endorsement of a Regional Safety Policy to guide this work that:

- Endorses Zero Deaths as part of a comprehensive effort to strive to achieve zero transportation-related fatalities and serious injuries in the SCAG region;
- Motivates data-driven approaches, including High Injury Networks and safety modeling, to inform safety policy and planning and the strategic use of available funds and resources;
- Promotes equity in regional safety policies and plans by considering and analyzing impacts on Disadvantaged Communities, Communities of Concern, and Environmental Justice Areas, and protecting vulnerable roadway users, such as pedestrians and bicyclists, older adults and youth;
- Engages regional stakeholders in transportation safety policy and plan development, implementation, and evaluation, with the goal of achieving alignment with Zero Deaths;
- Provides leadership at the state and regional levels to promote safety, including supporting work on statewide efforts (e.g., SHSP) and legislation that furthers achieving Zero Deaths.

**FISCAL IMPACT:**

Funding for staff work on this issue is included in the OWP (22-310.4883.01: Transportation Safety).

**ATTACHMENT(S):**

1. Caltrans Safety Performance Management Targets for 2022
2. PowerPoint Presentation - Transportation Safety Targets 2022
3. Draft - 2022 Safety Targets and Regional Safety Policy Resolution

# Safety Performance Management Targets for 2022

The California Department of Transportation (Caltrans), in cooperation with the Office of Traffic Safety (OTS), is required to set five annual Safety Performance Management Targets (SPMTs) for all public roads in the State of California by August 31 of each year. This is pursuant to the Moving Ahead for Progress in the 21st Century Act (MAP-21, P.L. 112-141). The Safety Performance Management Final Rule adds Part 490 to Title 23 of the Code of Federal Regulations to implement the performance management requirements in 23 U.S.C. 150.

Caltrans set SPMTs for the 2022 calendar year by August 31, 2021. Caltrans and OTS have adopted the following performance measures shown in Table 1.

Performance Measure	Data Source	5-Yr. Rolling Average Target for 2022	Annual Percentage Change for 2022
Number of Fatalities	FARS	3,491.8	-3.61%
Rate of Fatalities (per 100M VMT)	FARS & HPMS	1.042	-2.00%
Number of Serious Injuries	SWITRS	16,704.2	1.66%
Rate of Serious Injuries (per 100M VMT)	SWITRS & HPMS	4.879	1.66%
Number of Non-Motorized Fatalities and Non-Motorized Severe Injuries	FARS & SWITRS	4,684.4	-3.61% for Fatalities and 1.66% for Serious Injuries

*Note: The targets highlighted in gray are set in coordination with OTS.*

TABLE 1. PERFORMANCE MEASURE AND TARGET BASED ON 5-YEAR ROLLING AVERAGE

## **Federal Guidance and Requirements**

The Highway Safety Improvement Program (HSIP) is a core Federal-aid program with the purpose to achieve a significant reduction in fatalities and serious injuries on all public roads. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads and focuses on performance. The HSIP regulation under 23 CFR 924 establishes the Federal Highway Administration’s (FHWA) HSIP policy, as well as program structure, planning, implementation, evaluation and reporting requirements for States to successfully administer the HSIP.

In support of a data-driven and strategic approach, the HSIP Final Rule contains major policy changes related to:

- (1) the state Strategic Highway Safety Plan (SHSP) update cycle,
- (2) the state annual HSIP report content and schedule, and
- (3) the subset of the Model Inventory of Roadway Elements (MIRE) fundamental data elements (FDE).

The Safety Performance Management (PM) Final Rule supports the data-driven performance focus of the HSIP. The Safety PM Final Rule establishes five performance measures as five-year rolling averages to carry out the HSIP. The performance measures include:

- (1) Number of Fatalities,
- (2) Rate of Fatalities per 100 million Vehicle Miles Traveled (VMT),
- (3) Number of Serious Injuries,
- (4) Rate of Serious Injuries per 100 million VMT, and
- (5) Number of Non-motorized Fatalities and Non-motorized Serious Injuries.

These safety performance measures are applicable to all public roads regardless of ownership or functional classification. The Safety PM Final Rule also establishes a common national definition for serious injuries.

### **California Safety Planning and Target Setting**

The overarching highway safety plan for the State of California is the Strategic Highway Safety Plan (SHSP). In January 2020, California updated its SHSP, which is a statewide, coordinated traffic safety plan that provides a comprehensive framework for reducing roadway fatalities and serious injuries on California's public roads. The SHSP is a multi-disciplinary effort involving Federal, tribal, State, and local representatives from the 5Es who dedicate countless hours to improve safety and partnerships across disciplines where the 5Es represent education, enforcement, engineering, emergency response, and emerging technologies.

States must establish statewide targets for each of the federal safety performance measures. States also have the option to establish any number of urbanized area targets and one non-urbanized area target for any, or all, of the measures. Targets are established annually. For three performance measures (number of fatalities, rate of fatalities, and number of serious injuries), targets must be identical to the targets established for the National Highway Traffic Safety Administration (NHTSA) Highway Safety Grants program that is administered by OTS. The State Departments of Transportation (DOTs) must also coordinate with their Metropolitan Planning Organizations (MPOs) in their States on establishment of targets, to the maximum extent practicable. States will report targets to the FHWA in the HSIP report due in August of each year.

Each MPO will establish targets for the same five safety performance measures for all public roads in the MPO's planning area within 180 days after the State establishes each target. The targets will be established in coordination with the State, to the maximum extent practicable. The MPO can either agree to support the State DOT target or establish a numerical target specific to the MPO planning area. MPOs' targets are reported to the State DOT, which must be able to provide the targets to FHWA, upon request.

A State is considered to have met, or made significant progress toward meeting, its safety targets when at least four of the five targets are met or the outcome for the performance measure is better than the baseline performance the year prior to the target being set. Optional urbanized area or non-urbanized area targets will not be evaluated. Each year that FHWA determines a State has not met or made significant progress toward meeting its performance targets, the State will be required to use obligation authority equal to the baseline year HSIP apportionment for safety projects. States must also develop a HSIP Implementation Plan.

### **Target Selection Methodology**

There are three steps to setting safety performance targets, which are:

- (1) estimating the existing trend to determine where the State is,
- (2) determining what external factors will impact the target in order to adjust the trend for demographic and socioeconomic changes, and
- (3) estimating targets based on forecasted fatality reductions from safety plans.

Since SPMTs are applicable to all public roads in California, regional and local jurisdictions should be notified of the safety target setting process. On July 27, 2021, a virtual workshop was held to discuss the SPMTs with the MPOs and other vested stakeholders. During this workshop two possible scenarios for setting the 2022 SPMTs were presented. They included: (1) a trend line, which extrapolates the existing changes in fatalities and serious injuries into the future; and (2) a target based on estimated impacts from completed activities and projects.

The current approach is the first scenario that uses a trend line, which extrapolates the existing changes in fatalities and serious injuries into the future and is a data-driven process that estimates the impacts of external factors and safety improvements based on collision history.

**Statewide Number of Fatalities**

For 2022, the target for fatalities is the five-year rolling average of **3,491.8** with 3,229 fatalities projected for the same year. NHTSA Fatality Analysis Reporting System (FARS) data was used from 2010 through 2019. Traffic fatalities generally increased from 2010 to 2017 in California as shown in Figure 1, but there was a 2.20% reduction in fatalities from 3,884 in 2017 to 3,798 in 2018 and a 5.00% reduction from 2018 to 3,606 in 2019. To continue this downward trend line for fatalities, the average reduction of 3.61% from 2017 to 2019 was used to forecast data for 2020 through 2022. In Figure 1, the green bars reflect the data that was available in FARS at the time of the target setting process and the gray bars reflect the projected annual decrease of 3.61%. The dark green line represents the 5-year rolling average of the annual fatality numbers.



FIGURE 1 – STATEWIDE NUMBER OF FATALITIES

Through assistance with the HSIP, many California agencies have or are developing Local Roadway Safety Plans that put a focus on reducing fatal and serious injury collisions throughout their respective jurisdictions. This coupled along with an increase in the number of OTS grants from the prior year will assist California in continuing this downward trend in fatalities.

**Statewide Number of Serious Injuries**

For 2022, the target for serious injuries is the five-year rolling average of **16,704.2** with 17,259 serious injuries projected for the same year. Statewide Integrated Traffic Records System (SWITRS) data was available for serious injuries from 2010 through 2018. Preliminary data for 2019 was used since final data was not available at the time of 2022 target setting. The definition of serious injuries was changed to include suspected serious injuries and was implemented in mid-2017. The first full year of suspected serious injuries resulted in a significant increase from the last full year using the old definition. The trend line for serious injuries was based on the data from 2018 to 2019 with an annual increase of 1.66%, and the annual increase was used to forecast data for

2020 through 2022 to determine the five-year average. In Figure 2, the green bars reflect the data from SWITRS and the gray bars reflect the projected annual increase. The dark green line represents the 5-year rolling average of the annual serious injury numbers.

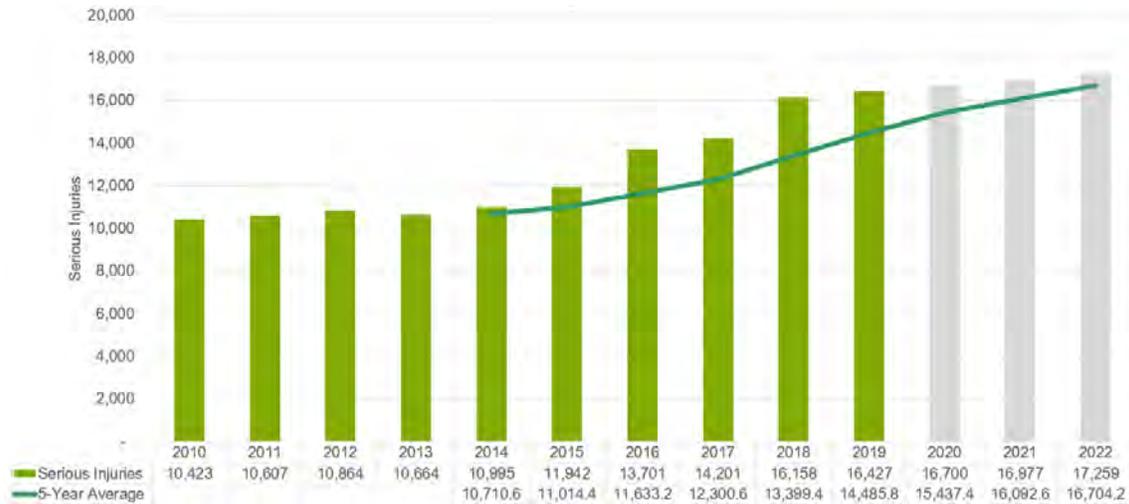


FIGURE 2 – STATEWIDE NUMBER OF SERIOUS INJURIES

Through assistance with the HSIP, many California agencies have or are developing Local Roadway Safety Plans that put a focus on reducing fatalities and serious injuries throughout their jurisdictions. This coupled with an increase in the number of OTS grants from the prior year will assist California in reversing the upward trend in serious injuries.

