

STATE ROUTE 91 COMPREHENSIVE MULTIMODAL CORRIDOR PLAN

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EXECUTIVE SUMMARY

The Orange County Transportation Authority (OCTA) is the county's transportation planning commission responsible for funding and implementing transit and capital projects including bus and rail transit, rideshare, active transportation, express lanes, and freeways. OCTA is responsible for projects, programs, and services that affect the daily quality of life for Orange County's nearly 3.2 million residents in 34 cities and countless others who commute or visit for recreation. OCTA seeks to improve transportation, community, and environmental quality by implementing various innovative solutions to resolve current transportation constraints. The California Department of Transportation (Caltrans) owns and operates the state highway system.

As part of implementing a multimodal improvement plan, Senate Bill 1 (SB1) requires the preparation of a Comprehensive Multimodal Corridor Plan (CMCP) that identifies how the OCTA plans to reduce congestion and improve safety, air quality, accessibility and create jobs¹ with the projects that it recommends.

This SR-91 Comprehensive Multimodal Corridor Plan (Plan) focuses on a set of transportation options in the 23-mile long, three-mile wide (1.5 miles on either side of SR-91) Orange County corridor that is roughly parallel to the SR-91 complex of general purpose and managed lanes, from the Los Angeles County line to the Riverside County line.

This approximately 66-square-mile area is one of the most vibrant in the U.S., housing more than 399,000 residents in 2016 and anticipated to grow 12% to more than 447,000 in 2045. The study area supported more than 205,000 jobs in 2016 is projected to grow 12.7% to 231,000 jobs in 2045. Supporting and enhancing the quality residential and employment characteristics of the study area is an overarching goal of this study and OCTA.

These homes and jobs are served by a complex web of transit, rail, highway, street, trail, and pedestrian facilities, as well as supporting bus and demand management services that maximize the overall network efficiency within the study area and minimize the impacts on the residential neighborhoods and employment nodes within the study area. Importantly, these facilities and services support more than just east-west mobility. They support the actual movement of people and goods as they travel in a variety of ways in all directions in the course of a day.

In line with protecting these existing and growing uses, OCTA started this CMCP with direct community, and local government outreach to solicit ideas for future projects within or serving the study area. Multiple outreach methods were utilized to share study information and promote a survey (303 responses) and public webinar. OCTA promoted through social media (Facebook and Twitter), the OCTA blog (12,700 readers) and via eblast (314 subscribers) and press release.

A communications toolkit was distributed to all corridor cities and the County of Orange staff, OCTA's public committees, transportation industry and environmental groups, and Caltrans. The toolkit provides pre-written language and graphics to be used for social media posts, blogs and websites. A study website was also launched and received 995 visits from February 2022 to June 2022. The survey and project collateral and notification materials for the survey, such as fact sheets and the webinar were made available in English and Spanish. Closed captioning and Spanish interpretation were also made available during the community meeting.

¹ SB 1 SEC 2394.

OCTA attended four community events in the cities of Buena Park, Anaheim, Fullerton, and Yorba Linda to share information about the study, receive feedback, and answer questions. In addition, OCTA presented to two agency stakeholder groups, the OCTA Citizens Advisory Committee and Diverse Community Leaders group, and at a Yorba Linda Chamber of Commerce event.

Those outreach efforts resulted in eight Medium-term (prior to 2035) projects and eight Long-term (after 2035) projects as outlined in **Table ES-1**. Starting with a 2016 Base Year, these outreach-driven projects were added to the 2016 OCTA Long Range Plan for modelling purposes. This approach allowed OCTA to analyze three **network** scenarios that accounted for all surface transportation movements within the 23-mile long and 3-mile wide study area, in light of projected employment and population increases:

- 2016 Network Performance Metrics
- 2045 Network Performance Metrics **without** the outreach-driven projects
- 2045 Network Performance Metrics **with** the outreach-driven projects

Given the projected increases in population (12.1%) and employment (12.7%) by 2045, Orange County and corridor municipalities are creating a more compact local transportation network with greater balance between and among corridor housing, employment, education, and daily activity travel demand. Offsetting those network performance improvements are the nearly 600,000 daily trips on SR-91 originating outside the corridor, or the projected 650,000 daily trips on SR-91 originating outside the corridor in 2045.

Table ES-1: Projects Included in SR-91 CMCP

TIMING	PROJECT NAME	JURISDICTION
Medium-Term	Fullerton Proposed Bikeway Improvements	Fullerton
Medium-Term	Placentia Metrolink Rail Station	OCTA/SCRRA
Medium-Term	SR-91 (SR-57 to SR-55) Improvement Project (Measure M2 Project I)	OCTA
Medium-Term	Anaheim Canyon Metrolink Station Improvements	OCTA/SCRRA
Medium-Term	Yorba Linda Boulevard Multimodal Improvements	Yorba Linda
Medium-Term	Savi Ranch Parkway Operational Improvements	Yorba Linda
Medium-Term	La Palma / Savi Ranch Multi-Modal Connection	Yorba Linda
Medium-Term	SR-241 / 91 Express Lanes Connector	TCA
Medium-Term	SR-57 to SR-55 (M2 Project I)	OCTA
Medium-Term	Anaheim Canyon Metrolink Station Improvements	OCTA/SCRRA
Long-Term	La Palma / Lincoln Corridor Rapid Bus	OCTA
Long-Term	Fullerton Park and Ride	OCTA and Fullerton
Long-Term	Central Harbor Boulevard Transit Corridor	OCTA
Long-Term	State College / Bristol Corridor BRT	OCTA
Long-Term	Central Harbor Boulevard Transit Corridor	OCTA
Long-Term	Metrolink 3 rd Track – Fullerton to Atwood	SCRRA
Long-Term	Fairmont Boulevard Improvements	Cities of Anaheim and Yorba Linda
Long-Term	SR-91 Project J	OCTA
Long-Term	Santa Ana River Parkway Extension (County project)	Orange County Public Works Dept
Long-Term	SR-91 Eastbound Lane Addition from SR-21 to Orange / Riverside County Line (Measure M2 Project J)	OCTA

In addition to serving the residential and commercial uses within the study area, traffic volumes on SR-91 itself are driven by major cargo and residential growth outside of Orange County. The SR-91 is one of the main transportation routes from the Los Angeles Port Complex (Port of Los Angeles and Port of Long Beach) areas to the growing warehouse and distribution uses in the Inland Empire (Riverside and San Bernardino Counties)² and beyond. Additionally, the allure of the lower cost housing found in the Inland Empire and the higher paying jobs in Los Angeles County and Orange County, including a number of major employers within the SR-91 corridor, make the SR-91 corridor a first choice for commuters. Therefore, the SR-91 in Orange County, which is situated between Los Angeles and Riverside Counties, is one of the most congested corridors in the region.

Growth in daily vehicle trips is driven in part by these external factors. Vehicle trips originating outside the study area will grow by approximately 15%, from 47.3 million trips per day in 2016 to 56.4 million trips per day in 2045. Over that same time period, daily vehicle trips on the SR 91 highway originating outside the study area will increase from approximately 598,000 in 2016 to approximately 653,000 daily vehicle trips originating outside the study area.

Despite these external factors, and with projected population and employment growth of approximately 12% between 2016 and 2045, the SR 91 study area shows an actual **reduction** in work peak travel distance and a percentage change in total vehicle miles traveled (VMT) that is substantially less than the growth in population and employment within the study area. These trends are the result of significant mobility planning and investments by OCTA and compatible land use decisions by Orange County and Orange County municipalities.

Given these projected increases in population, employment and “external” traffic, OCTA evaluated the community-driven list of CMCP improvements in light of the adopted 2018 Long Range Transportation Plan and the four OCTA goals within that plan:

- To deliver on commitments to voters who fund the projects
- To improve system performance
- Expand system choices
- Support Sustainability

Commitment to voters. OC Go (also known as Measure M) is a 30-year one half-cent sales tax for transportation improvements in Orange County from 2011 to 2041. After the success and progress of the original Measure M, nearly 70 percent of voters renewed the half-cent sales tax in 2006 to launch OC Go. OC Go identified three improvements along SR-91 (H, I and J). Portions of two OC Go projects are included in this CMCP: SR-57 to SR-55 (Project I) and SR-241 to Orange County/Riverside County Line (Project J).

Long term system performance. OCTA has evaluated all sixteen projects in light of the 2016 baseline conditions versus the 2045 Build and No Build option and their ability to: *improve* overall conditions within the study area versus the 2016 baseline; *maintain* overall conditions consistent with internal and externally driven growth versus the 2016 baseline; and identify overall conditions that require *further attention and study*.

Long-term performance measures that were **improved** by some of the 16 CMCP projects (i.e., those that addressed and improved system performance beyond the 12% population growth, 12.6% employment growth, and 15% growth in externally generated trips) (see **Table ES-2**):

- Rapid bus trips grew by 198% under the Build scenario versus 5.6% under the No-Build scenario
- Commuter rail trips grew by 34.8% under the Build scenario versus 27% under the No-Build Scenario
- Urban rail trips grew by 42.2% under the Build scenario versus 37% under the No-Build scenario

² *Connect So Cal Technical Report Goods Movement, Adopted September 3, 2020 (ConnectSoCal.org)*

- Person trips via carpool grew slightly by 8.3% under the Build scenario versus 8.2% under the No-Build scenario
- Total vehicle trips only grew 10.3% under the Build scenario versus 10.4% under the No-Build scenario—less than the growth in population, employment, and “external” vehicle trips
- 2045 Work peak travel distance and work peak travel times declined under both the Build and the No-Build scenarios—less travel distance and less travel for peak period work trips in 2045 vs. 2016

The CMCP process also identified certain system performance areas that maintained or kept pace with growth in population, employment, and “pass through” vehicle trips:

- Total person trips grew by 9.7% under both the Build and No-Build scenarios—less than the growth in population, employment, and “external” vehicle trips
- Percentage of total delay time remained constant at 17% for both the base year (2016) and the Build scenario versus 19% for the No Build scenario
- Daily VMT grew by 9.1% under the Build scenario versus 7.7% for the No-Build scenario—both less than the growth in population, employment, and “external” vehicle trips

The CMCP process also identified certain performance areas that require **further attention and study**:

- Growth in total person work trips by vehicle grew by 13.2% under the Build scenario—less than the 13.4% growth under the No-Build scenario, but still greater than the growth in population, employment and “external” trips
- Total person hours of delay grew by 13.3% under the Build scenario, but still an improvement over the 22.2% increase in total person hours of delay under the No Build scenario

Expand System Choices. A total of 12 of the 16 projects expand or enhance system choices, including BRT, commuter rail, and active transportation.

In addition, the SR-91 ramp and roadway projects increase the efficiency of the managed lanes. This helps to protect the surrounding surface transportation network and the mature residential and commercial land uses from being overwhelmed by “external” freight and commuter traffic—key OCTA goals for this study.

Support Sustainability.

- Significant growth in commuter rail, urban rail, rapid bus and HOV ridership
- Charging Stations will be added for the whole transit fleet

Table ES-2: Modeling Metrics

Metric	2016 Summary	2045 No Build	2045 Build	2016 vs 2045 No Build	2016 vs 2045 Build	2045 No Build vs Build
Demographics						
Total Population	399,411	447,676	447,676	12.1	12.1	0.0
Employment	205,265	231,297	231,297	12.7	12.7	0.0
Vehicle Trips						
Person Trips in Vehicles	2,286,818	2,508,618	2,508,350	9.7	9.7	0.0
Total Person Trips	2,594,915	2,845,014	2,845,058	9.6	9.6	0.0
Work Person Trips in Vehicles	661,039	749,412	748,433	13.4	13.2	-0.1
Total Vehicle Trips	1,674,472	1,848,101	1,847,657	10.4	10.3	0.0
Bus Trips						
Daily Local Bus Trips	22,695	25,332	24,034	11.6	5.9	-5.7



Metric	2016 Summary	2045 No Build	2045 Build	2016 vs 2045 No Build	2016 vs 2045 Build	2045 No Build vs Build
Peak Local Bus Trips	13,788	15,503	14,618	12.4	6.0	-6.4
Daily Rapid Bus Trips	1,630	1,721	4,844	5.6	197.2	191.6
Peak Rapid Bus Trips	1,186	1,282	3,468	8.1	192.6	184.4
Rail Trips						
Daily Commuter Rail Trips	1,824	2,316	2,459	27.0	34.8	7.8
Daily Urban Rail Trips	819	1,122	1,165	37.0	42.3	5.3
Daily Transit Trips	26,967	30,491	32,502	13.1	20.5	7.5
Congestion						
Total Vehicle Hours of Delay	59,268	72,805	67,512	22.8	13.9	-8.9
Delay as a Percent of Travel Time	17%	19%	17%	11.0	3.5	-7.6
Daily Vehicle Hours Traveled	354,827	392,508	390,558	10.6	10.1	-0.5
Daily Vehicle Miles Traveled	13,631,461	14,686,985	14,879,749	7.7	9.2	1.4
Daily Peak Vehicle Hours Traveled	223,090	250,668	247,790	12.4	11.1	-1.3
Daily Peak Vehicle Miles Traveled	7,462,494	8,085,087	8,214,087	8.3	10.1	1.7
Work Peak Trip Travel Distance (miles)	15.1	14.8	14.9	-1.5	-1.4	0.1
Work Peak Trip Travel Time (minutes)	30.5	30.4	30.3	-0.2	-0.6	-0.4

The 2045 Build scenario does not incorporate significant and aggressive demand management measures that may be considered in the current update of the regional Long Range Transportation Plan (LRTP), including, but not limited to the following demand management measures:

- Microtransit
- Ramp metering
- TDM/Remote work incentives
- Mobility Hubs
- Active transportation enhancements
- Fare Free Transit

If agreed to and fully implemented, it is likely that these and additional demand management measures would further reduce work trips by vehicle, hours of delay, and the number of short trips by vehicle (typically 3 miles or less). In addition, these and additional demand management measures, if agreed to and fully implemented, would further enhance the medium- and long-term OCTA investments in transit and active transportation.

PLAN PURPOSE

The Orange County Transportation Authority (OCTA) manages a system of bus, rail, active transportation, and highways throughout Orange County. In 2017, the State of California passed Senate Bill 1 (SB1) that established several new funding programs, including the Solutions for Congested Corridors Program (SCCP) dedicated to constructing multimodal improvements for highly traveled and highly congested corridors.

In 2018, OCTA developed the Long-Range Transportation Plan (LRTP) through public outreach and stakeholder engagement to provide the multimodal transportation vision for Orange County and serve as OCTA's input into the Southern California Association of Governments (SCAG) 2020 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS). The OCTA goals within the LRTP are:

- To deliver on commitments to voters who fund the projects
- To improve system performance
- Expand system choices
- Support Sustainability³

In pursuit of completing the vision outlined in the LRTP, OCTA intends to seek state funding made available through the SB1 and other sources. To compete for funding, OCTA must first prepare a Comprehensive Multimodal Corridor Plan (CMCP) in accordance with the California Transportation Commission's (CTC) Comprehensive Multimodal Corridor Planning Guidelines to qualify projects for funding eligibility. Consistent with OCTA, regional LRTP and CTC goals, this CMCP document:

- Identifies the current condition, including environmental and community impacts of existing conditions
- Identifies how much worse the conditions would be without the projects
- Identifies how the projects would alleviate congestion and minimize the vehicle miles traveled while maximizing the person throughput in the corridor and the study area
- Identifies how the solutions would balance transportation, the environment, and the community.

The California Transportation Plan (CTP) is a long-range transportation plan that provides a statewide framework for how to achieve various transportation related goals and improve the lives of all Californians. It helps close the gap between the goals of the regional plans and implementation. The Interregional Transportation Strategic Plan (ITSP) provides program and policy direction for improving the California multimodal transportation system. The Smart Mobility Framework (SMF) works with social equity concerns and integrates them into the transportation system improvements. California's Climate Change Scoping Plan prioritizes transportation sustainability and multimodal transportation to help meet climate and greenhouse gas (GHG) goals. A Climate Adaptation and Resiliency Plan is in development at OCTA that will integrate environmental sustainability with climate impacts and resilient infrastructures. All these plans and frameworks will work cohesively with the Comprehensive Multimodal Corridor Plan to improve highly traveled and congested corridors.

State Bill 743 (SB 743) changes how Caltrans measures the impact a new development or project will have on the roads. Prior to SB 743, projects were evaluated on Levels of Service (LOS), which was possible increase in traffic congestion levels. By switching over to evaluating Vehicle Miles Traveled (VMT), the impact is seen in how long and how many new car trips the development project would create. VMT analysis can support more transit service and active transportation options to decrease the VMT impacts of a development a project.

³ 2022 LRTP Directions 2045 is in process

While still under development, VMT analysis methodologies also include the potential for evaluating the induced demand of individual highway facilities.

The planning studies reflected in the LRTP include several projects that have been publicly vetted, including OC Transit Vision, Regional Bikeways plans, Metrolink Strategic Plan, and locally preferred alternatives from OCTA's major investment studies, and committed projects and programs included in Orange County's voter-approved local transportation sales tax program, OC Go. All of these efforts, including the LRTP itself, have been developed through public outreach, stakeholder engagement, and presentations to the OCTA Board of Directors. This SR-91 Comprehensive Multimodal Corridor Plan (Plan) includes a set of transportation options developed through community and stakeholder outreach in the 23-mile long, three-mile wide (1.5 miles on either side of SR-91) Orange County corridor that is roughly parallel to the SR-91 facility of general purpose and managed lanes, from the Los Angeles County line to the Riverside County line.

This approximately 66-square-mile area is one of the most vibrant in the U.S., housing more than 399,000 residents in 2016 and anticipated to grow 12% to more than 447,000 in 2045. The study area supported more than 205,000 jobs in 2016 is projected to grow 12.7% to 231,000 jobs in 2045. **Supporting and enhancing the quality of residential and employment uses within this study area is an overarching goal of this study and OCTA.**

These homes and jobs are served by a complex web of transit, rail, highway, street, trail, and pedestrian facilities, as well as supporting bus and demand management services that maximize the overall network efficiency within the study area and minimize the impacts on the residential neighborhoods and employment nodes within the study area. Importantly, these facilities and services support more than just east-west mobility. They support the movement of people and goods as they travel in a variety of ways in all directions in the course of a day.

CORRIDOR OBJECTIVES AND VISION

The objective of this SR-91 CMCP is to address goals of the 2018 LRTP in the context of this wider vision for the corridor. That vision includes increasing access to transit and active transportation alternatives, while enhancing and protecting the quality of the residential and employment sectors within the study area. The objectives of the 2018 LRTP include: deliver on commitments, improve multimodal system performance, expand system choices, and support sustainability. By implementing the goals of the SR-91 CMCP and 2018 LRTP, OCTA will maintain and improve the efficiency of existing facilities and transit operations, make active transportation and transit more accessible and viable, increase demand management effectiveness, and reduce harmful emissions.

The projects identified within the SR-91 CMCP will work toward these goals by addressing the following corridor objectives:

- Maintain facilities and assets
- Improve system efficiencies and reduce congestion
- Support environmental and emission-reduction strategies
- Provide more frequent transit service in higher-demand areas
- Improve connectivity for active transportation
- Enhance rideshare options
- Implement OC Go committed projects and programs
- Leverage emerging technologies and services
- Preserve the characteristics of the corridor

The SCAG 2020 RTP/SCS, the 2018 LRTP and this State Route 91 CMCP all work toward meeting the goals of State transportation plans, such as the California Transportation Plan, Interregional Transportation Strategic Plan, Caltrans Smart Mobility Framework, California Freight Mobility Plan, California Sustainable Freight Action Plan, and California Climate Change Scoping Plan. Safety is a core goal and recommendation documented in the various transportation plans and integrated into all modes.

The California State Transportation Agency prepared a Climate Action Plan for Transportation Infrastructure (CAPTI) to align transportation programs with climate, health and social equity goals statewide⁴. The plan includes 8 implementation strategies and 31 key actions to move the plan forward, and many are consistent with the CMCP guidelines. Specifically, to encourage innovative sustainable transportation solutions, Key Action S1.2 partially supports the California Transportation Commission to "...require that all projects be part of a multimodal corridor plan consistent with the CTC's Comprehensive Multimodal Corridor Plan Guidelines..." Some of the other Key Actions that enhance the CMCP include the following: support active transportation, community engagement, development of an equity index, prioritize sustainable multimodal investments in key corridors, vehicle miles traveled, and creating metrics to track progress.

Caltrans recently completed the Caltrans Active Transportation Plan for District 12 (CAT Plan), which identifies active transportation needs within the sphere of influence of the State Highway System, including the SR-91⁵.

The SCAG 2020 RTP/SCS Connect SoCal has five sections of their Core Vision of Sustainable Development; Demand & System Management, Goods Movement, Complete Streets, System Preservation & Resilience, and a Transit Backbone, all of which correlate with the corridor objectives of the CMCP.

The CMCP aligns with the goals of these various Plans and Frameworks in multiple ways. The CTP has eight different goals and fourteen recommendations to guide transportation planning and decision making for the future.

- CTP Goals
 - Safety
 - Climate
 - Equity
 - Accessibility
 - Quality of Life & Public Health
 - Economy
 - Environment
 - Infrastructure
- CTP Recommendations
 - Expand access to safe and convenient active transportation options
 - Improve transit
 - Rail and shared mobility options
 - Expand access to jobs, goods, services, and education, advance transportation equity
 - Enhance transportation system resiliency
 - Enhance transportation safety and security
 - Improve goods movement systems and infrastructure
 - Advance Zero-Emissions Vehicle technology and supportive infrastructure
 - Manage the adoption of connected and autonomous vehicles

⁴ California State Transportation Agency, *Climate Action Plan for Transportation Infrastructure, Final Draft, 47 pages, July 2021*

⁵ Caltrans Active Transportation Plan for District 12, *Summary Report, 28 pages, June 2022*

- Price roadways to improve the efficiency of auto travel
- Encourage efficient land use
- Expand protection of natural resources and ecosystems
- Strategically invest in state of good repair improvements
- Seek sustainable, long-term transportation funding mechanisms.

Many of these goals and recommendations are addressed in the CMCP, such as State of Good Repair by maintaining facilities and assets; Climate with Zero Emission Vehicles; and Equity and Accessibility with expanding access to jobs, education and healthcare.

The Interregional Plan has the Goals of Safety, Climate, Equity, Quality of Life & Public Health, Accessibility, Economy, Environment, and Infrastructure, and takes a closer look at multimodal corridor planning and sustainable transportation solutions.

Caltrans' Smart Mobility Framework has six guiding principles: Location Efficiency, Reliable Mobility, Health and Safety, Environmental Stewardship, Social Equity, and a Robust Economy. These match with the corridor objectives of the project, such as Environmental Stewardship to reduce emissions, and Location Efficiency to improve system efficiencies, improve connectivity and reduce congestion.

The efforts put forward by the Climate Change Scoping Plan will lower GHG emissions, support a clean energy economy, provide a more equitable future, and improve public health. The alignment of the SR-91 CMCP goals with the regional and state plans are included in **Table 7**, located in Section 4 (Goals, Objective, and Path Forward) of this document (see page 62).

SECTION 1. PUBLIC AND STAKEHOLDER OUTREACH

COMMUNITY AND STAKEHOLDER ENGAGEMENT

To build an understanding of existing conditions and community needs, a public involvement plan was created and implemented to gather public input and identify transportation needs. An outreach strategy was developed to invite key stakeholders and those that live, work and travel in and around the SR-91 corridor to learn more about the study and provide feedback. The primary goal was to actively engage the community through a survey (available online and as a hard copy), public webinar, community event pop-ups, and print and online resources and media. Digital tools, such as eblasts and social media messaging were utilized to promote the survey, virtual community meetings and other outreach opportunities. The community engagement phase took place from February 14 to March 27, 2022.

Along with the survey and the public webinar, several efforts were made to reach out to diverse communities and offer multiple options to participate and comment. The survey and project collateral and notification materials for the survey, such as fact sheets and the webinar were made available in English and Spanish. Closed captioning and Spanish interpretation were also made available during the community meeting. A video recording of the webinar was posted online, so it was available for the public to view at any time. In addition, staff attended community and pop-up events to promote the survey throughout the corridor cities and collect feedback in person. To view the full outreach report, see **Appendix A**.

The following agency stakeholders participated in Project Development Team meetings (held in February 2022) and provided input for the SR-91 CMCP:

- Caltrans
- County of Orange
- Corridor Cities
 - Anaheim
 - Buena Park
 - Fullerton
 - La Palma
 - Orange
 - Placentia
 - Yorba Linda
- Southern California Regional Rail Authority (SCRRA)
- Southern California Association of Governments (SCAG)

PUBLIC SURVEY RESULTS

A total of 303 surveys were collected. The survey research was qualitative, which means that results cannot be considered representative of the total population of interest. Informal research methods are useful to explore a group's opinions and views, allowing for the collection of verifiable data. This data can reveal information that may warrant further study and is often a cornerstone for generating new ideas.

In addition, multiple people shared their feedback during the community pop-up events and shared the need for improved bus service, first/last mile options and safe biking and walking options. Key findings from the survey are provided in **Table 1**. To view the complete survey results, see the outreach report in **Appendix A**.

Table 1: Summary of Key Findings⁶

Survey Question	Top Ranked	Second Ranked	Third Ranked
Why do you travel in the SR-91 corridor area? To access (check all that apply):	Entertainment (amusement park, dining, events, etc.) 68%	Work 68%	Recreation 68%
How do you travel most often in and around the corridor area? (pick up to three top choices)	Drive 97%	Rideshare 17%	Walk on sidewalks or paths 17%
What are the biggest challenges you face when you travel in and around the corridor area? (pick top three choices)	Traffic congestion on SR-91 freeway 92%	Traffic congestion on streets 75%	Wait time at traffic signals 51%
What are the best ways to improve the challenges you face in and around the corridor area? (pick top three choices)	Make improvements generally within existing SR-91 Freeway 71%	Add high-capacity transit improvements such as streetcar or dedicated bus lanes 56%	Improve traffic and pedestrian signal timing at intersections 54%

⁶ Total percentages for individual questions exceed 100 because each question required multiple response choices.

SECTION 2. STUDY AREA OVERVIEW AND BACKGROUND

CORRIDOR STUDY AREA

The approximately 66 square mile Study Area for the CMCP is shown in **Figure 1**. The Study Area includes a 23-mile long, three mile wide, 1.5 miles on either side of State Route 91 (SR-91), located in the County of Orange from the Los Angeles to the Riverside County lines.



Figure 1: SR-91 CMCP Study Area

Figure 1 illustrates the study area with major employment, commercial and regional attractions, including:

- Buena Park Downtown
- Knott's Berry Farm
- Fullerton Transportation Center
- Disneyland
- California State University (CSU), Fullerton
- Kaiser Permanente Anaheim Kraemer Medical Center
- Anaheim Canyon Industrial Center

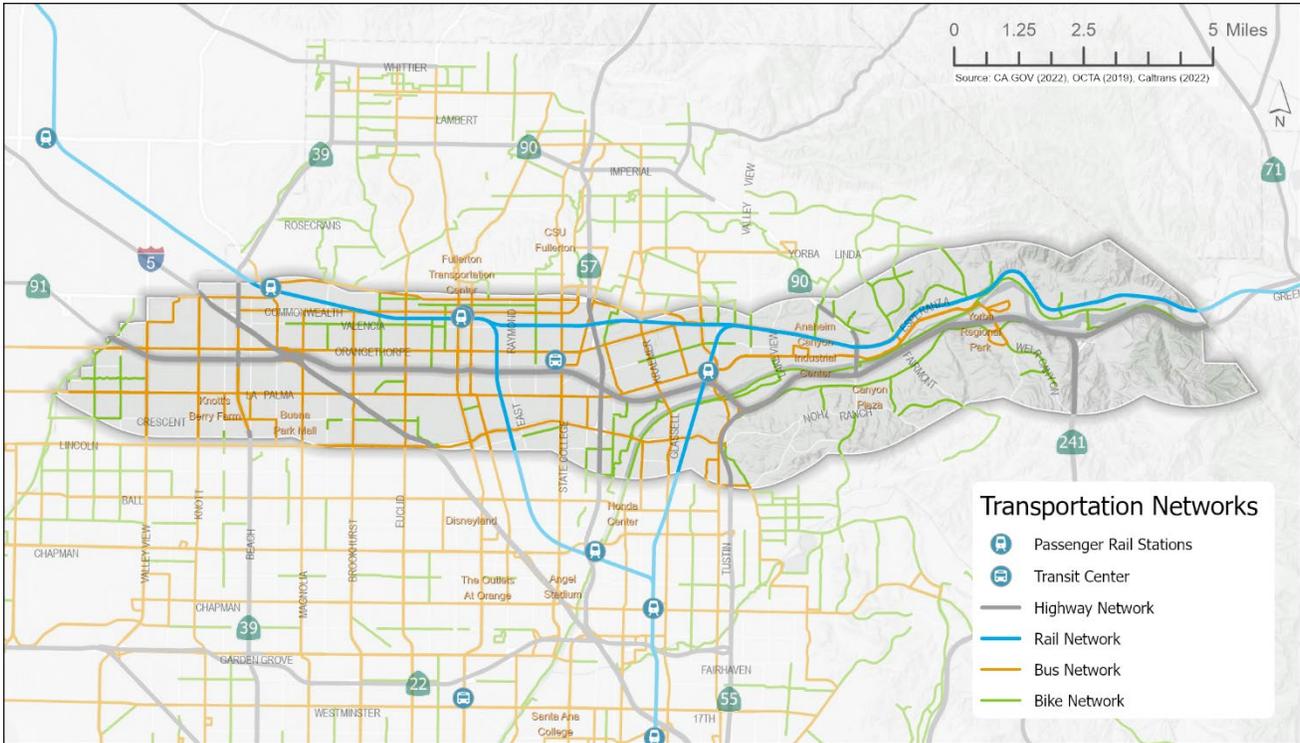


Figure 2: SR-91 Transportation Network

As shown in **Figure 2**, the residential, commercial, employment, and entertainment uses are served by several major highway, transit, and rail corridors. While SR-91 lies at the center of this study area, this east-west highway provides critical links to major highway, transit, and rail mobility, both north-south and east-west.

Figure 2 illustrates the major transportation facilities serving the study area, including:

- Highway
 - SR-91, I-5, SR-57, SR-55, and SR-241
- Transit
 - Bus
 - Local Bus Routes
 - Rapid Bus Routes
 - Commuter Rail
 - Metrolink Orange County Line
 - Metrolink 91/Perris Valley Line
 - Metrolink Inland Empire/Orange County Line
 - Intercity Rail
 - Amtrak Pacific Surfliner
 - Amtrak Southwest Chief
- Park and Ride
- Active Transportation
 - OC Loop
 - Santa Ana River Trail

EXISTING FACILITIES AND SERVICES IN THE STUDY AREA

Transit

The SR-91 corridor is served by several commuter rail and bus routes, including the Metrolink Orange County Line, 91/Perris Valley Line, and Inland Empire – Orange County Line, and the OCTA 794 Express Bus route (currently suspended). Several other local bus routes, and extensive bicycle and pedestrian infrastructure, including the Santa Ana River Multi-Use Trail, also serve the study area. Together, these services and facilities form a multimodal network that supports travel within and outside of the study area.

Bus

In Spring 2020, OCTA bus ridership dropped by 73% in response to pandemic driven stay-at-home orders and reduced service levels. OCTA anticipates returning to 100% of pre-pandemic service levels over the next 24 month period. As it restores service, OCTA has an opportunity to redesign the network to reflect current travel patterns resulting from changes brought on by the pandemic.

Public transit strives to attract riders by delivering high-quality, reliable service, evolving to meet changing mobility needs by integrating alternatives like Uber and expanding options with services such as OC Flex. Together, these factors present a unique opportunity to rethink transit in Orange County as part of Making Better Connections. OCTA's Making Better Connections Study is to redesign the OCTA transit network to reflect current travel patterns stemming from travel changes associated with the COVID-19 pandemic. This study is based on analysis of travel patterns, ridership trends, and community stakeholder input to redesign routes to better serve riders. At this time, it is anticipated that the OCTA Board of Directors will approve the plan for a phased implementation starting in early 2023. This phased implementation is scheduled to take up to 24 months.

