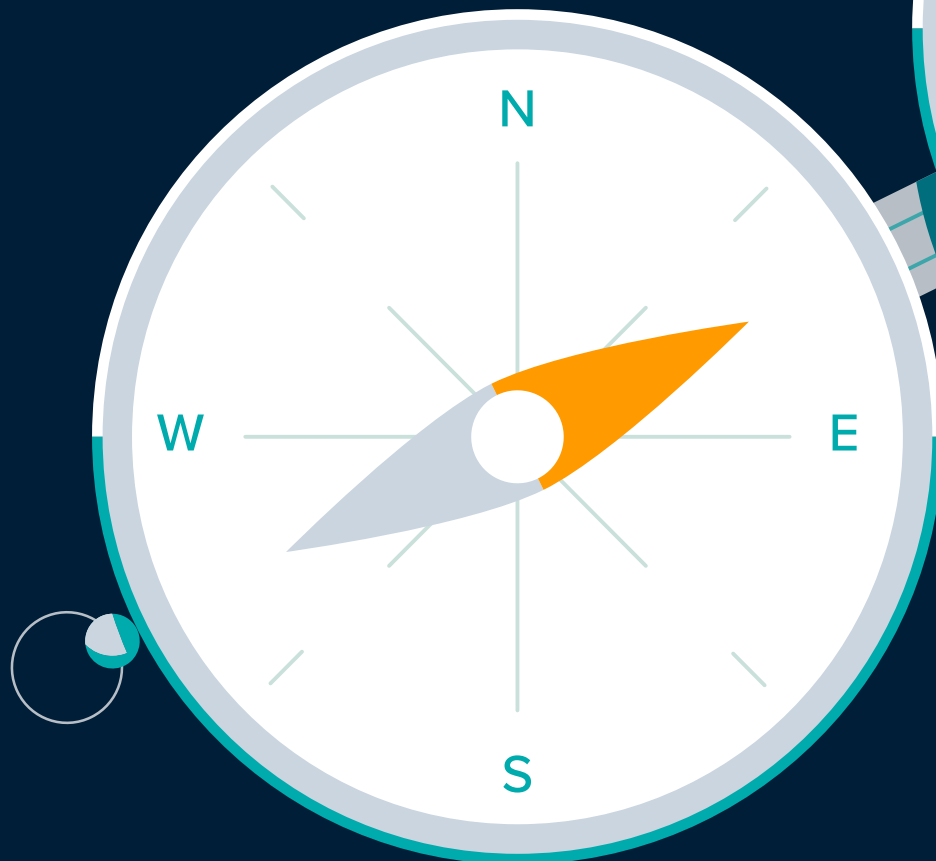


Connect SoCal

A Plan for Navigating to a Brighter Future

DRAFT PLAN, NOVEMBER 2, 2023



The Southern California Association
of Governments' 2024-2050
Regional Transportation Plan/
Sustainable Communities Strategy

ABOUT SCAG

The Southern California Association of Governments (SCAG) leads the region. Founded in 1965, it is the nation's largest metropolitan planning organization and council of governments, encompassing six counties and 191 cities. In addition to conducting research and developing long-range transportation plans, SCAG convenes local governments and agencies to address regional transportation, land use and other issues of mutual concern.

FUNDING

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U.S. Department of Transportation
Federal Highway Administration
Federal Transit Administration



Our Vision

Southern California's catalyst
for a brighter future

Our Mission

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

Our Core Values

Be Open

Be accessible, candid, collaborative and transparent in the work we do.

Lead by Example

Commit to integrity and equity in working to meet the diverse needs of all people and communities in our region.

Make an Impact

In all endeavors, effect positive and sustained outcomes that make our region thrive.

Be Courageous

Have confidence that taking deliberate, bold and purposeful risks can yield new and valuable benefits.

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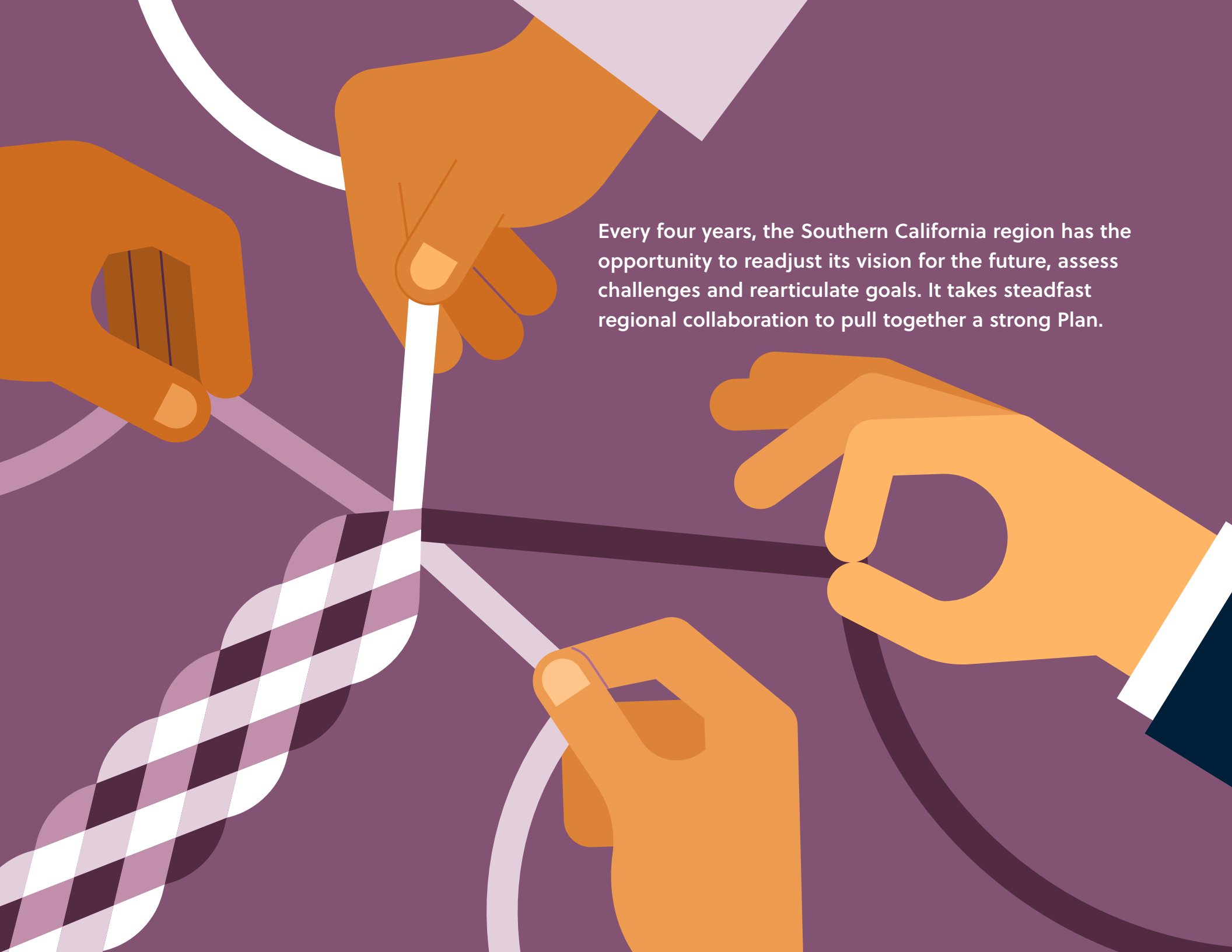
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Executive Summary

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An illustration on a purple background showing four hands in shades of orange and brown. The hands are holding a white ribbon that forms a complex, interlocking knot. The knot has a black and white checkered pattern on its surface. The hands are positioned around the knot, with some holding the ends and others supporting the structure. The overall style is flat and graphic.

Every four years, the Southern California region has the opportunity to readjust its vision for the future, assess challenges and rearticulate goals. It takes steadfast regional collaboration to pull together a strong Plan.

1.1

Connect SoCal 2024

Connect SoCal 2024 reflects a continuum of progress across each planning cycle, not just in the technical capabilities of our state-of-the-art modeling tools or advancements in data collection but in building upon local agencies progress completing projects—and through the stewardship and policy leadership of special subcommittees. While the Plan remains focused on its core responsibilities, and on the requirements of comprehensive regional transportation planning integrated with the development of a Sustainable Communities Strategy (SCS), it also encompasses a holistic approach to programs and strategies that support success of the Regional Transportation Plan (RTP)/SCS, such as workforce development, broadband and mobility hubs.

THE BIG PICTURE

Plan Requirements

As the Metropolitan Planning Organization (MPO) for the region, SCAG is required by federal law (23 USCA Section 134 et seq.) to prepare and update a long-range Regional Transportation Plan (RTP) every four years. The Plan must provide for the development, integrated management and operation of transportation systems and facilities that will function as an intermodal transportation network for the SCAG metropolitan planning area. The process for development of the Plan takes into account all modes of transportation, federal planning factors and goals and objectives of the California Transportation Plan (CTP 2050)—and is accomplished by a “continuing, cooperative and comprehensive” planning approach, which is also performance-driven and outcome-based. In addition, because most areas within the SCAG region have been designated as nonattainment or maintenance areas for one or more transportation-related criteria pollutants under the federal Clean Air Act (42 U.S.C. Section 7401 et seq.), the Plan must conform to the applicable State Implementation Plan (SIP). The passage of California Senate Bill 375 (SB 375) in 2008 requires that SCAG prepare and adopt a Sustainable Communities Strategy (SCS) that sets forth a forecasted regional development pattern which, when integrated with the transportation network, measures and policies, will reduce greenhouse gas (GHG) emissions from automobiles and light-duty trucks and achieve the GHG emissions reduction target for the region set by the California Air Resources Board (Govt. Code Section 65080(b)(2)(B)).



READ THE SUPPLEMENT

To see a full description of the laws that guide the plan, see the Supplementals section.

Setting a Vision for 2050

Southern California is a vast region with a diversity of landscapes and communities. The six counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura are home to a population of nearly 19 million people, powering the 16th largest economy in the world. The region is a vibrant economic hub and a center for innovation, culture and entertainment. Southern California is a polycentric megaregion that operates as a single labor market, housing market and transportation shed. This means that people and destinations are more spread out, with linkages both within and across communities. This dispersed activity, combined with decades of prioritizing roadway investments, has led to increasing congestion and poor air quality. In addition, the rewards of our economic prosperity have not been equitably shared. Some communities and their residents face more adverse health consequences based on where they live—or they have less access to opportunities, including housing. The region is also vulnerable to challenges outside of anyone’s immediate control, like global economic shifts or a pandemic.

Connect SoCal is a long-term plan for the Southern California region that details investment in our transportation system and development in our communities to meet the needs of the region both today and tomorrow. The horizon year for Connect SoCal is 2050.

What kind of future are we envisioning?

Healthy: Southern California’s sustainable future hinges on a commitment to improved public health. The efforts to improve how we travel and where we develop will help us achieve environmental goals, like meeting air-quality standards and GHG emission-reduction targets, but will also contribute to better public health outcomes. Because the transportation sector is the largest contributor to statewide GHG emissions, Connect SoCal 2024 will expand alternatives to driving alone—with transit as a backbone of the regional transportation


system—and the focus on cleaner transportation. Land use planning will concentrate on reducing sprawl, preserving open spaces, increasing access to important resources and enhancing resilience to climate change impacts.

Prosperous: Connect SoCal fosters an inclusive and resilient economy. Strategic investments in infrastructure and transportation will improve access to employment centers and stimulate regional economic growth and opportunity in historically underserved areas. The region will prioritize workforce development initiatives, entrepreneurship and innovation to create diverse job opportunities across industries. Connect SoCal will advance the transition to clean-transportation technologies, such as the development of a roadmap for the infrastructure to support zero-emission medium- and heavy-duty trucks. Investment in clean technologies and the transition to a clean-energy economy will provide valuable opportunities to support economic development and recovery, resilience planning and the achievement of equity.

Accessible: Connect SoCal envisions a future where transportation is efficient, multimodal and accessible to all. Integrated transit networks, including expanded rail systems, bus rapid transit and active transportation infrastructure, will provide seamless connections throughout the region and expand mobility options connecting to previously underserved areas. The improved safety and security of the system will help more people feel comfortable taking transit or active transportation. Innovative technologies, such as zero-emission vehicles, broadband and Intelligent Transportation Systems, will play a vital role in expanding accessibility and reducing congestion and emissions.

Connected: The Southern California region will be characterized by connected and vibrant communities. New compact and mixed-use development patterns will prioritize walkability and create livable neighborhoods with ample green spaces, public amenities and affordable housing options. Transit-oriented development will foster thriving urban centers, reducing dependency on single-occupancy-vehicle travel and the need for long commutes.