**Statewide Traffic Volumes**

Statewide traffic volumes are reported in one hundred million vehicle miles traveled (100M VMT). VMT data from the Highway Performance Monitoring System was used through 2018 as VMT data for 2019 was not available at the time of 2022 target setting. In Figure 3, traffic volumes have been steadily increasing since 2011. The 2019 VMT was projected to increase 0.9 percent over 2018 and then remain flat through 2022 due to the uncertainties of the pandemic.

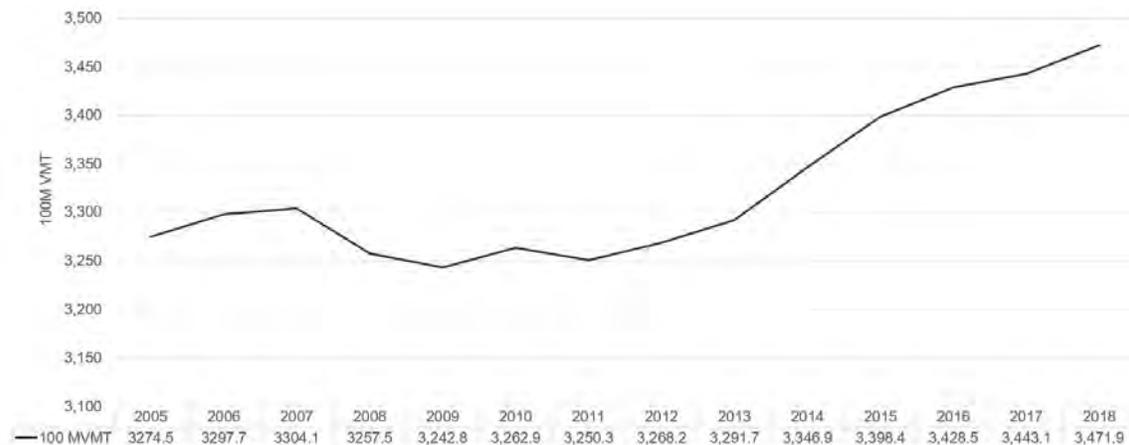


FIGURE 3 –STATEWIDE TRAFFIC VOLUMES

**Statewide Fatality Rate**

For 2022, the target for the fatality rate is the five-year rolling average of **1.042** with an annual rate of 1.00 projected for the same year. The trend line for the fatality rate is based on the average annual reduction from 2016 through 2019. The fatality rate did not change between 2016 and 2017, a 3.37% reduction between 2017 and 2018, and a 2.83% reduction between 2018 and 2019, so the calculated average reduction for the fatality rate is 2.01%. To continue this downward trend line for the fatality rate, the reduction was used to forecast data for 2020 through 2022. In Figure 4, the green bars reflect the available data for the annual fatality rates and the gray bars reflect the trend line reduction. The dark green line represents the 5-year rolling average of the annual fatality rates.

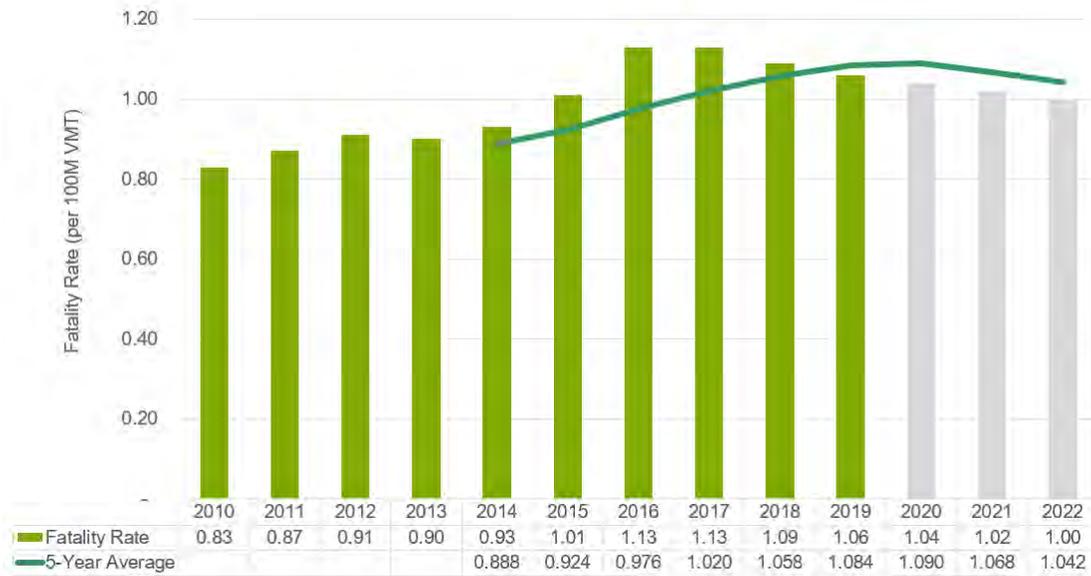


FIGURE 4 – STATEWIDE FATALITY RATE (PER 100M VMT)

**Statewide Serious Injury Rate**

For 2022, the target for the serious injury rate is the five-year rolling average of **4.879** with an annual rate of 5.06 projected for the same year. The serious injury rate was projected by 1.66% from 2020 through 2022. In Figure 5, the green bars reflect the available data for the annual serious injury rates and the gray bars reflect the trend line projection. The dark green line represents the 5-year rolling average of the annual serious injury rates.



FIGURE 5 – STATEWIDE SERIOUS INJURY RATE (PER 100M VMT)

***Statewide Non-Motorized Fatalities and Non-Motorized Serious Injuries (Pedestrians and Bicyclists)***

For 2022, the target for non-motorized fatalities and serious injuries is the five-year average of **4,684.4** with an annual frequency of 4,740 for the same year. In Figure 6, the green bars reflect the number of fatalities from FARS and serious injuries from SWITRS for pedestrians and bicyclists combined. The gray bars reflect the annual 3.61% decrease in fatalities and annual 1.66% increase in serious injuries as previously discussed.

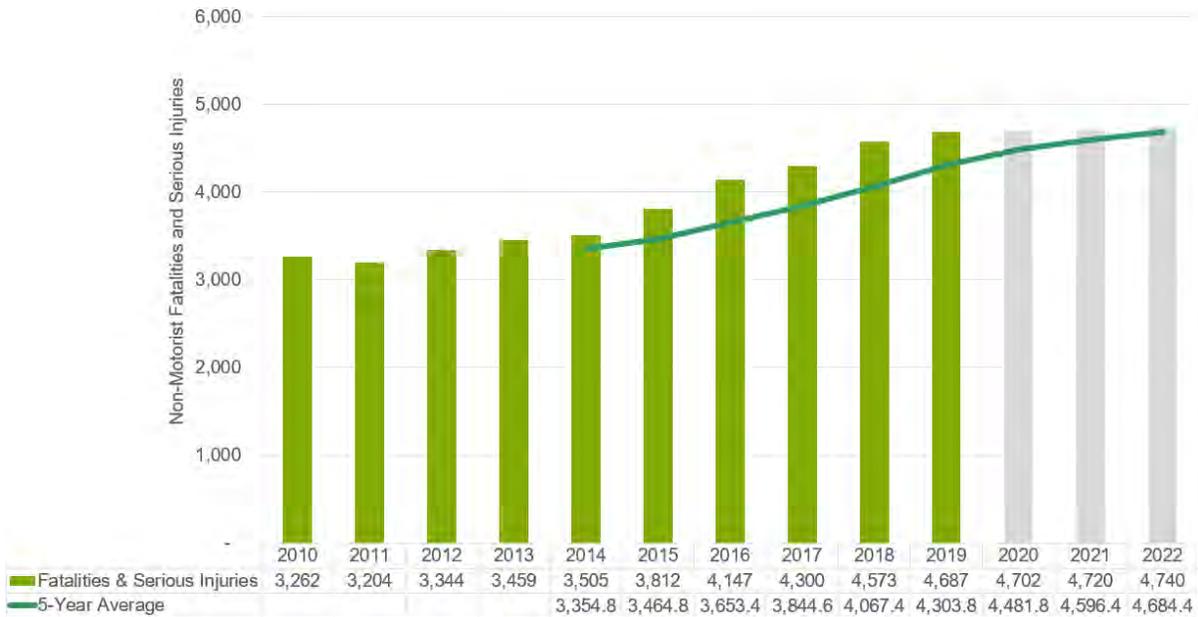


FIGURE 6 – STATEWIDE NON-MOTORIZED FATALITIES AND SERIOUS INJURIES (COMBINED)

**Contacts:**

Nagendranath (Nagi) Pagadala  
Phone: (916) 387-5850  
Email: nagi.pagadala@dot.ca.gov

Kelly Mar  
Phone: (916) 617-0159  
Email: kelly.mar@dot.ca.gov

# Regional Safety Targets 2022

Transportation Committee

Courtney Aguirre

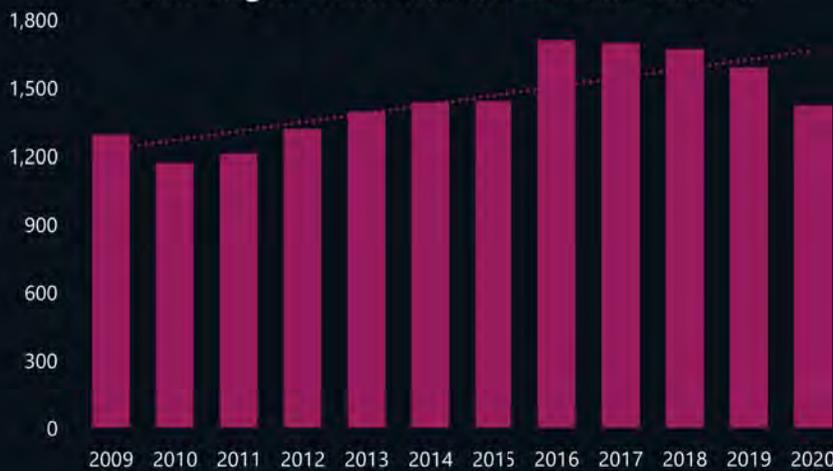
January 6, 2022

[www.scag.ca.gov](http://www.scag.ca.gov)



## What are the overall trends?

SCAG Region Total Number of Fatal Victims



**1,450**  
PEOPLE DIE EVERY YEAR FROM COLLISIONS

**5,500**  
PEOPLE SUSTAIN SERIOUS INJURIES EVERY YEAR FROM COLLISIONS

**77%**  
OF ALL COLLISIONS OCCUR IN URBAN AREAS

### Why are collisions occurring?



One of the top contributing factor of all collisions is unsafe speed.