The number of average daily trips across all modes in Orange County declined 19% between early 2019 and summer 2021. Trip activity fell the most between people's homes and regularly frequented destinations, such as work or school (34% decline) and on trips between regular destinations and non-regular locations, such as shopping (46% decline). Activity fell the least on trips between home and non-regular locations (6% decline).

Decline in trip activity was highest at regular or COVID-sensitive destinations, including universities and Disneyland. Trip activity grew at a small number of locations, mostly at outdoor recreational facilities such as beaches and parks.

As of Fall 2022, average weekday ridership on the OC Bus network was approximately 83,000 (Figure 3)⁷. The map shows ridership for Orange County. Part of designing a successful network is understanding where and when people use the existing system; locations of major ridership stops, and route-level ridership are indicators of what is and isn't working well. The OC Bus network is primarily a grid system, with most routes spaced out approximately a mile apart on major corridors. Grid systems generally make it very easy for riders to travel from anywhere on the grid to anywhere else on the grid but may require many riders to transfer.

⁷ Source: OCTA

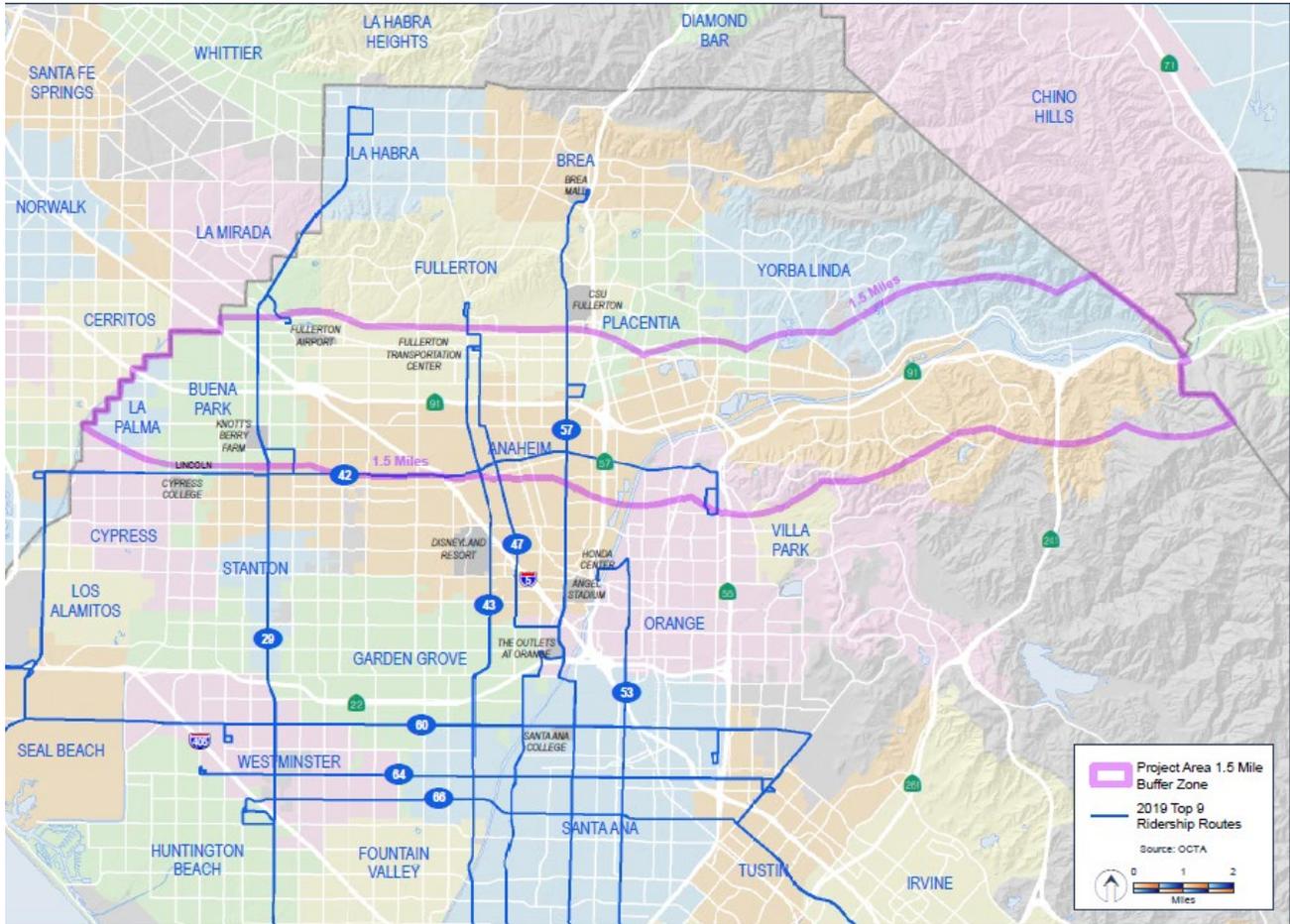


Figure 3: OCTA Top 9 Ridership Routes (2019)

Fifty percent of the boardings are located on the top nine highest ridership routes (Figure 4)⁸. Of these nine routes, five traverse through the study area (and identified in bold font):

- **Route 57 (Brea Mall — Newport Transportation Center)**
- Route 64 (Huntington Beach — Tustin via Bolsa/1st)
- **Route 43 (Harbor Boulevard)**
- Route 66 (Huntington Beach — Irvine)
- **Route 29 (La Habra — Huntington Beach via Beach)**
- **Route 47 (Anaheim/Haster — Fairview)**
- Route 60 (Long Beach — Tustin via 17th/Westminster)
- **Route 42 (Seal Beach to Orange via Lincoln)**
- Route 53 (Main Street)

⁸ Source: OCTA

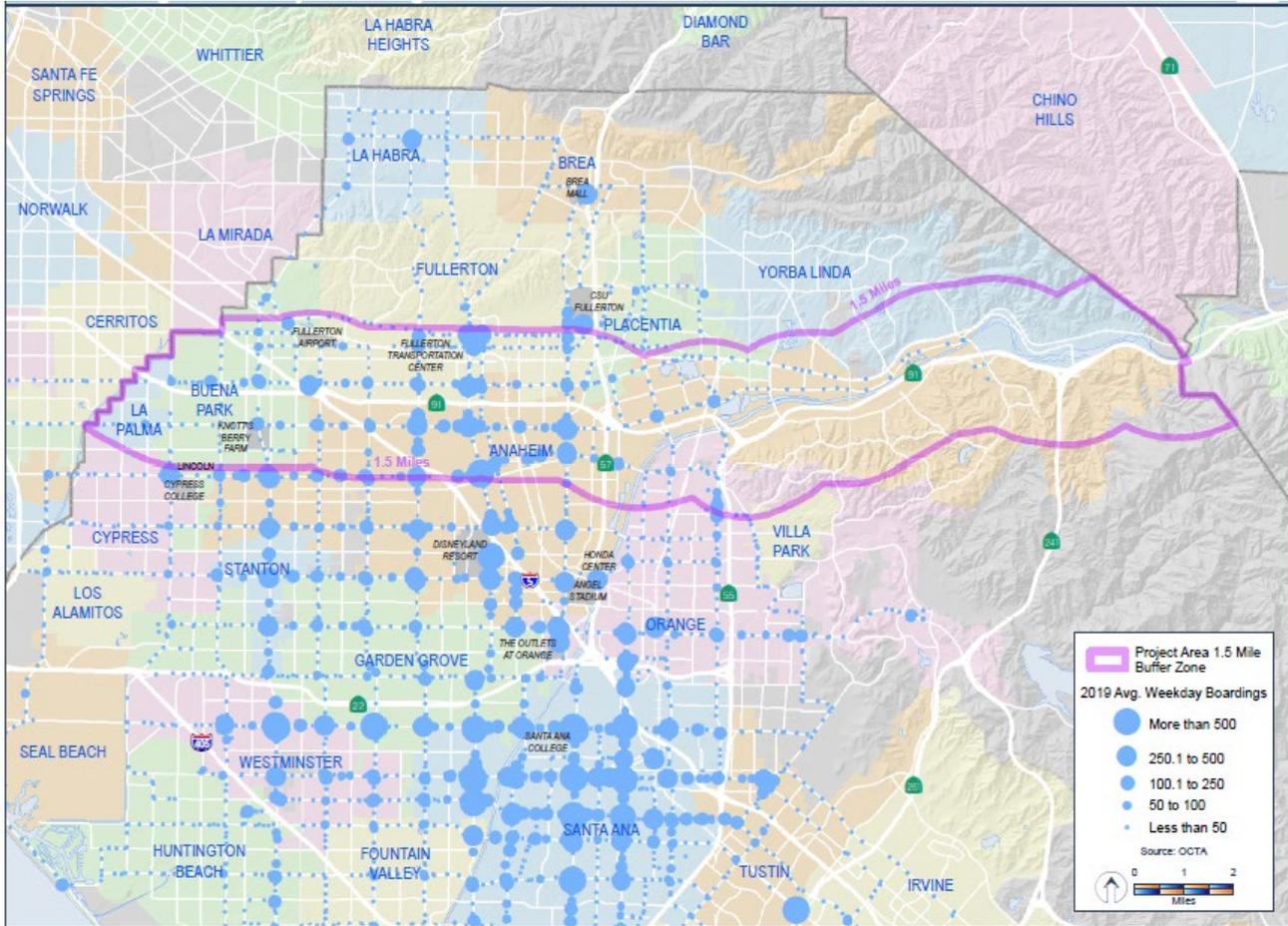


Figure 4: OCTA Average Weekday Boardings (2019)

Eleven percent of the boardings are at the top 10 ridership locations, with one location sited within the study area (and identified in bold font):

- Bristol-McFadden
- Bristol-17th
- Harbor-Westminster
- Bristol-1st
- Main-17th
- Harbor-1st
- Harbor-Katella
- Harbor-McFadden
- **Fullerton Transit Center**
- Westminster-Beach

A total of 31% of boardings occur in the core of the service area, located in and around Santa Ana, which is about five miles south of the study area.

Commuter Rail

Founded in 1991, the Southern California Regional Rail Authority (SCRRA) also known as Metrolink, operates as a Joint Powers Authority with five member agencies serving the Counties of Los Angeles, Orange, Riverside,

San Bernardino, and Ventura. The commuter rail system in Southern California consists of seven lines and 62 stations operating on 538 miles of rail network. OCTA is responsible for participating and providing funding to operate the three lines that serve Orange County. These lines include the following: Orange County Line, the 91/Perris Line, and the Inland Empire-Orange County Line. These routes serve rail commuters in Orange, Los Angeles, San Diego, San Bernardino and Riverside Counties.

Metrolink has a \$10 billion capital improvement program currently funded at just over \$1 billion named Southern California Optimized Rail Expansion (SCORE)⁹. The purpose of the program is to upgrade the Metrolink system in time for the 2028 Olympic and Paralympic Games, with construction finishing by 2028. The program will upgrade grade crossings, station and signal improvements and track additions. The purpose of the SCORE program is to serve Southern California's growing population, increase safety, and enhance the environment (including progress toward Metrolink's zero-emissions future).

Figure 5 displays the existing commuter and intercity rail network serving the corridor; station and ridership information is provided in **Table 2** on the following page. Weekday riders is the number of riders from Monday to Friday, whereas weekly riders is the number of riders during a seven day period (weekday + weekend).

- **Anaheim Canyon Station**, 1039 N. Pacificcenter Drive, Anaheim. This station is located just north of SR-91 near La Palma and Tustin avenues, an area within the City of Anaheim that has nearly 3,000 companies and 72,000 jobs, including the Kaiser Permanente Hospital and 1.35 million square foot Anaheim Concourse Business Park, making it the second largest jobs center in the City of Anaheim. It provides connections to Metrolink's Inland Empire – Orange County line and OCTA Bus Lines Local Bus: 38, 71, 123¹⁰. As of April 4, 2022, the station experiences a total of 14 trains per day on weekdays and four trains per day on weekends. In addition to its rail connections, the station provides connections to three OCTA bus routes as well as Anaheim Resort Transportation. This station is located along the La Palma Avenue high frequency corridor. This station offers 149 parking spaces. In 2021, OCTA, in partnership with Metrolink, began constructing improvements to meet current and future rail and transit demand, by expanding and improving the Anaheim Canyon Metrolink Station. Improvements include constructing a second main track to allow more than one train to serve the station and pass through the station, a new station platform, and extending the existing platform. The work is scheduled to be complete in 2023.
- **Fullerton Transportation Center**, at 123 S. Pomona Avenue and the **Fullerton Metrolink/Amtrak Station**, at 120 E. Santa Fe Avenue. These two facilities are located within approximately 200 feet from each other and provide separate facilities for both rail (Metrolink/Amtrak on Santa Fe Ave) and bus transportation (which use Pomona Ave) with a clear path for pedestrian travel between the two facilities. The Metrolink Station on Santa Fe Ave is located across the street from two historic railroad depots, currently operated by BNSF. The combined facility provides connections to Metrolink's Orange County and 91/Perris Valley lines, Amtrak Pacific Surfliner, Amtrak Southwest Chief, and OCTA bus routes Local Bus: 26, 43, 47, 543; Community Bus 143; and OC Express Bus 213 (currently suspended)¹¹. The station welcomes a total of 39 trains per day on weekdays and 28 trains per day on weekends¹². On average, Fullerton Metrolink/Amtrak Station receives 1,641 weekday Metrolink boardings (2018)

⁹ <https://metrolinktrains.com/score>, accessed June 30, 2022

¹⁰ <http://www.octa.net/ebook/CompleteBusBook.pdf>, accessed June 30, 2022

¹¹ <http://www.octa.net/ebook/CompleteBusBook.pdf>, accessed June 30, 2022

¹² https://metrolinktrains.com/globalassets/schedules/metrolink_schedule_timetable_april-4.pdf; accessed June 30, 2022

and 496 daily Amtrak Pacific Surfliner boardings (2017). This station offers 1,321 spaces and 40 handicapped parking spaces¹³.

- Buena Park Metrolink Station**, 8400 Lakeknoll Drive, Buena Park, is located near the corner of Dale Street and Malvern Avenue, at the center of a transit-oriented development including townhomes and a housing complex owned by the California State University-Fullerton. It provides connection to Metrolink’s Orange County and 91/Perris Valley lines and OCTA bus routes Local 25, 29 and 123¹⁴. The station is distinguished by a clock tower nearly 70 feet in height, symbolizing its connection to nearby Disneyland. The station includes a 302-parking spaces, 11 handicapped spaces, and a covered pedestrian overpass to allow passengers to cross from one side of the tracks to the other.

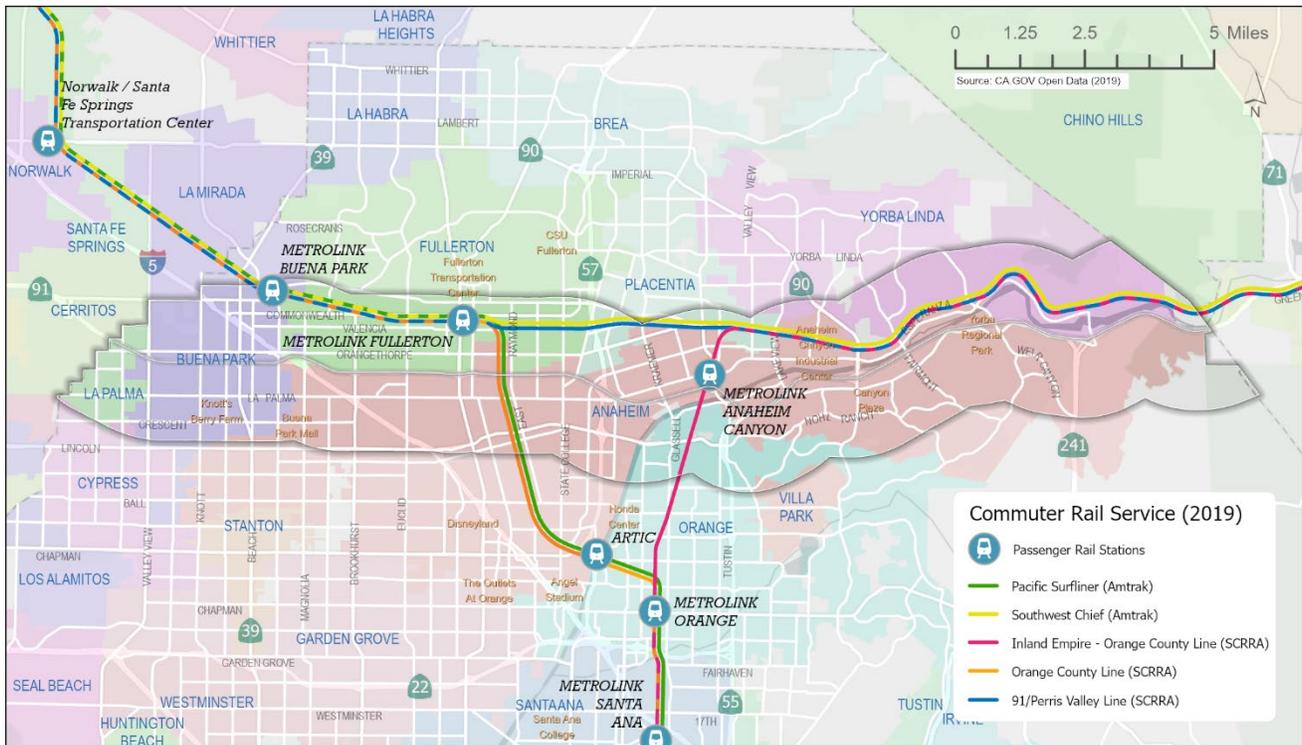


Figure 5: Commuter Rail Service

Table 2: Metrolink Line Information and Annual Ridership (FY 2018-2019)¹⁵

Metrolink Line Information	Orange County Line	Inland Empire-Orange County Line	91/Perris Valley Line
Stations	15	16	12
Route miles	87	100	85
Trains operated/weekday	29	16	15
Trains operated/weekend	16	8	8
Total Ave. Weekday Riders	30,832	17,865	11,965

¹³ <https://metrolinktrains.com/rider-info/general-info/stations/fullerton/>, accessed June 30, 2022

¹⁴ <http://www.octa.net/ebusbook/CompleteBusBook.pdf>, OC Bus eBusBook, dated 6/12/2022, accessed June 30, 2022

¹⁵ Southern California Regional Rail Authority’s Fact Sheets, Q1, Q2, Q3 and Q4 ('18-19), accessed June 30, 2022

Total Ave. Weekly Riders	49,049	23,870	17,776
Passenger Miles Traveled	96,428,579	44,585,589	35,594,774
Ave. Speed (mph)	39	39	35

Intercity Rail

Amtrak’s corridors in California are some of the busiest outside of the Northeast Corridor. Two corridors pass through the study area:

- Pacific Surfliner¹⁶ – the Amtrak Pacific Surfliner route travels along a 351-mile route along the California coast from San Diego to San Luis Obispo, traveling through six counties (San Diego, Orange, Los Angeles, Ventura, Santa Barbara, and San Luis Obispo) in a little less than six hours. Service on the northern end of the route is supplemented with Amtrak Thruway bus service to connect to locations throughout California. OCTA Bus Route 39 connects the Fullerton Train Station to Riverside County (Riverside, Cabazon, Downtown Palm Springs, Palm Springs Airport, Palm Desert, La Quinta, and Indio). As of Fiscal Year 2019, this Amtrak route offers 11 daily round-trip services between San Diego and Los Angeles, 12 on the weekends, and five between Santa Barbara and San Diego¹⁷.
- Southwest Chief¹⁸ - the Amtrak Southwest Chief route travels from Chicago to Los Angeles through the American West including major stops at Chicago, Kansas City, Albuquerque, Flagstaff, Los Angeles and takes about 43 hours. The Southwest Chief has daily departures and stops at 32 train stations, including Fullerton.



Amtrak Pacific Surfliner



Amtrak Southwest Chief

One Amtrak station is located within the study area: Fullerton. The Pacific Surfliner and the Southwest Chief both pass through Fullerton. In fiscal year 2019, the total number of intercity rail boardings and alightings in Fullerton was 256,594, and was 86,618 in 2021¹⁹.

Park and Ride

Park and Ride lots offer a convenient location to transfer and continue motoring from a single passenger vehicle to a carpool, vanpool, or transit, which improves the efficiency of the transportation system. The OC Park and Ride Brochure identifies 10 Caltrans facilities and five OCTA facilities, which allows parking up to 72 hours, and has a total of 2,757 parking spaces²⁰.

The following Park and Ride facilities are located within the SR-91 Study Corridor as identified in **Figure 6**.

- **Fullerton Park & Ride**, 3000 W. Orangethorpe Ave., Fullerton, is located adjacent to the SR-91 and I-5 interchange. Operated by OCTA, it provides service for Local bus routes: 25, 26, 30, 33, 35, 529; Express Bus 721 (currently suspended); and Metro Bus 460 and offers 791 parking spaces²¹.

¹⁶ <https://www.amtrak.com/pacific-surfliner-train> and www.PacificSurfliner.com, accessed June 30, 2022

¹⁷ <https://www.amtrak.com/about-amtrak/amtrak-facts/state-fact-sheets.html>, accessed July 6, 2022

¹⁸ <https://amtrakquide.com/routes/southwest-chief/>, accessed June 30, 2022

¹⁹ <https://www.amtrak.com/about-amtrak/amtrak-facts/state-fact-sheets.html>, accessed July 6, 2022

²⁰ <https://dot.ca.gov/-/media/dot-media/district-12/documents/park-and-ride-brochure.pdf>, accessed July 1, 2022

²¹ <http://www.octa.net/ebusbook/CompleteBusBook.pdf>, accessed July 1, 2022

- Lincoln Park and Ride²²**, is comprised of two sections (Lincoln East and Lincoln West):
 - Both lots are operated by Caltrans, and have a combined 242-spaces. No bicycle lockers are available at either Lincoln Park and Ride location.
 - Lincoln East Park and Ride: 2896-3072, N. Santiago Blvd, Orange, near the northeast quadrant of the SR-91/Lincoln Avenue-Nohl Ranch Road interchange. Located at Lincoln Avenue/Santiago Blvd intersection. The main access is from Lincoln Avenue.
 - Lincoln West Park and Ride: 2555 N. Tustin Avenue, Orange, near the southwest quadrant of the SR-91/Lincoln Avenue-Nohl Ranch Road interchange, and provides access to OCTA bus routes 42, 46, 50, 71, 167, 213, and RTA 200 across the street at the Village at Orange shopping center. The main access is from Tustin Street.

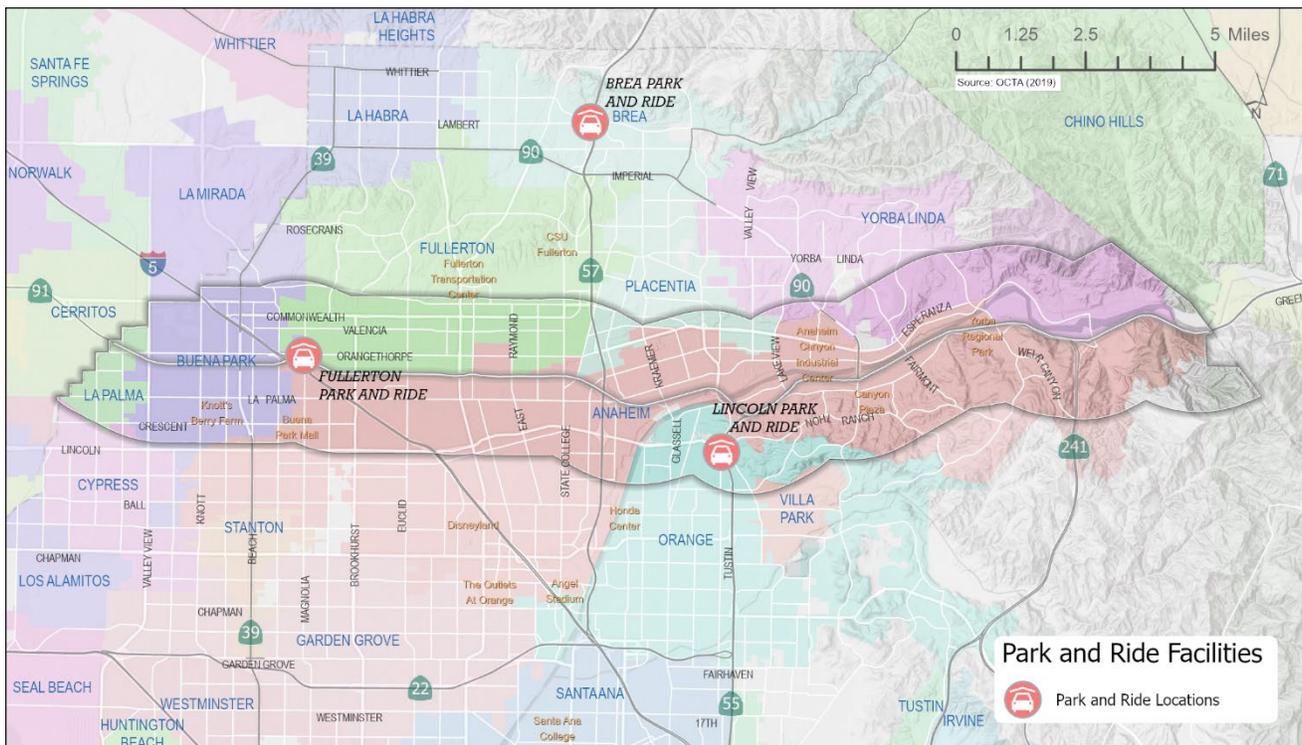


Figure 6: Park & Ride Facilities

Active Transportation Network

Bikeways. Orange County has a variety of transportation amenities for bicycle riders, including off-street paved bike paths (Class I), on-road striped and signed bicycle lanes (Class II), and on-lane, shared-lane signed bike routes (Class III). In 2015, there were approximately 262 miles of existing Class I bikeways, 760 miles of Class II bikeways, and 101 miles of Class III bikeways throughout Orange County²³. Countywide, the majority of bikeways in the area were Class II and Class III; however, within the SR-91 corridor, the surrounding bikeways are mostly Class I and Class II bikeways.

²² <http://www.octa.net/ebusbook/CompleteBusBook.pdf>, accessed July 1, 2022

²³ OC Active Orange County's Bike + Ped Plan, 414 pages, dated December 2019

Within the SR-91 Study Area, as of July 2022, there were approximately 88 miles of bikeways. Class II bike lanes compose 51 of the total 88 miles. There are also 22 miles of Class I bike paths and 15 miles of Class III bikeways. These bikeways are depicted in **Figure 7**. The majority of the bikeways in the area continue to be Class I and II. Collectively, the 34 cities and the County have identified 888 combined miles of planned on-street and off-street bikeways that are set to be completed by 2040 in order to enhance mobility and improve quality of life within the corridor.

Shared-Use Trails. In addition to these proposed bikeways, OCTA is actively working on “completing the loop” through the OC Loop project. Since the 1950s, the OC Loop has been providing residents the opportunity to bike, walk, and access Orange County’s most scenic locations. The OC Loop includes 66 miles of bicycle and pedestrian connections using five major trail corridors throughout Orange County. The OC Loop network is approximately 88 percent complete while 12 percent still needs to be developed.

More specifically to the SR-91 corridor, the Santa Ana River Trail²⁴ is a multi-use trail complex that runs alongside the Santa Ana River in Southern California and is part of the OC Loop. The trail covers about 50 miles in two disconnected segments from the Pacific Ocean at Huntington Beach along the Santa Ana River to Waterman Avenue in the Counties of Orange, Riverside, and San Bernardino Counties. The paved, 12-foot-wide path is used by walkers, runners and cyclists and is used as a bike commuting corridor.

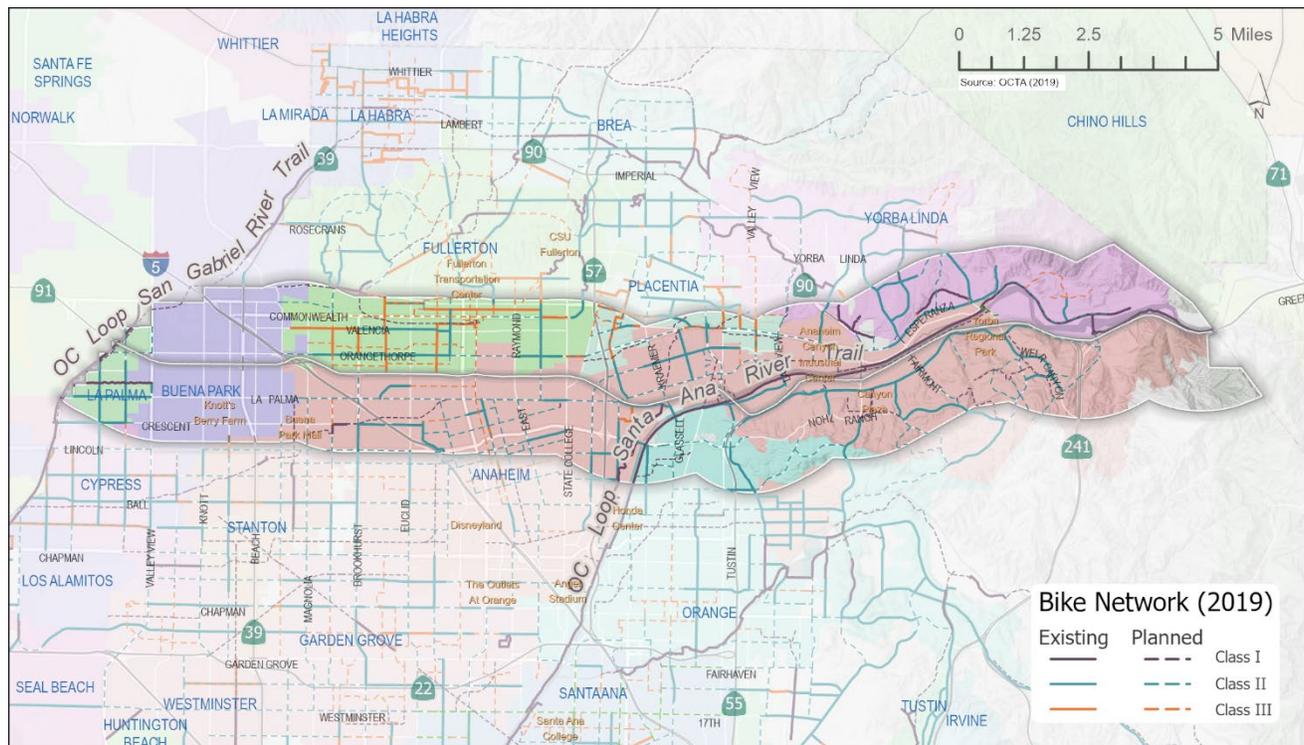


Figure 7: Active Transportation Network

Freeways and Arterial Roadways

Freeways

- SR-91 is also known as the Riverside Freeway (portion within Orange County) is an east-west access controlled, grade separated 6 to 12 lane freeway that extends approximately 18 miles between the

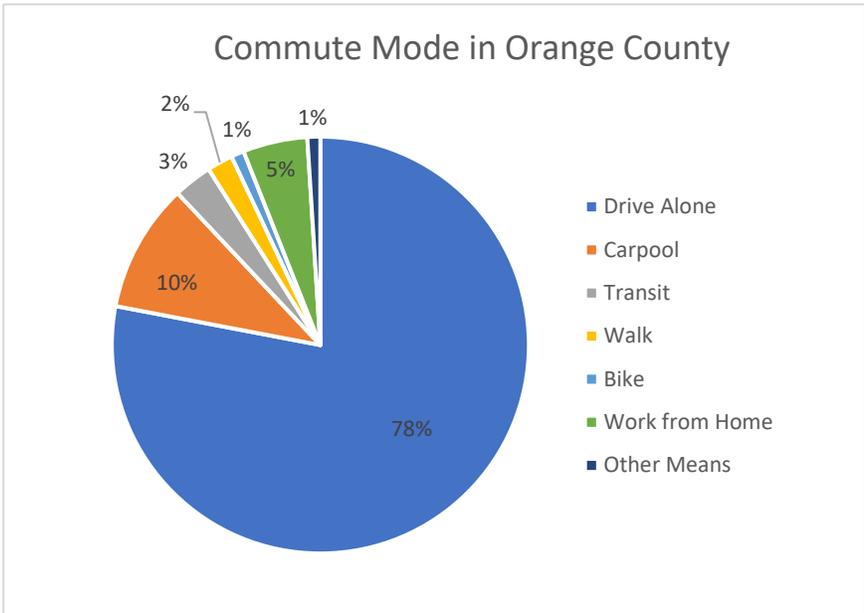
²⁴ <https://www.trailink.com/trail/santa-ana-river-trail/#trail-detail->, accessed July 5, 2022

Riverside County Line and the Los Angeles County Line. It is used for commuter, goods movement and interregional travel.