Achieving this vision will require the collaboration of each community as well as leadership at the local, regional and state levels to take bold actions that address the injustices of the past, face the challenges of today and make investments for the future. SCAG is committed to ensuring that Connect SoCal remains a living document that is rooted in strong analysis and evolves alongside changes in the economy, technologies and demographics. SCAG adopted its first Regional Transportation Plan/Sustainable Communities Strategy in 2012. At that time, the region faced uncertainty as to how recovery from the Great Recession would impact the region over the long term. There were not yet e-scooters on our sidewalks, and there were less than 10,000 electric vehicles on our roads. Navigating this shifting context requires continued collaboration with local and state government agencies and other stakeholders.



In 2050, Southern California will be a healthy, prosperous, accessible and connected region for a more resilient and equitable future.

Addressing Regional Challenges

Over the past several decades, the Southern California region has faced a number of challenges, many of which continue to evolve today. The prominent issues outlined below contextualize solutions proposed in Chapter 3.

Mobility

Our historic prioritization of roadway-system expansion and dispersed land use patterns has led to severe congestion on our roadways, long commute times and declining transit ridership. The SCAG region has invested billions of dollars over the last few decades to improve accessibility and reduce congestion by providing alternatives to driving alone. These alternatives include regional commuter rail, light rail and the bus network. However, more work is needed to better manage both the viability and reliability of the transportation system and consumer demand for it.

A considerable challenge is securing adequate funding for transportation—not just for new infrastructure but also for investment in system preservation, operations support for transit and passenger rail, and increasing resiliency needs. Although the passage of Senate Bill 1 (SB 1) (2017) provided much-needed funding for system preservation, we have only managed to maintain the condition of local streets and roads to match their condition from four years ago—which is below a state of good repair. As we shift to a zero-emission transportation system, there will be an increased decline of transportation revenue sources dependent on fuel taxes, further deteriorating pavement conditions. SCAG will collaborate with federal, state and local partners to leverage existing revenue sources, explore innovative funding and financing mechanisms and advocate for increased investment in the region’s transportation needs.

Communities

The region’s communities are often fragmented, lacking connectivity and having unequal access to housing and essential services such as education, healthcare and employment. This fragmentation hinders the overall quality of life for residents and results in higher costs for both housing and transportation. In addition, Southern California’s housing crisis has been decades in the making. The quantitative impacts of the housing crisis, such as overcrowding, cost-burden and home-ownership rates, disproportionately burden communities of color. The 6th cycle RHNA identified a need of over 1.3 million units in the SCAG region to address this crisis. Building consensus and garnering public support for transformative change is essential. SCAG will engage diverse stakeholders, including community organizations, advocacy groups and residents to ensure their voices are heard and incorporated into decision-making processes.

While the region boasts a resilient economy, diverse natural resources and a robust transportation system, it faces challenges in providing equitable opportunities. Disparities in access to education and training, affordable housing and transportation contribute to regional inequities.

Environment

Southern California experiences significant air pollution that impacts public health and contributes to climate change. Climate change-related hazards are becoming more intense, with widespread regional impacts that include wildfires, drought, extreme weather and rising sea levels that negatively impact public health, welfare and the economy. The impacts of climate change also exacerbate underlying health risks in vulnerable and historically marginalized communities. In addition, urbanization continues to consume farmlands and open spaces, which contributes to the loss of groundwater supply and habitat areas that play a critical role in strengthening the region's resilience. SCAG will collaborate with federal, state and local partners to ensure that the implementation of the Plan helps address existing air-quality challenges, preserve natural lands and reduce GHG emissions.

Economy

While the region boasts a resilient economy, it faces challenges in providing equitable economic opportunities. Disparities in access to education and training opportunities, affordable housing and transportation options hinder inclusive growth and contribute to inequities. The goods-movement sector supports a diversity of jobs but faces instability with global supply chains, exponential increases in freight activity and volatility, congestion and bottlenecks that threaten the loss of market share, and the challenge of mitigating community and environmental impacts. SCAG will collaborate with public and private stakeholders to ensure the benefits of a robust economy are shared by providing access to infrastructure like broadband, supporting workforce development opportunities—particularly around the deployment of clean technologies—and conducting comprehensive, systems-level planning for goods movement.



As the largest metropolitan planning organization in the country, SCAG has worked collaboratively with transportation agencies across Southern California for 50 years to align and connect transportation investments across the six-county region through the adoption of Regional Transportation Plans. With the more recent passage of SB 375, SCAG has broadened this collaboration over the last 15 years to integrate local land use and transportation planning through the development of a Sustainable Communities Strategy.

1.2

Planning for a Better Tomorrow



Connect SoCal 2024 reflects a continuation of the shift toward more efficient resource management. This refers to our transportation infrastructure, land resources and environmental resources.

Historically, the region has been able to build outward to accommodate population growth and then augment the transportation network to support that growth. Going forward, plans and programs will leverage our existing assets and infrastructure through an increased focus on system management, revitalization and reuse. This could include infill development and repurposing underutilized properties. This will look different for each community, as there are no one-size-fits-all solutions in such a diverse region.

By working collaboratively, we can be better stewards of our land and our public investments.

ALL ABOUT THE PLAN

Plan Development

Connect SoCal was developed through a four-year planning process that involved rigorous technical analysis, extensive stakeholder engagement, consultation with state and federal governments (such as land management agencies), and robust policy discussions with local elected leaders who make up SCAG's policy committees and Regional Council. This process also included formal input processes for our Project List from County Transportation Commissions and land use and growth data from local jurisdictions. In spring 2023, SCAG engaged with thousands of people across the region to gain a clear understanding of the issues and policy choices for the region.

Plan Goals

The goals for Connect SoCal are designed to help us achieve our vision. They fall into four core categories: mobility, communities, environment and economy. These goals are not mutually exclusive—they are mutually reinforcing. For example, the decisions and actions taken to achieve mobility goals can also help to achieve and support environmental goals. The top-line goals are highlighted below, and the supportive subgoals are further detailed in Chapter 3.

Mobility: Build and maintain a robust transportation network

Communities: Develop, connect and sustain communities that are livable and thriving

Environment: Create a healthy region for the people of today and tomorrow

Economy: Support a sustainable, efficient and productive regional economic environment that provides opportunities for all residents

Focusing on Objectives

By 2050, the population of the region is projected to increase by two million people, or 11 percent, with an increase of 1.6 million housing units, or 26 percent, and 1.3 million jobs, or 14.2 percent.

This Plan invests \$750.1 billion in our transportation system, primarily in operations and maintenance, to ensure the continued performance of our current network. Implementation of Connect SoCal 2024 will add 181,200 new miles of transit revenue service, 4,000 new miles of bike lanes and 869 new miles to the Regional Express Lane Network. More importantly, the Plan includes investments and strategies to better manage these and past investments, including an Intelligent Transportation System and policies for Transportation Demand Management.

Sixty-seven percent of new households and 55 percent of new jobs between 2019–2050 will be located in Priority Development Areas, either near transit or in walkable communities.

This will create a region with:

- Transit as a backbone of the transportation system
- More Complete Streets where people and safety are prioritized
- Policies that encourage emerging technologies and mobility innovations that support rather than hamper regional goals
- More housing, jobs and mobility options closer together in Priority Development Areas to preserve natural lands and open spaces
- More housing to address the “existing housing need” as defined by the Regional Housing Needs Assessment
- Safe and fluid movement of goods, with a commitment to the broad deployment of zero- and near-zero emission technologies

For more details on the policies and projects included in Connect SoCal, see Chapter 3.

Altogether, the Plan's investments will create over 275,000 jobs and increase transportation efficiency and regional output to provide benefits of two dollars per dollar invested.

In addition to meeting our GHG reduction target, Connect SoCal will deliver significant benefits to the region with respect to mobility, safety, health outcomes, travel-time reliability, air quality, economic productivity, environmental justice and transportation asset condition. For more details on the benefits and results of Connect SoCal, see Chapter 5.

Achieving the Vision

Connect SoCal embodies a collective vision for the region's future through the horizon year of 2050. It is developed with input from a wide range of constituents and stakeholders from all six of the SCAG region counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura, including public agencies, community organizations, elected officials, tribal governments, the business community and the general public.

This document outlines the challenges facing our region, our shared goals and policies, and the transportation investments and land use strategies needed to chart a path toward a brighter future. However, SCAG is just one part of a large body of governments and public agencies that collectively plan, construct, operate and maintain the region's transportation system, plan for housing and regulate land use. SCAG's work helps facilitate implementation, but the agency does not directly implement or construct projects or have land use authority.

Connect SoCal allows public agencies who implement transportation projects to do so in a coordinated manner while supporting economic growth, achieving environmental goals, promoting public health, quality of life, and social equity, and ensuring continued access to federal and state transportation funding. The Plan includes robust financial analysis that considers operation and maintenance costs to ensure our existing transportation system's reliability, longevity, resilience and cost-

effectiveness. The Plan outlines a forecasted development pattern that demonstrates how the region can sustainably accommodate needed housing. In addition, Connect SoCal is supported by a combination of transportation and land use strategies that outline how the region can achieve California's GHG-emission-reduction goals and federal Clean Air Act requirements. These are articulated in a set of Regional Strategic Investments, Regional Planning Policies and Implementation Strategies. Within those elements, the Plan also strives to achieve broader regional objectives, such as increased housing production, improved equity and resilience, the preservation of natural lands, improvement of public health, increased transportation safety, support for the region's vital goods movement industries and more efficient use of resources.

Connect SoCal embodies a collective vision for the region's future through 2050. It is developed with input from a wide range of constituents and stakeholders from all six counties in the SCAG region including public agencies, community organizations, elected officials, tribal governments, the business community and general public.

HOW IT WORKS

Connect SoCal Performance-Based Planning

VISION AND GOALS

SCAG leads the region by defining where we want to go and outlining strategies to get us there.

Leadership

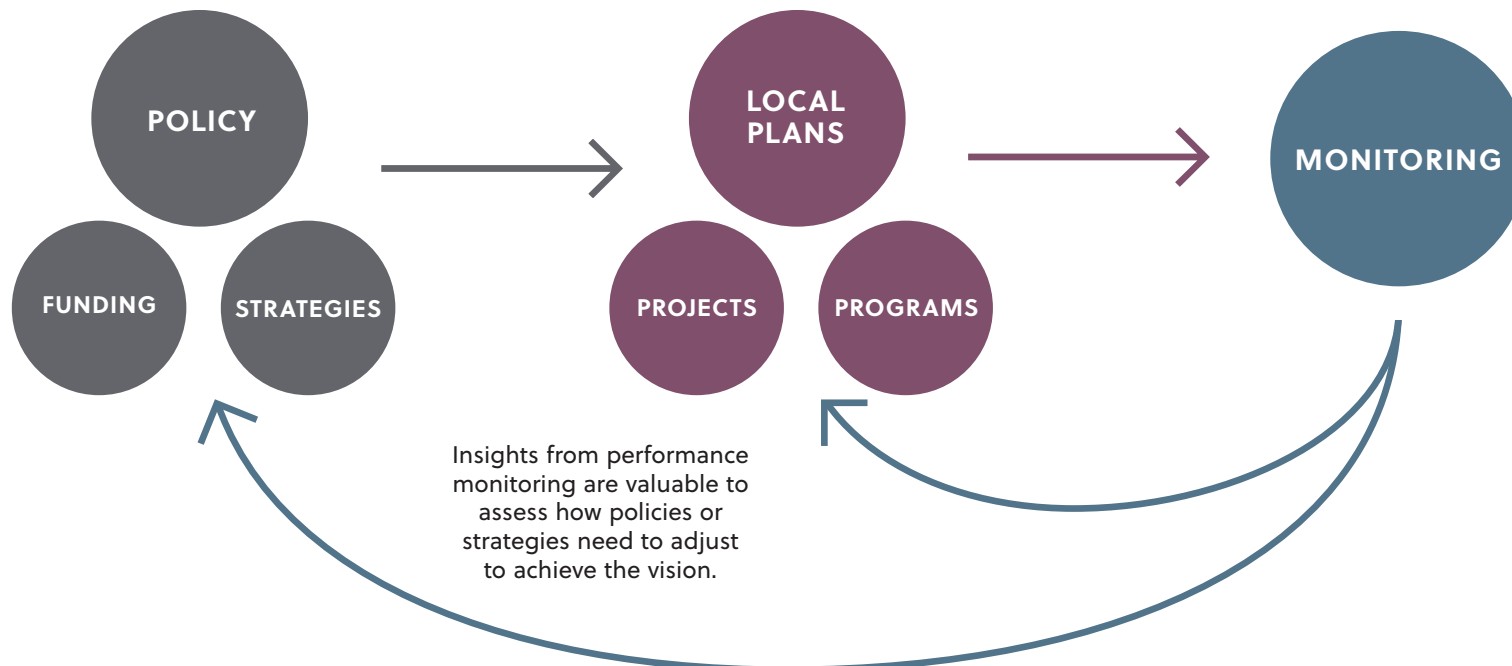
SCAG works with local jurisdictions, transportation commissions, state and federal agencies and various stakeholder groups to identify how we will work together to achieve the regional vision.