Speed is the critical factor in the severity of collisions.



HIT BY A VEHICLE TRAVELING AT 25 MPH



89% chance of survival.

HIT BY A VEHICLE TRAVELING AT 35 MPH



68% chance of survival.

HIT BY A VEHICLE TRAVELING AT 40 MPH



35% chance of survival.

## Background: Safety Performance Management Final Rule

- Effective April 14, 2016
- Statutory authority under MAP-21 (49 USC 490)
- Establishes 5 safety performance measures (in all cases, victims)
  - Number of Fatalities
  - Rate of Fatalities per 100 million VMT
  - Number of Serious Injuries
  - Rate of Serious Injuries per 100 million VMT
  - Number of Non-motorized Fatalities and Non-motorized Serious Injuries
- 5-Year Rolling Averages

## Background: MPO Targets

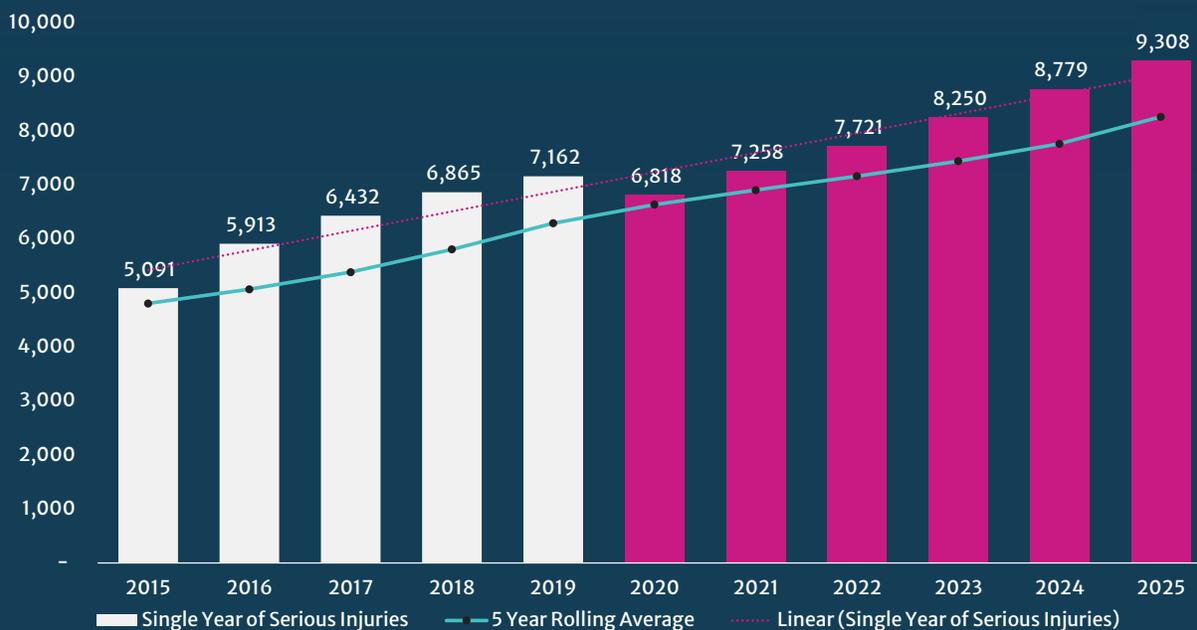
- Must establish safety targets within 180 days after the State establishes targets (Feb. 28, 2022)
- Options:
  - Support State targets
  - Establish numerical targets specific to the region, or
  - Use a combination of both
- MPO reporting progress to the State includes reporting in RTP/SCS and FTIP



## Trends: Fatalities



## Trends: Serious Injuries



# Trends: Non-Motorized Fatalities & Serious Injuries



# Past Target Setting Methodologies

Year	State Method	SCAG Method
2018	Toward Zero Deaths by 2030 7.69% reduction in fatalities 1.5% reduction in serious injuries 10% reduction in bike/ped fatalities/serious injuries	Same as State
2019	Toward Zero Deaths by 2030 3% reduction fatalities 1.5% reduction serious injuries 3% and 1.5% reduction in bike/ped fatalities/serious injuries	Same as State
2020	Toward Zero Deaths by 2050 3.03% reduction in fatalities 1.5% for reduction for serious injuries 3.03% and 1.5% reduction in bike/ped fatalities/serious injuries	Same as State

## Past Target Setting Methodologies

Year	State Method	SCAG Method
2021	Trend Line Approach 2.9% reduction in fatalities 1.3% reduction in serious injuries 2.9% and 1.3% reduction in bike/ped fatalities/serious injuries	Towards Zero Deaths by 2050 3.5% reduction in fatalities 3.5% reduction in serious injuries 3.5% reduction in bike/ped fatalities/serious injuries
2022	Trend Line Approach 3.61% reduction in fatalities 2.00% reduction in rate of fatalities 1.66% reduction in serious injuries (# and rate) 3.61% and 1.66% reduction in bike/ped fatalities/serious injuries	Multivariable Safety Model 2.7% increase in fatalities 3.7% increase in serious injuries 4.6% increase in bike/ped fatalities/serious injuries

## Safety Target Setting Models

- Consider a variety of factors:
  - Vehicle Miles Traveled
  - Traffic trends on specific types of roads
  - Older and younger drivers
  - Employment
  - Income levels
  - Gas prices
  - Alcohol consumption



## Calendar Year 2022 Safety Targets

- SCAG Targets vs. (Caltrans)
  - Number of **Fatalities**: 1,511.4 (3,491.8)
  - Rate of Fatalities per 100 million VMT: 0.95 (1.042)
  - Number of **Serious Injuries**: 7,164.7 (16,704.2)
  - Rate of Serious Injuries per 100 million VMT: 4.5 (4.879)
  - Number of **Non-motorized** Fatalities & Serious Injuries: 2,140 (4,684.4)

## SCAG's Role in Transportation Safety

- Safety Policy and Planning
  - Regional Safety Policy
  - SHSP Steering Committee
  - Connect SoCal – safety component
  - Transportation Safety Regional Existing Conditions Report
  - Annual safety targets
  - Safety legislation (AB 43)
  - Convening jurisdictions and agencies to achieve better coordination (**Safe & Active Streets Working Group**)



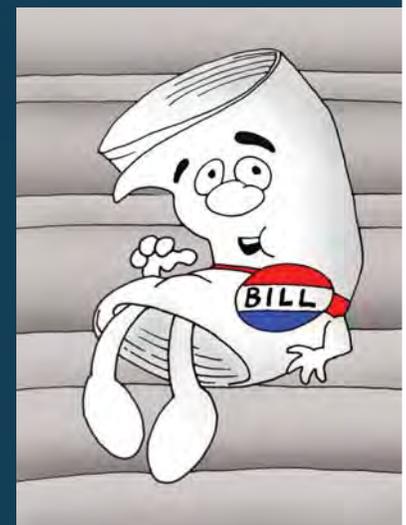
## SCAG's Role in Transportation Safety

- Data Collection and Analysis
  - Developed series of predictive models for safety planning and target setting
  - Regional High Injury Network
  - Gathering data such as roadway network, traffic volumes, and VMT
  - Analyzing, interpreting and sharing regional data



## Assembly Bill 43

- Allows locals to lower speeds on safety corridors (i.e., high injury networks)
- Caltrans must update the Manual on Uniform Traffic Control Devices (MUTCD) to define safety corridors
- Establish 25mph speed limits in business and residence districts
- Traffic & engineering studies – good for up to 14 years (vs. 7)



## SCAG's Role in Transportation Safety

- Funding Safety-Related Efforts
  - SCAG Sustainable Communities Planning Grants
  - Supporting ATP funded projects
- Encouraging Best Practices
  - Toolbox Tuesdays (High Injury Network Training)
  - Safe and Active Streets Working Groups
  - Regional Safety Workshops & Peer Exchanges
- Leading and Collaborating on Safety Education Campaigns
  - *Go Human*



## Recommended Action

- Recommend that the Regional Council:
  - Adopt SCAG's calendar year 2022 transportation safety targets based on model forecasts.
  - Reaffirm SCAG's regional leadership role and commitment to advancing activities outlined in Connect SoCal and the Regional Safety Strategy.

## Regional Safety Policy

- Endorses **Zero Deaths** (Safe Systems) as part of a comprehensive effort to strive to achieve zero fatalities and serious injuries.
- Motivates **data driven approaches** to inform safety policy and planning and the strategic use of available funds and resources.
- Promotes **equity** in regional safety policies and plans by considering and analyzing impacts on high need areas and **protecting vulnerable road users**.
- Engages regional stakeholders in transportation safety policy and plan development, implementation, and evaluation.
- Provides **leadership at the state** and regional levels to promote safety, including supporting work on statewide efforts (e.g., SHSP) and **legislation** that furthers Zero Deaths.