- I-5 is also known as the Santa Ana Freeway and is a major north-south route that extends approximately 45 miles from the San Diego County Line to the Los Angeles County Line. The I-5 is on the Interstate Highway System and National Highway system, a network of highways that are considered essential to the country's economy, defense and mobility by the Federal Highway Administration.
- SR-57 is a major north-south regional freeway that extends from central Orange County (junction with I-5 and SR-22) approximately 22 miles to the north to Los Angeles County. The freeway provides substantial inter-regional freeway connections and carries high volumes of vehicular, transit, and truck traffic.
- SR-55 is also known as the Costa Mesa Freeway, is a heavily travelled north-south state highway that extends about 18-miles linking southern Orange County with SR-91 in Anaheim with a HOV lane along the entire freeway portion from I-405 to SR-91. This was the first freeway in Orange County to receive carpool lanes.
- SR-241 is a north-south toll road for its entire length, whose southern half is the 12-mile Foothill Transportation Corridor, and its northern half is part of the Eastern Transportation Corridor. The road extends from SR-91 in the north to near Irvine and is part of the Eastern Transportation Corridor system. It is part of the California Freeway and Expressway System as also the National Highway System. The SR-241 is one of the highest elevated highways in Orange County and provides scenic views of the Santa Ana Mountains as it passes through 12 Cities and regions.

Orange County includes 10 major freeways and has a network of over 6,365 lane miles established throughout the county, with over 200 lane miles on the SR-91 alone. Within the study area, SR-91 provides vital connections to other north-south freeways such as I-5, SR-57, SR-55 and SR-241 (toll road). In Riverside County, as in Orange County, SR-91 operates as a controlled access freeway throughout.

The total number of lanes in the study area (including general purpose lanes, 91 Express Lanes, High Occupancy Toll (HOT) lanes and High Occupancy Vehicle (HOV) lanes) ranges from 14, 16, or 18 lanes. At its widest, there is one HOV lane running in either direction that can be used by vehicles holding two or more passengers. The 91 Express Lanes, a four-lane toll section operated by OCTA spans approximately 10 miles from the SR-91/State Route 55 (SR-55) junction to the Orange-Riverside County Line. The freeway and arterial system in the SR-91 corridor Study Area is included in **Figure 8**. The freeway network within the SR-91 Corridor consists of 664 lane-miles of general purpose lanes, 70.5 lane-miles of HOV lanes and 40.4 lane-miles of toll lanes.



According to the 2009-2013 American Community Survey (US Census Bureau ACS), the vast majority of Orange County’s population drives alone. However, as the number of people who commute within Orange County continues to grow, average freeway speeds are decreasing. This means commuters are spending more time in traffic and less time with family, friends, and personal activities.

Additionally, SR-91 is one of the few east-west thoroughfares that travels across the Santa Ana Canyon and connects Riverside

and San Bernardino counties with Orange and Los Angeles counties. With housing costs significantly lower in Riverside County, which is also the fourth most populated county in the state, many Southern California residents have made the choice to settle in Riverside County and commute to employment areas in Orange and Los Angeles counties, which is a trend that is projected to amplify in the future as the population in Riverside County is projected to grow by approximately 23.3% between 2020 and 2045. In 2016, approximately 598,000 SR 91 highway trips originated outside the study area every day. By 2045, between 651,000 and 656,000 SR 91 highway trips will originate outside the study area every day. The planned CMCP projects and local land uses help to manage and mitigate this significant volume and growth in “external” trips.

The area is already home to a large population (the county being the sixth most populated in the country, and population growth in Orange County is expected continue to grow by about 12 percent between 2016 and 2045²⁵.

As of 2019, SR-91, SR-55, and SR-57 have been experiencing high levels of congestion, particularly during morning commute hours (**Figure 9**).

²⁵ Southern California Association of Governments, April 3, 2020. Demographics and Growth Forecast.

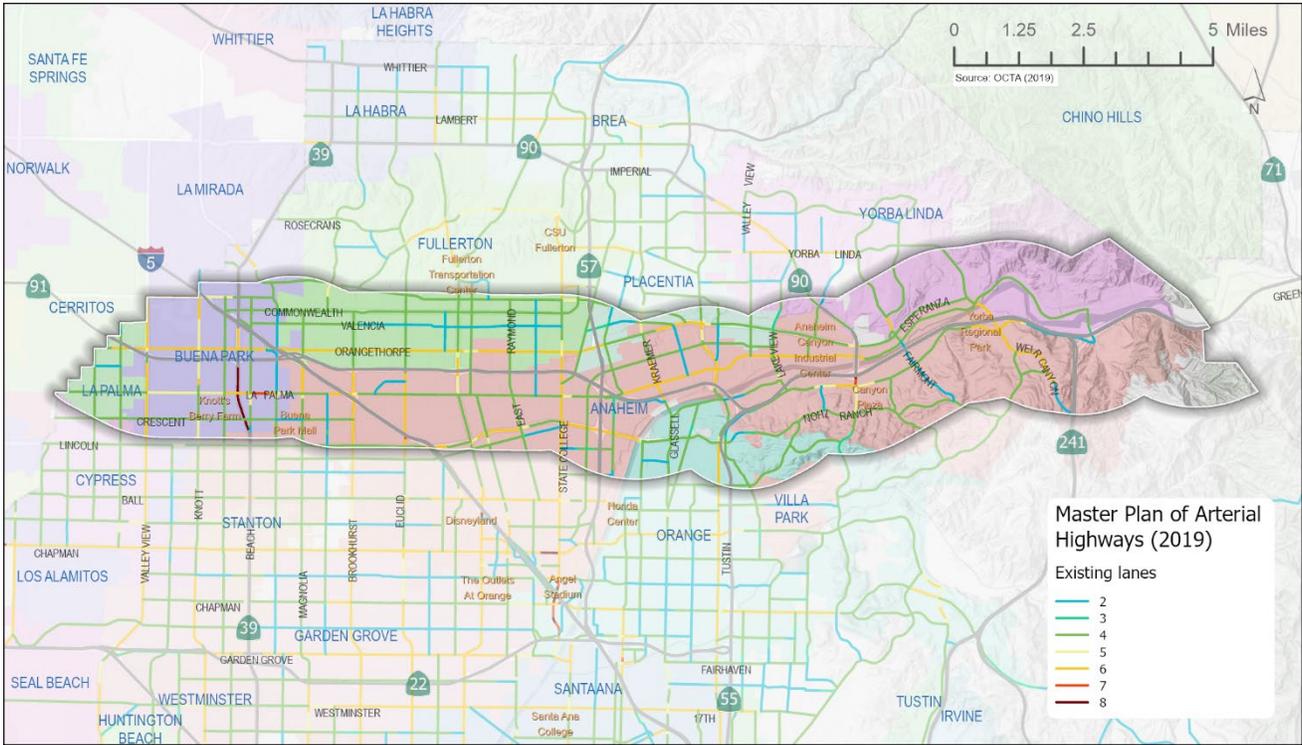


Figure 8: Master Plan of Arterial Highways

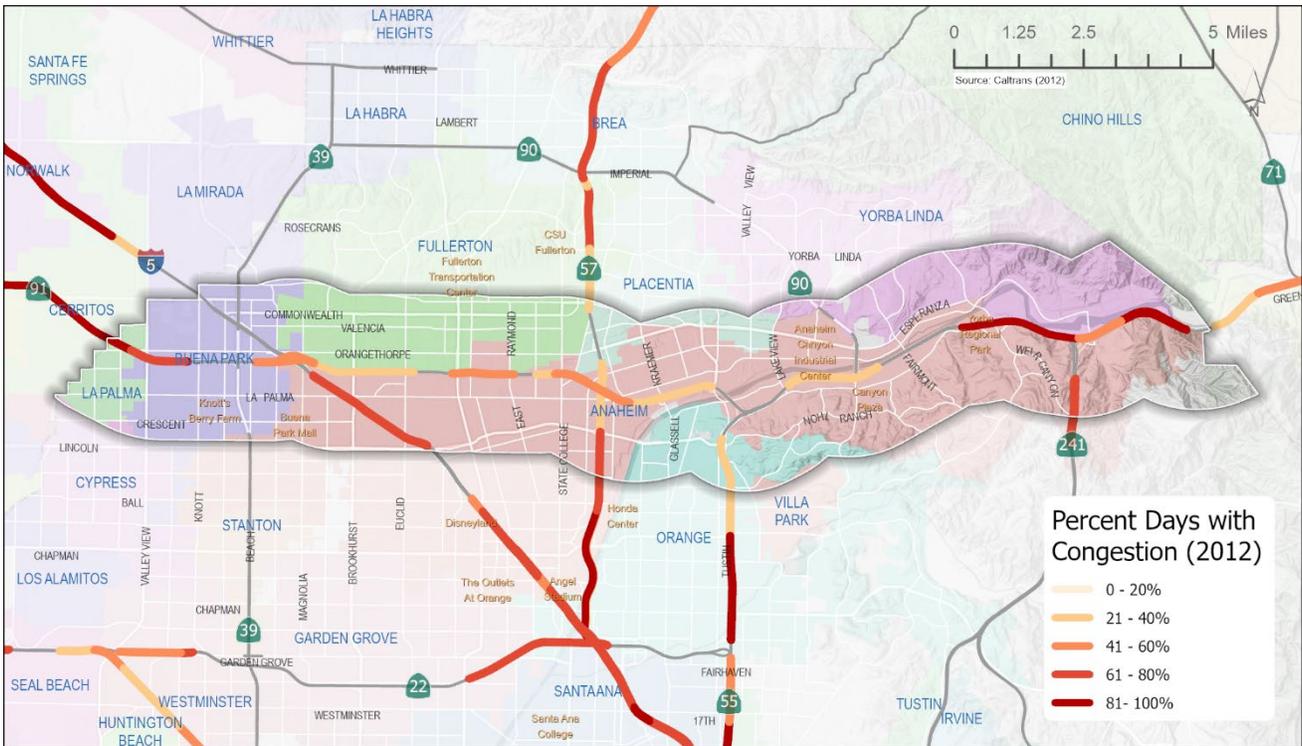


Figure 9: Congestion Frequency

Managed Lanes

Managed Lanes in Orange County consist of HOV lanes and High-Occupancy Toll (HOT) lanes, also known as tolled express lanes. HOV lanes provide a way to increase capacity on the highway network by incentivizing individuals to carpool. Orange County’s HOV network has 216 lane-miles of existing HOV lanes, more than in any other California county except Los Angeles.

In the SR-91 Corridor Study Area, HOV lanes (for carpools with 2+ people) exist on the I-5, SR-91, SR-57, and SR-55 (**Figure 10**). According to the latest Caltrans HOV Facilities Degradation Report, “Districts 7, 8, and 12 had the highest amounts of degradation. All three districts experienced degradation in the morning and afternoon peak hour periods. The levels of degradation for Districts 7 and 12 in the morning were about 11 to 15 percent less than the levels seen in 2019 and levels of degradation in the afternoon decreased by 3 to 5 percent.”²⁶ Caltrans defines degradation²⁷ as when the average traffic speed during the morning or evening weekday peak hour is less than 45 miles per hour (mph) for more than 10 percent of the time over a consecutive 180-day period. In other words, the HOV lanes average traffic speed cannot drop below 45 mph for an average of more than two weekdays each month.

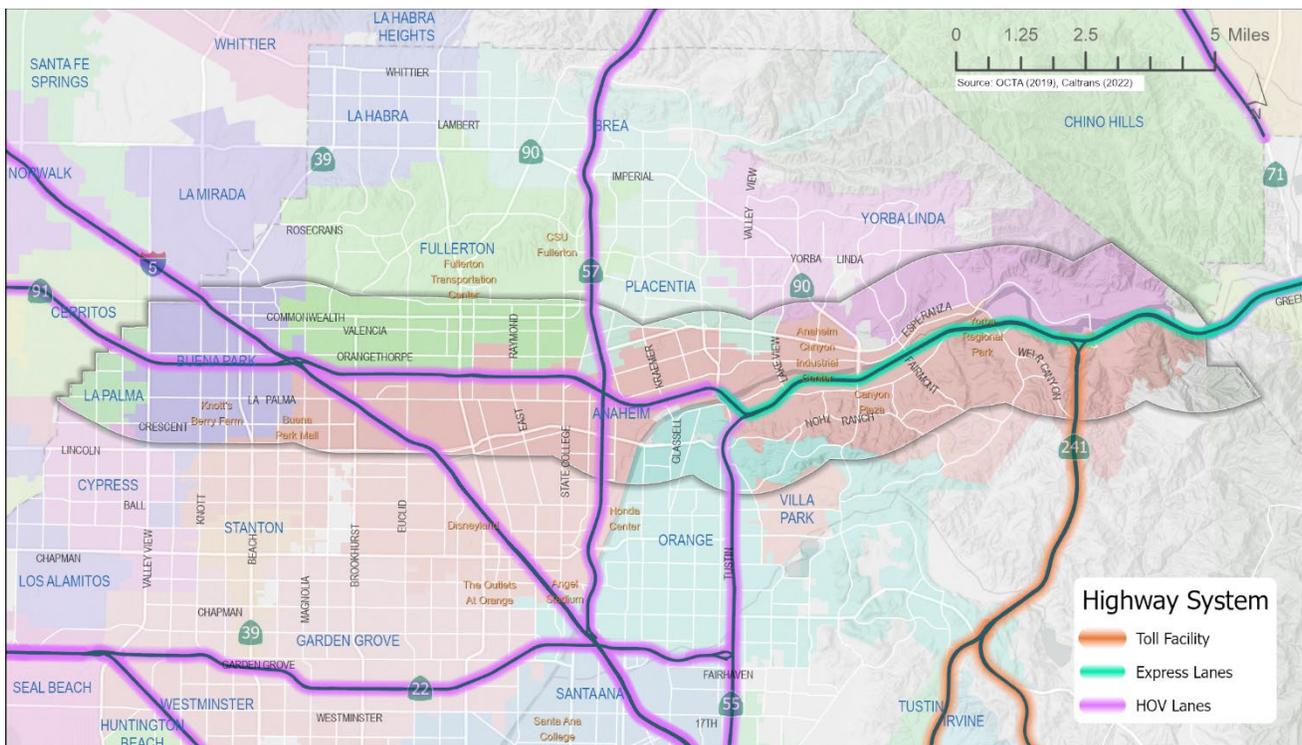


Figure 10: Highway Network

91 Express Lanes

The 91 Express Lanes were born from the need for congestion relief on SR-91 when no public funds were available to solve this critical transportation problem. In 1989 State legislation (Assembly Bill 680) was approved which allows Caltrans “. . . to enter into agreements with private entities for the construction by, and lease to, private entities of four transportation demonstration projects . . .”. The 91 Express Lanes, originally a private toll road project located in the median of SR-91 between SR-55 and the Riverside County Line, was one

²⁶ 2021 California High Occupancy Vehicle Facilities Degradation Report (18 pages) and Attachments (21 pages), dated May 2022

²⁷ Definition of degraded is defined by federal law (23 U.S.C. 166(d)(2))

of the four demonstration projects which were originally built and operated by the California Private Transportation Company (CPTC). Although the 91 Express Lanes initially extended only from SR-55 to the Riverside County Line, the original franchise agreement gave the rights to toll lane development on SR-91 from the Los Angeles/Orange County Line to I-15 in Riverside County.

Built by the California Private Transportation Company (CPTC), the 91 Express Lanes embodied a unique concept: The private sector would take the risk and the state would get congestion relief at no cost to taxpayers.

The 91 Express Lanes have saved users tens of millions of hours of commuting time since the facility began service on December 27, 1995.

Built at a cost of \$135 million, the Orange County section of the project was authorized as a toll road by the State of California in 1989 and opened in 1995. An agreement with the State of California Department of Transportation (Caltrans) included a non-compete provision that created a 1.5-mile protection zone along each side of SR-91. This zone prohibited improvements along the corridor and created mobility problems as the region and corresponding transportation demands grew.

To mitigate growing concerns over congestion, the Orange County Transportation Authority (OCTA) acquired the 91 Express Lanes franchise rights in January 2003. This eliminated the non-compete provision, clearing the way for future enhancements that would increase capacity and improve traffic flow along the SR-91 corridor.

In 2008, the Riverside County Transportation Commission (RCTC) received authority to extend the Express Lanes to I-15. Traffic congestion on eastbound SR-91 between Anaheim and Corona is routinely among the worst five areas in the nation. In 2017 the RCTC completed the initial phase of the 91 Corridor Improvement Project. This \$1.4 billion investment project included widening of SR-91 by one general purpose lane in each direction east of SR-71, adding collector-distributor roads and direct south connectors at I-15/SR-91, extending the 91 Express Lanes to I-15, and provided system/local interchange improvements.

The Riverside County section of the 91 Express Lanes provides customers with 8 additional miles of travel options from the Orange County line through Riverside County.

To provide 91 Express Lanes customers with excellent customer service, OCTA and RCTC entered into an agreement with the current 91 Express Lanes operator to service both segments of the Express Lanes.

There are now approximately 18 miles of Express Lanes between Orange and Riverside counties, with 10 miles in Orange County and the remaining 8 miles in Riverside County. Senate Bill 1316 requires OCTA and RCTC, in consultation with Caltrans, to continue to issue an annual SR-91 Implementation Plan and a proposed completion schedule for SR-91 improvements from SR-57 to I-15. The SR-91 Implementation Plan prior to SB 1316 included a westerly project limit of SR-55. The Plan establishes a program of potential improvements to relieve congestion and improve operations in the SR-91 corridor.

The 91 Express Lanes use congestion pricing to optimize traffic at free-flowing speeds. To accomplish this, hourly traffic volumes are continually monitored. Toll adjustments are triggered through increases and decreases in traffic demand and may move up or down, depending on traffic volumes and congestion levels. Rates are raised when hourly traffic is consistently too heavy and there is a potential for traffic congestion in the toll lanes. Times when traffic volumes consistently reach a trigger point where traffic flow can become unstable are known as “super peak” hours. Given the capacity constraints during these hours, pricing is used to manage demand. When traffic volume falls, tolls may also be adjusted downward to stimulate demand.

Once an hourly toll is adjusted, it is frozen for six months. This approach differs from the dynamic congestion pricing currently used in several managed lane projects in the U.S. Other (non-super peak) toll prices are adjusted annually for inflation. Signs at each entry point display toll rates for travel on the entire 18 miles or

the individual Orange or Riverside County sections. The rate displayed at the time of entry is the price charged. Current toll rate schedules are available for easy reference and travel planning.

Three Ride Free encourages carpooling by allowing a group of three or more commuters per vehicle to travel the 91 Express Lanes for free except when traveling eastbound, Monday through Friday between the hours of 4:00 p.m. and 6:00 p.m. At these times, carpools of three or more can still save money with a 50 percent discount on the posted toll. To receive the carpool discount, motorists must have a valid FasTrak® account with a properly mounted transponder and enter the toll point in both the Orange County and Riverside County sections through the far left HOV3+ lane.

91 Express Lanes Maintenance Agreement

OCTA and RCTC have an agreement during the terms of the franchise agreement with Caltrans to maintain the 91 Express Lanes. This includes repairing cracks, displaced barriers, and filling potholes on the 91 Express Lanes. The maintenance agreement between Caltrans and OCTA/RCTC ensures minimum disruption to traffic during peak traffic hours. In addition, the California Highway Patrol provides the enforcement on the 91 Express Lanes.

Arterial Roadways

Orange County's system of local roads, comprising more than 6,365 lane miles in 2015, is mostly built out²⁸. This roadway network is coordinated across the county's 34 cities and unincorporated Orange County through the Master Plan of Arterial Highways (MPAH). The arterial roadway network is an integral part of Orange County's transportation network, serving many local trips and getting vehicles to and from the freeway network for longer trips. Approximately half of the vehicle miles traveled within Orange County are on the roadways, with the other half on the freeways and managed lanes.

Also, through the OC Go half-cent sales tax initiative that is dedicated to transportation, OCTA and its partners from local jurisdictions have invested extensively in coordinating signals to increase traffic throughput (the Regional Traffic Signal Synchronization Program). By the end of 2015, more than 2,000 signalized intersections were synchronized along 540 miles in Orange County²⁹.

Based on the improvements made, synchronizing signals provided greater traffic flow, with a countywide average of 13 percent time savings, 15 percent faster speeds, and 31 percent fewer stops.

The study area has approximately 785 lane miles of arterial roadways as of June 2022 that provide access to many destinations throughout the Corridor. The MPAH facilities within the SR-91 Corridor are shown in **Figure 8**. It should be noted that many of these facilities have, or are planned to have, synchronized signals.

Some of the more important arterials within the study area include:

- North/South trending streets:
 - Valley View Street
 - Beach Boulevard (SR-39)
 - Magnolia Street
 - Brookhurst Street
 - Euclid Street
 - Harbor Boulevard
 - Raymond Avenue
 - State College Boulevard
 - Kramer Boulevard /Glassell Street

²⁸ OCTA Long Range Transportation Plan, 2015 Travel Conditions – Local Roads (page 32), 304 pages

²⁹ OCTA Long Range Transportation Plan, 2015 Travel Conditions – Local Roads (page 32), 304 pages

- Tustin Avenue
- Lakeview Avenue
- Imperial Highway (SR-90)
- Yorba Linda Boulevard/Weir Canyon Road
- East/West trending streets:
 - Commonwealth Avenue
 - Orangethorpe Avenue
 - Santa Ana Canyon Road
 - Esperanza Road
 - La Palma Avenue

Like the County at large, arterials and other roadways within the SR-91 study area carry a relatively equal share of total VMT within the study area.

Transportation Demand Management

Transportation Demand Management (TDM) strategies are geared toward increasing vehicle occupancy, promoting the use of alternative modes, reducing the number of automobile trips, decreasing overall trip lengths, and improving air quality. TDM strategies implemented in Orange County include carpools, vanpools, alternate work hours, park and ride facilities, telecommuting, transportation management associations, motorist aid and traffic information system (511), parking cash-out programs, guaranteed ride home programs, and park-and-ride lots. OCTA is currently conducting a countywide Transportation Demand Management Study that will provide recommendations for effective investments that: shift trips away from single-occupant vehicle trips, increase transit and non-motorized travel, reduce travel costs, and improve operational efficiency. Specific TDM strategies will be recommended and prioritized based on analysis of effectiveness within defined Orange County place-types. This two-year study will kick-off in early 2023 and be complete by early 2025.

Vanpool Program

The OCTA Vanpool Program assists commuters working in Orange County. OCTA coordinates with commuters, employers, and private vanpool operators to organize and sustain vanpools, and provides a monthly subsidy for each vanpool to offset vehicle lease and maintenance costs. In addition, OCTA supports the Guaranteed Ride Home program and provides trip planning tools on their website and on the phone through the 511service. OCTA has also provided the necessary data to Google Transit to integrate trip planning with other Southern California transit operators. These efforts are designed to reduce single-occupancy commuting.

Transportation Management Associations

Transportation Management Associations (TMAs) are comprised of groups of employers who work together to solve mutual transportation problems by implementing programs to increase average vehicle ridership. Orange County has a TMA located in Irvine (Spectrumotion) which is a free, non-profit rideshare association for employees, residents, students, employers and property owners with a commute to the Irvine Spectrum area. TMA's can help to target peak hour work trips by vehicle.

Parking Cash-Out Programs

Parking cash-out programs are employer-funded programs that provide cash incentives to employees who do not drive to work. The most effective programs provide an incentive equal to the full cost of employee parking. State law requires certain employers who provide subsidized parking for their employees to offer a cash allowance in lieu of a parking space. This law is meant to reduce vehicle commute trips and emissions by incentivizing transit, biking, walking, or carpooling to work. Pending legislation (AB 2206) and ongoing work-

from-home transitions could make these types of programs more effective, and possibly target peak hour work trips by vehicle.

Ramp Metering

Caltrans pioneered the widespread use of ramp metering on its highway systems. Caltrans District 12 has long used use ramp metering as a cost-efficient traffic management strategy to:

- Maintain the freeway, HOV, and express lane functionality and throughput
- Incentivize carpooling, transit vehicle use, and motorcycling
- Increase safety on the ramp and the mainline

Ramp metering has been successful for the on-ramp flow so that the mainline downstream slows down the bottlenecks in the highway system. The concept is to facilitate mainline throughput and reduce congestion for both mainline and on-ramp traffic, especially during the peak periods. With ramp meters, only an identified number of vehicles per minute can merge with mainline flow, which allows for a smoother and safer merging operation. Some ramp metering locations have a high occupancy vehicle preferential lane that provides carpoolers, buses and motorcycles to bypass the ramp meter queue.

Guaranteed Ride Home Program

Guaranteed Ride Home (otherwise known as GRH) provides commuters who have commuted to work by bus, train, carpool, vanpool, bike, or on foot with a FREE ride home when one of life's unexpected emergencies arise. Commuters may take advantage of GRH twice per year and OCTA will reimburse the cost of the ride. GRH is available to get home for unexpected emergencies such as a personal illness or a sick child. GRH can also be used for unscheduled overtime when your employer mandates that you must stay late.

Employers who actively participate in the Vanpool, E-Pass, AVR Processing, or Metrolink Corporate Programs are eligible to participate in the Guaranteed Ride Home Program. To apply and be accepted – employers must have two designated employees onsite to administer the GRH Program.

Motorist Aid and Traffic Information (511)

OCTA provides information to the Southern California 511 service, a one-stop source for up-to-the-minute travel information, advisories and trip planning information for Los Angeles, Orange, Riverside, San Bernardino and Ventura counties. Traffic and transit updates are provided via the free Go511 application, calling 511, or visiting Go511.com. The 511 Motorist Aid and Travelers' Information System (MATIS) helps commuters navigate traffic congestion with the following services:

- Real-time traffic speed, congestion and incident information
- Live freeway cameras and roadwork advisories
- Bus and rail trip planner

Telecommuting

The recent popularity of remote work presents opportunities for growth that could be supported through programs to encourage employers and employees to take advantage of flexible and remote work arrangements when feasible (**Figure 11**). The Covid 19 pandemic has highlighted the prevalence of remote work, which allows businesses to maintain essential operations while employees stay safe. Inland Orange

County had mostly between 4 percent and 10 percent work from home mode share³⁰. This compares to a 5.5 percent pre-pandemic average work-from-home mode share for the Los Angeles-Long Beach-Anaheim metropolitan statistical area³¹. Work-from-home frequency likely increased as a result of the Covid 19 pandemic, but recent data for the study area are not yet available from the U.S. Census Bureau. Work-from-home trends will continue to be monitored.

The availability of broadband internet is a key requirement for residents to work from home. In Northern Orange County, internet speeds for households are largely similar to Los Angeles County, where gigabit speed internet is generally available.

Incentives & Facilitation

Telecommuting

Telecommuting describes the process of an employee working from home or a satellite office close to their home, rather than commuting to their traditional workplace.

Implementors

Employers / Property Managers / TMAs

- Large employers
- Small employers
- TMAs/TMOs
- Property managers - residential

VMT Reduction:



Telecommuting directly reduces trips and VMT.



Benefits →

- Can reduce VMT and congestion, particularly during peak periods
- Provides time savings for employees



Challenges →

- Telecommuting is only appropriate for some industries, may not work universally

Measurement

Outcomes	Impacts	Methods
<ul style="list-style-type: none"> • Number of employees who telecommute • Number of days employees telecommute 	<ul style="list-style-type: none"> • Trips reduced as a result of telecommuting • VMT reduced 	<ul style="list-style-type: none"> • Survey results • Traffic data



Congestion impacts

Each trip not taken due to the ability to work or perform tasks remotely removes a car from the road.



Implementation tips

The concept of telecommuting can be expanded beyond the virtual workplace. Remote options for appointment-based and educational services can cut back on daytime SOV travel, congestion and VMT.

Costs

The cost of supporting telecommuting includes initial costs (such as remote computers) for employees but may reduce cost of office space, events or promotional material.

Complementary strategies

- Congestion pricing
- Parking pricing
- Employee commute programs



As seen in the SCAG region

In 2019, SCAG conducted a “Future of the Workplace” study to evaluate the nature of employment and the workplace and address its impact on greenhouse gas emissions in the Region.

Figure 11: Telecommuting³²

³⁰ OCTA South Orange County Multimodal Transportation Study, in progress (2022)

³¹ OCTA South Orange County Multimodal Transportation Study, in progress (2022)

³² SCAG TDM Strategic Plan and Final Report, Incentives & Facilitation - Telecommuting, page 215 of 376, dated August 2019.

Mobility Hubs

The Orange County Transportation Authority (OCTA) is studying mobility hubs as a potential strategy for bringing together various mobility services, amenities, and technologies all in one place to connect travelers more conveniently to their destinations (**Figure 12**). Mobility hubs improve connectivity and convenience by allowing people to easily switch between transportation services including bus, bike and e-scooters, ridesharing, and rail. They can also offer supporting amenities, such as electric charging stations, secured bike storage, or seating. These hubs are generally located at activity centers near employment, housing, shopping, recreation and other essential destinations and integrated into neighborhoods. The Orange County Mobility Hub Study will explore how mobility hubs might benefit Orange County residents and visitors, examine how they could be planned and designed, and identify a potential network of locations. This strategy serves as an opportunity to improve connectivity and increase sustainable transportation options throughout the county while addressing traffic congestion and pollution caused by vehicle emissions. Caltrans is in the process of evaluating locations best-suited for Mobility Hub upgrades and enhancements, and the Lincoln East Park and Ride is a prioritized location at this time.



Figure 12: Mobility Hubs

Goods Movement

Orange County has many location advantages that make it suitable as an international trade hub and a manufacturing base. The location advantages include proximity to nationally significant San Pedro Bay Port of Long Beach (POLB) and Port of Los Angeles (POLA) and the westernmost California-Mexico border crossings in San Diego County at San Ysidro, Otay Mesa, and Tecate. Orange County is also near the nationally significant import hub of the Inland Empire; proximate to the Union Pacific Railroad's Intermodal Container Transfer

Facility (ICTF) yard; intermodal yards in Los Angeles, City of Industry, and San Bernardino; and close to airports such as Los Angeles International Airport, Long Beach Airport and Ontario International Airport.

Orange County has more than 34 million square feet of occupied warehouse space and four intermodal facilities. The four intermodal centers are at John Wayne Airport in unincorporated Orange County and the rail-truck intermodal facilities located in Orange, Buena Park, and Anaheim. Within the SR-91 Corridor Study Area, there are clusters of warehousing along the corridor. **Table 3** shows the land use per the zoning maps from each of the corridor cities.