Implementation

Jurisdictions take action at the local level to implement work that moves toward achieving this regional vision.

Evaluation

Measurement of implementation work and outcomes acts as a benchmark on progress toward achieving the vision.



1.3

SCAG Leadership



Connect SoCal development is led by SCAG's 86-member governing board, known as the Regional Council, which represents 67 districts. Membership in SCAG's Regional Council also includes representation from each county Board of Supervisors and one representative from the Southern California Native American Tribal Governments.

SCAG's decision-making process is also guided by its Executive/Administration Committee, Legislative/Communications and Membership Committees and three Policy Committees. Much of the discussion occurs in the Policy Committees. All issues considered by the Regional Council must originate through one or more of the committees.

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1.4

Data and Details

Connect SoCal is rooted in deep research, data collection and policy development. This book, the Connect SoCal “main book”, presents a summary of that work. Further detail on Plan elements and analysis can be found in the Plan’s accompanying Technical Reports.



TECHNICAL REPORT	SUMMARY
Aviation and Airport Ground Access	Discussion of the regional airport and aviation system, including the regulatory, operational and planning framework; airports in the SCAG region; passenger and cargo trends; surface transportation modal choices; passenger forecasts; and highlights of airport ground-access improvement projects
Congestion Management	Details the state and federal congestion management regulatory framework, discusses congestion performance measures, and describes strategies to reduce congestion
Transportation Finance	Describes Plan financial elements, including projected revenues and expenditures
Transportation Conformity Analysis	Discussion of latest planning assumptions, regional emissions analysis, financial constraint analysis, timely implementation of transportation control measures (TCMs), interagency consultation and public involvement, and conformity findings
Goods Movement	Discussion of regional goods movement systems, including seaports, rail, air cargo and trucking—and their relationships to industrial and retail facilities; global and national supply chains; local and national consumption; regulatory frameworks; technology transitions and community impacts
Equity Analysis	Equity analysis to evaluate the potential impacts of the implementation of the Plan on communities of color, low-income populations and other underserved communities
Performance Monitoring	Plan performance assessment metrics and results, and ongoing regional performance monitoring over time
Project List	List of constrained and unconstrained projects

TECHNICAL REPORT	SUMMARY
Public Participation and Consultation	Documentation of consultation, outreach and engagement activities
Mobility	Focuses on overarching and intersectional issues across all transportation modes. Subsequent modal-specific chapters: Transit/Rail, Active Transportation, and Streets and Highways. Each includes a discussion on our existing conditions, challenges and key strategies
Economic Impact Analysis	Discussion of the Plan's regional economic impacts
Demographics and Growth Forecast	Analysis of the region's current demographics and anticipated future population, household and employment growth patterns
Land Use and Communities	Discussion of the Plan's Forecasted Regional Development Pattern and strategies for sustainable and resilient land use
Housing	Discussion of the regional housing supply and strategies to increase access to housing
Travel and Tourism	Discussion of travel and tourism in the region, including key destinations, the transportation system, programs serving travel and tourism in the region, and the local, county and state agencies, and nonprofit organizations working on enhancing tourism in the region

2

Our Region Today

Past and Present	26
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With a diverse geography that spans 38,000 square miles, Southern California is the 16th biggest economy in the world. This chapter examines the most significant trends and challenges across the region today.



2.1

Past and Present



The fabric of today's Southern California communities is rooted in activities and decisions of people who came before us. Travelers on Wilshire Boulevard in Los Angeles are tracing the path that Kizh people used to gather tar and reach the ocean.¹ Neighborhoods and corridors throughout the region trace the former routes of the Pacific Electric Railway. Today's freeways dissected once-vibrant communities in eastern Los Angeles when they were developed in the 1960s.

Planning for the future requires an understanding of how the past informs our present-day environment and infrastructure—and opportunities for people who live in the region. Before we can plan for the future, we must assess the existing conditions in the region, including challenges, recent progress and broader context.

CONTEXT FOR CHANGE

Planning for Justice

Understanding the context of regional planning includes considering the historical circumstances that led to the transportation system and built environment that exist today, as well as broader economic and technological trends. As a regional planning organization, understanding the disparities and inequities resulting from geography and the built environment are central to SCAG's work to plan for a more racially just and equitable future.

Policy Roots of Inequality

Throughout history, communities of color have faced limitations in mobility, housing and accessing essential services due to federal, state and local policies that resulted in racial segregation, gentrification, displacement and systemic underinvestment.

In 1911, the newly established California Highway Commission implemented federal policy direction to create the Interstate Highway System, furthered by the 1921 and 1944 Federal Aid Highway Acts. The Commission determined project locations, and both state and local officials routed new freeways through existing communities of color, displacing thousands of households through eminent domain. Much of this freeway construction was in service of an explicitly segregationist suburban housing boom. Racist policies and decisions also influenced the siting of other types of transportation infrastructure, such as commuter railways and the delivery of transit services.

In 1934, the Federal Housing Administration (FHA) was established to facilitate numerous tasks, including assisting with home financing, improving housing standards, making housing and mortgages more

affordable and increasing employment in the home construction industry in the wake of the Great Depression. However, while its core function was to insure home mortgage loans by banks and private lenders, the FHA refused to insure mortgages to Black residents and in Black neighborhoods. Beyond leaving Black residents unable to build the wealth that comes through the purchase of a home, these practices significantly reduced their housing options. Access was limited to neighborhoods that lacked adequate investments and resources and, in some cases, had a prevalence of noxious land uses. It is important to note that the impacts experienced by Black residents cited above also impacted other people of color.

This FHA home-valuation system was known as "redlining" because maps created by the Home Owners' Loan Corporation and the FHA used red to color-code neighborhoods where Black residents lived, indicating these areas were too risky to insure mortgages. The FHA also tacitly endorsed the use of restrictive covenants, which were private agreements attached to property deeds to prevent the purchase of homes by Black, Hispanic (Latino), Asian and Native American people. Though the FHA announced that it would not insure mortgages with restrictive covenants in 1950, redlining lasted until the mid-1960s.

People of color had few choices where to live. Neighborhoods where they were allowed to live became overcrowded and were often adjacent to noxious land uses that created unhealthy living conditions. Many of these neighborhoods were located next to polluting industrial infrastructure, sped up by burgeoning industrial factories in the defense, garment and automobile industries. Many of the highway infrastructure projects not only cleared existing neighborhoods but also contributed to heavy air pollution that led to ongoing asthma and health conditions in remaining residents. Even in neighborhoods where people of color found housing, they were threatened by violence and urban renewal policies. The Federal Housing Acts of 1949 and 1954 enabled the clearing of blighted areas and led to the demolition of affordable housing units in urban areas and neighborhoods inhabited by people of color.

Steps Toward Fairness

Attempts have been made through various federal and state laws and regulations, including the Civil Rights Act of 1964 and Executive Order 12898 (1994), to identify and rectify the impacts of racially discriminatory policies. More recently at the federal level, Executive Order 13985 (2021) and Executive Order 14091 (2023) directed federal agencies to make policy changes to strengthen the federal government’s ability to address the barriers that underserved communities continue to face. These include the creation of annual progress reports on Equity Action Plans. Executive Order 14008 (2021) established the first-ever White House Environmental Justice Advisory Council and the Justice40 Initiative, which commits to delivering 40 percent of the overall benefits of federal investments in climate, clean energy, affordable and sustainable housing, clean water and other investments to disadvantaged communities that have been historically marginalized, underserved and overburdened by pollution.

At the state level, Senate Bill 115 (1999) called for “the fair treatment of people of all races, cultures and income with respect to development, adoption and implementation of environmental laws, regulations and policies” to be included in the development of General Plans. More recently, Governor Newsom issued Executive Order N-16-22 (2022) to strengthen the state’s focus on advancing equity and tackling disparities. Targeting the historic inequities of transportation investment, Senate Bill 535 (De Leon, 2012) required at least 25 percent of Greenhouse Gas Reduction Funds, collected as a result of Assembly Bill 32 (Nunez 2006), go to projects benefiting disadvantaged communities, with at least 10 percent of projects to be located directly within those communities. In 2016, California passed Senate Bill 1000, The Planning for Healthy Communities Act, requiring local jurisdictions to create an Environmental Justice element and integrate environmental justice–related policies, goals and implementations aimed to aid disadvantaged communities into their General Plans. In addition, recently adopted legislation is helping SCAG work toward improving the availability of housing for all residents. In 2018, the State of California adopted legislation requiring local governments to “affirmatively further fair housing.” (Assembly Bill 1771 (2018))

Prior to the final adoption of Connect SoCal, in July 2020 SCAG’s Regional Council made a commitment to advancing justice, equity, diversity and inclusion throughout the region (Resolution 20-623-2). For the region to become healthy, livable, sustainable and economically resilient, SCAG recognized that it would need to dramatically improve outcomes for low-income families and people of color. To that end, SCAG’s core function, its planning work, must directly address the long-standing systemic and institutional barriers that have fostered inequities in health, wealth and opportunities. SCAG adopted its Racial Equity Early Action Plan in May 2021 to help facilitate the consistent integration of equity into its planning work. The Racial Equity Early Action Plan provides a definition of equity and establishes goals, strategies and a set of “early actions” to advance racial equity through SCAG’s policies, practices and activities. In 2022 and 2023, equity’s integration into Connect SoCal was prioritized through the convening of the Racial Equity & Regional Planning Subcommittee. The subcommittee recommended that Connect SoCal 2024 function as a vehicle to promote racial equity, to address the historic impacts of systemic racism, and coordinate and implement equity-centered activities across the region.



LET’S GET TECHNICAL

The Connect SoCal Housing Technical Report includes a detailed assessment of existing conditions including housing stock, overcrowding, housing tenure and displacement pressures.

The Connect SoCal Equity Analysis Technical Report includes a detailed analysis of how the Plan impacts protected populations as defined by federal regulation, priority communities identified by SCAG, and regional stakeholders across the region.

LOOKING FOR MEANING

What is Racial Equity?

Central to SCAG’s work, racial equity describes the actions, policies and practices that eliminate bias and barriers that have historically and systemically marginalized communities of color in order to ensure that all people can be healthy, prosperous and participate fully in civic life. SCAG aims to lead with racial equity as a focal point to address the pervasive and deep inequities faced by people of color and support the overarching goal of the creation of a just and equitable society.



SCAG’s understanding of racial equity in the context of regional planning is closely tied to Executive Order 12898 issued by President Clinton in 1994 and to the completion of the first-ever environmental justice analysis of SCAG’s 1998 Regional Transportation Plan—Community Link 21. Tracing roots back to the Civil Rights Movement in the 1960s and the Environmental Movement of the 1960s and 1970s, the Environmental Justice Movement in the United States is in response to discriminatory environmental practices, including toxic dumping, municipal waste facility siting and land use decisions which negatively affected communities of color. Several grassroots organizations founded in the SCAG region during this movement continue to advocate for a cleaner environment to protect all communities. The federal government defines environmental justice (EJ) as the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies.

The history of transportation and housing policies in both the United States and California demonstrates how racism in government has played a role in the disparities and inequities that people of color face today. The range of economic and social impacts, such as health outcomes, education, employment, housing conditions, rates of incarceration and life expectancy varies significantly in this region based on race, income and location. The institutional and systemic racism experienced by communities of color continues to impact their access to more mobile, sustainable and prosperous futures in Southern California. To illustrate, people of color were overrepresented in bicycle- and pedestrian-related fatal and serious injuries, according to analysis from the Statewide Integrated Traffic Records System. This data shows that 18.4 percent of fatal collisions in 2021 involved Black victims, who represent just over 6 percent of the population.



2.2

New and Evolving Trends

The SCAG region is continually shaped and reshaped by technologies, social and political shifts, and local, national and global events. Some of these changes evolve slowly with unforeseen impacts and others are sudden.

Twenty years ago, we were just beginning to see e-commerce emerge. Ten years ago, transportation network companies like Uber and Lyft were gaining market share. More recently, in early 2020, the region and world were shocked by a global pandemic. At the same time, other stressors were also building within the region and can no longer be sidelined: housing affordability and climate change.