## Next Steps

- Seek Regional Council adoption of 2022 safety targets (February)
- Submit 2022 safety targets to Caltrans by February 28, 2022
- Continue to work with FHWA on safety modeling
- March onwards:
  - Work with stakeholders to implement Connect SoCal's safety strategies and actions (e.g., encourage applications for SCAG's SCP, California's HSIP, LRSP, ATP, etc.)
  - Monitor progress and set updated targets each year

## Comments? Questions?

Further Questions? Please contact:  
Courtney Aguirre, [aguirre@scag.ca.gov](mailto:aguirre@scag.ca.gov)

[www.scag.ca.gov](http://www.scag.ca.gov)





DRAFT  
RESOLUTION NO. 22-XXX-X

A RESOLUTION OF THE SOUTHERN CALIFORNIA  
ASSOCIATION OF GOVERNMENTS APPROVING THE  
2022 SAFETY TARGETS AND REGIONAL SAFETY POLICY

SOUTHERN CALIFORNIA  
ASSOCIATION OF GOVERNMENTS  
900 Wilshire Blvd., Ste. 1700  
Los Angeles, CA 90017  
T: (213) 236-1800  
www.scag.ca.gov

REGIONAL COUNCIL OFFICERS

- President  
**Clint Lorimore, Eastvale**
- First Vice President  
**Jan C. Harnik, Riverside County  
Transportation Commission**
- Second Vice President  
**Carmen Ramirez, County of Ventura**
- Immediate Past President  
**Rex Richardson, Long Beach**

COMMITTEE CHAIRS

- Executive/Administration  
**Clint Lorimore, Eastvale**
- Community, Economic &  
Human Development  
**Jorge Marquez, Covina**
- Energy & Environment  
**David Pollock, Moorpark**
- Transportation  
**Sean Ashton, Downey**

**WHEREAS**, SCAG is the largest Metropolitan Planning Organization (MPO) in the United States covering six-counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura), and serving 19 million people pursuant to 23 USC § 134 et seq. and 49 USC § 5303 et seq.;

**WHEREAS**, SCAG is responsible for bringing Southern California’s diverse residents and local partners together with unifying regional plans, policies, and programs that result in more healthy, livable, sustainable, and economically resilient communities;

**WHEREAS**, improving mobility, accessibility, reliability, and transportation safety has been a goal included in SCAG’s long-range plans, including *Connect SoCal*, for decades;

**WHEREAS**, transportation safety is a serious issue in the region, where on average 1,450 people are killed, 5,500 are seriously injured, and 124,00 are injured in traffic collisions every year;

**WHEREAS**, transportation safety is an equity issue because low-income and communities of color are disproportionately impacted; 66 percent of SCAG’s current High Injury Network exists in Disadvantaged Communities;

**WHEREAS**, the Moving Ahead for Progress in the 21st Century (MAP-21) Act requires MPOs to establish annual safety targets;

**WHEREAS**, 23 U.S. Code §450 requires the Regional Transportation plan to include a system performance report, including progress achieved by the MPO in meeting safety performance targets, and requires the Transportation Improvement Program (TIP), once implemented is designed to make progress toward achieving the safety performance targets;

**WHEREAS**, Zero Deaths (ZD) provides a framework for reducing fatalities and serious injuries on all public roads, utilizing a safe systems approach that is based on the understanding that even one traffic-related fatality is unacceptable, and that the road system needs to put layers of protection in the form of safe roads, vehicles, speeds, and people (safe road users) around the fallible and vulnerable human in order to prevent fatalities and serious injuries; and

Attachment: Draft - 2022 Safety Targets and Regional Safety Policy Resolution (Regional Transportation Safety Targets 2022)

**WHEREAS**, SCAG recognizes that it can help in motivating and facilitating action to reduce fatalities and serious injuries, and it seeks to continue to lead or join aligned ZD efforts.

**NOW, THEREFORE, BE IT RESOLVED**, by the Regional Council of the Southern California Association of Governments, that SCAG hereby adopts calendar year 2022 safety targets, with the long-term aim of achieving Zero Deaths; and

**BE IT FURTHER RESOLVED THAT:**

1. SCAG adopts a Regional Safety Policy to commit to working with partner agencies to encourage and support actions towards the elimination of transportation-related fatalities and serious injuries by 2050, if not sooner, in Southern California; and
2. SCAG endorses Zero Deaths as a comprehensive and holistic approach to achieving this goal; and
3. SCAG affirms its commitment to motivating data driven approaches, including High Injury Networks and safety modeling, to inform safety policy and planning and the strategic use of available funds and resources; promoting equity in regional safety policies and plans by considering and analyzing impacts on Disadvantaged Communities, Environmental Justice Areas, and Communities of Concern, and protecting vulnerable roadway users, such as pedestrians and bicyclists, older adults and youth; engaging regional stakeholders in transportation safety policy and plan development, implementation, and evaluation, with the goal of achieving alignment with ZD; and providing leadership at the state and regional levels to promote safety, including supporting work on statewide efforts (e.g., SHSP) and legislation that furthers ZD; and
4. SCAG encourages partner agencies to sign on to the [Go Human Safety Pledge](#), and in doing so, commit to safety by creating streets that promote walking, biking, and community connections; and
5. SCAG also encourages partner agencies to consider adopting and developing ZD policies and plans for their respective jurisdictions.

**PASSED, APPROVED AND ADOPTED** by the Regional Council of the Southern California Association of Governments at its regular meeting this 3 day of February, 2022.

---

Clint Lorimore  
President, SCAG  
Mayor Pro Tem, Eastvale

Attested by:

---

Kome Ajise  
Executive Director

Approved as to Form:

---

Michael R.W. Houston  
Chief Counsel



AGENDA ITEM 7  
REPORT

Southern California Association of Governments  
Remote Participation Only  
January 6, 2022

To: Transportation Committee (TC)

EXECUTIVE DIRECTOR'S  
APPROVAL

From: Jaimee Lederman, Senior Regional Planner  
(213) 236-1948, lederman@scag.ca.gov

Subject: Regional Express Lanes Concept of Operations Update Overview

**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:**

*Connect SoCal includes strategies for a Regional Express Lane System that facilitates travel within the SCAG region by developing a regionally coordinated approach to the system, particularly focusing on improving intercounty travel. County Transportation Commissions (CTCs), in collaboration with the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA), are responsible for planning and implementing individual Express Lanes within their county borders. The Regional Express Lane System Concept of Operations (ConOps) provides a blueprint for integrating individual express lane projects into a regional system by identifying a comprehensive set of issues that should be addressed by the stakeholder agencies as they advance individual express lane projects.*

*Through the ConOps process, SCAG aims to provide an open forum for focused discussion on emerging issues facing regional express lanes implementation. SCAG convened a stakeholder group including members from Caltrans, FHWA, Los Angeles County Metropolitan Transportation Authority (LA Metro), Orange County Transportation Authority (OCTA), Riverside County Transportation Commission (RCTC), and San Bernardino County Transportation Authority (SBCTA). The group collaborated on strategic recommendations on emerging issues, identifying actionable outcomes, and contributing to specific language to be included in the ConOps Update.*

**BACKGROUND:**

There are currently five operating Express Lane facilities in the SCAG region and thirteen in development. These include six express lane corridors that will cross county lines. As more projects

are implemented, the need for a regionally integrated vision grows. Conceptualizing the Regional Express Lanes network is a balance between a regional desire for consistency and the flexibility for CTCs to address local needs and requirements in their express lane planning and implementation. In this way, the need for appropriate Express Lane policy choices in the ConOps update and regional consistency is not about express lanes having the same policies but understanding the differences between express lane corridors and working within that flexibility to improve the user experience.

The first ConOps was developed in 2016. It leveraged the success of the I-110 and I-10 Express Lane conversions in 2012 and 2013, screening highway corridors in Los Angeles, Orange, Riverside and San Bernardino Counties to identify a regional network of express lanes. Priority corridors in all four counties were included in SCAG 2016 RTP/SCS. SCAG is currently updating its Regional Express Lane ConOps document. Since the last ConOps was completed in 2016:

- Two new Express Lane Segments have opened: (1) SR-91 Express Extension (2017; RCTC) and (2) I-15 Express Lanes (2021; RCTC).
- Standalone express lane ConOps reports have been initiated for over 171 miles of highway in 9 corridors.
- Construction has been completed or is underway on \$3.7 billion in express lane expansions in the four-county region. \$2.1 billion in express lane projects are funded and programmed to come online by 2027.

The update revisits the recommendations included in the 2016 Regional ConOps and extends its focus to a broader discussion of policy issues that have percolated to the surface over the past five years, particularly those that would benefit from a more coordinated regional response. This approach is particularly important as the regional system continues to expand in the next few years and could potentially result in future policy variations as more express lane corridors cross county lines.

One of the goals of SCAG's Regional Express lanes ConOps is to facilitate collaborative decision-making in identifying policy, design, operational and business requirements. Some of the policy issues that are being addressed by the stakeholders during the ConOps update process include:

- Regional Consistency
- Network Coordination
- Occupancy Rates
- License Plate Tolling Policies
- Signage
- Degradation

- SB 743 Assessment and Mitigation

WSP, currently under contract with SCAG, is facilitating discussions with SCAG and our regional partners, along with Caltrans and FHWA, to update the ConOps. The ConOps update is anticipated to be completed by end of January 2022. SCAG staff will provide a brief introduction and the WSP team will provide an overview of the ConOps process, discuss key issues, and potential solutions surfacing during the update.

**FISCAL IMPACT:**

Work associated with this item is included in the FY 2021-2022 Overall Work Program (OWP) budget under project number 265.2125.02, Express Travel Choices Phase III.

**ATTACHMENT(S):**

1. PowerPoint Presentation - Regional Express Lanes Concept of Operations Update Overview

# Regional Express Lanes Concept of Operations Update Overview

Transportation Committee  
January 6, 2022

[www.scag.ca.gov](http://www.scag.ca.gov)



## REL ConOps Context Setting

- There are currently five operating Express Lane facilities in the SCAG region and thirteen in development, including six corridors that will cross county lines.
- The first REL ConOps was developed in 2016. Priority corridors in four counties were included in SCAG 2016 RTP/SCS.
- SCAG is currently updating the ConOps. Since 2016:
  - Two new Express Lane Segments have opened: (1) SR-91 Express Extension (2017; RCTC) and (2) I-15 Express Lanes (2021; RCTC).
  - Standalone express lane ConOps reports have been initiated for over 171 miles of highway in 9 corridors
  - Construction has been completed or is underway on \$3.7 billion in express lane expansions in the four-county region. \$2.1 billion in express lane projects are funded and programmed to come on line by 2027.

## Intent of the ConOps Update

- Assist stakeholders to build a successful regional express lane network
- Identify issues to resolve as the region moves ahead, together with potential solutions
- Update technical and operational recommendations
- Provide policy makers with a comprehensive and accessible understanding of the express lane development process
- Provide initial recommendations on the Express Lane Network to include in the 2024 RTP/SCS update
- Provide a forum for ongoing dialogue

## Audience for the ConOps Update

### Express Lane Stakeholders

- CTCs – LA Metro, OCTA, RCTC, SBCTA
- Caltrans – HQ, Districts 7, 8, 12
- FHWA

### Public Officials

- SCAG Policy Committees/Regional Council
- CTC Board Members
- County Officials
- Other Policy Makers



# Current Status of the Connect SoCal Regional Express Lane Network



## The ConOps Focuses on Key Issues and Potential Solutions

- Regional Consistency
- Network Coordination
- Occupancy Rates
- License Plate Tolling Policies
- Signage
- Degradation
- SB 743



## Regional Consistency

- There is a desire for regional consistency across the network
  - *Occupancy Requirements*
  - *Toll Collection*
  - *Operational Policies*
- Allow flexibility for CTCs to address local needs and requirements
- Customer facing issues – *especially signage* – must be addressed in as consistent a manner as possible to help motorists navigate potential differences
- Goal of improving the user experience on the express lane network

## Network Coordination

There are multiple forums for coordination:

- SCAG Stakeholder Group  
*Regional Express Lane Policies / SB 743 Coordination*
- CTCOC  
*Technical & Operational Issues / Interoperability*
- Bilateral CTC to CTC Coordination  
*Cross-County Express Lane Agreements / Legal & Financial Issues*
- Internal CTC Coordination  
*Planning for intersecting facilities – toll segments and signage*
- Standing inter-agency coordination meetings  
*Include express lanes as an agenda item*

## Cross-County Express Lane Coordination

- Coordination should start early – during the environmental approval phase
- Negotiate a Master Agreement followed by a more detailed Operational Agreement
- Establish an *ad hoc* committee of board members that is empowered to make decisions when issues arise
- Establish working groups to drill down into the details
  - *Executive Committee*
  - *Civil*
  - *Toll Operations*
  - *Financial*
  - *ConOps*

## Setting Vehicle Occupancy Rates

- Clarified in Caltrans TOPD 20-02
- CTCs make decisions on occupancy based on operational considerations and revenue expectations
- CTCs should advise Caltrans of proposed changes in occupancy requirements



## Signage

- All signage must be compliant with MUTCD
- An update of MUTCD is currently pending (*first in 11 Years*)
- As the express lane network expands, signage needs will become more complex
- CTCs have a vested interest in pursuing region-wide conformity for Express Lane signage
- Per MUTCD, signs are limited to three rows of text
- When signage needs arise that are not specifically addressed in MUTCD, multiple-sign solutions may be required
- Consider the ramifications of design and operations policy decisions on signage requirements

1

## License Plate Tolling

- License plate tolling policies influence regional consistency and signage needs
- Current license plate tolling policies
  - LA Metro: *Pay as You Go – Base toll plus \$4.00 processing fee*
  - OCTA: *Not provided on 91 Express or the I-405 Express Lanes*
  - RCTC: *Not provided on 91 Express or the I-15 Express Lanes*
  - SBCTC: *License plate toll rates – Double the FasTrak toll plus \$1.00*
  - TCA: *Pay Toll Now – Peak period rates at all times*
- License plate tolling policies can benefit from ongoing network and agency-to-agency coordination

1

## Degradation – Mandated in 23 U.S.C. § 166

- Projects constructed with federal funding are degraded if average speeds fall below 45 mph 10% of the time or more during a.m. or p.m. peak period
- Caltrans' annual *California High-Occupancy Vehicle Facilities Degradation Report* identifies facilities that are degraded
- Caltrans District Offices prepare facility-specific annual *Action Plans* identifying mitigation measures for degraded facilities
- FHWA is requiring Caltrans to complete degradation analytics
  - *Needs to be a clear nexus between mitigation measures and the causes of degradation*
  - *Mitigation projects need to be programmed within three years*

1

## SB 743 – An emerging issue affecting all Express Lane capacity projects with no definitive assessment framework

- Caltrans *Transportation Analysis Framework (TAF)* September 2020
  - NCST calculator tool (*not for Express Lanes*)
  - Travel demand models (*must be approved for use by Caltrans*)
- Caltrans *Transportation Analysis Under CEQA (TAC)* September 2020
  - Determining the Significance of VMT impacts
- Mitigation approaches unclear

1

## SB 743 – An Emerging Issue

- Through the ConOps process SCAG has initiated a regional dialog to explore SB 743 issues with Caltrans:
  - *The use of travel demand models to forecast VMT effects*
  - *Review of the induced demand elasticities included in the NCST Calculator tool*
  - *Additionality – using elements of the RTP / SCS for VMT mitigation*
  - *A programmatic approach for performance-based VMT mitigation*
- Regional coordination on SB 743 will continue following the conclusion of the ConOps update

15

## Status of the ConOps Update

- Draft to be completed mid-November 2021
- Stakeholder review December/January
- Final ConOps end January 2022



16

# Thank You

Ben Perez  
Benjamin.Perez@wsp.com

[www.scag.ca.gov](http://www.scag.ca.gov)





AGENDA ITEM 8  
REPORT

Southern California Association of Governments  
Remote Participation Only  
January 6, 2022

To: Transportation Committee (TC)

EXECUTIVE DIRECTOR'S  
APPROVAL

From: Alison Linder, Senior Regional Planner  
(213) 236-1934, linder@scag.ca.gov

Subject: Role of Electric Utilities in Medium/Heavy-Duty Transportation  
Electrification

**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. 2: Advance Southern California’s policy interests and planning priorities through regional, statewide, and national engagement and advocacy.

**EXECUTIVE SUMMARY:**

*The California Public Utilities Commission (CPUC) regulates services and utilities, protects consumers, safeguards the environment, and assures Californians’ access to safe and reliable utility infrastructure and services. The CPUC regulates investor-owned electric and natural gas utilities. Utilities are a critical component in supporting the infrastructure needed to transition to a decarbonized transportation system as envisioned in Connect SoCal. For this information item Yuliya Shmidt from the CPUC will discuss the role of utilities in medium/heavy-duty transportation electrification, specifically utility transportation electrification programs, electrification rates, and interconnection and planning for new load.*

**BACKGROUND:**

The 2020 Connect SoCal or Regional Transportation Plan/Sustainable Communities Strategy introduced five key connections to meet more aggressive greenhouse gas reduction targets – one of which is Accelerated Electrification. The Accelerated Electrification strategy offers a holistic and coordinated approach to de-carbonizing or electrifying passenger vehicles, transit and goods movement vehicles. CPUC plays a critical role to support transition to medium and heavy-duty transportation electrification as they regulate investor-owned electric utilities such as Pacific Gas & Electric (PG&E) and Southern California Edison (SCE). CPUC works with utilities to install infrastructure that supports EV charging, to provide rebates for select EV charging equipment, to develop EV-specific rates, and to facilitate the development of vehicle grid integration technologies.

CPUC has authorized over \$1.5 billion dollars in transportation electrification investments. Programs specified for medium and heavy-duty infrastructure are currently available. Some of those programs are listed below:

**PG&E and SCE MD/HD Programs (Decision 18-05-050, May 2018)**

- \$600 million for programs targeting school buses, forklifts, transit agencies and other market segments
- Between 25% and 40% of funds invested in disadvantaged communities

**SDG&E MD/HD Programs (Decision 19-08-026, Aug 2019)**

- \$107 million to electrify approximately 3,000 medium and heavy-duty vehicles
- At least 30% of funds invested in disadvantaged communities

**Near Term Priority Investments (Decision 21-07-028, July 2021)**

- Creates expedited approval process for new utility programs of up to \$20 million each
- Designates medium and heavy-duty TE as a priority category for investment
- At least 50% of funds must be spend in underserved communities

**FISCAL IMPACT:**

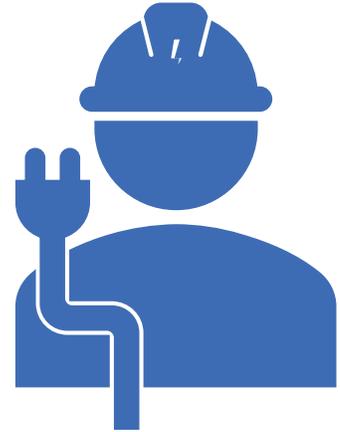
Work under the Accelerated Electrification strategy is funded by task 310.4874.02 Key Connections Strategy Team.

**ATTACHMENT(S):**

1. PowerPoint Presentation - CPUC

# Role of Electric Utilities in Medium/Heavy-Duty Transportation Electrification

Yuliya Shmidt, Advisor to  
Commissioner Rechtschaffen  
California Public Utilities  
Commission  
01-06-2022



## Outline

---

Utility Transportation  
Electrification Programs

---

Electric Vehicle Rates

---

Interconnection and Planning for  
New Load

---

Additional Policy Considerations

# Utility Transportation Electrification Programs

California Public Utilities Commission



## Role of California Public Utilities Commission and Utilities

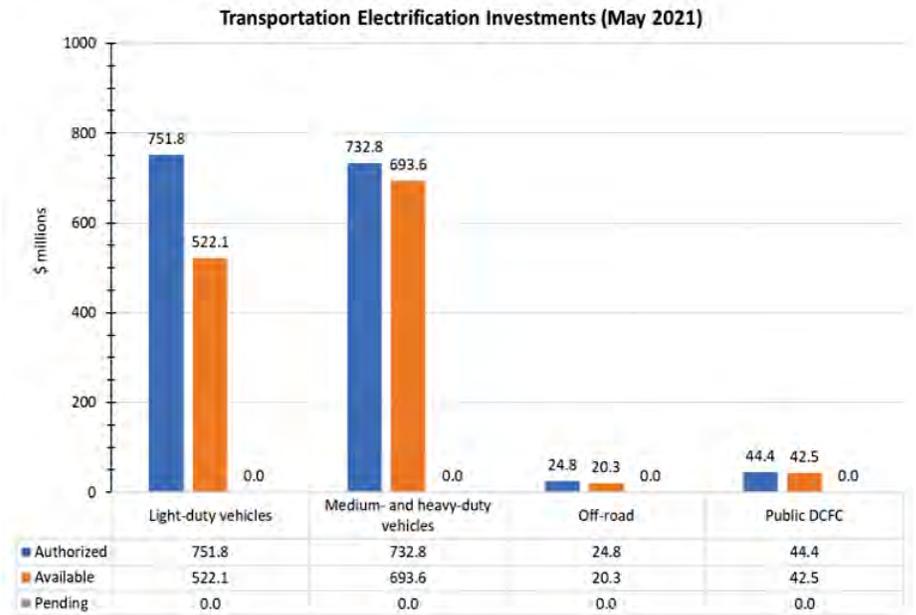
CPUC regulates investor-owned electric utilities (IOUs)

- Provide 78% of Californians with transmission and distribution infrastructure
- Provide half of Californians with electricity
- Regulated utilities are:
  - Large IOUs: PG&E, SCE, SDG&E
  - Small IOUs: Liberty, PacifiCorp, Bear Valley

Utilities have an “obligation to serve”

CPUC must ensure utilities charge “just and reasonable rates” and provide safe and reliable service

CPUC has authorized over \$1.5B in utility investment across dozens of programs of which ~18% have been spent



## Medium and Heavy-Duty (MD/HD) Infrastructure Programs

### PG&E and SCE MD/HD Programs (Decision 18-05-050, May 2018)

- \$600 million for programs targeting school buses, forklifts, transit agencies and other market segments
- Between 25% and 40% of funds invested in disadvantaged communities

### SDG&E MD/HD Programs (Decision 19-08-026, Aug 2019)

- \$107 million to electrify approximately 3,000 medium and heavy-duty vehicles
- At least 30% of funds invested in disadvantaged communities

### Near Term Priority Investments (Decision 21-07-028, July 2021)

- Creates expedited approval process for new utility programs of up to \$20 million each
- Designates medium and heavy-duty TE as a priority category for investment
- At least 50% of funds must be spend in underserved communities