Table 3: Corridor City Land Uses

City	Industrial	Commercial	Recreation	Single Residential	Multi-Family Residential
La Palma ³³	<ul style="list-style-type: none"> Mixed Use Business with Industrial Overlay General Industrial 	<ul style="list-style-type: none"> Neighborhood Commercial 	<ul style="list-style-type: none"> Open Space/ Recreation 	<ul style="list-style-type: none"> Planned Neighborhood Development Single-Family Residential 	<ul style="list-style-type: none"> Multiple-Family Residential
Buena Park ³⁴	<ul style="list-style-type: none"> Heavy Industrial Light Industrial Commercial Manufacturing 	<ul style="list-style-type: none"> Commercial General General Mixed Use 	<ul style="list-style-type: none"> Recreational Space 	<ul style="list-style-type: none"> One Family Residential 	<ul style="list-style-type: none"> General Mixed Use
Fullerton ³⁵		<ul style="list-style-type: none"> General Commercial Office Professional 	<ul style="list-style-type: none"> Public Land 	<ul style="list-style-type: none"> One-Family Residential Mobile Home Park 	<ul style="list-style-type: none"> Multiple Residential
Anaheim ³⁶	<ul style="list-style-type: none"> Industrial 	<ul style="list-style-type: none"> General Commercial 	<ul style="list-style-type: none"> Public Recreational Open Space Transition 	<ul style="list-style-type: none"> Single Family Residential 	<ul style="list-style-type: none"> Multiple- Family Residential
Placentia ³⁷	<ul style="list-style-type: none"> Manufacturing Planned Manufacturing District 	<ul style="list-style-type: none"> Neighborhood Commercial 		<ul style="list-style-type: none"> Single-Family Residential 	<ul style="list-style-type: none"> Multiple-Family Residential
Yorba Linda ³⁸		<ul style="list-style-type: none"> Commercial General 	<ul style="list-style-type: none"> Open Space 	<ul style="list-style-type: none"> Planned Development 	<ul style="list-style-type: none"> Residential Suburban Residential Urban

³³ City of La Palma Zoning Map, adopted May 5, 2015 (<https://www.cityoflapalma.org/DocumentCenter/View/5366>), accessed September 21, 2022

³⁴ Buena Park Zoning Map (<https://maps.buenapark.com/portal/apps/webappviewer/index.html?id=d12a39506ce5463ea50547e78bd06e5c>), accessed September 21, 2022. The “General Mixed Use” zone provides for a mix of high density residential and neighborhood commercial uses along major arterials.

³⁵ City of Fullerton, Zoning Map Atlas and Go Zone (<https://qis.cityoffullerton.com/portal/apps/webappviewer/index.html?id=38a7db5f8a8748b1818bc31269bfa3b0>), accessed September 21, 2022

³⁶ City of Anaheim, Anaheim GIS Zoning, data updated September 16, 2022 (<https://data-anaheim.opendata.arcgis.com/datasets/anaheim::zoning/explore?location=33.867335%2C-117.720924%2C14.00>), accessed September 21, 2022

³⁷ Zoning Map for City of Placentia (source: City of Placentia, SCAG 2009) and City of Placentia Zoning (<https://placentia.maps.arcgis.com/apps/webappviewer/index.html?id=7db81d6cb58d457594207c777c84e046>), accessed September 21, 2022

³⁸ Map Yorba Linda 1.4 (<https://webgis.yorbalindaca.gov/portal/apps/View/index.html?appid=f6f6d40c8acb4050969cfe2c20fef180>), accessed September 21, 2022

The SR-91 corridor is one of three primary freight routes between the POLB/POLA and I-15 and I-10. More than 40 percent of the nation's imported goods enter the United States through the POLA/POLB, which are then distributed to markets throughout the country. Truck routes within Orange County are represented by the Surface Transportation Assistance Act (STAA) National Network and Terminal Access, the California Legal Network, and the California Legal Advisory Route. Within the SR-91 Corridor area, SR-91, between I-110 in Los Angeles to I-215/SR-60 and SR-55 between SR-91 and I-405 in Costa Mesa are part of the STAA National Network. The average truck percentage in 2019 along the SR-91 is 7.19% in Los Angeles County, 7.47% in Orange County, and 6.18% in Riverside County (**Table 4**).

According to the Caltrans 2019 Average Annual Daily Truck Traffic, about 20,000 trucks traveled along the SR-91 Corridor in Orange County between Riverside and Los Angeles counties, which amounts to almost 7.5 percent of total traffic volumes. Approximately 18,000 trucks travel along the SR-91 in Los Angeles County which accounts for just over seven percent of total traffic volumes. In Riverside County, around 13,500 trucks travel the SR-91 which is six percent of total traffic volumes.

Table 4: SR-91 Vehicle and Truck AADT (2019)

County	Post Mile	Description	Vehicle AADT	Truck AADT	Truck Percent
Los Angeles	6.35	Los Angeles, SR-110 IC	64,000	3,507	5.48
Los Angeles	6.34	Los Angeles, SR-110 IC	197,000	14,026	7.12
Los Angeles	7.43	Carson, Avalon Blvd. IC	201,000	14,130	7.03
Los Angeles	11.68	Long Beach, SR-710 IC	221,000	15,735	7.12
Los Angeles	11.68	Long Beach, SR-710 IC	273,000	21,103	7.73
Los Angeles	13.09	Long Beach, Cherry Ave. IC	277,000	21,412	7.73
Los Angeles	14.62	Bellflower, SR-19 (Lakewood Blvd.) IC	271,000	20,948	7.73
Los Angeles	14.62	Bellflower, SR-19 (Lakewood Blvd.) IC	259,000	20,021	7.73
Los Angeles	16.94	Cerritos, SR-605 IC	270,000	20,871	7.73
Los Angeles	16.94	Cerritos, SR-605 IC	288,000	16,272	5.65
Los Angeles	20.74	Los Angeles/Orange County Line	275,400	17,323	6.29
Los Angeles		Average			7.19
Orange	2.62	Buena Park, SR-39 (Beach Blvd.)	312,700	25,266	8.08
Orange	2.62	Buena Park, SR-39 (Beach Blvd.)	319,000	25,775	8.08
Orange	3.64	Fullerton, I-5 IC	120,200	9,015	7.5
Orange	3.26	Fullerton, Harbor Blvd.	317,000	22,507	7.1
Orange	3.26	Fullerton, Harbor Blvd.	306,600	22,995	7.5
Orange	5.26	Anaheim, State College Blvd.	287,000	25,830	9
Orange	5.26	Anaheim, State College Blvd.	279,300	24,299	8.7
Orange	6.12	Anaheim, SR-57 IC	228,700	19,897	8.7
Orange	9.19	SR-55 South IC	190,000	16,150	8.5
Orange	9.19	SR-55 South IC	287,400	24,429	8.5
Orange	11.54	SR-90 West	260,000	13,000	5
Orange	11.54	SR-90 West	279,000	13,253	4.75
Orange	12.08	East of Imperial Hwy (SR-90)	279,000	15,736	5.64
Orange		Average			7.47
Riverside	2.09	SR-71 North IC	253,000	15,104	5.97
Riverside	2.09	SR-71 North IC	256,000	16,666	6.51
Riverside	6.34	Corona, Main St.	247,000	16,080	6.51
Riverside	6.34	Corona, Main St.	233,000	14,120	6.06
Riverside	9.18	Mc Kinley St.	219,000	14,804	6.76

County	Post Mile	Description	Vehicle AADT	Truck AADT	Truck Percent
Riverside	9.18	Mc Kinley St.	209,000	16,072	7.69
Riverside	11.99	Riverside, La Sierra Ave.	197,000	16,706	8.48
Riverside	14.08	Riverside, Van Buren St.	212,000	10,600	5
Riverside	14.08	Riverside, Van Buren St.	195,000	9,750	5
Riverside	20.00	Riverside, 14 th St.	186,000	9,300	5
Riverside	22.07	Riverside, SR-60/215 North (end of SR-91)	185,000	9,250	5
Riverside		Average			6.18

Source: Caltrans Truck Traffic: Annual Average Daily Truck Traffic (<https://dot.ca.gov/programs/traffic-operations/census>, accessed 8/11/2022)

EXISTING ASSET CONDITIONS

Pavement Conditions

Figure 13 shows the Pavement Condition Index (PCI) scores for Orange County cities in 2020. In 2020, pavement conditions along SR-91 were considered at lower risk. The road networks in Buena Park and Yorba Linda were reported to being in good condition, receiving a PCI score between 71 and 100. The road networks in Anaheim, Fullerton and Placentia received a rating of being “at lower risk,” with PCI scores ranging from 61 to 70. While still in good condition, it is recommended to apply treatments that will address the structural adequacy of the pavement. As of 2020, Orange County roads were ranked as being in the best condition out of all California counties.

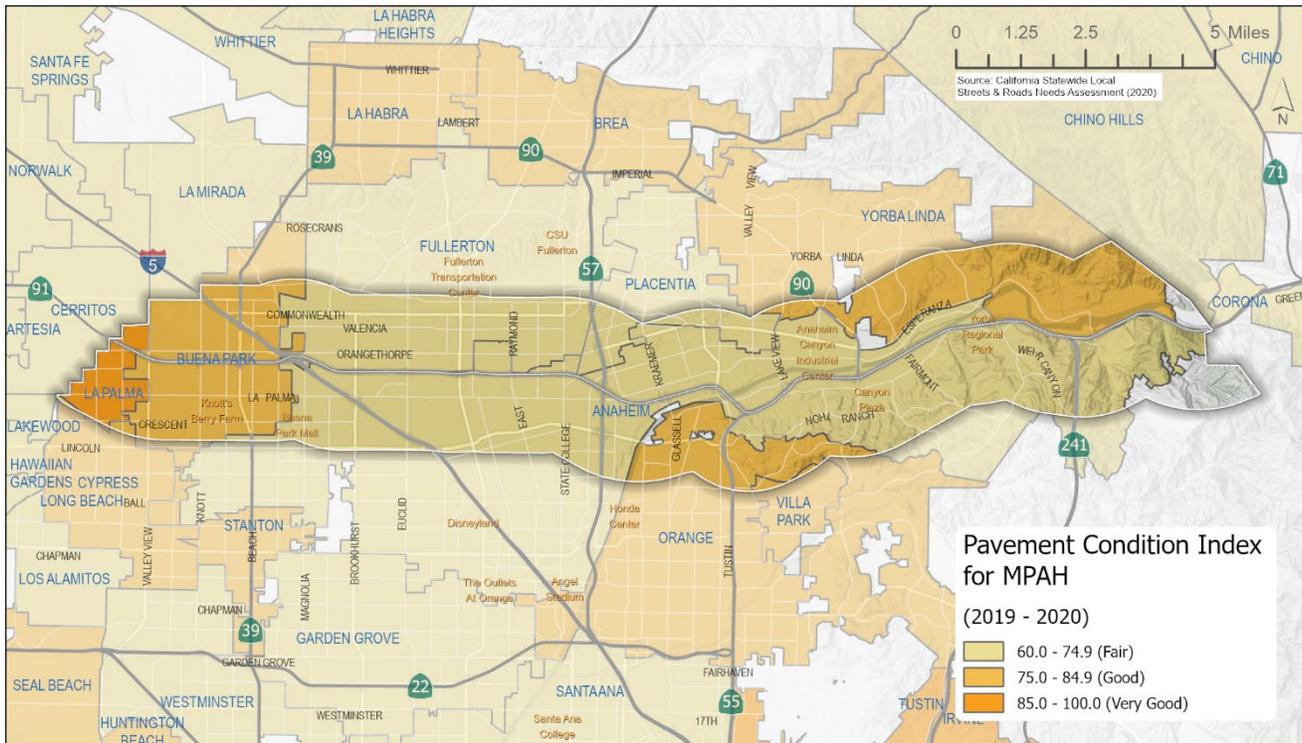


Figure 13: Arterial Pavement Conditions

Bridge/Structural Assets

The SR-91 Corridor has a total of 89 bridge/structural assets between its western and eastern terminus within Orange County³⁹. These assets serve many purposes and modes of travel, including bridges for freeways, roadways, railways, bicycle and pedestrian paths, storm channels, riverbeds, and HOV and Express Lane direct connectors. The year that an asset was originally built varies from 1958 to 2002; some include the following (from west to east):

- Pedestrian Overcrossing
 - Carmenita Road (1969)
 - Holder Street (1969)
- Named Drainage Features
 - Coyote Creek (1969)
 - Houston Avenue Drain (1958)
 - Carbon Ditch (1959)
 - Carbon Canyon Diversion Channel (1961 and 1964)
 - Santa Ana River (1954)
 - Gypsum Canyon Creek (1971)
 - Coal Canyon Creek (1971)
- Interchanges
 - SR-91/SR-39, Beach Boulevard (1970)
 - SR-91/I-5 (1970, 2000, 2002 — depending on the structure)
 - SR-91/I-5 HOV Connector (2000)
 - SR-91/SR-57 (1969, 1974 – depending on the structure)
 - SR-91/SR-57 HOV Connector (2000)
 - SR-91/SR-55 (1962, 1970, 1994 — depending on the structure)
 - SR-91/SR-90, Imperial Highway (1970)
 - SR-91/SR-241 (1998)
- Assets over Rail (Overhead)
 - SR-91/I-5 OH (three structures built in 1970, two in 2002)
 - SR-91/I-5 HOV Connector OH (2000)
 - Magnolia Avenue Off-ramp OH (1970)
 - North Anaheim OH (1959)

Transit Assets

The OCTA Transit Asset Management (TAM) Plan accounts for approximately 70% of the agency's capital asset inventory, while the other 30% is made up of freeway related assets and land assets. The TAM focuses on the 70% of assets that are used to provide public transit services in order to ensure that the vehicles, facilities, stations, and systems involved remain in a state of good repair.

As of 2022, OCTA's transit assets include:

- Rolling Stock: 750 revenue vehicles, including 40' and 60' buses as well as cutaway buses, with 8 light rail vehicles projected for the future

³⁹ Source: Caltrans District 12 Bridge Log, dated October 2018

- Equipment: 173 non-revenue vehicles, operations equipment, and information technology (IT) systems
- Facilities: five Maintenance and Operations Bases, five multimodal transportation centers, and two park and-ride lots

The revenue vehicles make up the largest share of the agency's transit asset holdings at 68%, while its facilities are the second largest share of its assets at 23% (as of January 1, 2022)⁴⁰. The remaining 9% of its assets are allocated to systems including fare collection and IT systems.

To assess its current stock, OCTA conducted a Condition Assessment to determine the condition of its assets. OCTA modeled its non-facility asset conditions using the Federal Transit Administration's (FTA) Transit Economics Requirements Model (TERM-Lite) system and conducted thorough onsite facility and station condition assessments. As of December 31, 2021, 40% of OCTA's non-facility assets were deemed adequate, meaning that the stock included some moderately defective or deteriorated components. 2% of its assets were deemed to be in excellent condition, while 3% of its assets were deemed to be good, meaning there were only some slightly defective or deteriorated components⁴¹. The remaining 54% of its stock were deemed marginal or worn, meaning that they were in need of replacements. OCTA's onsite condition assessment showed that all 542 of its facilities were ranked at a score of 3 (adequate) or above. In accordance with the FTA's Weighted Average Condition method, OCTA's 54 facilities are considered to be in a state of good repair⁴².

OCTA measured the amount of its rolling stock and equipment that had exceeded its respective useful life benchmark (ULB). A total of 3.3% of the agency's rolling stock had exceeded its ULB, in line with OCTA's goal to have no more than 10% past its ULB⁴³. A total of 4.5% of the agency's equipment had exceeded its ULB, in line with OCTA's goal to have no more than 17% past its ULB⁴⁴. As for its facilities, 100% of its facilities scored at a 3 or above, also meeting the agency's target⁴⁵.

As a part of its 20-year plan, OCTA plans to expand its assets to improve its rolling stock and facilities. Its rolling stock will expand by acquiring five 40' electric buses, 51 paratransit vehicles⁴⁶. Other expansion investments include electric charging stations and electric bus infrastructure.

SAFETY CONDITIONS

The most recent safety data is from 2019 and on countywide basis. That data indicates that Orange County⁴⁷ as a whole has the following:

- Combined fatal and injury crash rates for Orange County .41 per million miles travelled — less than the statewide average of .48 fatal/injury crashes per million miles travelled
- Pedestrian fatalities and injuries were relatively evenly divided between conventional highways and freeways, in contrast to adjacent Los Angeles County where pedestrian injuries and fatalities on freeways are nearly double those on conventional highways.

⁴⁰ Source: Draft OCTA Transit Asset Management Plan (2022).

⁴¹ Source: Draft OCTA Transit Asset Management Plan (2022).

⁴² Source: Draft OCTA Transit Asset Management Plan (2022).

⁴³ Source: Draft OCTA Transit Asset Management Plan (2022).

⁴⁴ Source: Draft OCTA Transit Asset Management Plan (2022).

⁴⁵ Source: Draft OCTA Transit Asset Management Plan (2022).

⁴⁶ Source: Draft OCTA Transit Asset Management Plan (2022).

⁴⁷ <https://dot.ca.gov/programs/research-innovation-system-information/annual-collision-data>, accessed on August 10, 2022

Figure 14 displays a heat map of collisions occurred along the SR-91 freeway corridor in 2019. Most of the fatal collisions were along the SR-91 whereas the severe injury and all other collisions are located throughout the SR-91 study area.

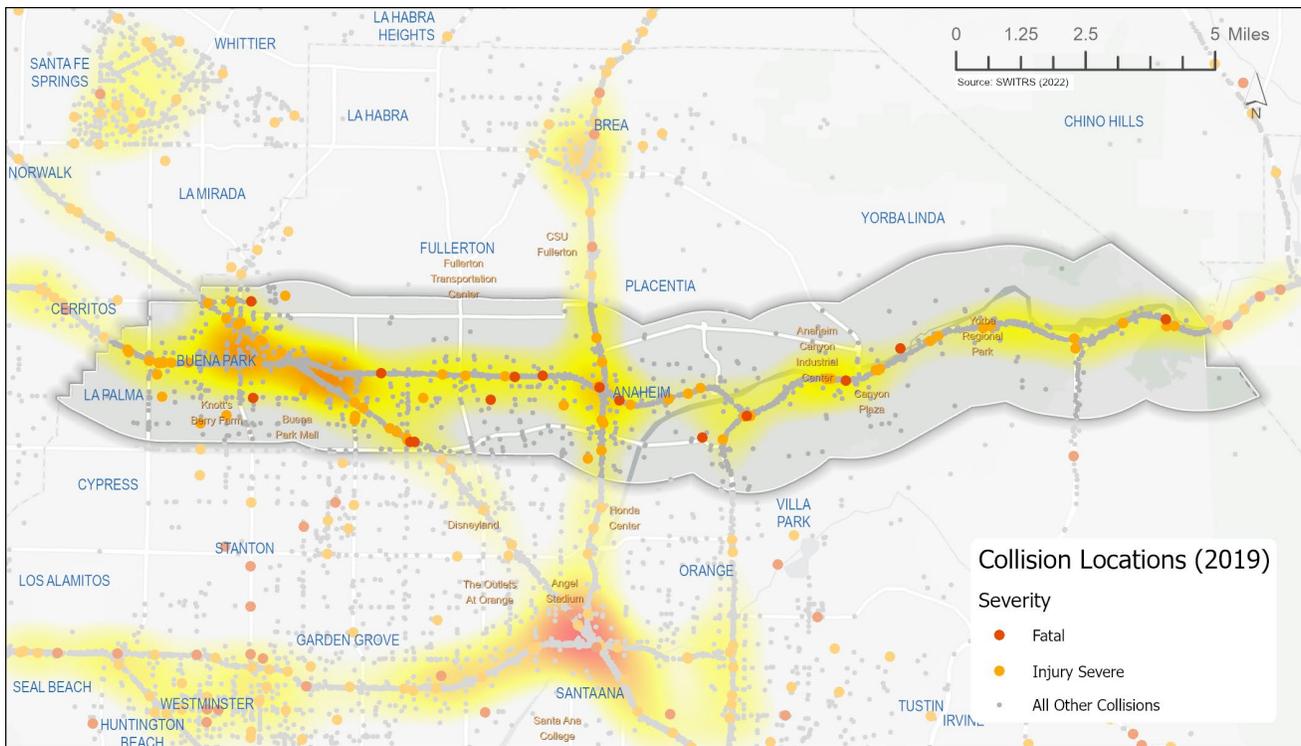


Figure 14: Collisions in Study Area

This resulted in a rate of 4.46 collisions per every 100 million vehicle miles traveled (MVMT) along the corridor. Additionally, these statistics resulted in a rate of 0.24 severe injuries per 100 MVMT and 0.04 fatalities per 100 MVMT along SR-91 from 2014 to 2018. 69% of collisions were reported to result in minor injuries, with victims only having complaints of pains. The majority of these collisions occurred Monday through Saturday, during evening peak hours (3 PM to 5:59 PM).

With regards to pedestrian collisions, the majority of them occurred later in the day. There were lower collision densities for pedestrian collisions, but there were five fatal incidents within the corridor boundaries. The area with the highest collision density involving pedestrians within the corridor is the SR-57/SR-91 interchange. The rest of the corridor does not have any other areas with significant collision density involving pedestrians. There was a higher concentration of collisions involving cyclists in the area, but there were fewer fatal bicycle incidents compared to pedestrian incidents within the corridor boundaries. The areas with the largest concentration of collision densities involving cyclists occur where SR-91 and CA-90 meet as well as the eastern end of the corridor.

SECTION 3. CHANGING CONDITIONS

DEMOGRAPHICS AND LAND USE

Population

Orange County is one of the densest, most populous counties in California. The US Census (2020) identified that Orange County had a population of nearly 3.2 million residents, making up approximately 8 percent of the state’s population.

Population and housing in Orange County are most dense within the central and northern parts of the county. **Figure 15** shows the population density in northern Orange County in 2019. Along the SR-91 corridor, the area with the highest population density is in Buena Park, Fullerton, and Anaheim. The eastern half of the corridor has a very low population density. This is due to the topographic complexity of the land use and the larger amount of open space east of the SR-55, which includes Yorba Regional Park and Featherly Regional Park north of SR-91 and Gypsum Canyon Nature Preserve (south of SR-91 and east of SR-241).

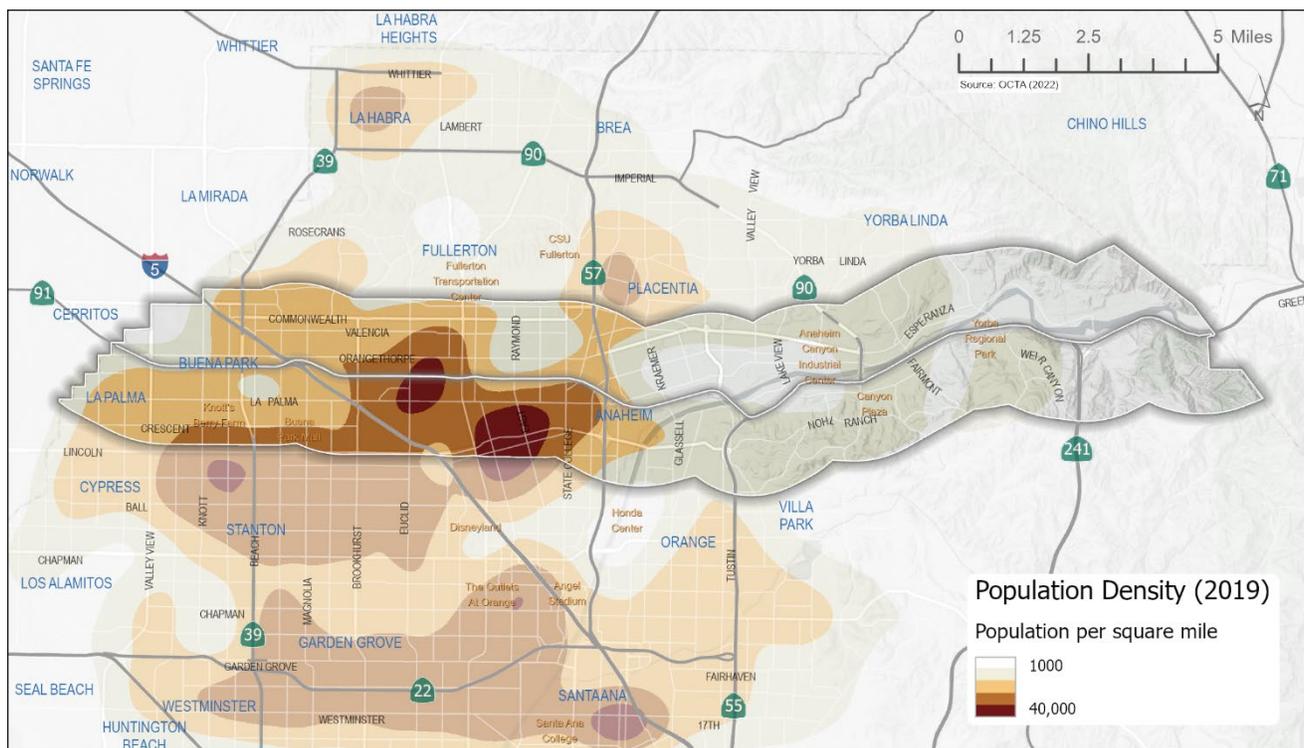


Figure 15: Population Density 2019 (per square mile)

By 2045, Orange County’s population is expected to increase to approximately 3.5 million residents (**Figure 16**). The greatest increase in population per square mile is expected to be in the western part of the study area in the Cities of Buena Park, Fullerton and Anaheim.

Population and employment growth within the study area is projected to be greater than countywide projections, with 12% and 12.7% projected growth in population and employment, respectively, between the study base year of 2016 and the planning horizon of 2045.

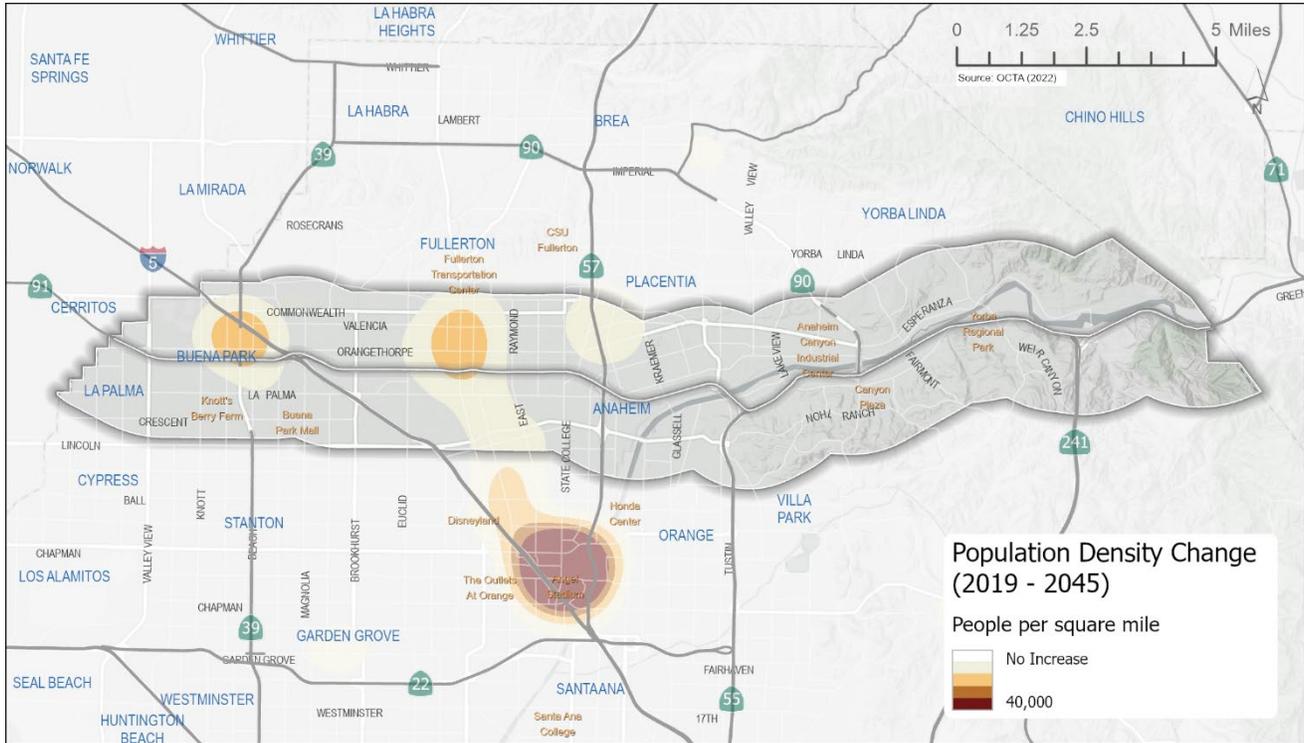


Figure 16: Population Change 2019-2045

Disadvantaged Communities

The SR-91 Corridor Study Area is also home to a concentration of low-income and disadvantaged communities, which are defined by California Office of Environmental Health Hazard and Assessment as, the top 25 percent scoring areas from CalEnviroScreen Version 4.0 along with other areas with high amounts of pollution exposure and its effects, as well as health and socioeconomic status. **Figure 17** identifies the locations of the disadvantaged communities within the study area, which include the following:

- SB 535 Disadvantaged Communities – portions of Buena Park and Orange
- AB 1550 Low-income Communities – portions of Fullerton, Anaheim
- SB 535 Disadvantaged Communities and AB 1550 Low-income Communities
 - Portions of Buena Park, Fullerton, Orange
- AB 1550 Low-income Communities within ½-mile of a SB 535 Disadvantaged Community – portions of Fullerton

Figure 17 shows the distribution of AB 1550 and SB 535 communities within Orange County and the adjacent counties⁴⁸, and **Figure 18** shows both the SB 535 Disadvantaged Communities and the Federal Opportunity Zones for the Study Area⁴⁹.

⁴⁸ Source: Metrolink SCORE Economic Impact Analysis document, prepared by Los Angeles County Economic Development Corporation)

⁴⁹ Source: CalEPA (<https://oehha.ca.gov/calenviroscreen/sb535>) and OEHA (<https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>), websites were accessed on August 10, 2022.