A CHANGING REGION

Regional COVID-19 Pandemic Recovery

The COVID-19 pandemic impacted the way we live, work and play in the region—and we are still feeling those impacts today. When SCAG’s Regional Council adopted Connect SoCal 2020 for all purposes in September 2020, they affirmed aligning Plan implementation with pandemic recovery and identified emerging trends to be monitored alongside future planning, like Connect SoCal 2024. The following are the key disruptions to the region that SCAG has been tracking since 2020. SCAG monitored these elements alongside Plan development to apply relevant updates to our inputs and assumptions. These changes and challenges are continuing to evolve.

Housing crisis: The COVID-19 pandemic and the corresponding economic fallout exacerbated the housing crisis and, for communities of color, widened the economic gap. While early concerns focused on the stalling of housing construction, the more immediate crisis became employment loss—particularly for low-income households—that resulted in a growing number of households falling behind on their mortgage or rent. To minimize this, local, state and federal policymakers prioritized urgent pandemic needs and responses, such as mortgage-relief policies and foreclosure and eviction moratoria. While this had a beneficial impact on households at risk for displacement, it shifted housing priorities away from those that increased housing supply.²

Demographic shifts: The region’s population growth was already slowing during the 2010s due to lower fertility rates and more out-migration than in-migration. The pandemic provided additional shocks – a near-zero level of foreign immigration, fewer births and excess deaths from the pandemic itself. While these shocks appear to be dissipating substantially, the region’s population declined between 2019 and 2023.

Goods movement: Supply chains were disrupted on a global scale, leading to severe bottlenecks at ports and cascading bottleneck and congestion issues further across the entire goods movement system—from railyards to industrial warehouses and distribution centers.

Transit ridership: While vehicle miles traveled (VMT) and congestion have returned to pre-pandemic levels, transit/rail ridership has rebounded unevenly. These transit/rail ridership declines have resulted in reduced farebox recovery and impacts to operations budgets—and there is widespread concern that transit/rail operators are fast approaching a fiscal cliff. Many transit operators remain uncertain of the longer-term future, particularly if remote working remains a norm for discretionary riders who tend to take rail. Returning riders are apprehensive about their safety and security as they resume using transit/rail services.

Active transportation: During the pandemic, the region saw an increased use of active transportation (i.e., bicycling, walking, rolling, etc.). Bicycling and walking were regarded as reliable and resilient options because they enabled physical distancing and carried a low risk of contracting or spreading COVID-19.³ The increase in bicycling was reflected in the higher demand for bicycles and in bicycle sales figures. According to market research company NPD Group, sales of bicycles between April 2020 and April 2021 were up by 57 percent in the United States.⁴ Numerous communities reconsidered how public space was allocated, and several prioritized opening up streets to bicyclists and pedestrians to make it easier to physically distance from others while traveling to essential businesses and engaging in recreation.⁵ However, at the start of the pandemic, most dockless, shared micromobility providers temporarily withdrew from the public space.

Tele-everything: Relying on remote work and school (e-learning) as primary ways to physically distance exposed the region’s digital divide of those who have access to reliable internet and those who do not. The internet, computers and smartphones have provided unprecedented access to information and have helped transform our relationship to transportation. Although many residents have benefited from these advancements, a significant portion of the population

remains unconnected. Currently, 10 percent of residents across the region lack broadband. This disparity is more pronounced in certain populations. For example, the lack of broadband rises to 20 percent of adults aged 65 and older—and 70 percent of those without internet are concentrated in low-income households.⁶

As we recover from the pandemic, faster broadband speeds and better devices will become increasingly essential, and the disparities between those who have access and those who do not will continue to widen. While broadband access might seem to be an issue that primarily affects individual quality of life, it is crucial infrastructure that supports technological advancements in the mobility ecosystem. That’s why in February 2021, SCAG’s Regional Council adopted the Broadband Access Resolution (Resolution No. 21-629-2) and resolved to bridge the digital divide in underserved and unserved communities.

Traffic Congestion: VMT and congestion have returned to pre-pandemic levels, yet our travel patterns are shifting both spatially and temporally. Despite the fact that increased working from home has reduced the region’s historic peak-commute congestion (“rush hour”), workers continue to drive for other household-serving and personal trips throughout the day. In particular, the afternoon “peak” period of travel has lengthened. Most trips are occurring during the early afternoon and in locations associated with the rise of working from home and school pickup/dropoff.⁷

Rethinking the Workplace

During the early stages of the pandemic, California implemented multiple measures to mitigate the spread of the virus. Remote-working rates rose abruptly and dramatically. Prior to the pandemic’s start, most workers spent the bulk of their time working outside of their homes, but once the pandemic was well underway, close to half of all employees were working remotely. Based on American Community Survey 1-year samples, the percentage of workers ages 16 and over who worked from

home was just over six percent in the SCAG region in 2019, but by 2021, this figure had jumped to 19 percent.⁸ This change in behavior had an outsized impact on downtown areas, which relied on increased daytime populations to support local businesses.

“Work from home” can be defined as working outside the traditional office or workplace, usually at home. However, this can also more broadly describe when people work remotely while traveling, at client/customer workplaces, libraries, co-working spaces and other internet-accessible locations.

Across the entire SCAG region, the share of jobs that can be performed at home is 36.7 percent. This is only slightly greater than the national share of 36.4 percent but varies widely across the region, with one of the nation’s highest shares in Los Angeles and Orange counties (50.5 percent) and one of the nation’s lowest in Riverside and San Bernardino counties (30.1 percent).⁹ There appears to be a strong relationship between wage and the ability to work remotely, with the industries with the highest wages and days worked from home being Finance and Insurance (\$61 per hour and 2.15 remote days per week) and Professional and Business Services (\$50 per hour and 1.96 remote days per week). The lowest wage-to-remote-work relationships are in Retail (\$24.80 per hour and 0.68 remote days per week), Transportation and Warehousing (\$29.19 per hour and 0.58 remote days per week), and Hospitality and Food Service (\$15.39 and 0.58 remote days per week).¹⁰ For the purposes of this Plan, SCAG is assuming roughly 22–25 percent of workdays will be conducted at home through 2050.

While these relationships are driven by the nature of the work in each of these sectors, a regional plan must consider how to balance the needs of remote workers, who are largely in higher-wage occupations, and the needs of commuting, on-site workers, who are more likely to be in low-wage occupations. Some literature suggests that while flexible work schedules and telecommuting may reduce (or, in the case of satellite offices, reroute) single occupancy vehicle (SOV) commute

trips, they likely increase SOV trips for other purposes, such as errands and trips for lunch while an employee is working from home (although not necessarily during peak congestion periods). This is known as the rebound effect.¹¹

Working from home has long been part of the planner's toolbox for reducing travel. The significant rise of working from home following the pandemic, and the changing travel patterns that have resulted, underscore the importance of pursuing strategies that offer more transportation options for non-work trips, in particular. A key component of this is fostering more connected and accessible communities that allow a wide range of trips to be accomplished within a short distance or via alternative modes. More analysis is needed to better understand this changing trend and how it may impact long-term decisions, including choice of housing location. However, despite recent concerns about people fleeing urban areas in general, the fact that the hybrid work model is becoming more predominant than the fully remote work model, workers will have more incentive to return to—or stay near—cities.¹²

At the present time, these changes appear to be felt very heavily in downtown areas, which by definition have the most intense clusters of employment in a region or subregion. American downtowns have had numerous declines and resurgences. Declines occurred during the crime increases of the 1990s and as a result of post-9/11 security concerns. Then, beginning in the mid-2000s, an increase in residential population and amenities took place. Now, due to the post-pandemic work-from-home trend—as well as crime and the perception of crime—many headlines have been sounding the alarm about the future vitality of downtowns. For example, office utilization rates in U.S. downtowns averaged less than 50 percent in mid-2023, which affects both transit ridership and small businesses, like restaurants.¹³ However, there remains a price premium for both commercial and residential property

with connectivity and activity nearby. Livability improvements and continued monitoring of opportunities can help downtowns—which can pool the largest labor force and foster more activity density than anywhere else—and in turn help improve surrounding neighborhoods and the region as a whole.

Emerging Technology

New and emerging technologies have had a significant impact on the transportation sector, transforming various aspects of mobility, efficiency, safety and user experience. These technologies include advancements in vehicle technology, like electric vehicles and automated vehicles, as well as advancement in travel planning and safety systems, such as Mobility as a Service and Advanced Driver Assistance Systems. Several of the key technologies impacting the region today—and on the horizon—include:

Zero-Emission Vehicles (ZEVs): The rise of hydrogen and electric vehicles has disrupted the automotive sector. ZEVs offer lower emissions, reduced dependence on fossil fuels, and improved energy efficiency compared to traditional internal-combustion-engine vehicles.

Shared Mobility: Ride sharing services such as Uber and Lyft have transformed the way people travel, reducing the need for personal car ownership. Car sharing and bike sharing platforms have also gained popularity, providing convenient and cost-effective transportation options.

Intelligent Transportation Systems (ITS): ITS integrates advanced technologies into transportation infrastructure to improve efficiency, safety and sustainability. This includes traffic management systems, dynamic signaling, smart parking and real-time traveler information systems.

Blockchain and Mobility as a Service (MaaS): Blockchain technology can enable secure and decentralized transactions for mobility services, such as car rentals or ridesharing. MaaS platforms integrate various modes of transportation, providing users with seamless and personalized travel options.

Advanced Driver Assistance Systems (ADAS): ADAS technologies, including adaptive cruise control, lane-keeping assist and automatic emergency braking, enhance vehicle safety and reduce accidents by assisting drivers and providing warnings or automated interventions.

Vehicle to Everything (V2X): Utilizing Internet of Things (IoT) technology, V2X enables vehicles to communicate with one another and with infrastructure to share real-time data on traffic conditions, crashes and road hazards, enhancing safety, optimizing traffic flow and improving overall efficiency.

Advanced Air Mobility (AAM): The goal of AAM programs and technology is to develop an air transportation system that safely moves people and cargo in local, regional and interregional settings. AAM technology includes electric vertical take-off aircraft, and autonomous aircraft/uncrewed aircraft systems (i.e., drones). Urban Air Mobility refers to AAM in an urban context.

Connected Autonomous Vehicles (CAVs): Self-driving cars and trucks have the potential to revolutionize transportation. AVs use sensors, artificial intelligence and advanced algorithms to navigate roads without human intervention. However, harnessing the potential of this technology will require ensuring that it contributes to achieving safety, accessibility and other mobility goals.

To address this evolving mobility technology landscape, SCAG's leadership recommended establishing Guiding Principles for Emerging Technology during the development of Connect SoCal 2020. In response, SCAG developed an objective framework to serve as a guide for policy discussions regarding emerging technologies within SCAG's programs and as a template for SCAG and its partner agencies.

The Guiding Principles give guidance to the topics of equity, accessibility, safety, sustainability, integration, adaptability, data privacy and security, transparency and accountability, resilience and workforce development investments. These Guiding Principles should be considered as a starting point and used as building blocks that agencies and local jurisdictions can adapt to fit their unique needs when making informed decisions regarding emerging technology.

Clean Energy Transition

The state of California is a leader in the national and global reduction in climate pollutants and deployment of clean technologies and fuels. Recent regulations passed by the California Air Resources Board (CARB) have put us on a path to cleaner buses, trucks and passenger vehicles.

For buses, the Innovative Clean Transit Rule requires public transit agencies in the state of California to shift their fleets to zero-emission buses by 2040, with only zero-emissions buses allowed for new purchases starting in 2029. For trucks, the Advanced Clean Fleets rule requires that fleet owners operating vehicles for private services such as last-mile delivery and government fleets, like the Postal Service, begin transitioning to zero-emission vehicles starting in 2024—and includes an end to combustion-engine truck sales in 2036. The Advanced Clean Cars II rule requires that all new passenger cars, trucks and SUVs sold in California be zero-emission vehicles by 2035.



LET'S GET TECHNICAL

For a full list of Guiding Principles for Emerging Technology, please refer to appendix 1 in the Mobility Technical Report.

The state and our region are on the precipice of a major shift in the transportation sector. Supporting this transition will have significant implications for the planning and designing of the built environment, as we must ensure that refueling or recharging infrastructure is available and that the power grid can support the refueling of our cleaner fleets. This transition also has fiscal implications, as sales and excise-tax receipts for fuel sales will decline over time. The transition will also have economic and social impacts, as gas stations—predominately owned by immigrants—might become obsolete.¹⁴

Climate Change

By the year 2050, the region is projected to face numerous challenges and pressures due to climate change, including heightened risks of intense wildfires, droughts, extreme heat, extreme rain, rising sea levels and seismic events. The region is already experiencing extreme climate-related events more frequently, such as air-quality degradation, inland flooding, the destruction of homes and infrastructure from wildfires, landslides from torrential rainstorms, coastal flooding from sea level rise, and urban heat island effects from unusually high temperatures. These conditions have detrimental effects on the region’s communities and will adversely impact the quality of the air we breathe, availability of essential resources like water and energy, safety of neighborhoods and the stability of the economy—as well as the transportation system and the people and businesses who depend upon it.