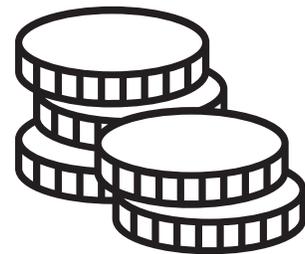


# Transportation Electrification Rates

California Public Utilities Commission

## Rate Design: a Crucial Component of TE

- EV rates should accomplish two goals: accelerate TE adoption and incentivize beneficial charging behavior
- Fuel cost savings motivate EV adoption
  - SB350 mandates that EV rates reduce consumer costs compared to conventional fuels
  - Time-of-use (TOU) rates provide fuel cost savings for customers that charge off-peak
- Rates can be time-differentiated, include fixed charges, and be based not just on volumetric use (kWh) but also highest monthly demand (kW)
  - Electric rates can be designed in a variety of ways to uphold policy principles
    - Avoid cross-subsidies
    - Be based on actual grid costs
    - Provide financial incentive for when to charge, and when not to charge, based on grid reliability and GHG conditions



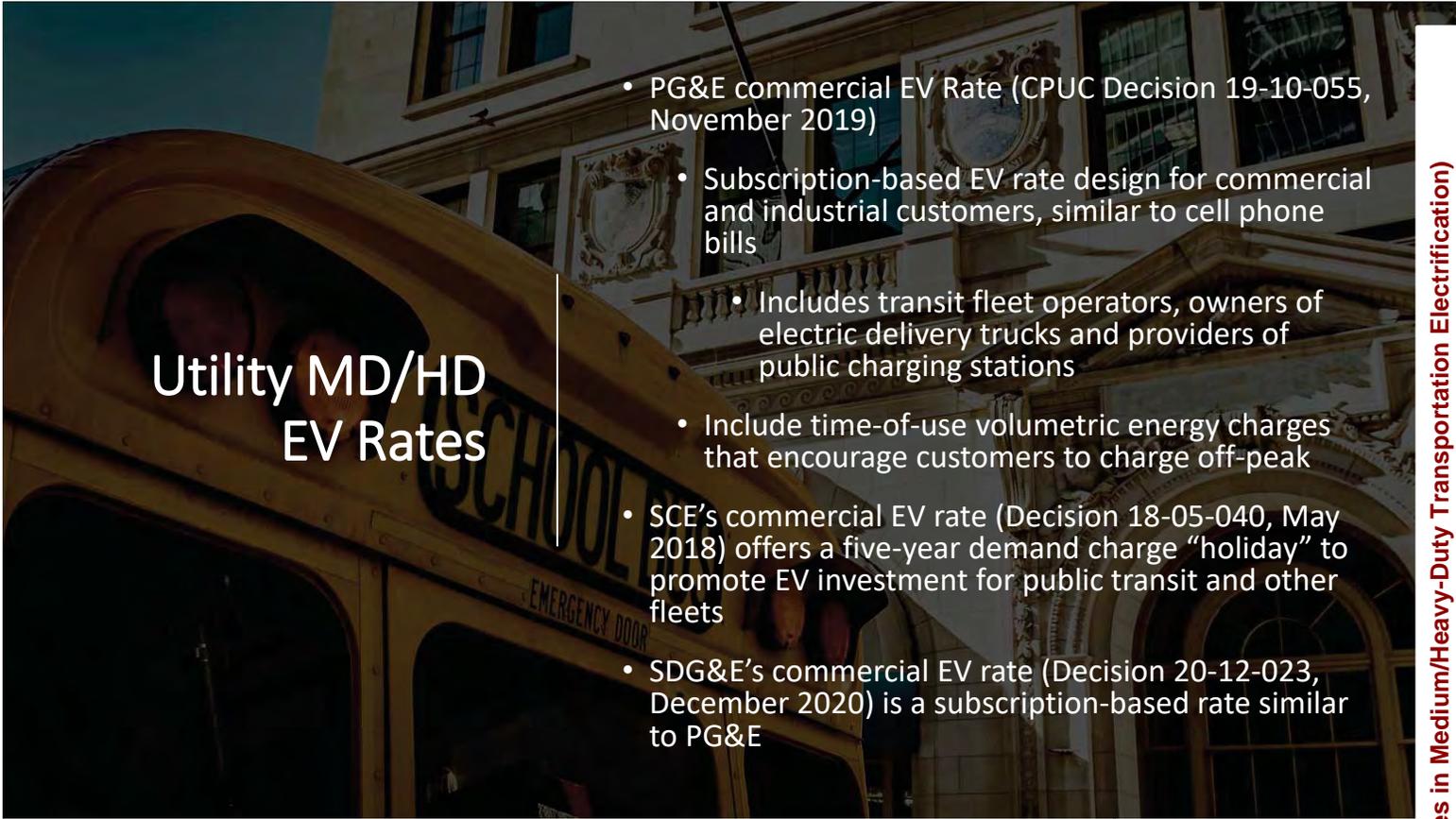
# Electricity is Often Cheaper than Gasoline

IOU Territory	PG&E/SCE	SDG&E
Off-peak residential EV charging rate (\$/kWh)	\$ 0.13	\$ 0.24
EV fueling is roughly equivalent to (\$/gal)	\$ 1.12	\$ 2.07
% difference to charge EV than to fuel with gas	-72%	-48%
Total monthly EV fueling cost	\$ 45.50	\$ 84.00
Total monthly gasoline fueling cost	\$ 162.34	\$162.34

California Public Utilities Commission

## Rate Designs Vary by Type of Customer

- Residential charging may be best served with a simple rate such as time-of-use
- Commercial medium/heavy-duty customers and fleet operators may need a more refined rate design such as a dynamic rate that both deters grid impacts and allows for fuel cost savings
- SB1000 (Lara, 2018) requires reconsideration of demand charges
  - Demand charges are assessed to commercial and industrial electric customers based on their highest demand of the month. The charge is intended to compensate the utility for distribution grid costs caused by the customer
    - For some types of customers, demand charges are a large proportion of their monthly bill
  - CPUC has approved restructured EV demand charges for each large utility

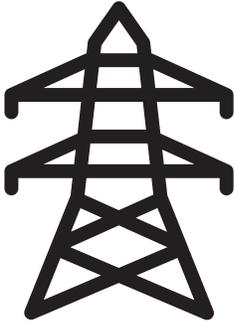


## Utility MD/HD EV Rates

- PG&E commercial EV Rate (CPUC Decision 19-10-055, November 2019)
- Subscription-based EV rate design for commercial and industrial customers, similar to cell phone bills
  - Includes transit fleet operators, owners of electric delivery trucks and providers of public charging stations
- Include time-of-use volumetric energy charges that encourage customers to charge off-peak
- SCE's commercial EV rate (Decision 18-05-040, May 2018) offers a five-year demand charge "holiday" to promote EV investment for public transit and other fleets
- SDG&E's commercial EV rate (Decision 20-12-023, December 2020) is a subscription-based rate similar to PG&E

## Interconnection and Planning for New Load

# Transmission and Distribution for New Load



- **New interconnection requests**
  - New EV customers may request service under a new account or request expanded service under their current account
  - Utilities may need to study the proposed new load to determine if circuit upgrades or other work is necessary
  - CPUC has issued resolutions implementing AB841 (Ting, 2020) which ensure that in EV customers will not pay for distribution upgrades for TE load
- **Distribution planning**
  - CPUC has launched a new Rulemaking to study and plan for future new load with a focus on TE
- **Transmission planning**
  - The California Independent System Operator studies the electric grid biannually -- using a demand forecast that incorporates TE -- to determine if new transmission is necessary

## Ensuring Sufficient Generation Capacity for New Load

- CPUC plans for new generation using a complex ten-year process, Integrated Resource Planning (IRP)
- Demand is forecasted ten years out and the electric grid is modeled using production cost modeling and capacity expansion software
  - Every hour of the year is studied under a variety of scenarios to ensure electric reliability
- If additional capacity is necessary to ensure reliability, the CPUC orders that load-serving entities procure new generation or storage resources

# Additional Policy Considerations

California Public Utilities Commission

## Equity

- Governor Newsom’s Executive Order N-79-20 prioritizes TE accessibility for disadvantaged and low-income communities
- CPUC’s Environmental and Social Justice Action Plan, adopted February 2019, established agency goals including improving outreach and public participation, promoting economic and workforce opportunities, and improving access to services and programs
- CPUC-approved programs direct 25-50% of investment to disadvantaged communities as defined by CalEnviroScreen, which considers pollution levels, income and other socio-economic factors



# Vehicle Grid Integration: crucial to TE development

VGI is an umbrella term for a host of measures and behaviors that better integrate EV charging with the electric grid

- VGI: smart charging (i.e. charging that is responsive to TOU or dynamic price signals)
- Vehicle-to-Grid (V2G): vehicle batteries feeding power back to the grid
- Vehicle-to-Home (V2H) or Vehicle-to-Load (V2L): vehicle batteries providing power to home or other customer electric load for example during power outages

California Public Utilities Commission



## Benefits of VGI

---

Reduce grid impact or even create grid benefit from additional electric load.

---

Deliver grid services by providing power back to the grid during needed times

---

Reduce customer cost of charging by allowing drivers to employ managed charging

---

Reduce customer cost of ownership by allowing drivers to earn revenue from their cars.

---

California Public Utilities Commission

18



# California Public Utilities Commission

[yuliya.shmidt@cpuc.ca.gov](mailto:yuliya.shmidt@cpuc.ca.gov)  
[www.twitter.com/CliffCPUC](http://www.twitter.com/CliffCPUC)



Southern California Association of Governments  
Remote Participation Only  
January 6, 2022

To: Transportation Committee (TC)

EXECUTIVE DIRECTOR'S  
APPROVAL

From: Alison Linder, Senior Regional Planner  
(213) 236-1934, linder@scag.ca.gov

Subject: Accelerated Electrification Update on Two Studies

**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:**

*Connect SoCal identified Accelerated Electrification as a “Key Connection”, a term coined to highlight a series of integrated regional strategies introduced in the 2020 plan to meet the region’s increased greenhouse gas reduction targets. In the plan and through subsequent work efforts, Accelerated Electrification is being addressed through a holistic and coordinated approach to de-carbonizing or electrifying passenger vehicles, transit and goods movement vehicles. As part of a catalog of ongoing projects related to this Key Connection, Alison Linder, Senior Regional Planner, will provide an update on two study efforts. The first is the Passenger Electric Vehicle Charging Station Study (EVCSS), which began in January 2021, and is roughly halfway through completion. The second is the Supporting Infrastructure for Medium and Heavy Duty Zero Emission Trucks Study which is expected to kick-off in early 2022.*

**BACKGROUND:**

Connect SoCal identified Key Connections that lie at the intersection of land use, transportation and innovation meant to advance policy discussions and strategies to leverage new technologies and create better partnerships to increase progress on the regional goals. Accelerated Electrification is one of the Key Connections, and was established to create a holistic and coordinated approach to de-carbonizing or electrifying passenger vehicles, transit and goods movement vehicles. In the South Coast Air Basin (SCAB) in 2016<sup>1</sup>, mobile sources were estimated to be responsible for 83 percent of NOx emissions and transportation was estimated to be 40 percent of greenhouse gas emissions (GHGs). Criteria pollutants such as NOx and PM2.5 threaten public health and GHGs lead

to climate change which has exacerbated extreme heat days, drought, and wildfire in Southern California. Both criteria pollutant and GHG challenges threaten our economic resilience.