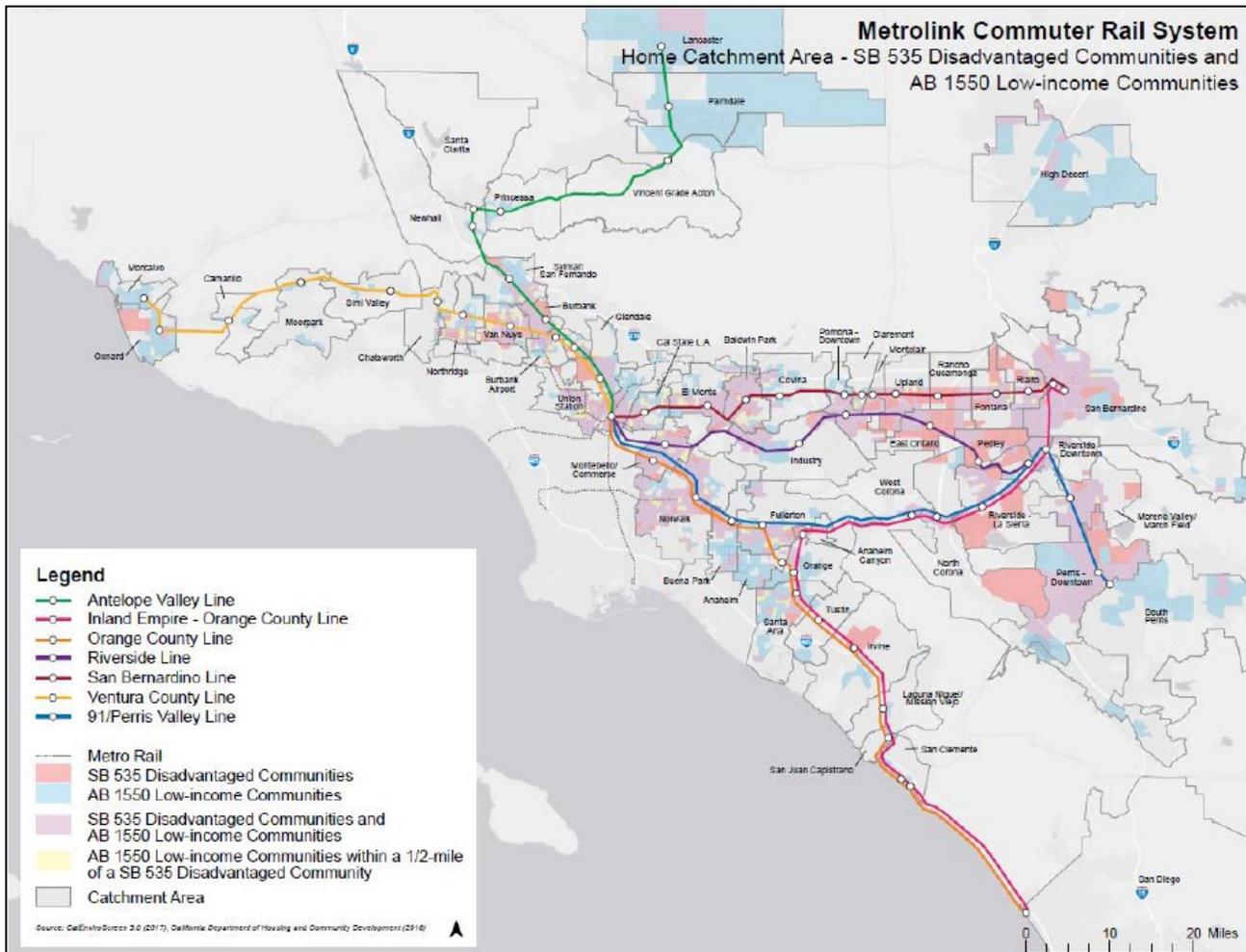


Figure 17: Disadvantaged/Low Income Communities

Within the Metrolink-defined catchment area that overlaps with our study area includes portions of the following cities:

- SB 535 Disadvantaged Communities – portions of Buena Park, Orange, and Anaheim Canyon
- AB 1550 Low-income Communities – portions of Fullerton and Anaheim
- SB 535 Disadvantaged Communities and AB 1550 Low-income Communities — portions of Buena Park, Fullerton, and Orange
- AB 1550 Low-income Communities within ½-mile of a SB 535 Disadvantaged Community – portions of Fullerton

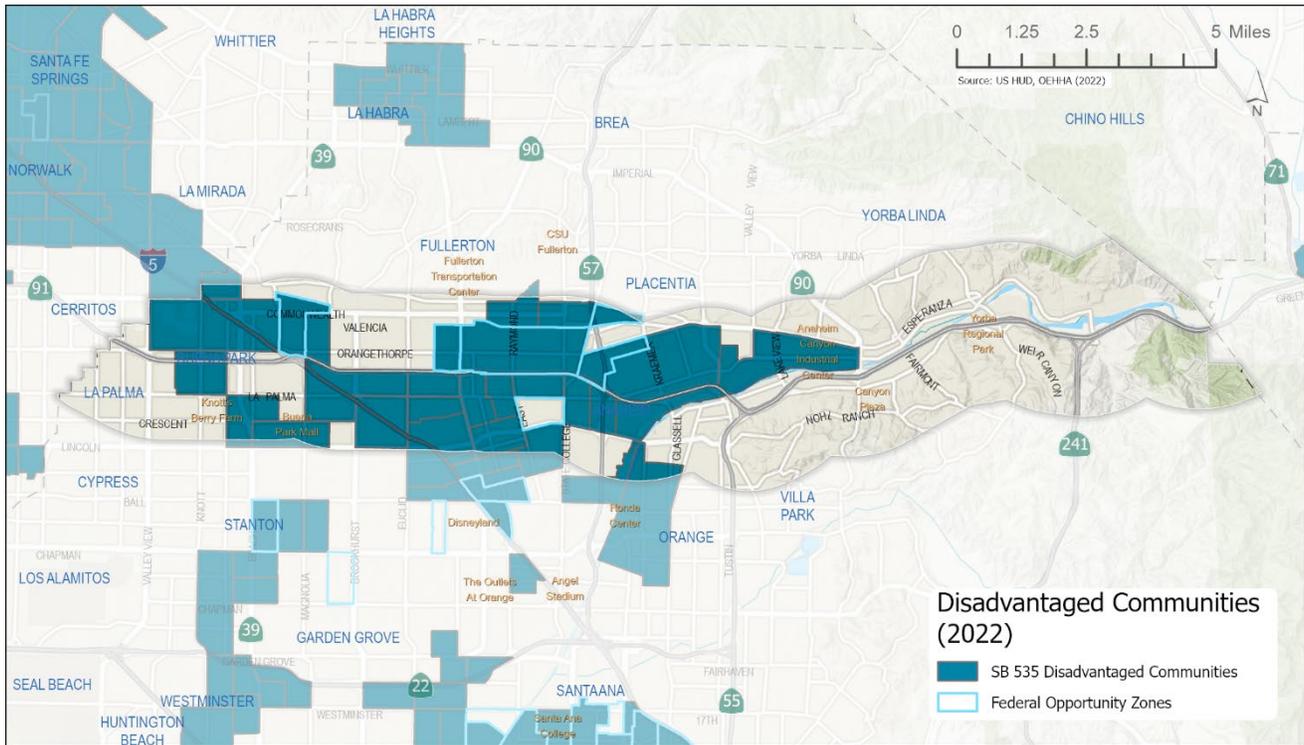


Figure 18: Disadvantages Communities in Study Area

Figure 19 shows CalEnviroScreen 4.0 scores from two groups of indicators (13 pollution burden and eight population characteristics) which have been combined to give a pollution burden percentile score representing the potential exposures by census tract to pollutants and the adverse environmental conditions from pollution. A higher pollution load is on the western side of the Study Area, which has a greater population burden.

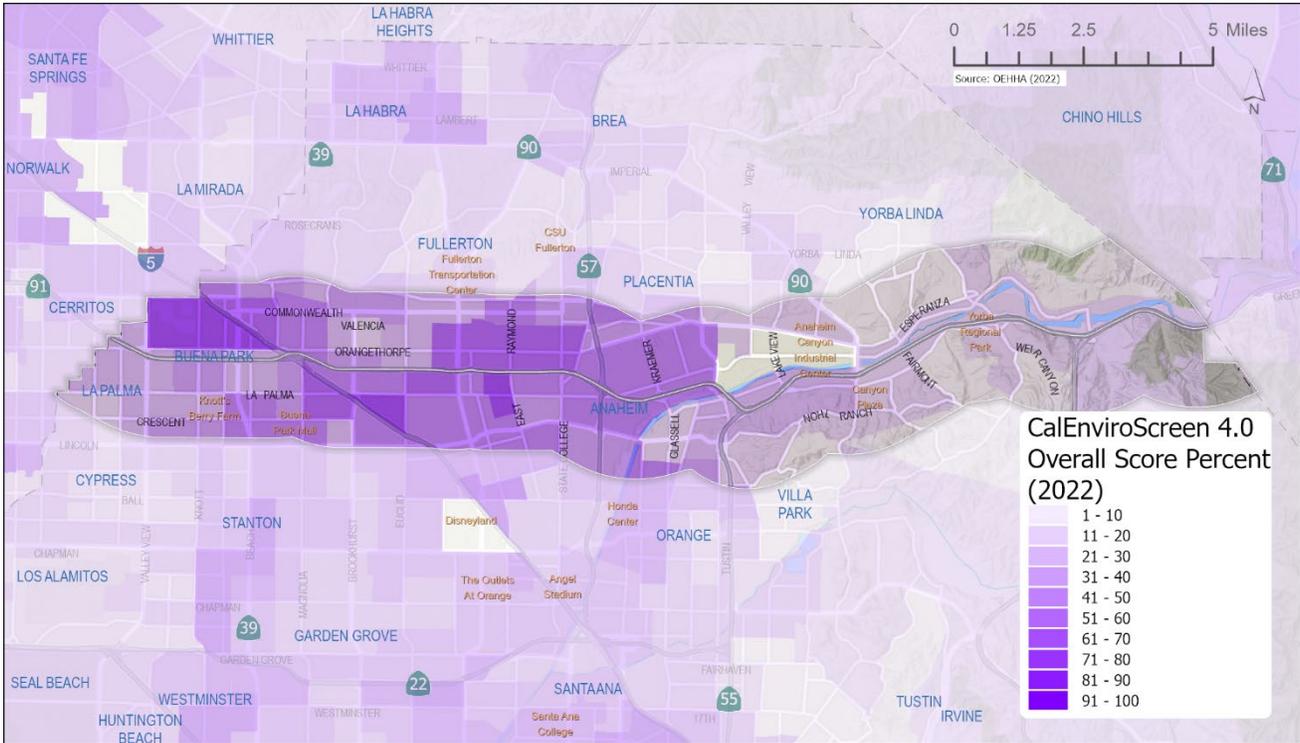


Figure 19: CalEnviroScreen Pollution Burden Scores

Employment

Orange County is home to a large workforce that provides employment to county residents as well as individuals from surrounding counties. In 2019, the number of people employed in Orange County was approximately 1.57 million compared to 1.53 million in 2016⁵⁰.

Population and employment growth within the study area is projected to be greater than countywide projections, with 12% and 12.7% projected growth in population and employment, respectively, between the study base year of 2016 and the planning horizon of 2045⁵¹.

Figure 20 shows the concentration of employment centers along the SR-91 corridor. A larger number of jobs is located on the west side of the SR-91 from the Los Angeles County line to SR-90 (Imperial Highway).

⁵⁰ CA Employment Development Department, <https://www.labormarketinfo.edd.ca.gov/cqi/databrowsing/localAreaProfileQSMOREResult.asp?viewAll=&viewAllUS=¤tPage=8¤tPageUS=&sortUp=&sortDown=L.PERIODYEAR&criteria=unemployment+rate&categoryType=employment&geoqArea=0604000059×eries=unemployment+rateTimeSeries&more=&menuChoice=localAreaPro&printerFriendly=&BackHistory=-27&qoTOPPageText= as accessed 5/21/2022>

⁵¹ Center for Demographic Research, <http://www.fullerton.edu/cdr/>, accessed 5/21/2022

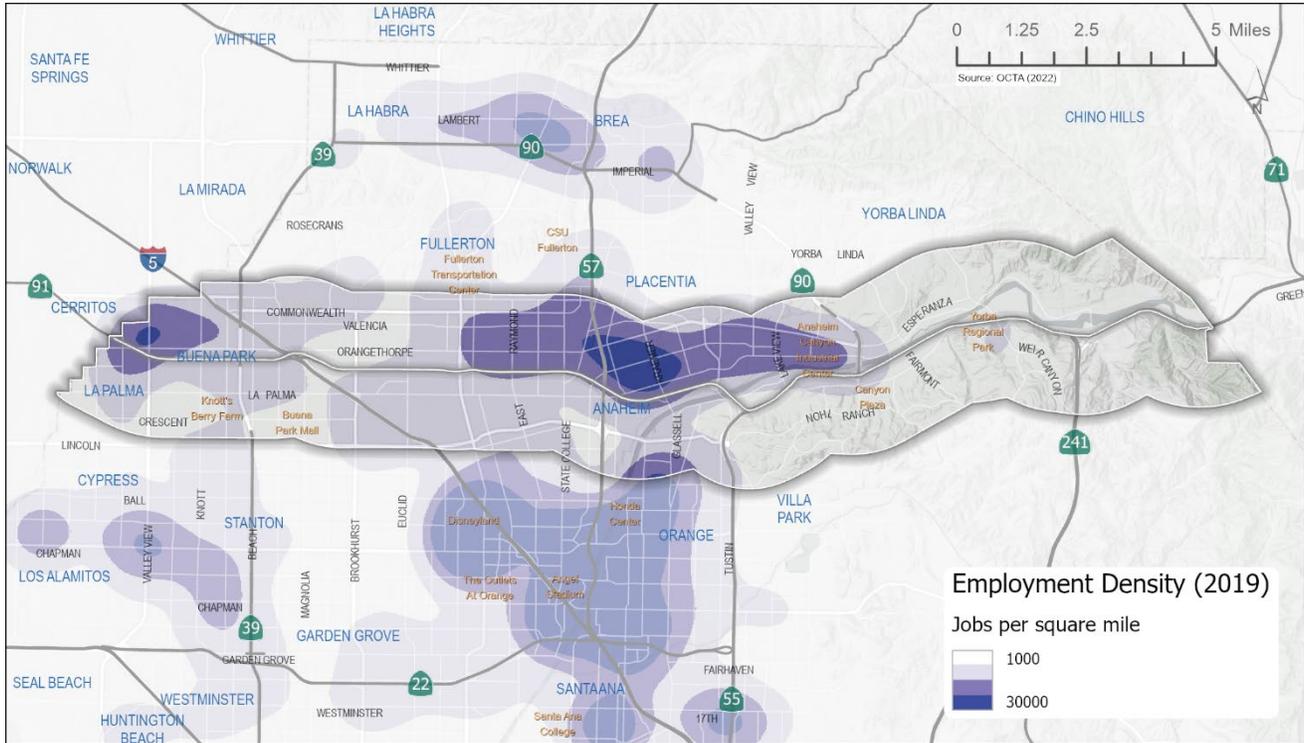


Figure 20: Employment Density

By 2045, the number of individuals employed in Orange County is expected to increase to nearly 1.9 million, up from 1.7 million in 2016⁵². **Figure 21** shows the expected changes employment density by 2045. The overall employment density shows a similar pattern in 2045; a few exceptions where employment is expected to increase in the areas surrounding Centerpoint Business Center (Valley View at Orangethorpe in Buena Park), in an industrial area east and west of Raymond between Valencia and Orangethorpe in Anaheim/Fullerton, and just north of SR-91 between Kraemer and Tustin in Anaheim.

⁵² Center for Demographic Research (<http://www.fullerton.edu/cdr/>), accessed 5/21/2022)

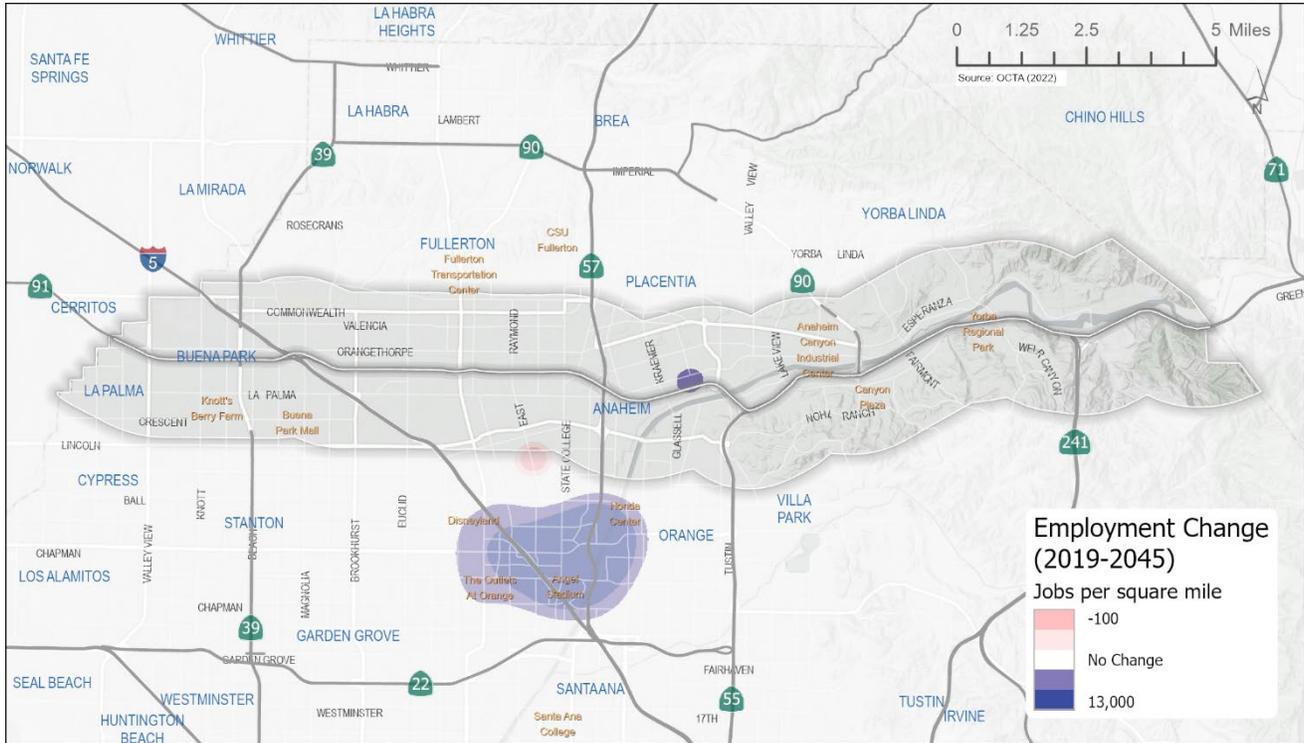


Figure 21: 2016-2045 Employment Change

In looking at a combination of population and employment, **Figure 22** shows that the west side of the study area is more densely populated and contains more employment locations; the east side of the corridor has lower population and employment.

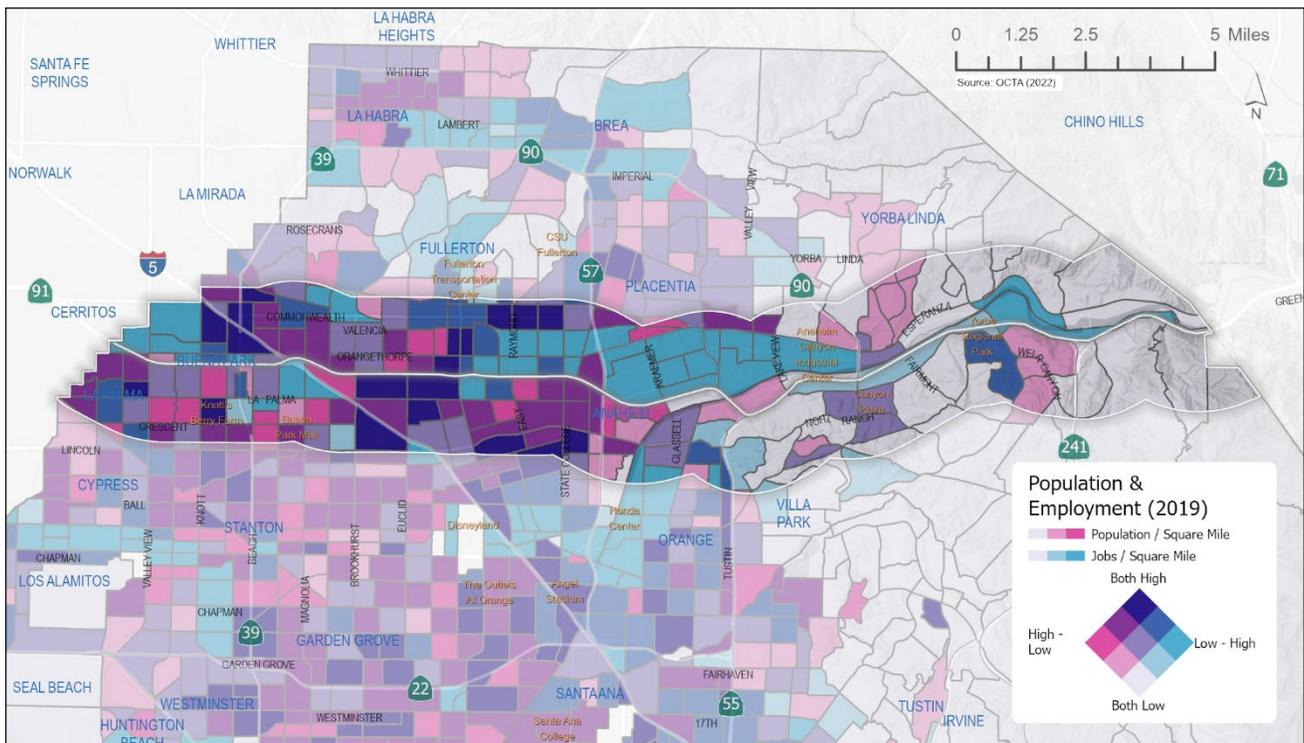


Figure 22: Population and Employment (2019)

SYSTEM PERFORMANCE

OCTA evaluated the system performance of the entire study area network by comparing the 2016 baseline against 2045 Build and 2045 No Build alternatives. The 2045 Build alternative was developed at the outset of the CMCP process using significant public and stakeholder outreach, and includes the following projects shown in **Table 5** and **Figure 23**.

Table 5: Project List

TIMING	PROJECT NAME	JURISDICTION
Medium-Term	Fullerton Proposed Bikeway Improvements	Fullerton
Medium-Term	Placentia Metrolink Rail Station	OCTA/SCRRRA
Medium-Term	SR-91 (SR-57 to SR-55) Improvement Project (Measure M2 Project I)	OCTA
Medium-Term	Anaheim Canyon Metrolink Station Improvements	OCTA/SCRRRA
Medium-Term	Yorba Linda Boulevard Multimodal Improvements	Yorba Linda
Medium-Term	Savi Ranch Parkway Operational Improvements	Yorba Linda
Medium-Term	La Palma / Savi Ranch Multi-Modal Connection	Yorba Linda
Medium-Term	SR-241 / Express Lanes Connector	TCA
Long-Term	La Palma / Lincoln Corridor Rapid Bus	OCTA
Long-Term	Fullerton Park and Ride	OCTA and Fullerton
Long-Term	Central Harbor Boulevard Transit Corridor	OCTA
Long-Term	State College / Bristol Corridor BRT	OCTA
Long-Term	Metrolink 3 rd Track – Fullerton to Atwood	SCRRRA
Long-Term	Fairmont Boulevard Improvements	Cities of Anaheim and Yorba Linda
Long-Term	Santa Ana River Parkway Extension	Orange County Public Works Dept
Long-Term	SR-91 Eastbound Lane Addition from SR-21 to Orange / Riverside County Line (Measure M2 Project J)	OCTA

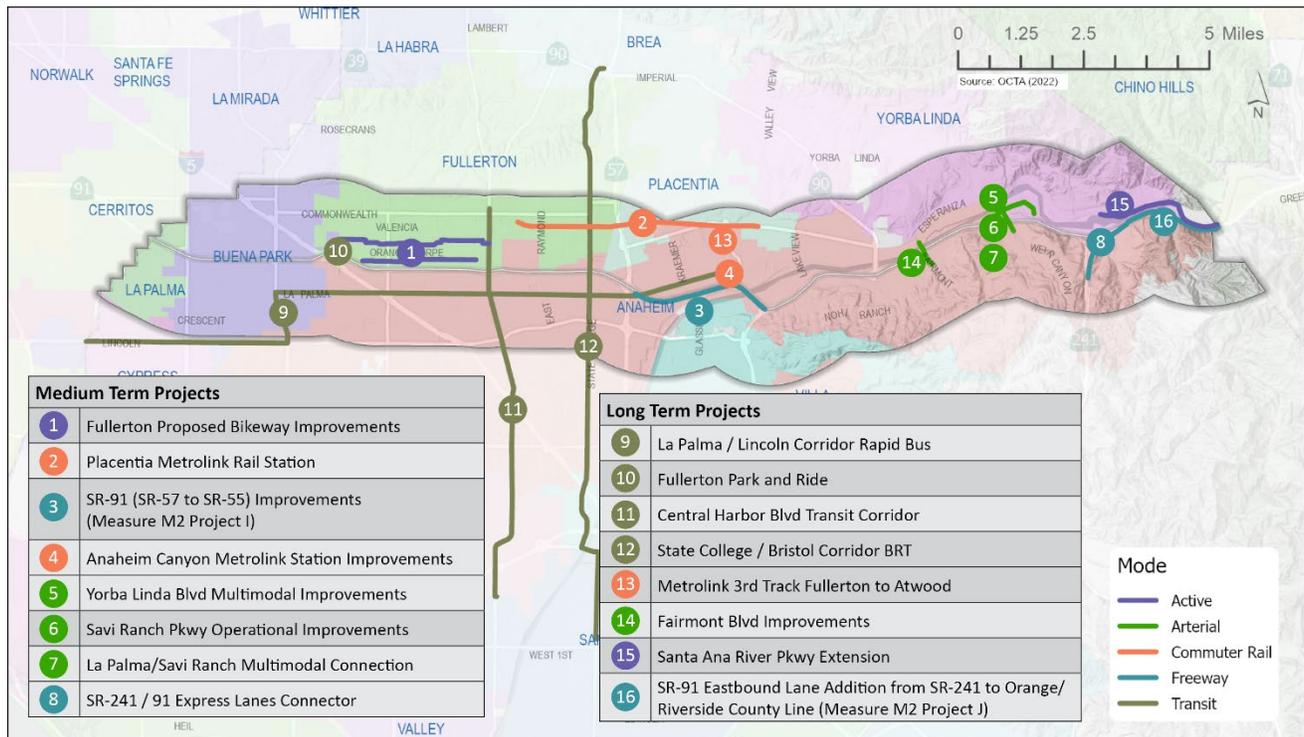


Figure 23: CMCP Project List by Mode

OCTA has evaluated all sixteen projects in light of the 2016 baseline conditions versus the 2045 Build and No Build option and their ability to: improve overall conditions within the study area versus the 2016 baseline; maintain overall conditions consistent with internal and externally driven growth versus the 2016 baseline; and identify overall conditions that require further attention and study.

Long-term performance measures that were improved by some of the 16 CMCP projects (i.e., those that addressed and improved system performance despite and beyond the 12% population growth, 12.6% employment growth, and 15% growth in externally generated trips, as illustrated in **Table 5**):

- Rapid bus trips grew by 198% under the Build scenario versus 5.6% under the No-Build scenario
- Commuter rail trips grew by 34.8% under the Build scenario versus 27% under the No-Build Scenario
- Urban rail trips grew by 42.2% under the Build scenario versus 37% under the No-Build scenario
- Person trips via carpool grew slightly by 8.3% under the Build scenario versus 8.2% under the No-Build scenario
- Total vehicle trips only grew 10.3% under the Build scenario versus 10.4% under the No-Build scenario—less than the growth in population, employment, and “pass through” vehicle trips
- 2045 Work peak travel distance and work peak travel times declined under both the Build and the No-Build scenarios—less travel distance and less travel for peak period work trips in 2045 vs. 2016

The CMCP process also identified certain system performance areas that maintained or kept pace with growth in population, employment, and “external” vehicle trips:

- Total person trips grew by 9.7% under both the Build and No-Build scenarios—less than the growth in population, employment, and “external” vehicle trips
- Percentage of total delay time remained constant at 17% for both the base year (2016) and the Build scenario versus 19% for the No Build scenario
- Daily VMT grew by 9.1% under the Build scenario versus 7.7% for the No-Build scenario—both less than the growth in population, employment, and “external” vehicle trips

The CMCP process also identified certain performance areas that require further attention and study:

- Growth in total person work trips by vehicle grew by 13.2% under the Build scenario—less than the 13.4% growth under the No-Build scenario, but still greater than the growth in population, employment and “pass through” trips
- Total person hours of delay grew by 13.3% under the Build scenario, but still an improvement over the 22.2% increase in total person hours of delay under the No Build scenario

The entire set of system modeling metrics are shown below in **Table 6**.

Table 6: Modeling Metrics

Metric	2016 Summary	2045 No Build	2045 Build	2016 vs 2045 No Build	2016 vs 2045 Build	2045 No Build vs Build
Demographics						
Total Population	399,411	447,676	447,676	12.1	12.1	0.0
Household Population	395,858	444,081	444,081	12.2	12.2	0.0
Total Dwelling Units	117,486	133,667	133,667	13.8	13.8	0.0
Employment	205,265	231,297	231,297	12.7	12.7	0.0
Vehicle Trips						
Person Trips in Vehicles	2,286,818	2,508,618	2,508,350	9.7	9.7	0.0



Metric	2016 Summary	2045 No Build	2045 Build	2016 vs 2045 No Build	2016 vs 2045 Build	2045 No Build vs 2045 Build
Total Person Trips	2,594,915	2,845,014	2,845,058	9.6	9.6	0.0
Work Person Trips in Vehicles	661,039	749,412	748,433	13.4	13.2	-0.1
Daily Drive Alone Person Trips	1,250,878	1,387,419	1,386,877	10.9	10.9	0.0
Daily Carpool Person Trips	1,035,940	1,121,199	1,121,472	8.2	8.3	0.0
Total Vehicle Trips	1,674,472	1,848,101	1,847,657	10.4	10.3	0.0
Bus Trips						
Daily Local Bus Trips	22,695	25,332	24,034	11.6	5.9	-5.7
Peak Local Bus Trips	13,788	15,503	14,618	12.4	6.0	-6.4
Off-Peak Local Bus Trips	8,906	9,829	9,416	10.4	5.7	-4.6
Daily Rapid Bus Trips	1,630	1,721	4,844	5.6	197.2	191.6
Peak Rapid Bus Trips	1,186	1,282	3,468	8.1	192.6	184.4
Off-Peak Rapid Bus Trips	444	439	1,376	-1.2	209.6	210.8
Rail Trips						
Daily Commuter Rail Trips	1,824	2,316	2,459	27.0	34.8	7.8
Peak Commuter Rail Trips	1,674	2,129	2,266	27.2	35.4	8.2
Off-Peak Commuter Rail Trips	150	187	193	24.5	28.5	4.0
Daily Urban Rail Trips	819	1,122	1,165	37.0	42.3	5.3
Peak Urban Rail Trips	561	777	818	38.6	46.0	7.4
Off-Peak Urban Rail Trips	258	345	346	33.6	34.3	0.6
Daily Transit Trips	26,967	30,491	32,502	13.1	20.5	7.5
Congestion						
Total Vehicle Hours of Delay	59,268	72,805	67,512	22.8	13.9	-8.9
Delay as a Percent of Travel Time	17%	19%	17%	11.0	3.5	-7.6
Daily Vehicle Hours Traveled	354,827	392,508	390,558	10.6	10.1	-0.5
Daily Vehicle Miles Traveled	13,631,461	14,686,985	14,879,749	7.7	9.2	1.4
Daily Peak Vehicle Hours Traveled	223,090	250,668	247,790	12.4	11.1	-1.3
Daily Peak Vehicle Miles Traveled	7,462,494	8,085,087	8,214,087	8.3	10.1	1.7
Total Person Hours of Delay	81,419	99,488	92,267	22.2	13.3	-8.9
Daily Person Hours Traveled	487,444	536,363	533,770	10.0	9.5	-0.5
Daily Person Miles Traveled	18,726,253	20,069,792	20,335,949	7.2	8.6	1.4
Daily Peak Person Hours Traveled	301,166	336,144	332,344	11.6	10.4	-1.3
Daily Peak Person Miles Traveled	10,074,160	10,842,068	11,016,982	7.6	9.4	1.7
Work Peak Trip Travel Distance (miles)	15.1	14.8	14.9	-1.5	-1.4	0.1
Work Peak Trip Travel Time (minutes)	30.5	30.4	30.3	-0.2	-0.6	-0.4
Work Peak Trip Travel Speed (mph)	29.7	29.3	29.4	-1.4	-0.8	0.5
Average Speed (mph)						
Daily Average Speed	38.4	37.4	38.1	-2.6	-0.8	1.8
Freeways Peak	36.6	37.3	38.3	1.9	4.6	2.7
Freeway AM Peak Period	34.7	34.7	36.1	0.0	3.9	3.9
Freeway PM Peak Period	38.1	39.3	40.0	3.4	5.1	1.7
Arterials Peak	25.2	25.4	25.3	0.5	0.1	-0.4
Arterial AM Peak Period	24.5	24.4	24.2	-0.5	-1.1	-0.6
Arterial PM Peak Period	25.8	26.2	26.1	1.4	1.1	-0.3
All Facilities Peak	32.4	32.7	33.3	1.0	2.9	1.9
All Facilities AM Peak Period	31.0	30.8	31.6	-0.6	2.1	2.6
All Facilities PM Peak Period	33.5	34.2	34.7	2.2	3.6	1.4

The 2045 Build scenario does not incorporate significant and aggressive demand management measures that may be considered in the current update of the regional Long Range Transportation Plan (LRTP), including, but not limited to the following demand management measures and their estimated regional benefits:

- Microtransit
- Ramp metering
- TDM/Remote work incentives
- Mobility Hubs
- Active transportation enhancements
- Fare Free Transit

If agreed to and fully implemented, it is likely that these and additional demand management measures would further reduce work trips by vehicle, hours of delay, and the number of short trips by vehicle (typically 3 miles or less). In addition, these and additional demand management measures, if agreed to and fully implemented, would further enhance the medium- and long-term OCTA investments in transit and active transportation.