Among Southern California residents, roughly 3.4 million people live in fire hazard severity zones, over one million people reside in “100-year” flood hazard areas and/or landslide hazard zones, more than 70,000 residents live in areas estimated to be impacted by one meter of sea level rise (conservatively projected to occur by 2050), and over 11 million residents reside in areas that will be subjected to extreme heat health events in the near future. Rising sea levels pose a threat to coastal railways and bridges, and severe storms can trigger mudslides

and highway flooding. Extreme heat can cause road surfaces to soften and buckle, leading to pavement damage and road closures. It can also cause rail tracks to buckle and induce slower transit/rail speeds. Such conditions can reduce the lifespan of infrastructure assets, disrupt operations more frequently, and necessitate the development of new infrastructure that incorporates design, construction, location and maintenance adjustments. It is likely that some existing transportation infrastructure will need to be modified or relocated to remain functional, and the planning, construction and maintenance processes will increasingly need to consider the consequences of climate change to ensure the long-term viability of infrastructure. Extreme heat and severe-weather conditions can also have a significant impact on people who rely on bicycling and walking as modes of transportation. Their excessive sweating, increased heart rates, and difficulty breathing in hot conditions can decrease overall physical performance and make it far more difficult and riskier to complete their trips.

In recognition of the importance of addressing such challenges, a resilience lens was used throughout the development of the Plan to consider and address shocks and stressors facing the region.



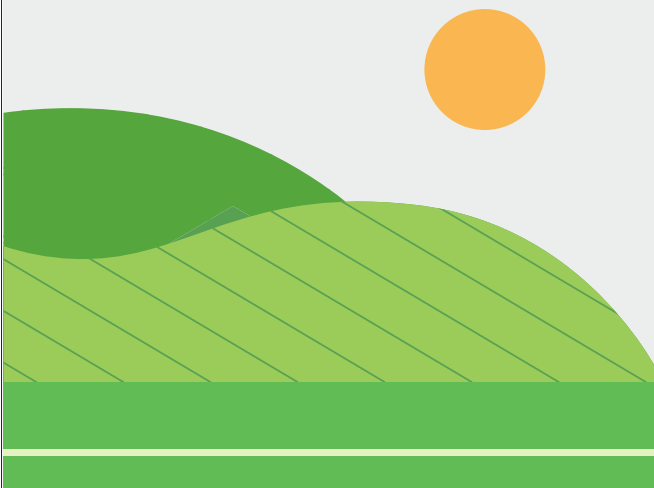
LET'S GET TECHNICAL

You can explore key shocks and stressors to consider when planning for resilience in the Connect SoCal Technical Reports.

LOOKING FOR MEANING**What is Resilience?**

A resilient and prepared region requires that transportation systems, the built environment and natural resources coexist in a well-balanced land use pattern. When well-coordinated, these components can result in multiple benefits, including greenhouse gas (GHG) emission reductions, health improvements and better resource conservation.

Resilience is defined as the capacity of the SCAG region's built, social, economic and natural systems to anticipate and effectively respond to changing conditions, acute shocks and chronic stressors by creating multiple opportunities for a sustainable, thriving and equitable future.

**Shocks and Stressors**

Shocks are sudden and acute events that threaten immediate safety and well-being, such as earthquakes and wildfires. Stressors are chronic challenges that weaken built, social, economic and natural systems, including persistent air-quality issues or transportation system disrepair. As part of the development of the Regional Resilience Framework, SCAG identified various shocks and stressors, including their potential scale and scope, that could impact Southern California's resilience. These were gathered through research on non-climate and environmental-related shocks, Local Hazard Mitigation Plans (LHMPs), local general plan safety elements, and through outreach to stakeholders and community-based organizations (CBOs).

When planning for community resilience, it is vital to adopt a comprehensive approach that acknowledges the interdependence of built, social, economic and natural systems.

Resilience within:

- **Built systems** can withstand changing conditions and shocks, including changes in climate conditions, while continuing to provide critical services

- **Social systems** can respond to changing conditions, shocks and stressors by minimizing risks to public health and safety, and maximizing equity and protection of the most vulnerable
- **Economic systems** can maintain function when shocked and efficiently use resources over time for investment in repair, reconstruction and adapting to change.
- **Natural systems** can adjust and continue to provide essential resources, including clean air and groundwater, and maintain functioning ecosystems

By embracing such an approach, local governments can effectively develop strategies that address the distinct vulnerabilities inherent within each system and fortify our communities against the impacts of shocks and stressors while also nurturing sustainable development that supports a thriving and equitable future.

**LET'S GET TECHNICAL**

Take a deeper dive into shocks and stressors and learn how the Plan can lessen their impact in the Connect SoCal Land Use and Communities Technical Report.

2.3

Regional Challenges



During Plan development, SCAG collects data and information to better understand the region's existing conditions including persistent and emerging challenges, which are as complex and interconnected as the region itself. Some challenges are rooted in our changing needs, while some have been persistent for several years.

The region has made strides over the last several decades to develop a regional light rail and commuter network and to reduce air pollution following the passage of the Clean Air Act of 1970 but there is still much work ahead. During the public engagement process, thousands of people across the region reflected on the challenges facing Southern California. The top responses were: housing affordability, limited reliable travel options other than driving and climate change impacts.

MOBILITY

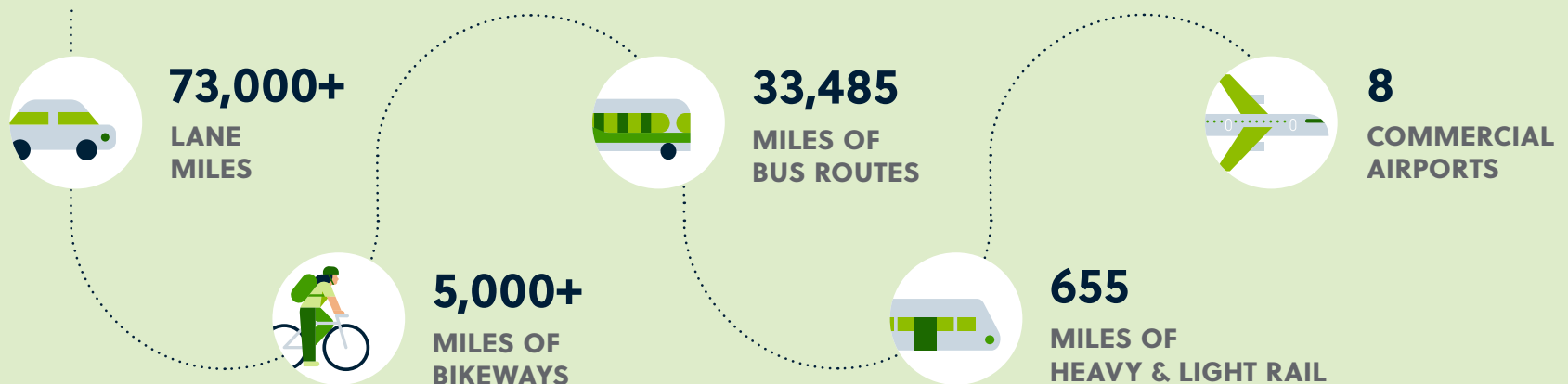
Overview

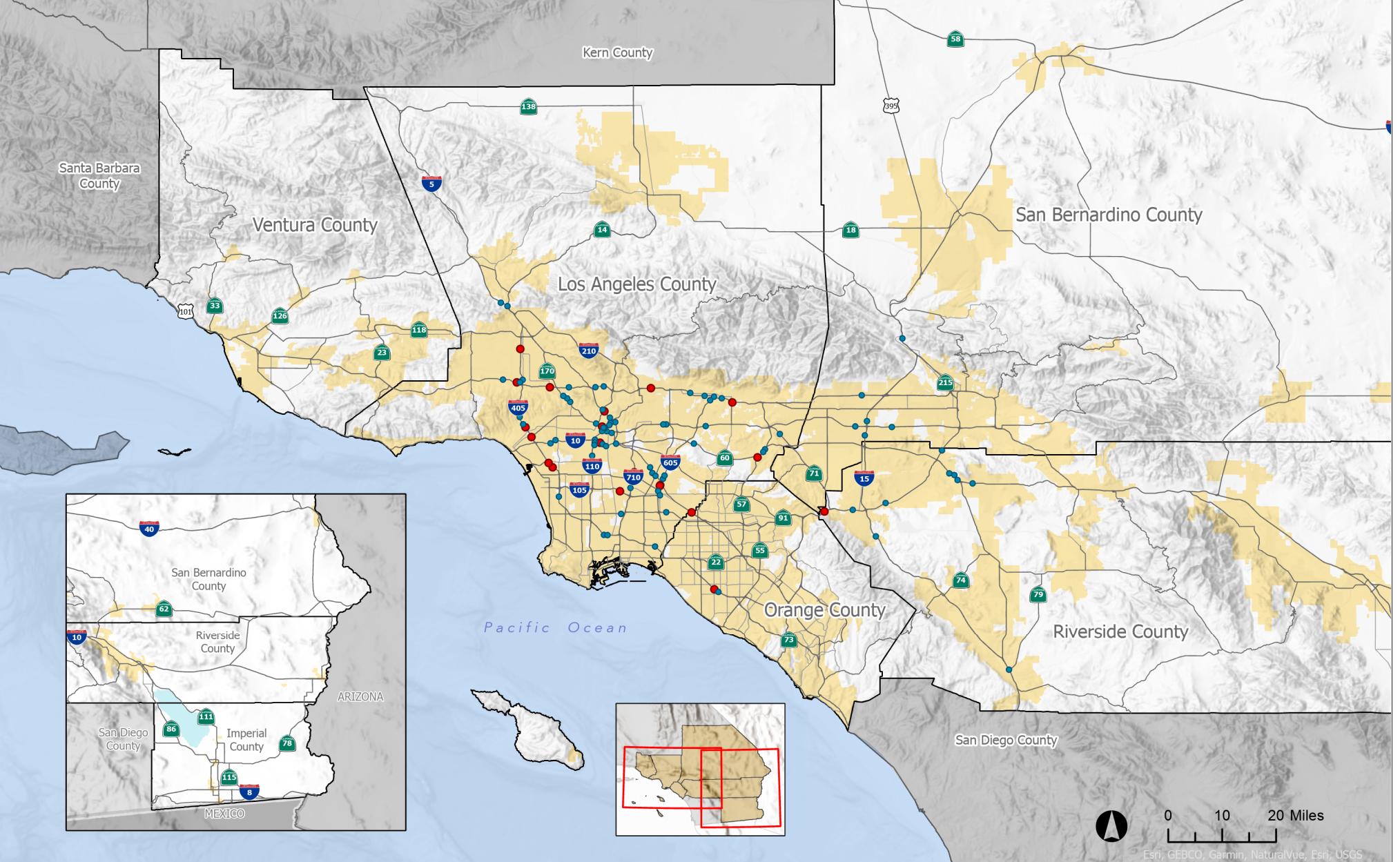
How do we move today? Our current transportation network is comprised of more than 73,000 miles of streets and freeways, 135 centerline miles of express lanes and over 5,000 miles of bikeways. We are home to an extensive transit/rail network that includes over 100 transit operators; 33,485 miles of bus routes, including local bus, express and bus rapid transit (BRT); 109 miles local light rail, serving 108 stations, Amtrak intercity and long-distance services; and Metrolink commuter rail service, which operates on seven lines with 66 stations in five of six counties on a 546 route-mile network. Our transportation network supports the largest container complex in the U.S., the Port of Los Angeles and the Port of Long Beach, and helps people and goods move to and from eight commercial airports, seven government/military airfields, and over 30 reliever and general aviation airports.

This transportation system links people to places. It also supports our economy, allowing goods and raw materials to move throughout the region. How we move today is shaped by the land use patterns in each neighborhood and community. The distribution of activities and destinations, combined with transportation options, influences how a person will move around the region and what opportunities will be accessible to them.

When SB 375 was passed in 2008, the region had already embarked on a path to consider the intersection between land use and transportation more comprehensively, as a way to provide more options for getting around. For example, in the early 1990s, the counties of Riverside, San Bernardino, Los Angeles and Orange passed sales-tax measures that enabled the opening of Metrolink in 1992. In Los Angeles County, Metro (Los Angeles Metropolitan Transportation Authority) began operation of the Blue Line in 1990 and has continued expanding its rail network with funding from locally supported sales-tax measures.