The Accelerated Electrification Key Connection sets a vision to reduce both the local and global emissions associated with multiple modes of transportation by deploying clean mobility solutions and the infrastructure needed to support them. This vision is being implemented across many SCAG initiatives. The two that will be the focus of this presentation include the Passenger Electric Vehicle Charging Station Study (EVCSS) and Supporting Infrastructure for Medium and Heavy Duty Zero Emission Trucks Study (ZEMHDT)

#### Passenger Electric Vehicle Charging Station Study (EVCSS)

For the Electric Vehicle Charging Station Study (EVCSS), SCAG is partnering with 18 cities within the SCAG region to help jurisdictions promote development and deployment of EV charging infrastructure to accelerate transportation electrification.

The study includes tailored policy guidance to study partner cities; a regionwide Site Suitability Analysis to target areas for future EV charging infrastructure, with a focus on increasing EV infrastructure in traditionally underserved and hard-to-reach communities including multi-unit dwellings (MUDs) and Disadvantaged Communities (DACs); EV site evaluations; and a Passenger Electric Vehicle (PEV) Infrastructure Plan that will provide a roadmap for cities to spur development of charging stations and support EV adoption across Southern California.

Additionally, SCAG will host 22 listening sessions, a virtual meeting room, and 15 community events to engage with city stakeholders, industry experts, and local communities to raise project awareness, encourage EV adoption, and gather community stakeholder input.

This study is expected to be completed in October 2022. To date, we have begun the suitability analysis and developed three scenarios, held listening sessions with multiple cities, and completed several policy memos. Initial findings suggest that most cities are meeting or are interested in meeting the intention of AB 1236 in terms of permit streamlining. We have also attended several community events and begun to collect feedback on barriers to installation of EV charging infrastructure as well as barriers to EV ownership. Some initial findings are that the public is not aware of station locations and has range anxiety related to EV ownership. Next steps for this study include continued outreach, finalization of the site suitability analysis, development of high level site evaluations for prioritized sites and creation of a final PEV Infrastructure plan.

### Supporting Infrastructure for Medium and Heavy Duty Zero Emission Trucks Study

Connect SoCal, includes a technology advancement plan for the regional goods movement system, as well as action steps to be taken by SCAG and its regional partners. This includes a focus on the long-term goal of a zero emission goods movement system where technically feasible and economically viable, while also integrating near-zero emissions technologies that serve as bridging options to continue to reduce emissions below current levels.

SCAG is about to initiate a planning study to help envision a regional network of zero emission charging and fueling infrastructure. This study will create a phased blueprint and action plan towards realizing this goal, and answer key questions about how stations in the region may operate to serve different truck markets and business functions. Though convened by SCAG, this study will be guided by a Technical Advisory Committee of key stakeholders, who will ultimately be instrumental in implementing this plan. Details related to the quantity, distribution and characteristics of charging and fueling stations will be quantified to the extent possible to help visualize and plan for infrastructure needs and investments. Up to 10 sites will be selected to provide a closer look at the needs of deploying an individual station.

To better support this work, SCAG applied for and received a CEC RHETTA grant as a sub-recipient to EPRI. The larger grant effort was designed to fund applied research and development (AR&D) and technology demonstration and deployment (TD&D) activities through the creation of a Research Hub for Electric Technologies in Truck Applications. The larger study will demonstrate and evaluate corridor based charging strategies for zero emission truck solutions. Phase 1 of the larger project has been funded for \$13,000,000. Of this, SCAG will receive \$600,048 associated with its study of supporting infrastructure for medium and heavy duty zero emission trucks. Acceptance of this grant is going before the Regional Council on Jan 6, 2022, under Resolution # 22-639-1.

The benefits and key deliverables of this study include, but are not limited to:

1. Determining the demand for stations based on truck market operational characteristics and travel behavior and assessing the potential supply of land for stations;
2. Planning the distribution of future stations throughout the region based on a variety of factors, (travel demand, need for public, private, and privately accessible stations, power and fueling supply, potential impacts to surrounding communities, and other factors to yet to be determined);
3. A micro-level site assessment for roughly 10 stations to understand the factors to get one up and running; and
4. A regional action plan supported by participating stakeholders showing the extent of the needed infrastructure and a sequence for phased development and recommendations that partners can take to facilitate the goal of a regional charging and fueling network.



**FISCAL IMPACT:**

Work associated with these two studies is included in the Fiscal Year 2021-2022 Overall Work Program associated with 130.0162.18 and 275.4823.06.

**ATTACHMENT(S):**

1. PowerPoint Presentation - AET Update

# Accelerated Electrification Key Connection

Update on Two Studies

Alison Linder, PhD  
Senior Regional Planner  
January 6, 2022

[www.scag.ca.gov](http://www.scag.ca.gov)



## Accelerated Electrification Key Connection

- **AE Key Connection:** creates a holistic and coordinated approach to de-carbonizing or electrifying passenger vehicles, transit and goods movement vehicles
- Increasing EV infrastructure is key to fostering EV adoption
- Goods Movement Vision: A zero emission goods movement system where technically feasible and economically viable, while also integrating near-zero emissions technologies that serve as bridging options to continue to reduce emissions



# Electric Vehicle Charging Station Study

## Project Introduction and Progress Update

Alison Linder, PhD

Senior Regional Planner

Jan. 6, 2022

[www.scag.ca.gov](http://www.scag.ca.gov)



## Goals and Objectives

- Help jurisdictions in the SCAG region promote electric vehicle charging stations (EVCS) to accelerate transportation electrification
- Develop tools and methods cities can use to site and install EVCS
- Focus on increasing EV infrastructure in traditionally hard to serve sectors – disadvantaged communities (DACs) and multi-unit dwellings (MUDs)



# Key Objectives and Project Outcomes



## Outcomes for SCAG

- Suitability analysis GIS results
- Real time feedback from cities on their challenges and successes on EV adoption throughout project
- Multiple reports, guides and memos that can guide future efforts



## Outcomes for Cities

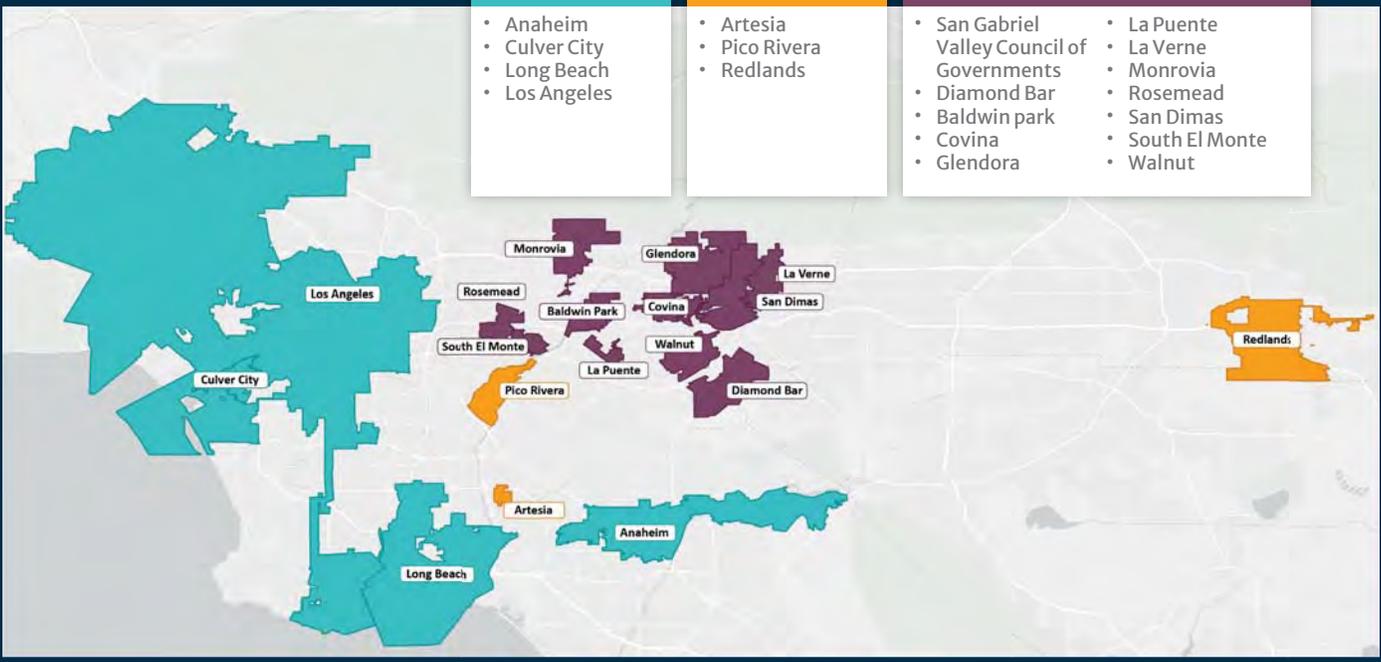
- EV policy guidance and implementation best practices guides
- Site evaluations and sample layouts for top sites
- Infrastructure plans customized to their specific needs
- Understanding of local challenges and how to overcome them