Regional Trends

On a regional scale, the SR-91 Corridor serves a link between Riverside County, Orange County and Los Angeles County. As previously stated, with housing costs significantly lower in Riverside County, which is also the fourth most populated county in the state, many Southern California residents have made the choice to settle in Riverside County and commute to employment areas in Orange and Los Angeles counties, which is a trend that is projected to amplify in the future as the population in Riverside County is projected to grow by approximately 23.3% between 2020 and 2045. Therefore, the existing net inflow of work trips coming into Orange County is expected to increase through 2045, resulting in a greater demand on the corridor.

Figure 24 shows that most of the trips in the corridor originate in the middle of the corridor directly adjacent to the SR-91. **Figure 25** shows that the destination of most of the trips in the corridor include Knott's Berry Farm in Buena Park, Downtown Buena Park, in Buena Park, Fullerton Transportation Center in Fullerton, shopping center at Harbor/Orangethorpe in Fullerton, big box (Home Depot and Sam's Club near Placentia and Valencia in Fullerton), shopping/entertainment area between Kraemer and Tustin in Anaheim, Anaheim Canyon Industrial Center in Anaheim Hills, and SAVI Ranch shopping center in Yorba Linda.

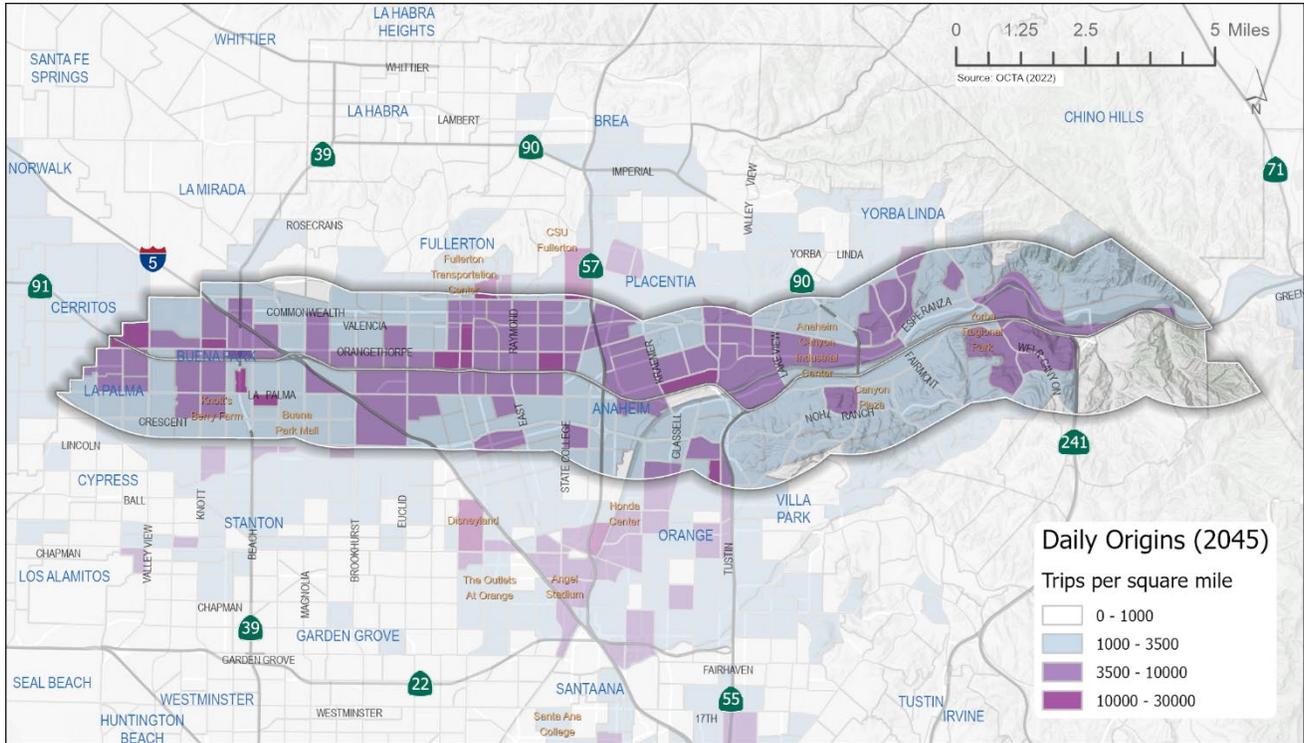


Figure 24: 2045 Origins Per Square Mile

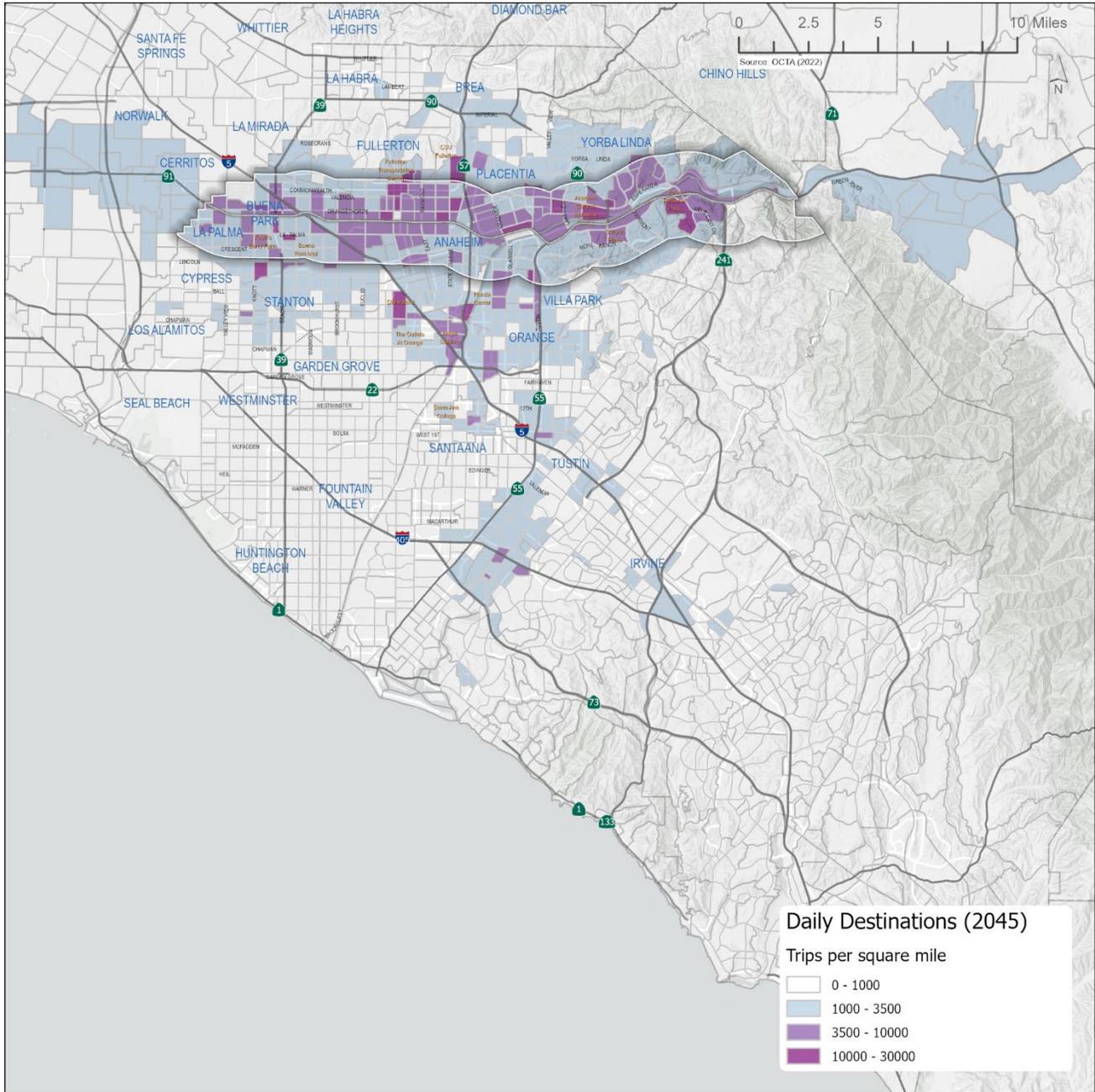


Figure 25: 2045 Destinations Per Square Mile

Looking at the origins minus destinations is a great way to see the areas that people drive to (in brown) and the places that people drive from (in green) in 2016 (**Figure 26**) and 2045 (**Figure 27**).

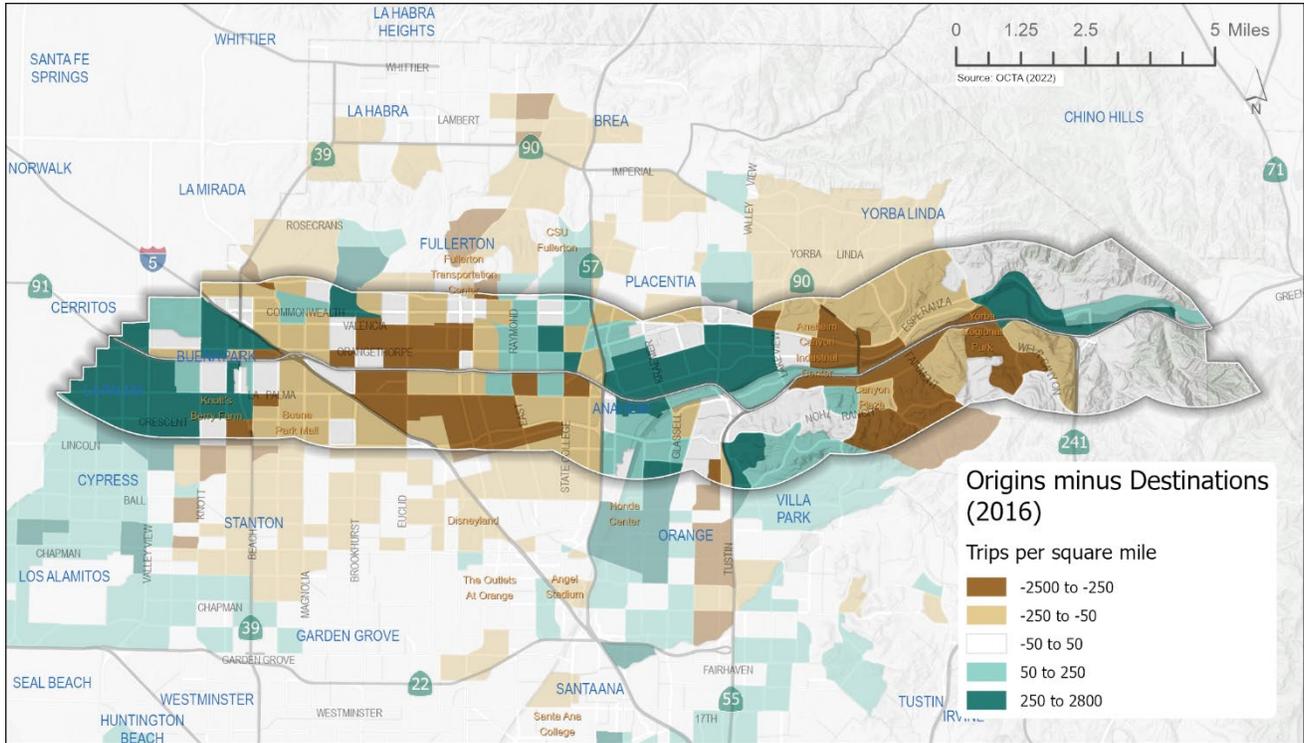


Figure 26: 2016 Regional Origins Minus Destinations Per Square Mile

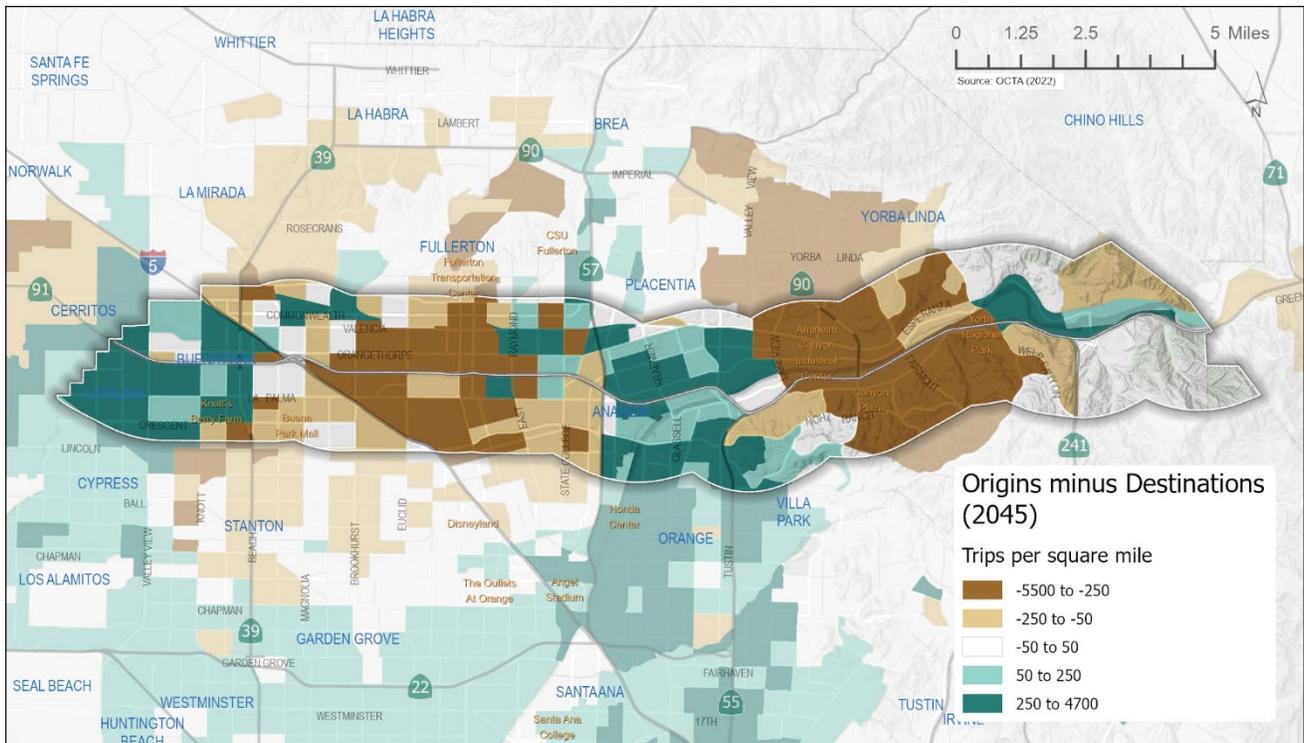


Figure 27: 2045 Regional Origins Minus Destinations Per Square Mile

Figure 28, Figure 29, and Figure 30 show the Metrolink rider origins & destinations on the Metrolink Orange County Line, 91/Perris Valley Line, and Inland Empire-Orange County Line, respectively (2018)⁵³.

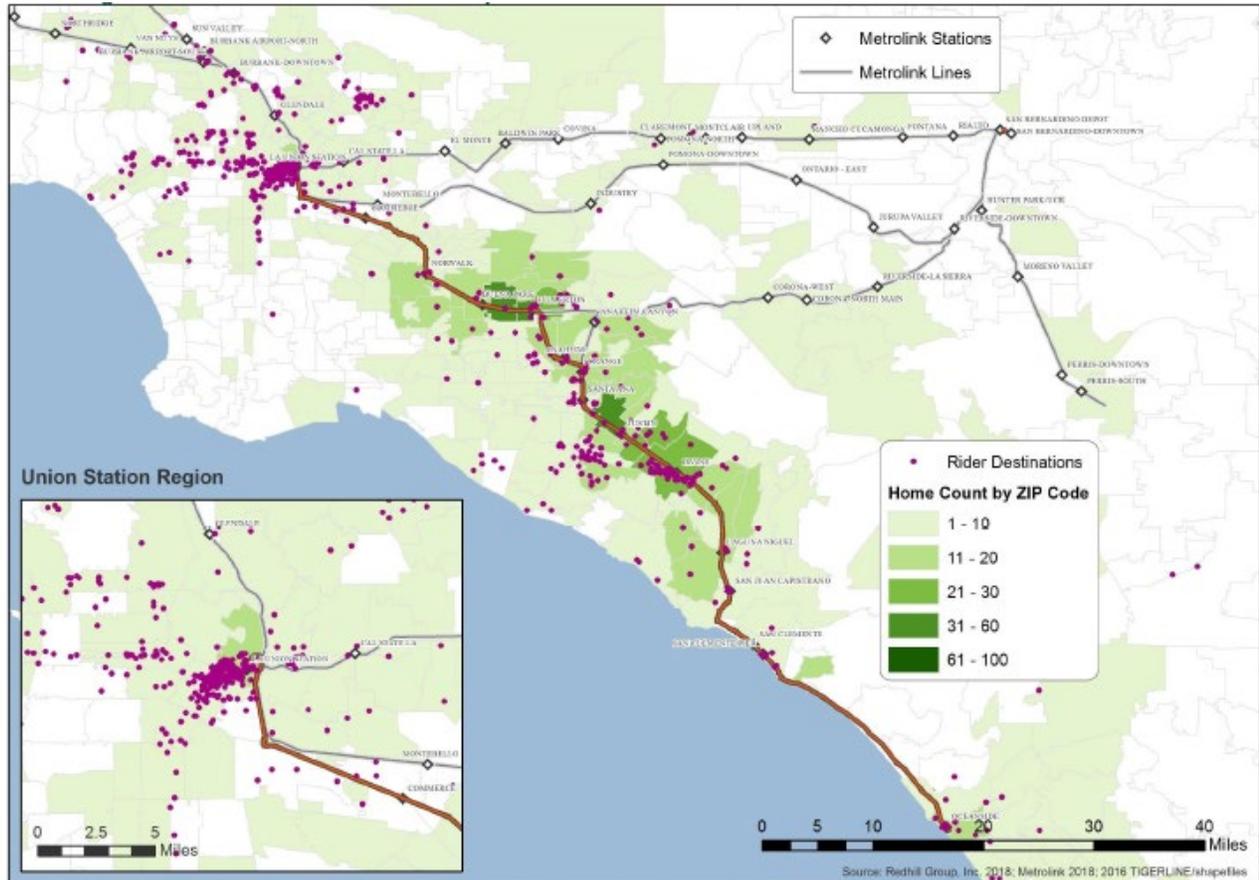


Figure 28: Metrolink Orange County Line – 600 Series, Rider Origins & Destinations – Home-Based Trips: 2018

⁵³ <https://metrolinktrains.com/globalassets/about/agency/facts-and-numbers/metrolink-2018-od-study.pdf>, accessed July 5, 2022

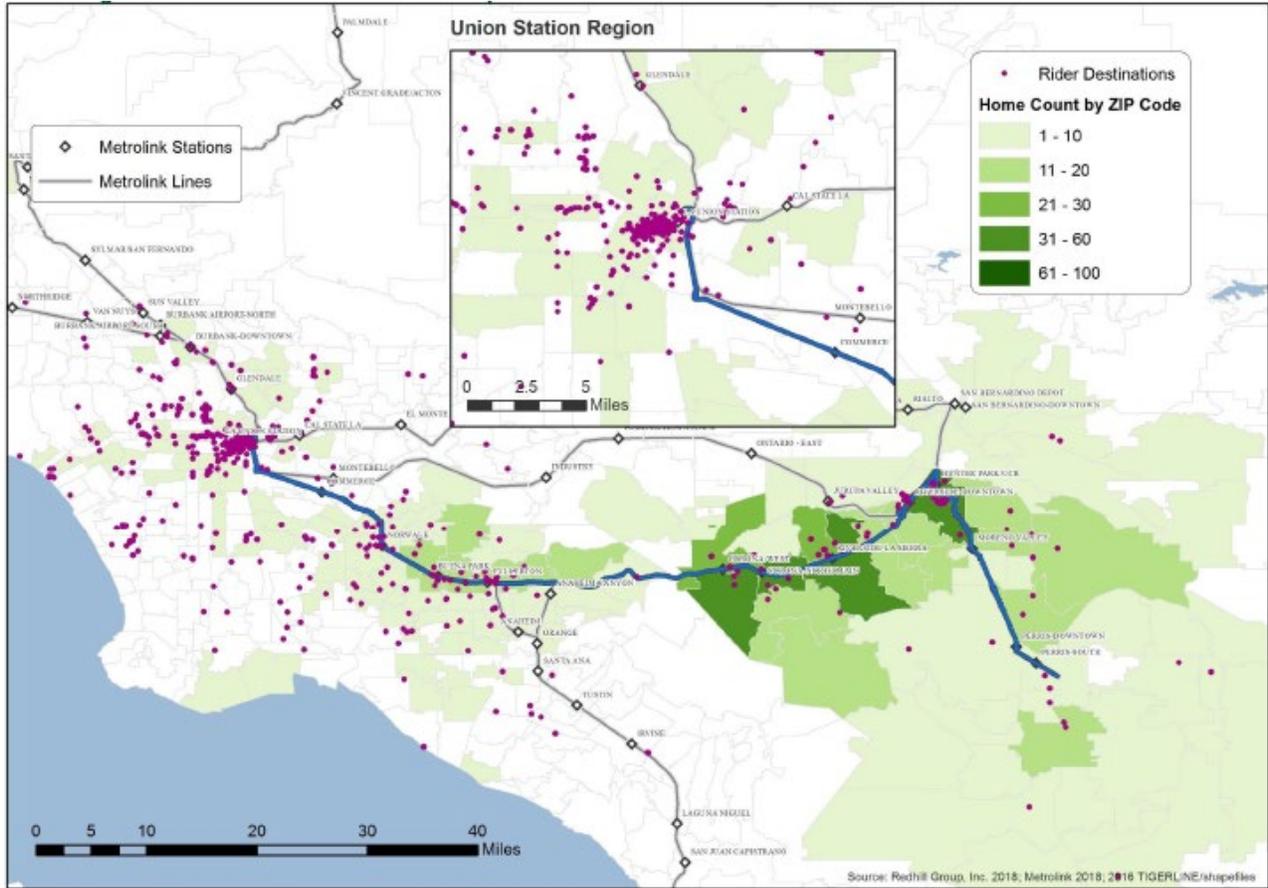


Figure 29: Metrolink 91/Perris Valley Line – 700 Series, Rider Origins & Destinations – Home-Based Trips: 2018

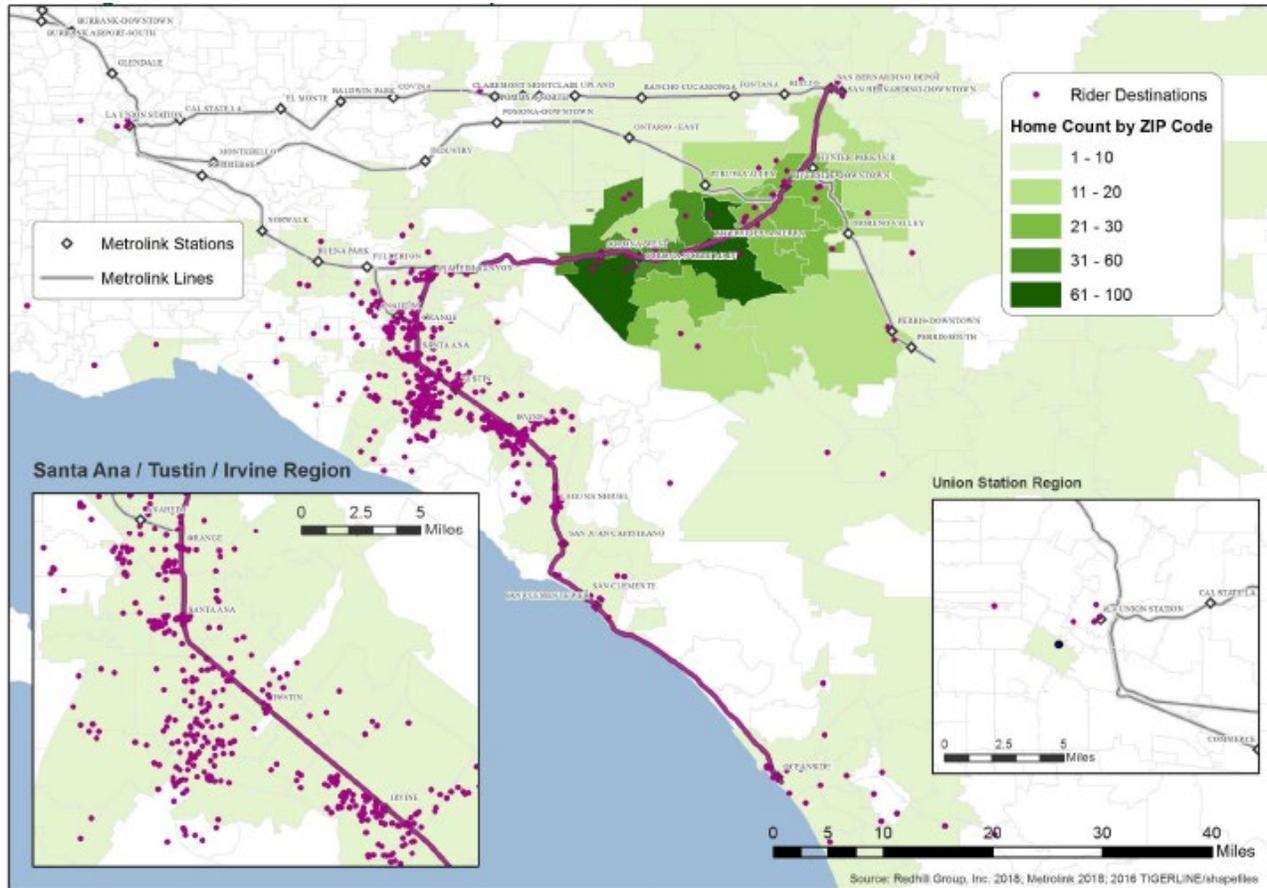


Figure 30: Metrolink Inland Empire-Orange County – 800 Series, Rider Origins & Destinations – Home-Based Trips: 2018

Access To Alternative Transportation Opportunities

For many years, OCTA and the SR-91 Corridor cities have been addressing the significant population and employment concentrations spread throughout the Corridor. Investments such as the OC Streetcar and rail, as well as OCTA’s high frequency transit corridors and regional bikeways strategies have been major steps towards addressing and improving the multimodal network in this region. In 2020, the SR-91 Corridor had a population of 226,059 within a quarter-mile of a bikeway, and a population of 347,062 within a half-mile of a transit route. Unsurprisingly, the Corridor’s significant employment density results in even greater access numbers, with 122,071 jobs within a quarter-mile of a bikeway and 201,847 jobs within a half-mile of a transit route.

Protecting Existing Residential and Commercial Uses

OCTA strategies are generally designed to support local control and preserve the character of local community. These various projects and programs address local mobility needs with context-specific solutions and utilize a bottom-up project development process. As such, the projects identified in this plan address input and needs of Orange County’s local communities. Below are a few examples of the many programs in which OCTA coordinates with local jurisdictions to design and implement transportation improvements for local communities.

Bicycle and pedestrian projects are locally led within the project-level planning and design phases but receive technical and funding support from OCTA. This enables treatments to be adapted for neighborhood-specific needs and locally preferred designs, while still improving the regional bicycle and pedestrian network.

OCTA also offers competitively awarded grants to local agencies for transit services through the Community Based Transit/Circulators under OC Go. These projects and services are planned and implemented by local agencies but receive OCTA funding and technical support. As a result, many of these projects and services have adopted unique and locally significant branding, signage, and design schemes.

Lastly, the Orange County MPAH is administered in collaboration with local jurisdictions to maintain and incorporate planned roadway needs into local circulation plans. This process allows OCTA to provide technical and funding support to help local jurisdictions make improvements that are consistent with the MPAH. These locally led improvement projects address the capacity, operational, and safety needs of communities through a process that promotes neighborhood plans and designs.

SECTION 4. GOALS, OBJECTIVES AND PATH FORWARD

CORRIDOR GOALS AND OBJECTIVES

The goals and objectives of this corridor plan align with the ones set forward by OCTA in its 2018 Long-Range Transportation Plan (LRTP). For each of the four goals stated by the agency (Deliver on Commitments, Improve System Performance, Expand System Choices, Support Sustainability), corridor-specific objectives can be identified to support a consistent yet adapted approach to optimize corridor performance and maintain the local character of surrounding communities.

Goal 1: Deliver on Commitments

OCTA is resolved to fulfill its commitment made to Orange County communities and actively implement the various mobility projects, system sustainability and environment enhancements detailed in Measure M, a half cent tax measure approved in 1990 and renewed in 2006.

The LRTP identifies the following general objectives under this goal:

- Prioritize OC Go (Measure M) Investments
- Maintain consistency with the Next 10 Plan
- Maximize external funds to support OC Go (Measure M) and complementary investments

From the LRTP Objectives, OCTA has identified SR-91 Corridor Specific objectives:

- 1a. Support the timely delivery of projects within the SR-91 corridor.
- 1b. Allocate excess revenues from SR-91 Express Lanes to projects that will increase multimodal options and reduce congestion along the corridor.
- 1c. Take advantage of federal and state funding opportunities to support the timely delivery of corridor improvements.

To support project implementation, OCTA has adopted over the years three delivery plans, looking at optimizing funding and bringing improvements to residents and commuters as quickly as possible. The latest plan, the Next 10 Delivery Plan, was adopted in 2016. The plan was updated in November 2019, validating delivery projections based on new available information, adding new projects and revising revenue assumptions and timelines. In particular, it increased revenues as a result of excess 91 Express Lanes revenue. These augmented funds will be specifically assigned to projects related to the 91 corridor and will free up funding for additional projects. These add to an exhaustive list of multimodal projects, several of which are located within the SR-91 corridor.

Goal 2: Improve System Performance

The second goal stated in OCTA's LRTP is to improve system performance. The LRTP identifies the following general objectives under this goal:

Goal 1 SR-91 Corridor-Specific Objectives:

- 1a. Support the timely delivery of projects within the SR-91 corridor.
- 1b. Allocate excess revenues from SR-91 Express Lanes to projects that will increase multimodal options and reduce congestion along the corridor.
- 1c. Take advantage of federal and state funding opportunities to support the timely delivery of corridor improvements.

Goal 2 Corridor-Specific Objectives:

- 2a. Implement projects to achieve lane balance and reduce congestion, delay, and weaving.
- 2b. Implement a data-oriented approach to assess and mitigate congestion as well as measure on-going performance.

- Deploy transit resources in a cost-effective manner
- Improve efficiency of highways (freeways and toll facilities) and roadways
- Leverage emerging technologies and services

From the LRTP Objectives, OCTA has identified SR-91 Corridor Specific objectives:

- 2a. Implement projects to achieve lane balance and reduce congestion, delay, and weaving.
- 2b. Implement a data-oriented approach to assess and mitigate congestion as well as measure on-going performance.

For the SR-91 corridor, this goal entails not only improving the efficiency of the freeway, but also taking advantage of available resources and new technologies to provide tangible alternatives to single-occupancy vehicles. This corridor plan identifies a portfolio of projects which will improve connectivity between modes and between corridor cities, as well as specifically address design elements that are currently affecting the flow of vehicles along the corridor.