Regional Transportation Network

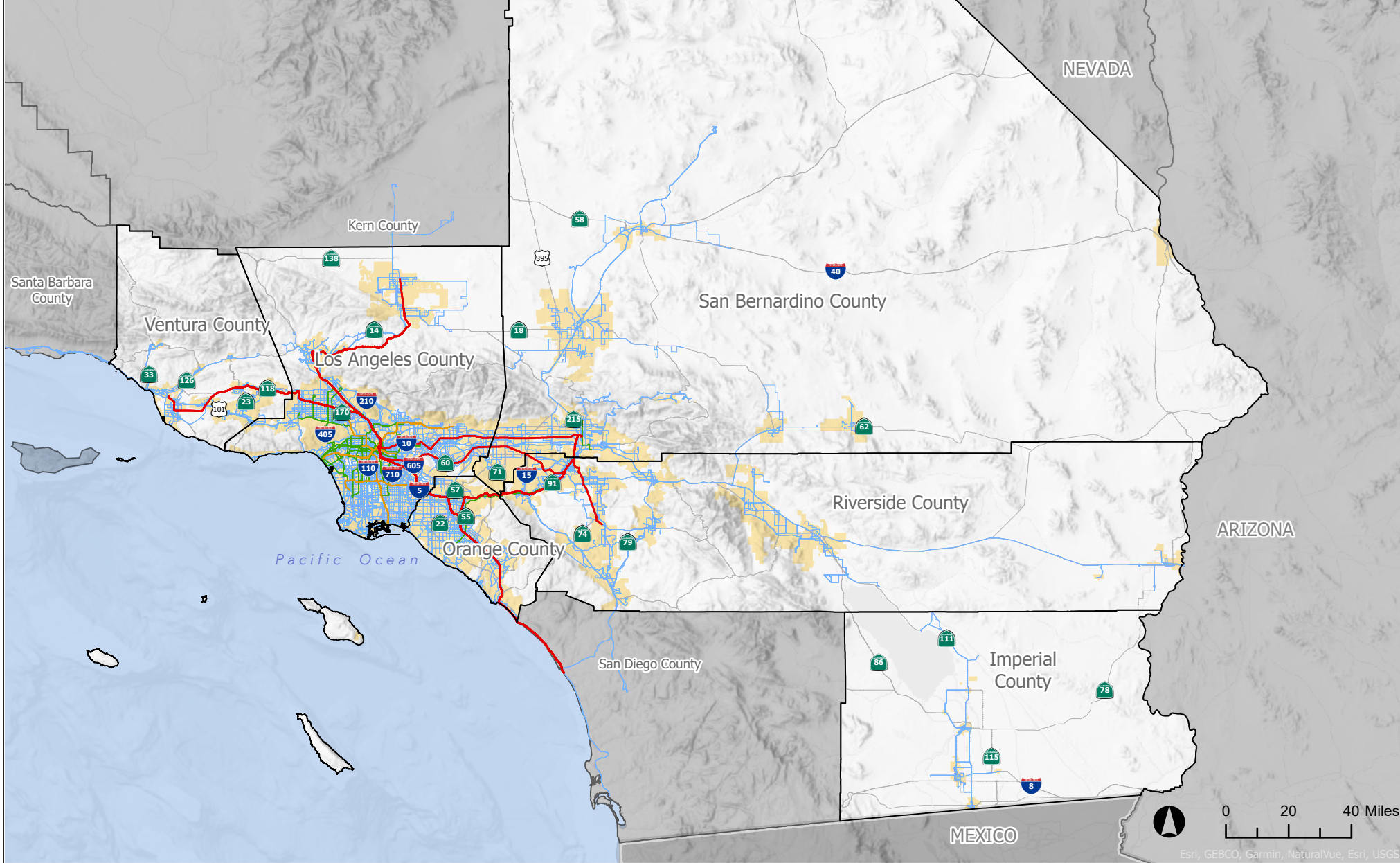




MAP 2.1 Top 100 Bottlenecks

- SCAG Region
- City Boundary
- Freeway
- Highway
- Top 1-20 Bottlenecks
- Top 21-100 Bottlenecks

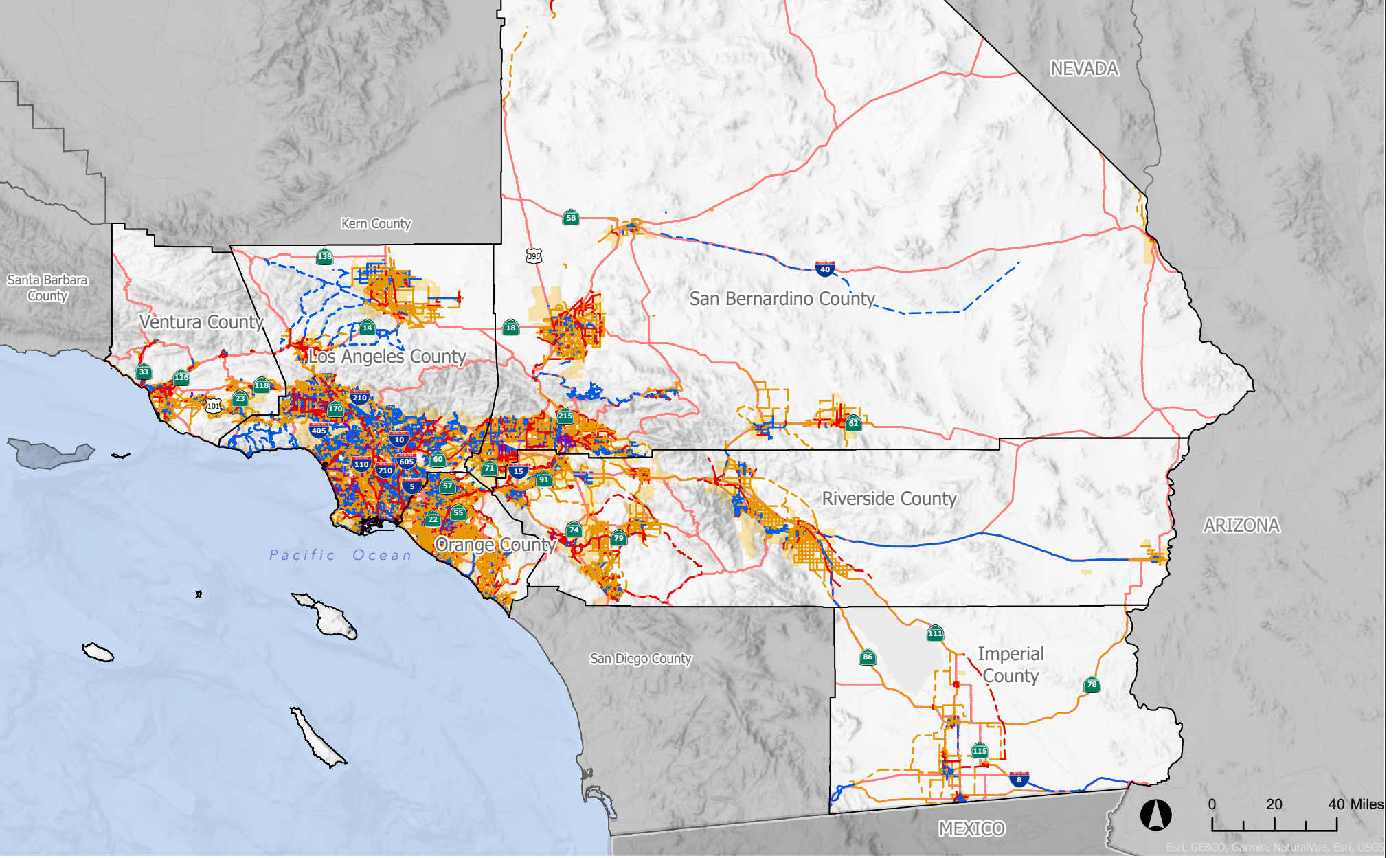
Source: SCAG 2023



MAP 2.2 Existing Transit Network (2019/2022)

- Metrolink
- Urban Rail
- Rapid Bus and Bus Rapid Transit
- Bus Routes
- Freeway

Source: SCAG 2023

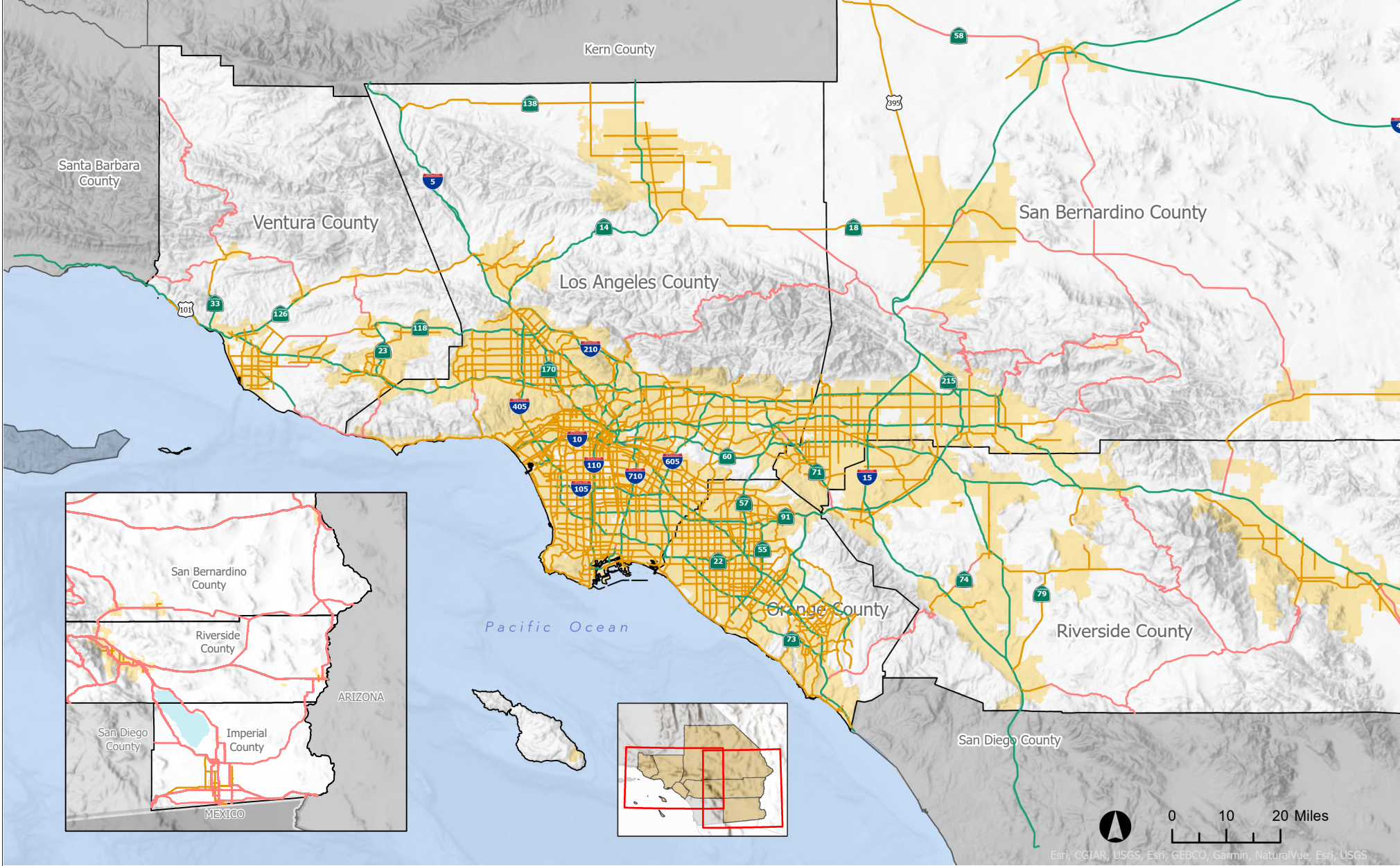


Esri, GEBCO, Garmin, NaturalVue, Esri, USGS

MAP 2.3 Existing Regional Bikeways

- Freeway
- SCAG Region
- City Boundary
- Class 1
- Class 2
- Class 3
- Class 4
- - - Class 1
- - - Class 2
- - - Class 3
- - - Class 4

Source: SCAG 2023



MAP 2.4 Existing Arterials and Highways

- Freeway
- SCAG Region
- City Boundary
- Highways
- Arterials

Source: SCAG 2023

Key Mobility Challenges

Limited Reliable Travel Options Besides Driving: As mentioned in the introduction to this chapter, one of the top challenges noted by Connect SoCal survey respondents is having limited reliable travel options other than driving. Despite billions of dollars in investments in our transit and active-transportation infrastructure, gaps in service and reliability remain—and these gaps impact perceptions of available options. As evidenced by responses to other survey questions, many people in the region prefer to drive alone on some trips, like errands, but want different options, such as walking or transit, for other trips that might include going to work or school or visiting friends.