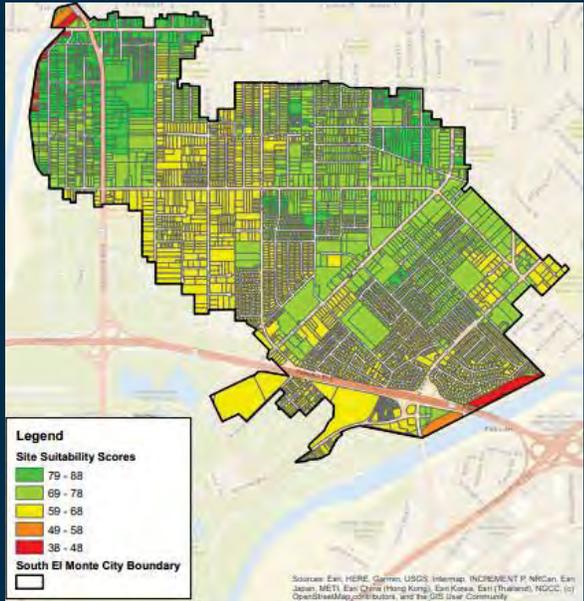
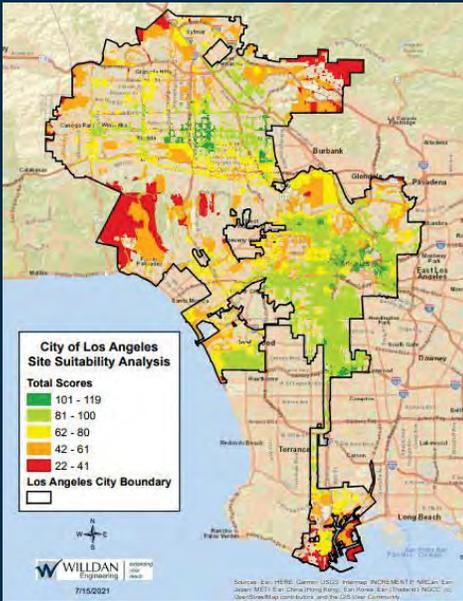
## Outcomes for Public

- Community events that engage residents about EVs
- Understanding local barriers
- EV brochures highlighting benefits of EV ownership
- Guide for property managers on benefits of adding EVCS on-site

# Participating Jurisdictions



# Suitability Analysis - Examples



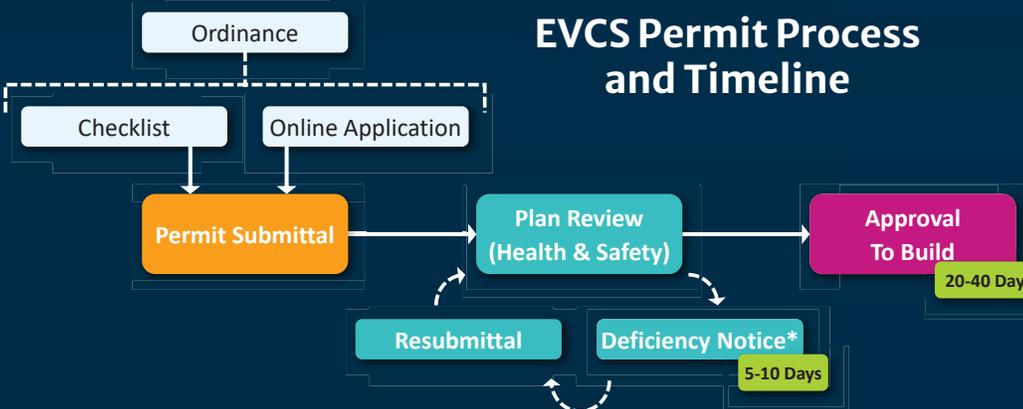
- Three scenarios developed to reflect different stages of EV adoption
- City scenario used will be based on their current level of EV adoption

Attachment: PowerPoint Presentation - AET Update [Revision 1] (Accelerated Electrification Update on Two Studies)

# AB 1236 and AB 970 Requirements and Guidelines

## AB 1236

- Cities must pass an ordinance and develop a checklist to streamline their EVCS permitting
- Requires Cities to accept electronic applications and signatures



## AB 970

- Establishes timelines for Cities to review and approve EVCS permit applications
- Requires Cities to reduce parking minimums to accommodate EVCS and infrastructure

## Listening Sessions and Initial Lessons Learned

- 22 listening sessions, at least one per city
- Most cities meet the intent of AB 1236 by quickly issuing EVCS permits
- Most EV permitting handled as a plan check
  - Residential permits – up to a few days
  - Commercial permits – few days to weeks, depending on buildout. AB 970 will put deadlines on this
- Smaller cities may outsource to the county or third-party firm – timeline outside of direct City control
- Cities have started to install publicly-owned EVCS at city parking lots or facilities
  - Site selection has been a challenge
  - Available funding is a barrier for cities that install their own EVCS

Attachment: PowerPoint Presentation - AET Update [Revision 1] (Accelerated Electrification Update on Two Studies)

## Community Engagement – Initial Findings

### 15 Community Events

### Common Barriers

- Lack of or not aware of public charging network
- Vehicle range anxiety, coupled with inadequate charging network
- Unaware of benefits of EVs, both financial and environmental

### Encouraging Signs

- Communities eager to learn more
- Understanding that EV ownership will increase, and we need to plan for the future



## Next Steps

- Complete Listening Sessions and Community Outreach
- Run final GIS analysis and start site evaluations
- Develop educational guides for cities, property managers, and general public
- Combine project results into custom infrastructure plans



## Supporting Infrastructure for Medium and Heavy Duty Zero Emission Trucks

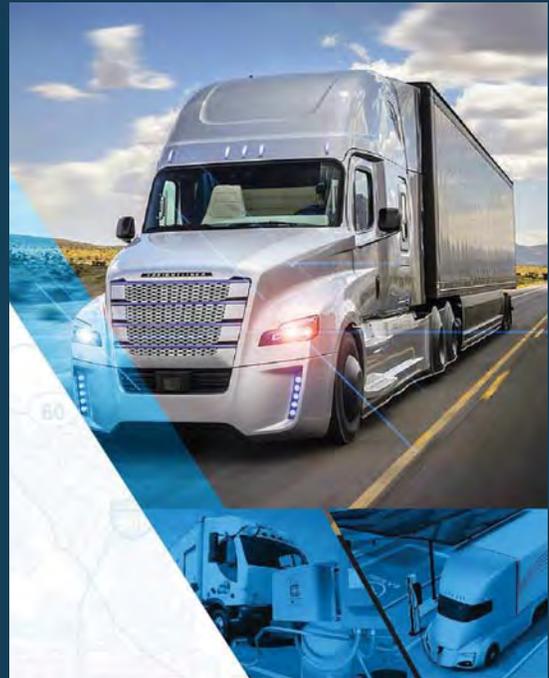
Project Introduction and Progress Update

Alison Linder, PhD  
Senior Regional Planner  
Jan. 6, 2022

[www.scag.ca.gov](http://www.scag.ca.gov)

## Goals and Objectives

- Plan for Zero Emission Supporting Infrastructure focused on both Battery Electric and Hydrogen Fuel Cell trucks
- Understand and address stakeholder concerns and other key considerations in developing supporting ZE Infrastructure
- Understand site level needs for station development
- Create a Regionally Supported Roadmap for MD/HD ZE Fueling Infrastructure



## Expected Tasks and Deliverables

- Refined understanding of truck markets, travel patterns, and relevant operational characteristics
- Define demand of Charging Network by Market
- Assessing the potential supply of land for stations
- Distribution of Charging network; based on
  - Travel demand
  - Existing stations
  - Power and fueling supply,
  - Potential impacts to surrounding communities
  - Other



## Expected Tasks and Deliverables Continued

- Stakeholder Engagement and Outreach
  - Fleet Survey
  - Interviews
  - TAC
- Assessment of 10 key sites
- A regional action plan supported by participating stakeholders
  - Partner agencies, industry, land owners, developers, fleet operators etc
- Final report



1

Attachment: PowerPoint Presentation - AET Update [Revision 1] (Accelerated Electrification Update on Two Studies)

## Next Steps

- Expected Kick-Off Jan/Feb 2022
- Convene TAC
- Determine Data Collection Plan to Define Truck Network
- Future Committee Updates



1

Questions?

[www.scag.ca.gov](http://www.scag.ca.gov)





AGENDA ITEM 10  
REPORT

Southern California Association of Governments  
Remote Participation Only  
January 6, 2022

**To:** Community Economic & Human Development Committee (CEHD)  
Energy & Environment Committee (EEC)  
Transportation Committee (TC)  
Regional Council (RC)  
**From:** Lyle Janicek, Associate Regional Planner  
(213) 236-1966, janicek@scag.ca.gov  
**Subject:** 2021 Student Showcase

EXECUTIVE DIRECTOR'S  
APPROVAL

**RECOMMENDED ACTION FOR EEC and TC:**

Information Only - No Action Required

**RECOMMENDED ACTION FOR CEHD AND RC:**

Receive and File

**STRATEGIC PLAN:**

This item supports the following Strategic Plan Goal 2: Advance Southern California’s policy interests and planning priorities through regional, statewide, and national engagement and advocacy. 4: Provide innovative information and value-added services to enhance member agencies’ planning and operations and promote regional collaboration.

**EXECUTIVE SUMMARY:**

*Staff will brief the Environment and Energy Committee (EEC) and the Transportation Committee (TC) on the results of the 2021 Student Showcase. Following the introduction, each committee will receive two presentations from the four finalists of the 2021 competition.*

**BACKGROUND:**

For more than five years, SCAG has created a platform for students to apply their critical thinking skills and compete in a planning competition. SCAG invited college and university students in the region to conceptualize, create, and submit ArcGIS StoryMaps using SCAG’s open data. StoryMaps are a meaningful way to provide insight, showcase plans, and projects, engage supporters and stakeholders, illustrate the possibilities of data, and highlight the usefulness of open data at the regional level.

The 2021 Student Showcase was a virtual StoryMap competition with two award categories: Innovation and Planning. The 2021 competition received eleven projects from nine different

colleges and universities. A jury of planning professionals evaluated the projects and selected four winners. The program awarded \$6,000 in cash prizes (\$2,000 first place prize and \$1,000 runner-up prize for each category). The winning StoryMaps are linked below and will be presented at the Jan. 6 Transportation Committee and the Energy & Environment Committee.

#### PLANNING CATEGORY

- 1st Place – \$2,000 Prize – Reaghan Murphy\* – University of Southern California: [Surviving SoCal’s Streets: The Case for Vision Zero](#)
- 2nd Place – \$1,000 Prize – Lacy Gugliemino\*\* – Crafton Hills College: [To Reach It, We Have to Teach It!](#)

#### INNOVATION CATEGORY

- 1st Place – \$2,000 Prize – Irene Farr\*\* – University of California, Los Angeles: [Identifying Hidden Open Spaces](#)
- 2nd Place – \$1,000 Prize – Adam Doyle\* – California State University, Long Beach: [Gas to Green](#)

\*Students will present their StoryMap at the Jan. 6 Transportation Committee

\*\*Students will present their StoryMap at the Jan. 6 Energy & Environment Committee

The 2022 Student Showcase Competition will be announced in January 2022. Pending Covid-19 protocols, we hope to have finalists from the 2022 competition present their work at the General Assembly and Regional Conference in May and have conference attendees select the winners.

#### FISCAL IMPACT:

Funding for this Project was provided from the Overall Work Program (OWP) Task: 22-090.0148.02.