System performance also entails monitoring and the development of region-specific performance metrics to provide dynamic strategies to local mobility issues. This plan will provide a set of performance metrics that will guide future operations and systems decisions as OCTA and its partners continue to design and implement improvements for the area.

Goal 3: Expand System Choices

Emerging trends in workforce and technology are re-shaping transportation needs and patterns. In this constantly evolving environment, offering a variety of mobility choices is as critical as ever.

The LRTP identifies the following general objectives under this goal:

- Deploy on-demand transit service and rideshare options
- Support improved connectivity for active transportation
- Explore public/private partnerships for new transportation capacity

OCTA is working on improving transit services along the SR-91 corridor, but also improving conditions for walking, biking and for commuters who use a combination of all these different modes. OCTA is also committed to taking advantage of technology and new shared services to respond to increased needs in flexibility and multimodality.

From the LRTP Objectives, OCTA has identified SR-91 Corridor Specific objectives:

- 3a. Support existing transit routes via first-last mile connections and station improvements.

Goal 3 Corridor-Specific Objectives:

- 3a. Support existing transit routes via first-last mile connections and station improvements.
- 3b. Expand flexible services, on-demand transit and mode share options to provide more adapted options to riders.
- 3c. Improve safety for all modes.
- 3d. Prioritize projects that will fill gaps within the existing network and strengthen connections between modes.

- 3b. Expand flexible services, on-demand transit and mode share options to provide more adapted options to riders.
- 3c. Improve safety for all modes.
- 3d. Prioritize projects that will fill gaps within the existing network and strengthen connections between modes.

Expanding choices also means upgrading infrastructure design to reduce the number of incidents as well as “filling the gaps” within the existing transportation infrastructures, to create seamless and safe routes for users. The projects proposed in this plan will aim to strengthen connections from one mode to another, but also to fill gaps within existing networks for each individual mode of transportation.

Goal 4: Support Sustainability

OCTA plans to leverage the SR-91 CMCP to provide more sustainable options to the riders traveling along the corridor. The improvements made to existing infrastructures will help make carpooling, bicycling and using public transit more competitive than single-occupancy vehicles, and will contribute to a reduction in greenhouse gas emissions and fine particle emissions. Supporting a holistic and comprehensive transportation grid will also contribute to the economic vitality of the region and to the creation of a cohesive social network.

Goal 4 Corridor-Specific Objectives:

- 4a. Support alternatives to single-occupancy vehicles
- 4b. Improve air quality through reduction in GHG and fine particles emissions.
- 4c. Encourage healthy living and social connection through improved multimodal infrastructures.

The LRTP identifies the following general objectives under this goal:

- Deliver a financially constrained long-range transportation plan and identify opportunities to reduce funding uncertainty
- Explore environmental and emission reduction strategies
- System maintenance

From the LRTP Objectives, OCTA has identified SR-91 Corridor Specific objectives:

- 4a. Support alternatives to single-occupancy vehicles
- 4b. Improve air quality through reduction in GHG and fine particles emissions.
- 4c. Encourage healthy living and social connection through improved multimodal infrastructures.

Statutory Requirements

These corridor-specific goals and objectives also align with federal, state and regional plans, including but not limited to the Section 2392 of the California Streets and Highways Code (SHC), and show direct compliance and consistency with the below plans. Other municipal climate adaptation plans and local circulation elements were reviewed for general consistency. **Table 7** identifies the various plans and how the SR-91 CMCP Plan aligns with these various plans.

Table 7: Alignment of Plan’s Goals and Objectives with Regional and State Plans

GOAL	PLAN	DESCRIPTION
1 DELIVER ON COMMITMENT		
Take advantage of federal and state funding opportunities to support the timely delivery of corridor improvements	California Transportation Plan 2040 ⁵⁴	<ul style="list-style-type: none"> Seek sustainable and flexible funding to maintain and improve the system
2 IMPROVE SYSTEM PERFORMANCE		
Implement a data-oriented approach to mitigate congestion as well as measure ongoing performance	SCAG Transportation System Congestion Management	<ul style="list-style-type: none"> Collect data/monitor system performance. Analyze congestion problems and needs
	Caltrans Interregional Transportation Strategic Plan	<ul style="list-style-type: none"> Invest strategically to optimize system performance
	Caltrans Smart Mobility Framework	<ul style="list-style-type: none"> Management of the circulation network
	SCAG Regional Transportation Plan	<ul style="list-style-type: none"> Improving highway and arterial capacity Managing demands on the transportation system
3 EXPAND SYSTEM CHOICES		
Support existing transit routes via first-last mile connections and station improvements	California Transportation Plan 2040	<ul style="list-style-type: none"> Provide viable and equitable multimodal choices including active transportation
	Toward an Active California: California State Bicycle and Pedestrian Plan	<ul style="list-style-type: none"> Integrate bicycle and pedestrian needs in planning and design of multimodal transportation systems and services
	SCAG Regional Transportation Plan	<ul style="list-style-type: none"> Promoting walking, biking and other forms of active transportation Focusing new growth around transit
Expand flexible services, on-demand transit and mode share options to provide more adapted options to riders	SCAG Transportation System Congestion Management Plan	<ul style="list-style-type: none"> Develop multimodal performance measures
	Caltrans Interregional Transportation Strategic Plan	<ul style="list-style-type: none"> Optimize multimodal connectivity throughout the interregional transportation system
	SCAG Regional Transportation Plan	<ul style="list-style-type: none"> Giving people more transportation choices
Increase safety for all modes	Caltrans Interregional Transportation Strategic Plan	<ul style="list-style-type: none"> Develop and operate a safe interregional transportation system for all travelers
	California Transportation Plan 2040	<ul style="list-style-type: none"> Improve public safety and security

⁵⁴ The CTC CMCP Guidelines reference CTP 2040, which is consistent with OCTA LRTP at 2045 (although CTP 2050, dated February 2021, is now available at <https://dot.ca.gov/programs/transportation-planning/division-of-transportation-planning/state-planning-equity-and-engagement/california-transportation-plan>)

GOAL	PLAN	DESCRIPTION
Increase safety for all modes (continued)	Toward and Active California: California State Bicycle and Pedestrian Plan	<ul style="list-style-type: none"> Address safety of vulnerable users in roadway design and operations Invest in the quality, completeness, timeliness, and availability of data on bicycle and pedestrian collisions Focus state and local enforcement of safety laws on highest risk behaviors by all road users
	Caltrans Smart Mobility Framework	<ul style="list-style-type: none"> Convenient and safe multimodal travel
Prioritize projects that will fill gaps within the existing network and strengthen connections between modes	California Transportation Plan 2040	<ul style="list-style-type: none"> Manage and operate an efficient multimodal system
4 SUPPORT SUSTAINABILITY		
Support alternatives to single-occupancy vehicles	California Transportation Plan 2040	<ul style="list-style-type: none"> Practice environmental stewardship Integrate environmental considerations in all stages of planning and implementation
	California’s 2017 Climate Change Scoping Plan	<ul style="list-style-type: none"> Increase the number, safety, connectivity, and attractiveness of biking and walking facilities to increase use. Promote shared-use mobility, such as bike sharing, car sharing, and ride sharing services to bridge the “first mile, last mile” gap between commuters’ transit stops and their destinations
Improve air quality through reduction in GHG and fine particles emissions	Caltrans Interregional Transportation Strategic Plan	<ul style="list-style-type: none"> Reduce GHG emissions
	California Transportation Plan 2040	<ul style="list-style-type: none"> Adapt the transportation systems to reduce impacts from climate change Reduce greenhouse gas emissions and other air pollutants
	California’s 2017 Climate Change Scoping Plan	<ul style="list-style-type: none"> Reduce fossil fuel use Achieve sector-wide, publicly-owned utility and load-serving entity specific GHG reduction planning target set by the State through Integrated Resource Planning Maximize air-quality co-benefits.
	SCAG Regional Transportation Plan	<ul style="list-style-type: none"> Improve air quality and reducing greenhouse gases
Support economic sustainability through reduced congestion and improved system performance	California Transportation Plan 2040	<ul style="list-style-type: none"> Support transportation choices to enhance economic activity Integrate multimodal transportation and land use development
	California’s 2017 Climate Change Scoping Plan	<ul style="list-style-type: none"> Support a resilient low carbon economy and strong job force
	SCAG Regional Transportation Plan	<ul style="list-style-type: none"> Support commerce, economic growth, and opportunity

CMCP PROJECT LIST

This list of projects is multimodal in nature, which provides a balanced set of improvements to meet future travel needs (**Figure 31**). This section prioritizes the proposed projects into medium-term (**Table 8**) and long-term (**Table 9**) categories. The tables below indicate the anticipated phasing of the proposed SR-91 Corridor projects. **Figure 31** identifies all projects, both medium-term and long-term.

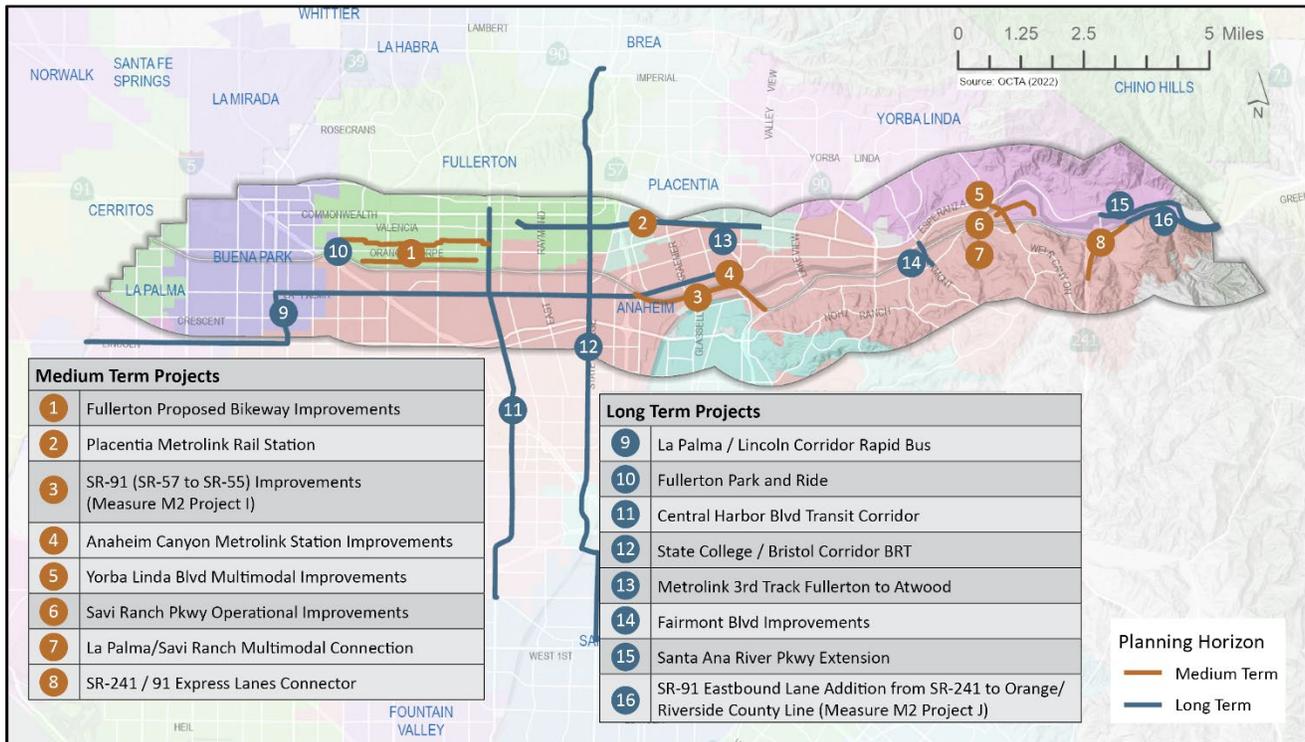


Figure 31: CMCP Project List by Planning Horizon

Table 8: Medium-Term Projects (To Be Implemented Prior to 2035)

PROJECT ID	MODE	PROJECT NAME	JURISDICTION	DESCRIPTION
MT-1	Active	Fullerton Proposed Bikeway Improvements	Fullerton	Directly adjacent, parallel to and north of the SR-91 and provides East/West bicycle route in southern Fullerton. (Source: City of Fullerton)
MT-2	Commuter Rail	Placentia Metrolink Rail Station	OCTA/SCRRRA	The new Placentia Metrolink Station will serve the Metrolink 91/Perris Valley Line, providing commuter rail service between Perris and Los Angeles, via Riverside, Orange and Los Angeles counties. The project includes construction of a parking structure, OCTA bus access, an area for passenger pick-up and drop-off, and two station platforms. (Source: 2021 SR-91 Implementation Plan)
MT-3	Freeway	SR-91 (SR-57 to SR-55) Improvements	OCTA	Add EB capacity between SR-55 and SR-57, improve the SR-91/SR-57 and SR-91/SR-55 interchanges and local interchanges.

PROJECT ID	MODE	PROJECT NAME	JURISDICTION	DESCRIPTION
		(Measure M2 Project I)		<ul style="list-style-type: none"> At 91/57 interchange area: split the WB SR-91 Connector into separate exits for NB and SB SR-57 and extending an additional lane on WB SR-91 from the NB SR-57 to WB SR-91 connector through State College Boulevard and terminating at the auxiliary lane to Raymond Avenue-East Street. At the SR-91/SR-55 interchange area: construct a drop on-ramp from Lakeview Avenue between realigned WB SR-91 lanes for direct access to SB SR-55, allowing for the exit to SB SR-55 to be moved further east, with a barrier separating WB SR-91 and SB SR-55 traffic west of the Lakeview Avenue bridge. <p><i>(Source: 2021 SR-91 Implementation Plan)</i></p>
MT-4	Commuter Rail	Anaheim Canyon Metrolink Station Improvements	OCTA/SCRRA	Addition of approximately 3,400 linear feet of secondary track; a second platform; extending the existing platform; improvements at two at-grade railroad crossings located at Tustin and La Palma; as well as new shade structures, benches, and ticket vending machines. <i>(Source: 2021 SR-91 Implementation Plan)</i>
MT-5	Arterial	Yorba Linda Boulevard Multimodal Improvements	Yorba Linda	<p>Increase corridor capacity throughput and storage for turning movements</p> <ul style="list-style-type: none"> Includes bridge over Santa Ana River (from La Palma Avenue to Santa Ana Canyon Road) Provides two-way cycle track and pedestrian pathway (barrier separated from vehicles) <p><i>(Source: City of Yorba Linda)</i></p>
MT-6	Arterial	Savi Ranch Parkway Operational Improvements	Yorba Linda	Provide three westbound lanes (starting at Mirage Street) and three left-turn lanes, and two right-turn lanes at Yorba Linda Boulevard. <i>(Source: City of Yorba Linda)</i>
MT-7	Arterial and Active	La Palma / Savi Ranch Multi-Modal Connection	Yorba Linda	Realign and extend Eastpark Drive through the existing parking lot and between Kohl's and Michael's, across the Santa Ana River and connect to La Palma at a new signalized intersection. A new roundabout would connect Savi Ranch Parkway and become the hub for the retail and entertainment zone. Also would provide a connection over the regional Santa Ana River Trail which runs from the Inland Empire to Huntington Beach. <i>(Source: City of Yorba Linda)</i>
MT-8	Freeway	SR-241 / 91 Express Lanes Connector	TCA	Direct connector between the 241 Toll Road and 91 Express Lanes, carrying northbound 241 Toll Road traffic to the eastbound 91 Express Lanes and westbound 91 Express Lanes traffic to the southbound 241 Toll Road. <i>(Source: SR-91 Implementation Plan)</i>

(MT = Medium-Term)

Table 9: Long-Term Projects (To Be Implemented After 2035)

PROJECT ID	MODE	PROJECT NAME	JURISDICTION	DESCRIPTION
LT-9	Transit	La Palma / Lincoln Corridor Rapid Bus Service	OCTA	Rapid bus service along La Palma and Lincoln Avenue serving communities from the Anaheim Canyon Station to Hawaiian Gardens. (Source: OC Transit Vision Report)
LT-10	Transit	Fullerton Park and Ride	OCTA and Fullerton	A Study will be underway to implement a joint development project at/near Fullerton Park and Ride to provide better connectivity with transit service and encourage ridership. (Source: OCTA Planning)
LT-11	Transit	Central Harbor Boulevard Transit Corridor	OCTA	Analyze opportunities for improving transit options along an eight-mile segment of Harbor Blvd. from the Fullerton Transportation Center to Westminster Ave. (Source: Central Harbor Blvd. Transit Corridor Project PEA Memo)
LT-12	Transit	State College / Bristol Corridor BRT	OCTA	Rapid transit or rapid bus service along Bristol and State College between Downtown Santa Ana and the Brea Mall. (Source: OC Transit Vision Report)
LT-13	Transit	Metrolink 3rd Track – Fullerton to Atwood	SCRRA	Install third track between Fullerton Interlocker (Junction) and Control Point Atwood (at Atwood Junction). (Source: SCRRA)
LT-14	Arterial	Fairmont Boulevard Improvements	Cities of Anaheim and Yorba Linda	The project proposes a new interchange with SR-91 at Fairmont Boulevard and a ped/bike connection between La Palma Avenue and Santa Ana Canyon Road, allowing for access to the Santa Ana River (SAR) Trail from Anaheim and Yorba Linda. The City of Anaheim completed a feasibility study in 2009 but no further studies have been completed. This project remains conceptual until such time as it gets reinitiated by either the City of Anaheim or Yorba Linda. (Source: 2021 SR-91 Implementation Plan)
LT-15	Active	Santa Ana River Parkway Extension	Orange County Public Works Dept	The Santa Ana River Parkway Extension is led by OC Public Works Strategic Land Planning Division. The project proposes a new Class I bikeway, riding and hiking trail, and amenities on the north and south banks of the Santa Ana River between Gypsum Canyon Road bridge and the Orange County line. The EIR was completed in 2016. It is currently in final design and there is no schedule for construction. (Source: OC Public Works)
LT-16	Freeway	SR-91 Eastbound Lane Addition from SR-241 to Orange / Riverside County Line (Measure M2 Project J)	OCTA	OCTA M2 Project J includes improvements from SR-55 to the Orange/Riverside County Line by adding capacity on SR-91 beginning at SR-55 and extending to I-15 in Riverside County. The goal is to provide up to four new lanes along these limits. To date, OCTA and RCTC have delivered most of the improvements (e.g., SR-91 Eastbound auxiliary lane between SR-241 and SR-71; SR-91 between SR-55 and SR-241; Green River Road overcrossing; and initiate phase of the RCTC's 91 Corridor Improvement Project). There remains a SR-91 eastbound general purpose lane improvements between SR-241 and SR-71. (Source: M2 Investment Plan)

(LT = Long-Term)

Not included in these project lists are the significant and aggressive demand management measures that are being considered in the current update of the regional Long Range Transportation Plan (LRTP), including, but not limited to the following demand management measures:

- Microtransit
- Ramp metering
- TDM/Remote work incentives
- Mobility Hubs
- Active transportation enhancements
- Fare Free Transit

If agreed to and fully implemented, it is likely that these and additional demand management measures would further reduce work trips by vehicle, hours of delay, and the number of short trips by vehicle (typically 3 miles or less). In addition, these and additional demand management measures, if agreed to and fully implemented, would further enhance the medium- and long-term OCTA investments in transit and active transportation. 56

SECTION 5. MONITORING AND EVALUATION

Table 10 below shows the performance metrics that have been selected to show how the SR-91 corridor is performing relative to the goals of the 2018 OCTA LRTP.

Table 10: Performance Metrics

PLAN GOALS	PERFORMANCE MEASURES
Congestion/Delay	<ul style="list-style-type: none"> • Person throughput – corridor total (multi-modal) person throughput • Person hours of delay – Number of person hours of delay in the corridor • Vehicle hours of delay • Vehicle miles travelled (Note: for highway and local road projects, the impact of induced demand should be considered and discussed as applicable for planning purposes)
Safety	<ul style="list-style-type: none"> • Number of fatal and injury crashes • Rate of fatal and injury crashes per 100 million vehicle miles traveled • Number of bicycle and pedestrian collisions • Rate of bicycle and pedestrian collisions per number of bicycle and pedestrian trips • Consideration of policies that support public safety and security such as lighting and other crime prevention and safety measures
Accessibility	<ul style="list-style-type: none"> • Access to multi-modal choices (e.g. access to traveler information, availability of connections between modes, convenience of multiple transportation choices, vehicle ownership). • Number of households within 45-minute transit ride of major employment center or college • Travel time reliability (e.g. commute trip travel time by transit and car) • First-mile/Last-mile considerations • Consideration of compete streets policies and the creation of networks of non-motor vehicle facilities (e.g., pedestrian, cycling) that connect residential, recreational, and employment opportunities
Economic Development, Job Creation & Retention	<ul style="list-style-type: none"> • Improvement of freight throughput • Truck Time Reliability • Access to jobs and education – change in cumulative jobs and education accessibility within 30 minutes (45 minutes for transit) • Access to jobs and education for disadvantaged populations – change in cumulative jobs and education accessibility for disadvantaged populations within 30 minutes (45 minutes for transit)
Regional Air Quality and Greenhouse Gas Emissions	<ul style="list-style-type: none"> • Reduction of criteria pollutants – airborne particulates, ground level ozone and other pollutants • Reduction of greenhouse gas emissions such as carbon dioxide and methane
Efficient Land Use	<ul style="list-style-type: none"> • Improvement in Jobs/Housing balance (total jobs vs. housing) and/or fit (low-wage jobs vs. low-cost housing) • Increase in non-single-occupant-vehicle mode Share • Increase in non-vehicle mode share (e.g., walking, cycling, public transit use, rail use) • Supports mixed-use and in-fill development with multimodal choices • Supports interconnected streets and corridor access management policies • Addresses climate adaptation



Appendix A: SR-91 Comprehensive Multimodal Corridor Plan Study Public Outreach Report





SR-91 Comprehensive Multimodal Corridor Plan Study

Public Outreach Report

June 2022



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EXECUTIVE SUMMARY

The Orange County Transportation Authority (OCTA) studied a 23-mile stretch of State Route 91 (SR-91), located in the County of Orange from the Los Angeles to Riverside county lines. The goal of the SR-91 Comprehensive Multimodal Corridor Plan Study is to improve mobility options and provide transportation choices in and around the corridor area while preserving the character of the local communities. To assist the understanding of existing conditions and community needs, a public involvement plan was created and implemented to gather public input and identify transportation needs during the six-month Study.

Community Engagement Approach

An outreach strategy was developed to invite key stakeholders and those that live, work and travel in and around the SR-91 corridor to learn more about the Study and provide feedback. The primary goal was to actively engage the community through an online survey, public webinar, community event pop-ups, and print and online resources and media. Digital tools, such as eblasts and social media messaging were utilized to promote the survey, virtual community meetings and other outreach opportunities. The community engagement phase took place from February 14 to March 27, 2022.

The survey and project collateral and notification materials for the survey, such as fact sheets and the webinar were made available in English and Spanish. Closed captioning and interpretation were also made available during the community meeting. A video recording of the webinar was posted online, so it was available for the public to view at any time. Finally, community and pop-up events were held to promote the survey throughout the corridor cities.



Key Findings

A total of 303 surveys were collected. The survey research was qualitative, which means that results cannot be considered representative of the total population of interest. Informal research methods are useful to explore a group’s opinions and views, allowing for the collection of verifiable data. This data can reveal information that may warrant further study and is often a cornerstone for generating new ideas.

In addition, multiple people shared their feedback during the community pop-up events and shared the need for improved bus service, first/last mile options and safe biking and walking options.

Following is a summary of key findings from the survey.

Summary of Key Findings

Survey Question	Top Ranked	Second Ranked	Third Ranked
Why do you travel in the SR-91 corridor area? To access (check all that apply):	Entertainment (amusement park, dining, events, etc.) 68%	Work 68%	Recreation 68%
How do you travel most often in and around the corridor area? (pick up to three top choices)	Drive 97%	Rideshare 17%	Walk on sidewalks or paths 17%
What are the biggest challenges you face when you travel in and around the corridor area? (pick top three choices)	Traffic congestion on SR-91 freeway 92%	Traffic congestion on streets 75%	Wait time at traffic signals 51%
What are the best ways to improve the challenges you face in and around the corridor area? (pick top three choices)	Make improvements generally within existing SR-91 Freeway 71%	Add high-capacity transit improvements such as streetcar or dedicated bus lanes 56%	Improve traffic and pedestrian signal timing at intersections 54%

Community Engagement

During the course of the Study, OCTA developed and implemented a comprehensive outreach strategy to provide stakeholders and the public with the opportunity to engage in the Study. OCTA also partnered with the corridor cities when reaching out to various stakeholders and residents.

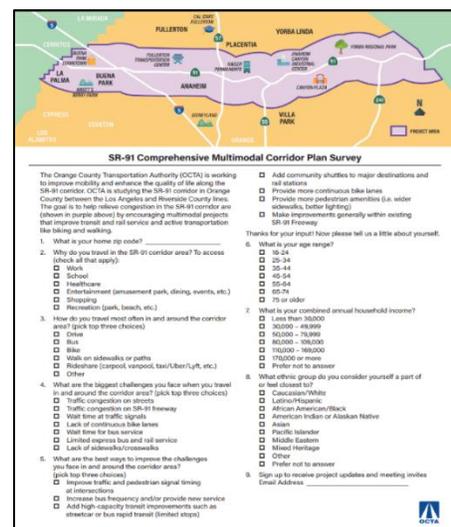
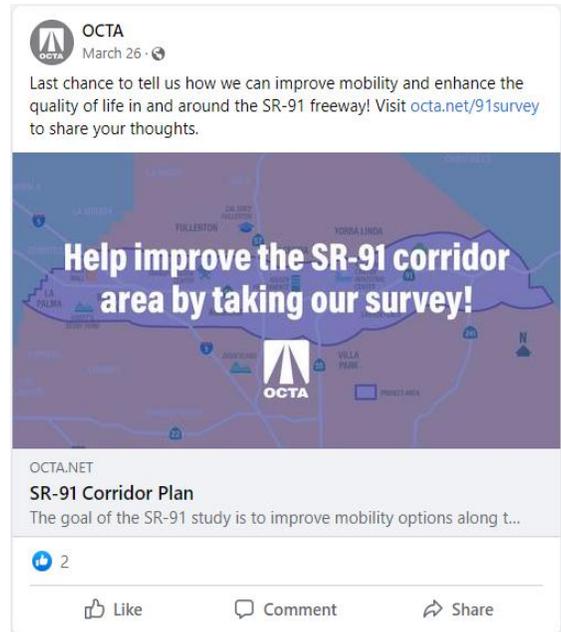
Multiple outreach methods were utilized to share Study information and promote the survey and webinar. OCTA promoted through social media (Facebook and Twitter), the OCTA blog (12,700 readers) and via eblast (314 subscribers) and press release. A communications toolkit was distributed to all corridor cities and the County of Orange staff, OCTA’s public committees, transportation industry and environmental groups, and Caltrans. The toolkit provides pre-written language to be used for social media posts, blogs and websites. A Study website was also launched and received 995 visits from February 2022 to June 2022.

OCTA attended four community events in the cities of Buena Park, Anaheim, Fullerton, and Yorba Linda to share information about the Study, receive feedback, and answer questions. In addition, OCTA presented to two agency stakeholder groups, the Citizens Advisory Committee and Diverse Community Leaders group, and at a Yorba Linda Chamber of Commerce event.

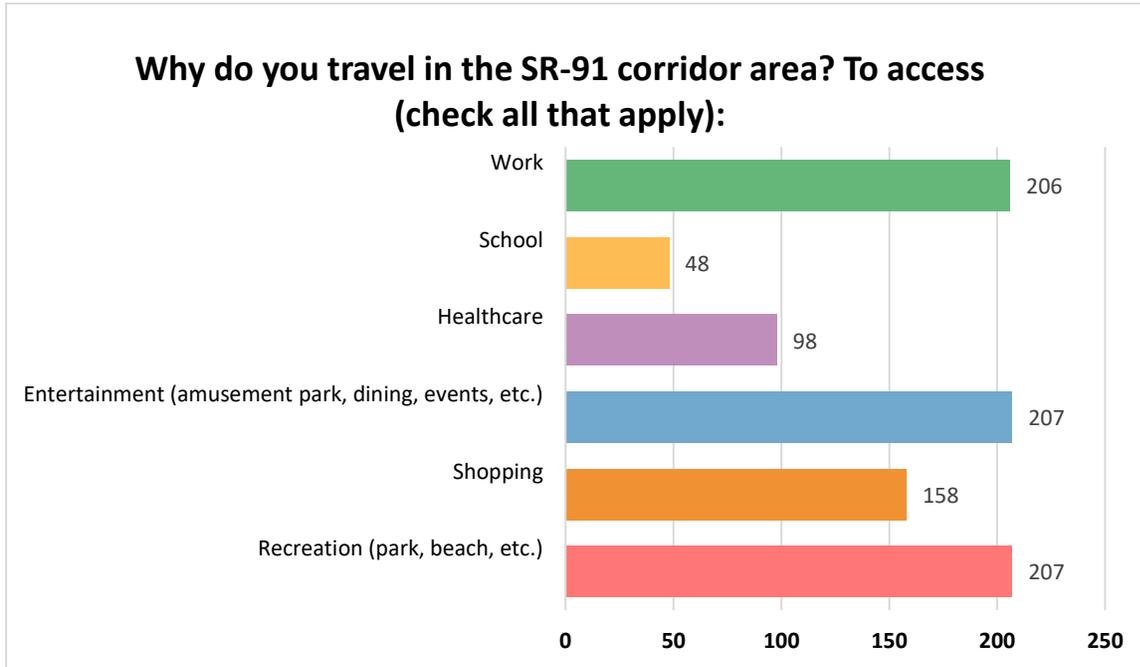
COMMUNITY SURVEY RESULTS

The survey results were analyzed based on the 303 responses collected from the eight-question survey. The survey was available online and as a hard copy from February 14 to March 27, 2022.

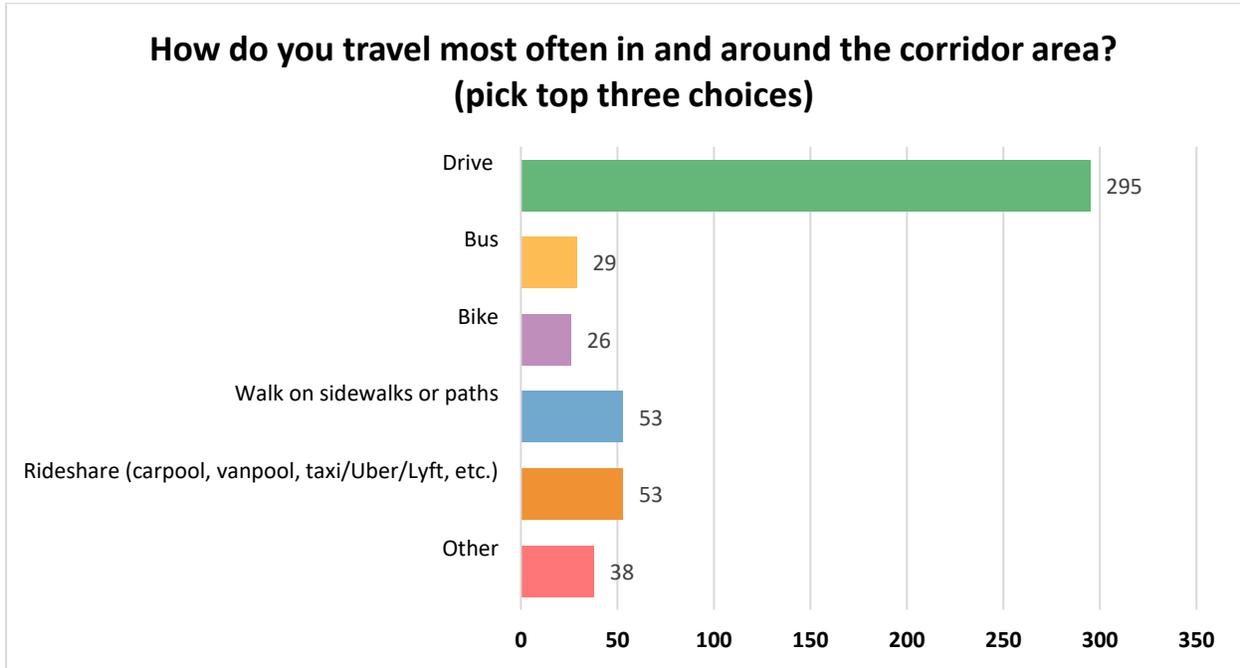
There were a total of four primary questions and four demographic questions. The following section highlights the findings for each survey question.