The current lack of travel options besides driving in parts of the region can lead to increased congestion on the regional transportation network, which then leads to time wasted in traffic and increased emissions and pollutants. In other parts of the region, people with access to a transit network have noted concerns about reliability and safety.

Transportation Safety: Safety can refer to both personal security when traveling on transit and safety when on our roadways, either in a vehicle, on a bike or on foot. Traffic-related fatalities and serious injuries are a critical and preventable public health and equity issue in the region. Approximately 1,600 people die, and 140,000 are injured—more than 7,000 of which are serious injuries—on roadways throughout the SCAG region every year.¹⁵ Collisions are happening in every community in the region and to people from all walks of life, including those who drive, walk and bike. Approximately 90 percent of collisions occur in urban areas, with most taking place on local roads, not highways. Regionally, about 65 percent of fatalities and serious injuries occur on less than 1.5 percent of the roadway network. Of particular concern are vulnerable groups such as children, older adults, pedestrians, bicyclists and users of personal mobility devices like e-scooters.

The regional housing crisis has resulted in people without housing seeking shelter in public spaces, particularly at locations with 24-hour transit/rail service. Unhoused persons frequently utilize buses or trains for overnight stays. The situation raises several concerns for both transit/rail agencies and riders. Returning riders are apprehensive about their safety and security as they resume using transit/rail services. Buses or trains occupied by unhoused persons may face lingering cleanliness issues, and there have been reports of threats, assault and crime incidents that deter ridership.¹⁶ From the transit/rail agency's perspective, addressing homelessness on systems poses a complex challenge, particularly amidst many other pressing issues and limited funding. Across the region, transit/rail agencies will need to develop comprehensive strategies that address homelessness on their systems, considering factors such as safety, cleanliness and the welfare of both riders and unhoused persons.

Increasing safety for pedestrians and bicyclists can make transit and active transportation a more appealing travel option, thereby motivating mode shifts away from single occupancy vehicle travel and reducing GHG emissions. However, finding sustainable solutions within the context of limited resources will remain an ongoing challenge.

A Just and Clean Transition

Transitioning to clean transportation technology offers numerous potential benefits, but will also require fundamental shifts in how we think about and plan for transportation, land use and energy. Barriers to implementation include cost, technology readiness, infrastructure, consumer knowledge and regulatory support. These barriers could result in disparities that create an unequal transition, meaning that some communities will benefit from a cleaner transportation system sooner than others. Barriers such as high vehicle costs and inadequate supportive infrastructure for renters and public charging stations hinder the transition to EVs for the majority of SCAG residents. For example, access to charging infrastructure can be particularly challenging for people who live in apartments or other multi-unit dwellings, where installing personal charging stations (i.e., home charging) may not be possible. Public charging stations are an alternative, but they require investment in infrastructure that may be lacking in low- and moderate-income neighborhoods. Lack of incentives for vehicle purchases and inconsistent regulations across jurisdictions create a complex landscape, discouraging potential adopters and stifling innovation in the clean-transportation sector.

Transitioning to clean transportation technology presents an opportunity, but will also require fundamental shifts in how we think about and plan for transportation, land use and energy.

MOBILITY STORIES

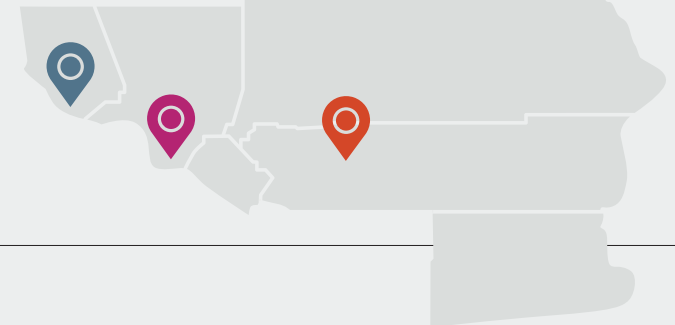
Traveling in the Region Today

To understand how people move, it helps to look beyond statistics to see how different people travel based on their daily need, ability and access. The following are illustrative examples inspired by conversations with people across the region.

Oxnard, CA: A father uses his SUV to drop off his kids at school on his way to work in Thousand Oaks two days a week. He picks them up from after-school care on his way home. On days when he works from home, he still drives the kids to and from school. The family lives within walking distance of restaurants on Saviers Road, which they like to go to on the weekends, but they drive together for most errands and outings.

Los Angeles, CA: A young adult lives in the East Hollywood neighborhood of Los Angeles. When their car broke down last year, they decided not to replace it so that they can pay down their student loans. To get to work in El Monte, they take the Metro B Line to the Silver Line. On weekends, they bike or use Uber to meet up with friends and run errands.

Hemet, CA: A retired woman uses GoMicro on-demand transit to travel to her appointments during the week. She likes to walk around her neighborhood but doesn't have many destinations that allow her to run errands on foot. Instead, she relies on her daughter to drive her to the grocery store and community events outside of GoMicro service hours.



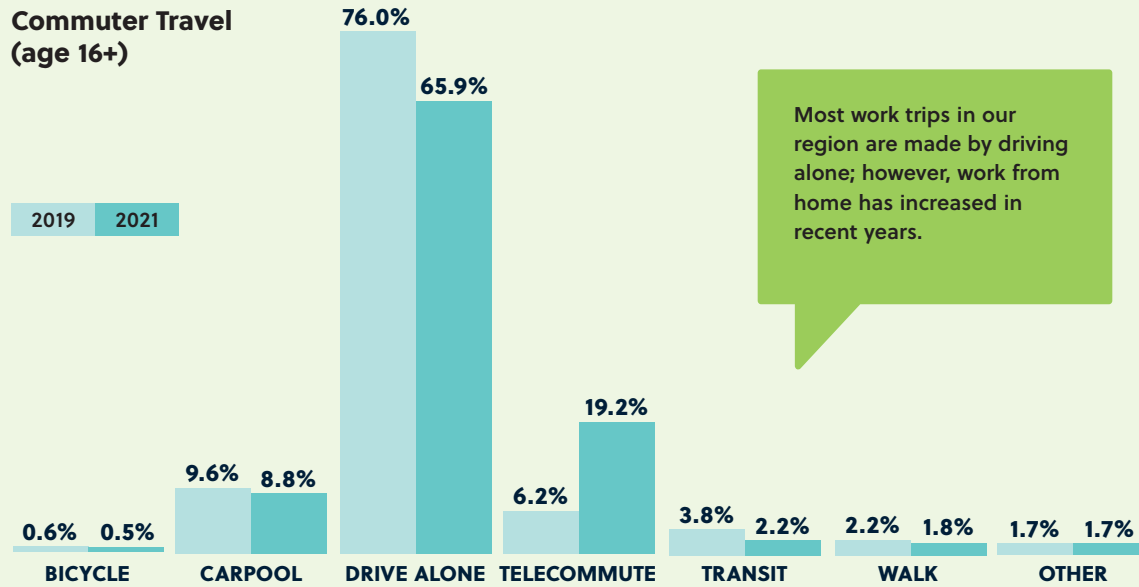
TAKE A CLOSER LOOK

The Way We Move Today

The region’s transportation network is extensive. However, the current lack of convenient travel options in areas of the region apart from driving create traffic congestion and air pollution. The COVID-19 pandemic

sparked changes in travel behavior and trends, which spotlight what is needed and what is possible for the future of transportation in our region.

Commuter Travel (age 16+)



Most work trips in our region are made by driving alone; however, work from home has increased in recent years.

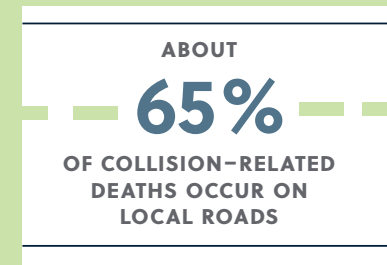
Source: 2021 American Community Survey 1-year Sample, Table B08006

Most Non-Work Trips are Short

While trips to work are longer on average, the short distance of most other trips taken in the region opens up possibilities for other modes like walking, biking or rolling.



Annual Safety Statistics

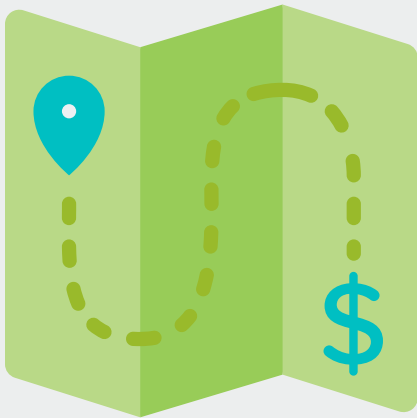


Traffic-related deaths and injuries are a preventable public health and equity issue in the region.

Source: California Statewide Integrated Traffic Records System (SWITRS) (2021); Fatality Analysis Research System (FARS) 2021

TRANSPORTATION FINANCE**Funding the System**

One of the biggest challenges facing transportation in the country is decreasing revenues due to increases in conventional fuel efficiency and the adoption of alternative fuel vehicles (especially electric vehicles). This is because transportation systems have historically been funded by excise fuel taxes. Decreasing revenues lead to challenges in securing stable and sustainable transportation funding over the life of the Plan to meet our region's evolving transportation needs. Our current transportation funding mechanisms are insufficient to maintain the existing system, let alone fund new investments, tackle ever-expanding maintenance backlogs and address failures of the current system to achieve larger Plan goals.



Costs for operating and maintaining the transportation system comprise the biggest portion of Plan expenditures. They are steadily increasing due to inflation and rising construction costs that decrease the purchasing power of existing revenue streams. Additional funding is needed to address deferred maintenance sooner and aggressively pursue preservation to minimize total system management costs. The region will increasingly need additional resources to absorb the shocks and stressors to the system as resiliency concerns become more pressing. Addressing this growing need is crucial to maintaining and managing the investments our region has already made.

The Connect SoCal financial plan summarizes federal, state and local sources of revenues used to pay for transportation, system preservation and improvements over the next 25 years. SCAG highlights the importance of finding new and innovative ways to pay for transportation as we continue to face an insolvency crisis due to the Federal Highway Trust Fund's (HTF) reliance on fuel excise taxes. The federal gas tax has remained unchanged since 1993, and fuel tax receipts have declined precipitously as fuel efficiency has increased. California's passage of the Road Repair and Accountability Act of 2017 (Senate Bill [SB] 1) provides a significant influx of new state revenue through a gas-tax

increase and other transportation fees, yet only a fraction of our needs are funded through state sources.

Our region currently supplements state and federal transportation funding streams with local sources, which comprise 61 percent of Plan funding. The largest single source of revenue in the region are local sales taxes for transportation, which provide 58 percent of core revenue and allow for the prioritization of local needs but are not linked to system usage and fail to encourage efficient use of the transportation system.

California's Advanced Clean Cars II rule requires that new sales of gasoline-powered vehicles be phased out by 2035. CARB's recently adopted Advanced Clean Fleet regulation requires drayage trucks to start transitioning to zero-emission technology beginning in 2024, with full implementation by 2035. This presents an imperative for the region to transition toward user-fee funding sources to replace lost revenues from conventional fuel-tax revenues and provide a sustainable and stable funding source.

Overall, the core transportation funding sources that our region has traditionally depended on are declining, volatile and uncertain. To meet the increasing costs of implementing the recommended improvements, as well as operate and maintain the transportation system, our region needs new, stable and sustainable funding.