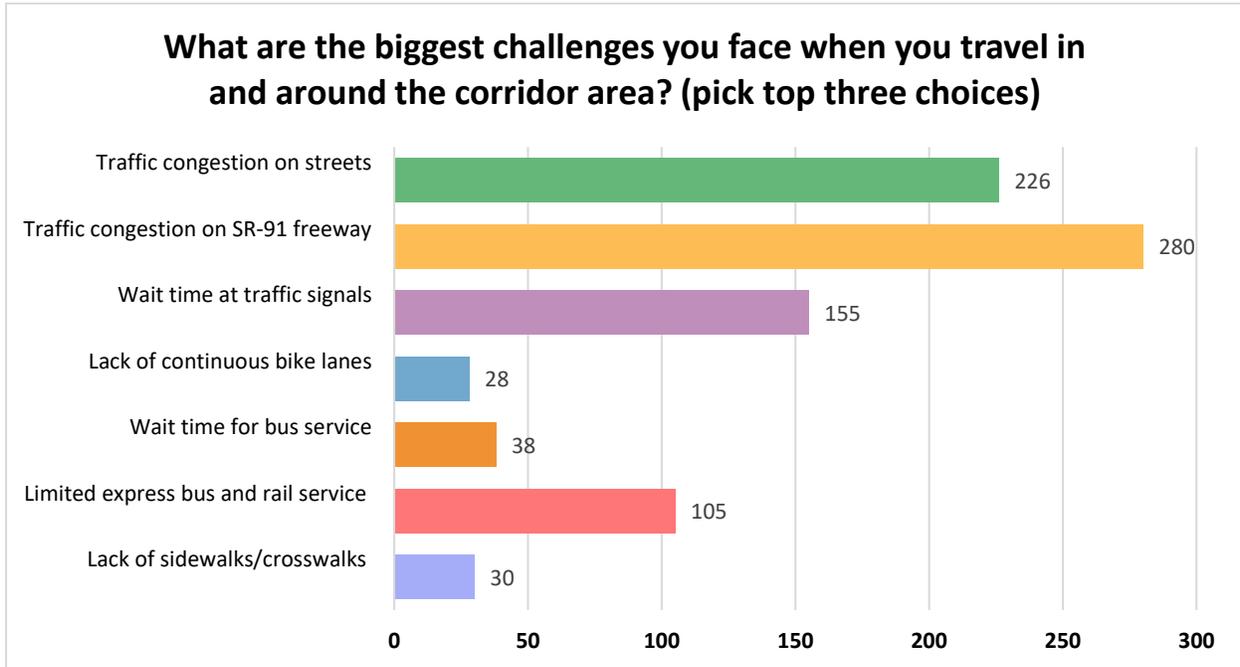
In the first survey question, participants were asked to choose all applicable reasons that they travel throughout the SR-91 corridor area. The table below gives the distribution of responses for each of the reasons to travel. Overall, the “Entertainment” and “Recreation” options were tied for the most common reason, with the “Work” option following closely behind.



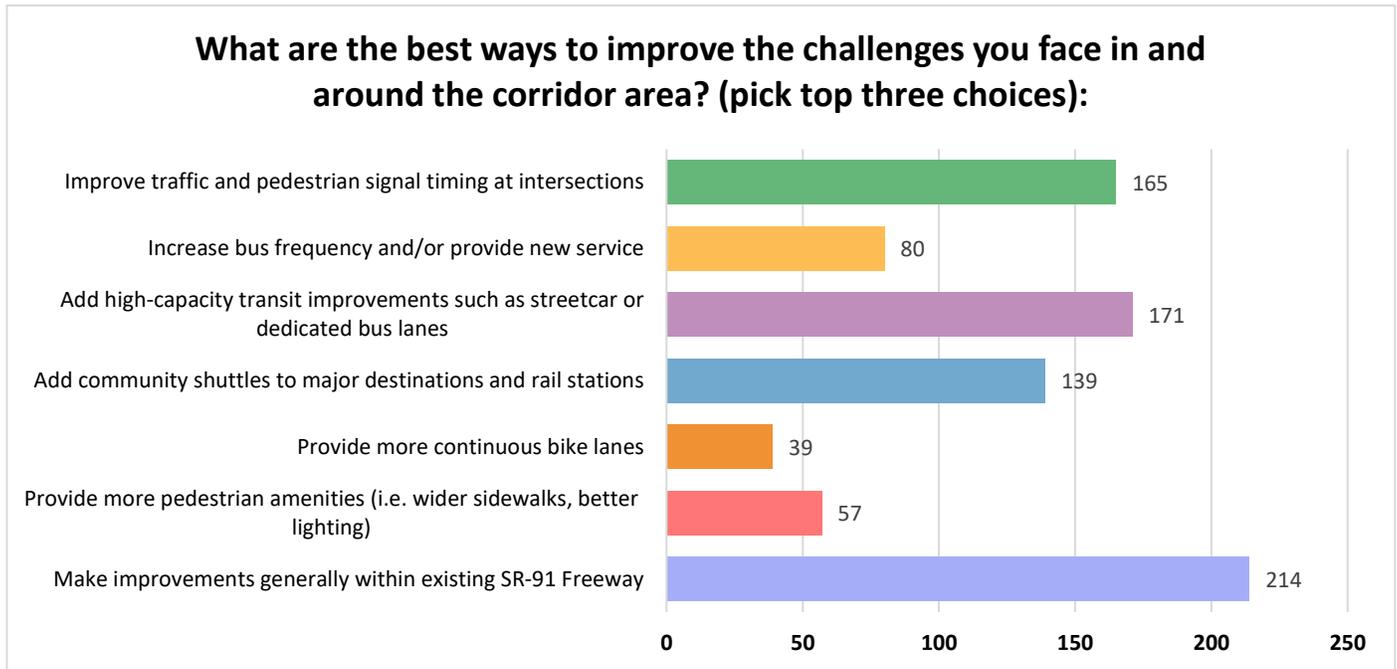
The second survey question asked for the most common ways that participants traveled in and around the corridor area. The table below shows the number of times each mode of transportation was chosen. The “Drive” option was overwhelmingly the top choice.



The next question that the participants were asked was what the biggest challenge they face when traveling in and around the corridor. The top response was “Traffic congestion on the SR-91 freeway.” The second and third ranked responses were “Traffic congestion on streets” and “Wait time at traffic signals,” respectively.



Finally, survey participants were asked about the best solution to the challenges they face in and around the corridor. The most common response was “Make improvements generally within existing SR-91 Freeway,” with “Add high-capacity transit improvements such as streetcar or dedicated bus lanes” and “Improve traffic and pedestrian signal timing at intersections” as the next top choices, respectively.



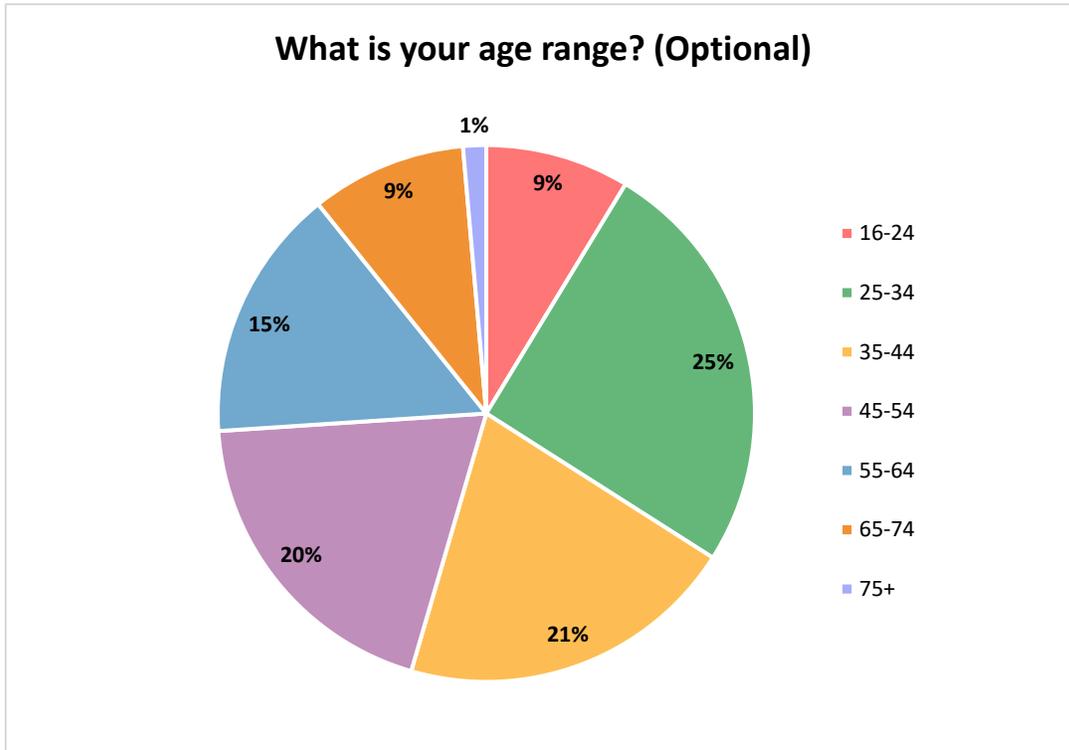
Demographics

There were a total of four optional demographic related questions. First, survey participants were asked to share their home zip code. Of the surveys collected, 90% of the respondents shared their home zip code (274). In total, 115 survey respondents both lived and worked in the project area.

City of Residence	Total survey participants*
Yorba Linda	67
Anaheim	51
Fullerton	14
Orange	13
Buena Park	9
Placentia	7
La Palma	3
OC cities not in study area	67
Riverside County	29
Los Angeles County	9
San Bernardino County	5

* Based upon 274 respondents

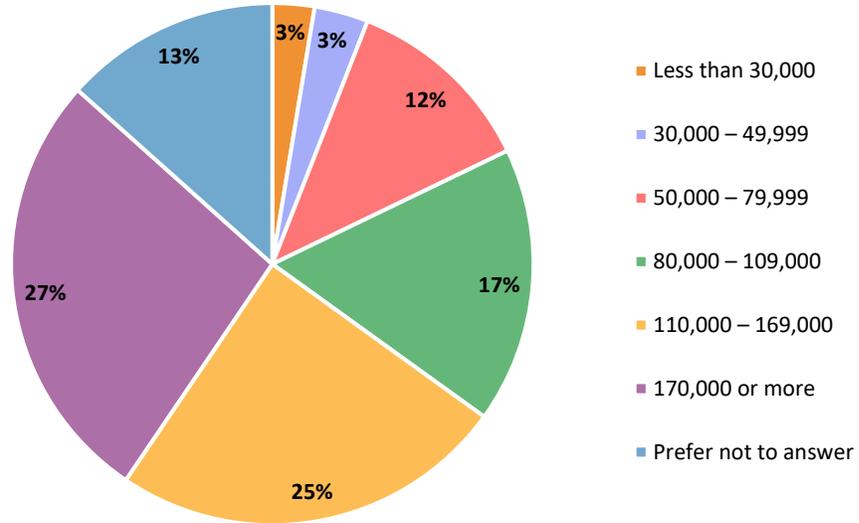
Following are the other three demographic questions.



Option	Total*
16-24	25
25-34	73
35-44	59
45-54	56
55-64	44
65-74	27
75+	4

* Based upon 288 respondents

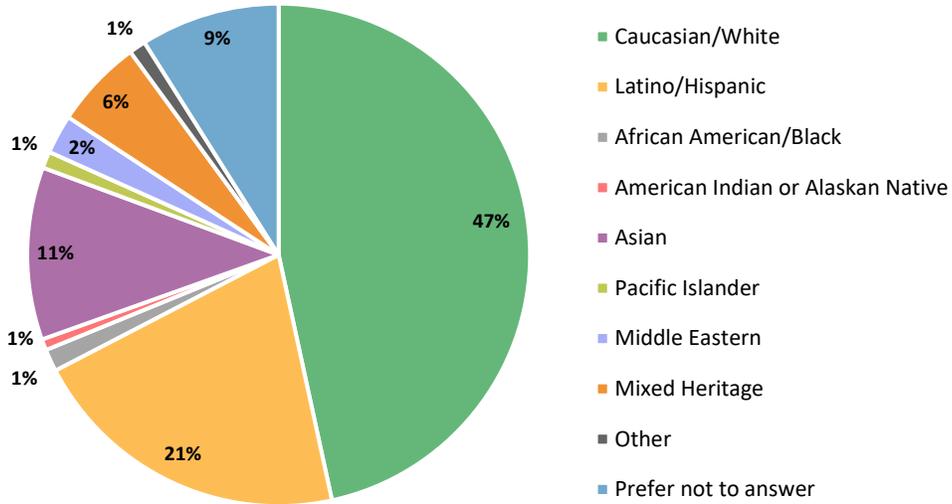
What is your combined annual household income? (Optional)



Option	Total*
Less than 30,000	7
30,000 – 49,999	9
50,000 – 79,999	32
80,000 – 109,000	46
110,000 – 169,000	66
170,000 or more	73
Prefer not to answer	36

* Based upon 269 respondents

What ethnic group do you consider yourself a part of or feel closest to? (Optional)



Option	Total*
Caucasian/White	130
Latino/Hispanic	58
African American/Black	4
American Indian or Alaskan Native	2
Asian	31
Pacific Islander	3
Middle Eastern	7
Mixed Heritage	16
Other	3
Prefer not to answer	25

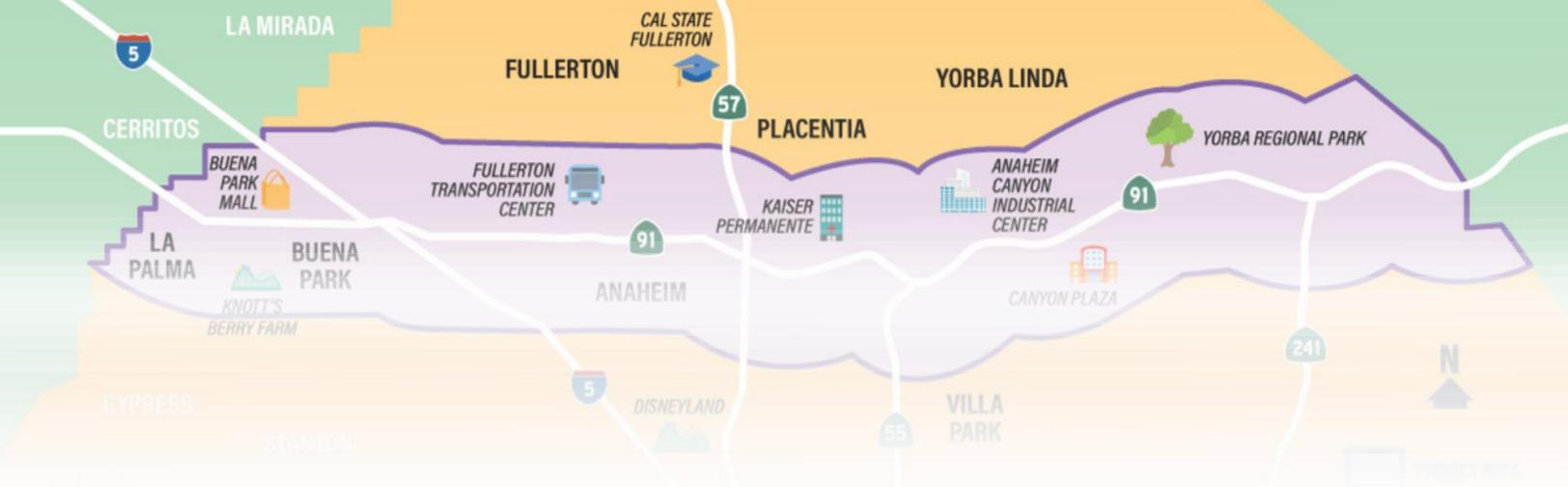
* Based upon 279 respondents

CONCLUSION

Relieving traffic congestion and making improvements generally within existing SR-91 Freeway were two key areas of support when hearing from the public. In addition, multiple people shared the need for improved bus service, first/last mile options and safe biking and walking options. The public feedback will help guide the development of the SR-91 Corridor Plan in order to obtain future funding to improve mobility options and provide transportation choices on and around the corridor.

Appendices

Appendix A: Toolkit



SR-91 Comprehensive Multimodal Corridor Plan Study Communications Toolkit

Dear Stakeholder,

The Orange County Transportation Authority (OCTA) is currently studying a 23-mile stretch of State Route 91 (SR-91) from the Los Angeles County to Riverside County lines. The goal of the SR-91 Comprehensive Multimodal Corridor Plan Study is to improve mobility options and provide transportation choices on and around the SR-91 freeway. Using the findings from the study, OCTA can move toward improving system operations, efficiency and air quality, as well as reducing vehicle miles traveled and encouraging multimodal transportation projects.

As a key stakeholder, we are reaching out to you to offer optional methods for sharing project and public survey details with your community. We plan to engage the public from February to March 27. Below are some suggested options on ways to share project and community survey details:

- Post on social media
- Distribute electronically via email
- Promote on your website
- Announce via newsletter/blog

Please see the next page for simple copy-and-paste-ready text you can use to share this information with your community. Click [here](#) to access all the graphics.

If you have any questions, please contact Marissa Espino at mespino@octa.net or at 714-560-5607. We thank you for your support and look forward to working with you in spreading the word about this study and capturing valuable survey results.

FACEBOOK

Text Option 1:

Join [@qoOCTA](#) in improving mobility and enhancing the quality of life in and around the SR-91 corridor. Start by taking a brief survey at octa.net/91survey then join OCTA for a community webinar on 3/2 at 5:30pm (octa.net/91Plan).

Text Option 2:

[@qoOCTA](#) wants to hear from you! Take a brief survey at octa.net/91survey to share how OCTA can improve mobility and enhance quality of life in and around the SR-91 corridor. Visit octa.net/91Plan to learn more.



TWITTER

Text Option 1:

Join [@qoOCTA](#) in improving mobility and enhancing the quality of life in and around the SR-91 corridor. Start by taking a brief survey at octa.net/91survey then join OCTA for a community webinar on 3/2 at 5:30pm (octa.net/91Plan).

Text Option 2:

[@qoOCTA](#) wants to hear from you! Take a brief survey at octa.net/91survey to share how OCTA can improve mobility and enhance quality of life in and around the SR-91 corridor. Visit octa.net/91Plan to learn more.



INSTAGRAM

Text:

Join [@goOCTA](#) in improving mobility and enhancing the quality of life in and around the SR-91 corridor. Start by taking a brief survey at octa.net/91survey then join OCTA for a community webinar on 3/2 at 5:30pm (octa.net/91Plan).



EBLAST/NEWSLETTER

Body:

The Orange County Transportation Authority (OCTA) wants your feedback on how to improve congestion in the State Route 91 (SR-91) corridor area. OCTA is studying a 23-mile stretch of the SR-91 in Orange County from the Los Angeles County to Riverside County lines. The goal of the SR-91 Comprehensive Multimodal Corridor Plan Study is to enhance mobility options and provide transportation choices on and around the SR-91 freeway by encouraging multimodal projects that improve transit and rail service and active transportation like biking and walking.

The public is invited to attend a virtual community webinar on Wednesday, March 2 from 5:30 to 6:30 p.m. An online survey is also available [here](#). For more info, visit octa.net/91Plan.



NEXTDOOR

Body:

The Orange County Transportation Authority (OCTA) wants your feedback on how to improve congestion in the State Route 91 (SR-91) corridor area. The goal of the SR-91 Comprehensive Multimodal Corridor Plan Study is to enhance mobility options and provide transportation choices on and around the SR-91 freeway by encouraging multimodal projects that improve transit and rail service and active transportation like biking and walking.

The public is invited to attend a virtual community webinar on Wednesday, March 2 from 5:30 to 6:30 p.m. An online survey is also available [here](#). For more info, visit octa.net/91Plan.



Appendix B: Survey



SR-91 Comprehensive Multimodal Corridor Plan Survey

The Orange County Transportation Authority (OCTA) is working to improve mobility and enhance the quality of life along the SR-91 corridor. OCTA is studying the SR-91 corridor in Orange County between the Los Angeles and Riverside County lines. The goal is to help relieve congestion in the SR-91 corridor area (shown in purple above) by encouraging multimodal projects that improve transit and rail service and active transportation like biking and walking.

1. What is your home zip code? _____
2. Why do you travel in the SR-91 corridor area? To access (check all that apply):
 - Work
 - School
 - Healthcare
 - Entertainment (amusement park, dining, events, etc.)
 - Shopping
 - Recreation (park, beach, etc.)
3. How do you travel most often in and around the corridor area? (pick top three choices)
 - Drive
 - Bus
 - Bike
 - Walk on sidewalks or paths
 - Rideshare (carpool, vanpool, taxi/Uber/Lyft, etc.)
 - Other
4. What are the biggest challenges you face when you travel in and around the corridor area? (pick top three choices)
 - Traffic congestion on streets
 - Traffic congestion on SR-91 freeway
 - Wait time at traffic signals
 - Lack of continuous bike lanes
 - Wait time for bus service
 - Limited express bus and rail service
 - Lack of sidewalks/crosswalks
5. What are the best ways to improve the challenges you face in and around the corridor area? (pick top three choices)
 - Improve traffic and pedestrian signal timing at intersections
 - Increase bus frequency and/or provide new service
 - Add high-capacity transit improvements such as streetcar or bus rapid transit (limited stops)

- Add community shuttles to major destinations and rail stations
- Provide more continuous bike lanes
- Provide more pedestrian amenities (i.e. wider sidewalks, better lighting)
- Make improvements generally within existing SR-91 Freeway

Thanks for your input! Now please tell us a little about yourself.

6. What is your age range?
 - 16-24
 - 25-34
 - 35-44
 - 45-54
 - 55-64
 - 65-74
 - 75 or older
7. What is your combined annual household income?
 - Less than 30,000
 - 30,000 - 49,999
 - 50,000 - 79,999
 - 80,000 - 109,000
 - 110,000 - 169,000
 - 170,000 or more
 - Prefer not to answer
8. What ethnic group do you consider yourself a part of or feel closest to?
 - Caucasian/White
 - Latino/Hispanic
 - African American/Black
 - American Indian or Alaskan Native
 - Asian
 - Pacific Islander
 - Middle Eastern
 - Mixed Heritage
 - Other
 - Prefer not to answer
9. Sign up to receive project updates and meeting invites
Email Address _____

Appendix C: Social Media

Twitter Posts:



OCTA
@goOCTA

Help us improve mobility and enhance the quality of life along the SR-91 freeway. Take a brief survey at octa.net/91Survey then join us for a community webinar on March 2, at 5:30 pm. Learn more at octa.net/91Plan.



3:00 PM · Feb 16, 2022 · Sprinklr Publisher



OCTA
@goOCTA

We want to hear from you! Take a brief survey at octa.net/91Survey to share how we can improve mobility and enhance the quality of life along the SR-91 freeway. Visit octa.net/91Plan to learn more.

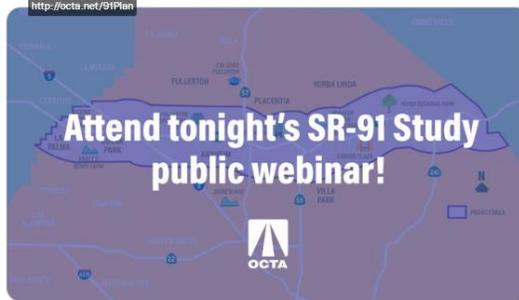


11:30 AM · Feb 24, 2022 · Sprinklr Publisher



OCTA
@goOCTA

Join our community webinar tonight at 5:30 pm! Tell us how we can improve mobility and enhance the quality of life in and around the SR-91 freeway at octa.net/91Plan.



8:30 AM · Mar 2, 2022 · Sprinklr Publisher



OCTA
@goOCTA

We want to hear from you! Take a brief survey at octa.net/91survey to share how we can improve mobility and enhance the quality of life in and around the SR-91 freeway. Visit octa.net/91Plan to learn more.



3:00 PM · Mar 14, 2022 · Sprinklr Publisher



OCTA
@goOCTA

Last chance to tell us how we can improve mobility and enhance the quality of life in and around the SR-91 freeway! Visit octa.net/91survey to share your thoughts.



11:30 AM · Mar 26, 2022 · Sprinklr Publisher

Facebook Posts:

 **OCTA**
February 16 · 🌐

Help us improve mobility and enhance the quality of life along the SR-91 freeway. Take a brief survey at octa.net/91Survey then join us for a community webinar on March 2, at 5:30 pm. Learn more at octa.net/91Plan.



OCTA.NET
SR-91 Multimodal Corridor Plan
The goal of the study is to improve options on and around the corr...

 **OCTA**
February 24 · 🌐

We want to hear from you! Take a brief survey at octa.net/91Survey to share how we can improve mobility and enhance the quality of life along the SR-91 freeway. Visit octa.net/91Plan to learn more.



OCTA.NET
SR-91 Multimodal Corridor Plan
The goal of the study is to improve options on and around the corr...

 **OCTA**
March 14 · 🌐

We want to hear from you! Take a brief survey at octa.net/91survey to share how we can improve mobility and enhance the quality of life in and around the SR-91 freeway. Visit octa.net/91Plan to learn more.



OCTA.NET
SR-91 Corridor Plan
The goal of the SR-91 study is to improve mobility options along t...

 **OCTA**
March 2 · 🌐

Join our community webinar tonight at 5:30 pm! Tell us how we can improve mobility and enhance the quality of life in and around the SR-91 freeway at octa.net/91Plan.



OCTA.NET
SR-91 Corridor Plan
The goal of the study is to improve transportation options along th...

 **OCTA**
March 26 · 🌐

Last chance to tell us how we can improve mobility and enhance the quality of life in and around the SR-91 freeway! Visit octa.net/91survey to share your thoughts.



OCTA.NET
SR-91 Corridor Plan
The goal of the SR-91 study is to improve mobility options along t...

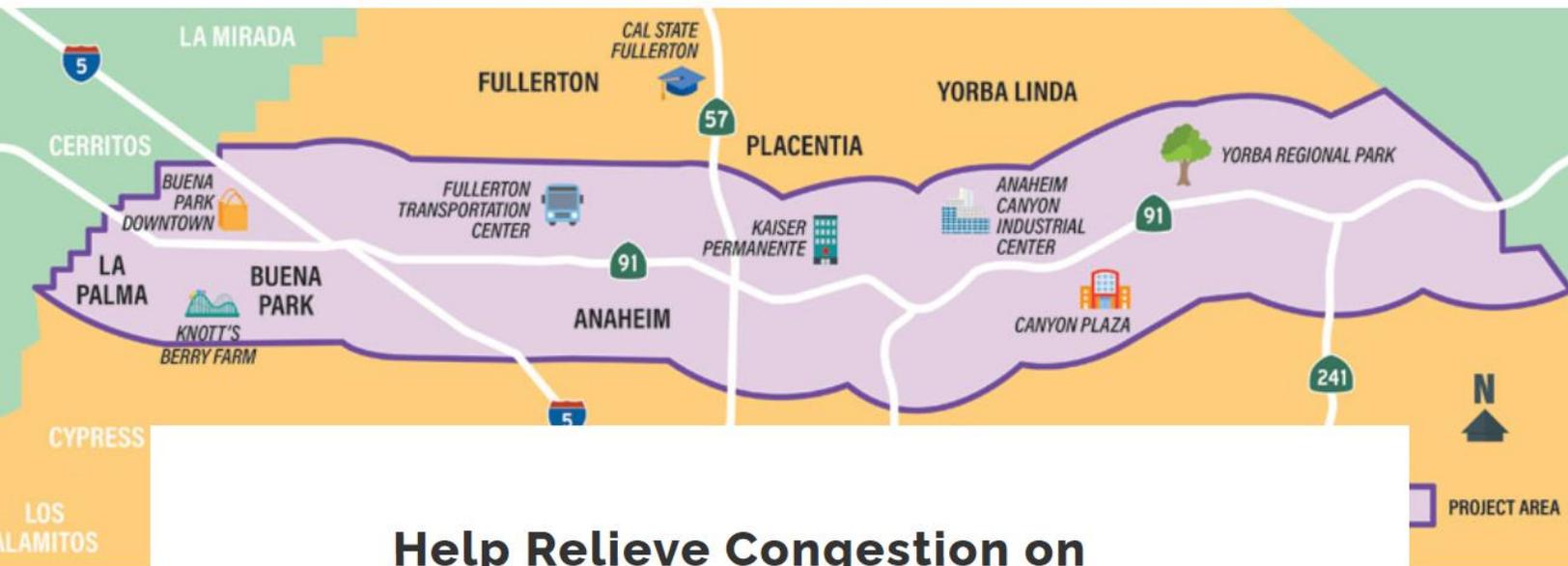
 **OCTA**
March 1 · 🌐

Join a webinar on March 2 and take an online survey to help enhance mobility and provide transportation choices.



BLOG.OCTA.NET
Help Relieve Congestion on the SR-91 Corridor

Appendix D: eBlasts



Help Relieve Congestion on the SR-91 Corridor

Thursday, February 24, 2022



State Route 91 (SR-91) is an essential travel corridor and a major source of employment, entertainment/recreation venues and academia generating high traffic volumes ranging from 225,000 to 325,000 vehicles per day. The corridor is largely built-out with residential, business, and developments continuing to put pressure on public transportation and increasing the need for mobility choices.

OCTA is studying a 23-mile stretch of the SR-91 in Orange County from the Los Angeles County to Riverside County lines. The goal of the SR-91 Comprehensive Multimodal Corridor Plan Study is to enhance mobility options and provide transportation choices on and around the SR-91 freeway by encouraging multimodal projects that improve transit and rail service and active transportation like biking and walking.

The public is invited to attend a virtual community webinar on Wednesday, March 2 from 5:30 to 6:30 p.m. An online survey is also available [here](#).

For more information about the study, visit [here](#).



SR-91 Comprehensive Multimodal Corridor Plan Study

WE WANT TO HEAR FROM YOU

The Orange County Transportation Authority (OCTA) wants your feedback on how to improve congestion in the State Route 91 (SR-91) corridor area. OCTA is studying a 23-mile stretch of the SR-91 in Orange County from the Los Angeles County to Riverside County lines. The goal of the SR-91 Comprehensive Multimodal Corridor Plan Study is to enhance mobility options and provide transportation choices on and around the SR-91 freeway by encouraging multimodal projects that improve transit and rail service and active transportation like biking and walking. For example, making improvements to a Metrolink station or implementing limited-stop bus service could help relieve congestion on the SR-91.

YOU'RE INVITED!

Here are all the ways you can learn more about the study, provide input and ask questions.

Public Webinar - Simulcast in Spanish

Date: Wednesday, March 2, 2022

Time: 5:30-6:30 p.m.

[Zoom Link](#)

(A recording of the presentation will be posted online after the meeting.)

Online Survey

Take a short, [online](#) survey to share your feedback.

Learn More

Visit octa.net/91Plan to learn more about the study, make a [comment](#), and sign up to get future updates.

Appendix E: Pop-Up Photos

Pop-Up Photos

Anaheim Farmer's Market



Fullerton Farmer's Market



Buena Park Family Art Festival



Yorba Linda Town Center