COMMUNITIES

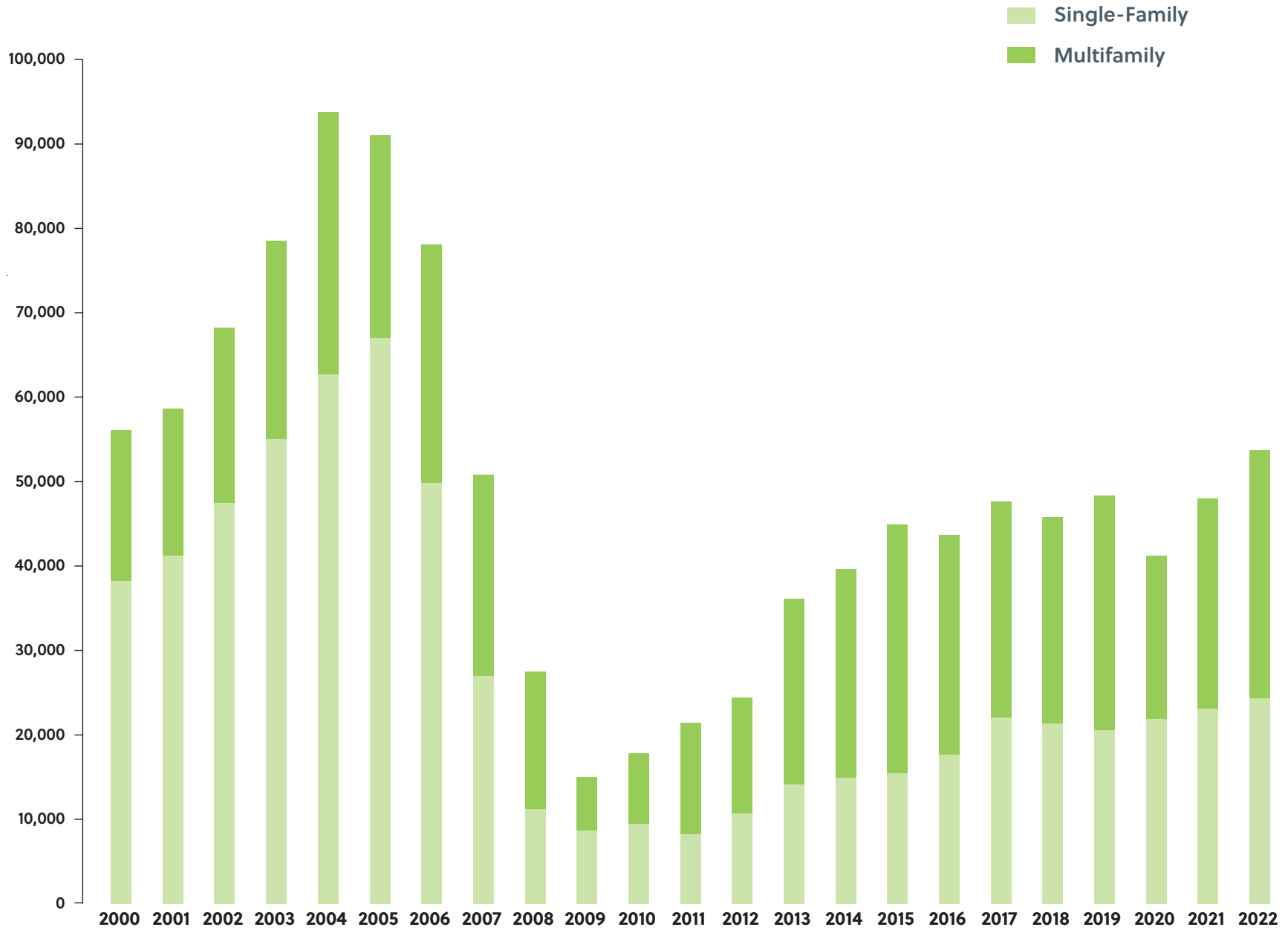
Overview

Where do we live? The SCAG region has incredible diversity in its built environment and land use patterns. This diversity is reflected in how people experience their communities and how that influences overall quality of life. Complete communities are important considerations in land use planning as they are places that meet peoples' essential needs (housing, mobility), the provision of goods and services, recreation and respite, and overall access to opportunity. It is important to evaluate existing conditions around community and land use patterns with a keen eye toward racial equity. Land use patterns are shaped by governmental decision-making and in many cases, the communities of today have been left with the burdens of the past that shape access to opportunities, resources and the quality of the environment. Issues around housing overcrowding and supply, environmental justice, access to healthy food and resources, parks and open spaces, economic and educational opportunity, and safety have critical influence over how people live and thrive in their communities.

Decisions about land use and growth, such as what type of housing, offices or retail gets built and where, rests fundamentally with each local government—sometimes referred to as “local land use authority.” A given city or county articulates its land use planning through general plans, specific plans and other documents (such as zoning ordinances or development agreements). These land use decisions can include provisions to create incentives for more sustainable development such as infill or mixed uses, as well as strategies for conserving natural lands and farmlands. Decisions made at the local level impact the region’s overall pattern of land use, such as when growth takes the form of a new regional employment center in one city and induces new travel from distant areas. Alternatively, when new housing is built close to shopping, job opportunities, schools, and other key destinations it tends to reduce the distance people travel and make transportation options such as transit, biking, walking, and rolling more feasible. The combination of these and other related factors have resulted in the existing unique and diverse land use patterns of the region and its communities and the resulting transportation and GHG emissions that Connect SoCal is intended to address.

The patterns that characterize our communities largely come down to housing and households. Over half of the region’s 6.6 million housing units were built before 1980. While 54 percent are single-family homes, 46 percent are multifamily homes such as condominiums, townhouses and apartments. The predominant form of new housing construction has fluctuated over time—a function of the number of people entering their 20s and 30s (the main household formation years) and other aspects of the housing market. The region’s peak housing production years during the 1980s were associated with a multifamily building boom. Total units and multifamily units dropped precipitously during the 1990s, but single-family production in particular grew steadily until about 2006, when the Great Recession started to impact the housing market. Single-family housing production fell so greatly that in 2008, it only made up 43 percent of new units. Housing production continued to favor multifamily housing until 2016. Since then, annual production

FIGURE 2.1 SCAG Region Building Permits Issued



Source: CA DOF E-5 and Construction Industry Research Board New Units from Permits.

numbers have been fairly well balanced between single-family and multifamily housing, while total production gradually increased in most years. In a high-cost urban megaregion with decreasing family sizes, the single-family-heavy skew of the current housing stock puts homeownership more out of reach for low- and moderate-income households, while also increasing overcrowding rates and travel distances. That’s why a mix of housing types offers both regional transportation and community benefits.

Overall, whether single-family or multifamily units, the total amount of housing production has historically lagged behind our growing population. Five decades ago, the SCAG region produced one new housing unit for every 1.7 persons added to the population. By the 1990s, the ratio decreased to one new unit for every 4.8 persons added. While the ratio has steadily increased over the past two decades, this indicator suggests the region has not been building enough units over decades. Beyond planning challenges, the cost of building residential units is another primary barrier to meeting housing need. Not only does it include construction costs, such as the cost of land, materials and labor, but local land use entitlement processes and environmental requirements can also add cost to the process. A successful Plan needs to address housing need from anticipated population growth while also accounting for past undersupply.



LET’S GET TECHNICAL

Looking for greater detail on the housing issue? *The Housing Technical Report and the Land Use and Communities Technical Report* can help.

TAKE A CLOSER LOOK

Housing Supply and Population Growth

As the region’s population grows, more housing units are needed to keep up with the growing demand.

1980–1990



1990–2000



2000–2010



2010–2020



-  Housing built
-  Housing needed to meet population growth that was not built
-  Housing built beyond population growth needs

While housing unit production has picked up since 2000, the region still has a backlog of unmet housing need from the previous decades when not enough housing units were built for the amount that the population grew.

Source: U.S. Decennial Census, 1980–2020. Three persons per housing unit assumed, equivalent to the SCAG regional average household size since 2000. Each house represents 83,333 new housing units.

TAKE A CLOSER LOOK

Our Communities

The SCAG region is home to nearly 19 million people who live in a diverse range of communities. The over six million households are spread across a mix of single-family and multifamily homes.

POPULATION

18,828,000

EMPLOYMENT

8,976,000

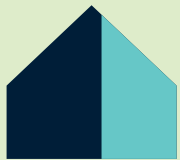
HOUSEHOLDS

6,193,000

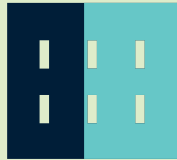


Source: SCAG 2023, 2019 data

Housing Stock



54%
SINGLE-FAMILY
HOMES



46%
MULTIFAMILY
HOMES

Since 2011, multifamily development has outpaced single-family development, leading to a more balanced mix of housing stock.

Source: 2021 American Community Survey 1-year samples, Table DP04

SCAG Jurisdictions by Population

% OF SCAG

JURISDICTION SIZE

10%

Very Small

Under 10,000 people

48%

Small

10,000–59,999 people

While the region is big, most jurisdictions are small and have limited staffing and/or resources.

20%

Medium

60,000–99,999 people

18%

Medium Large

100,000–299,000 people

3%

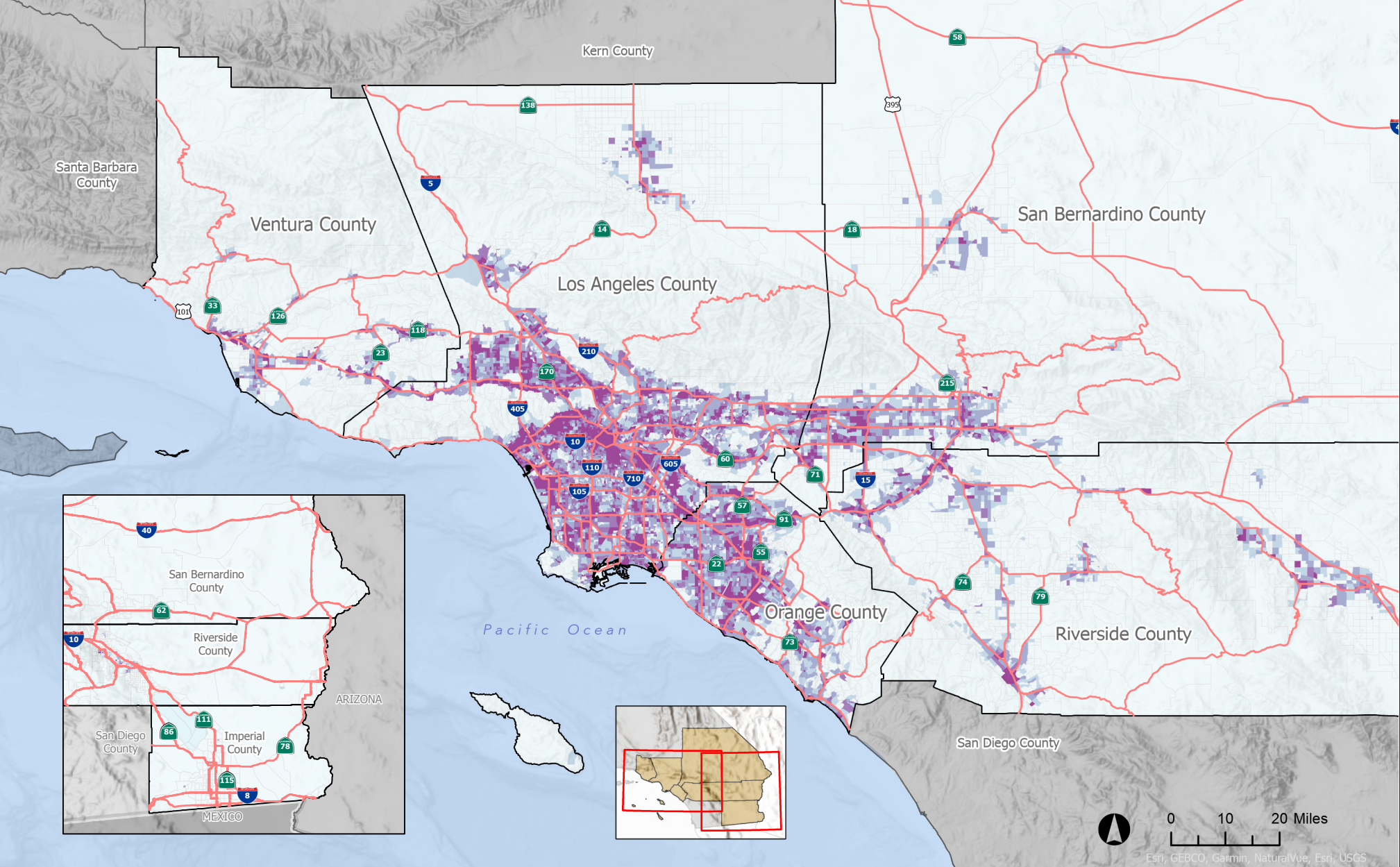
Large

300,000–499,000 people

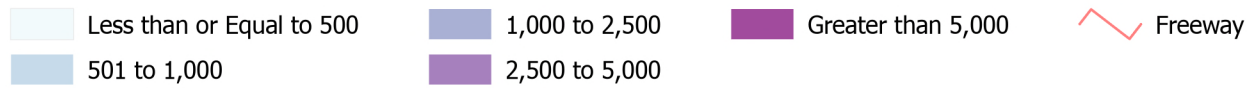
1%

Very Large

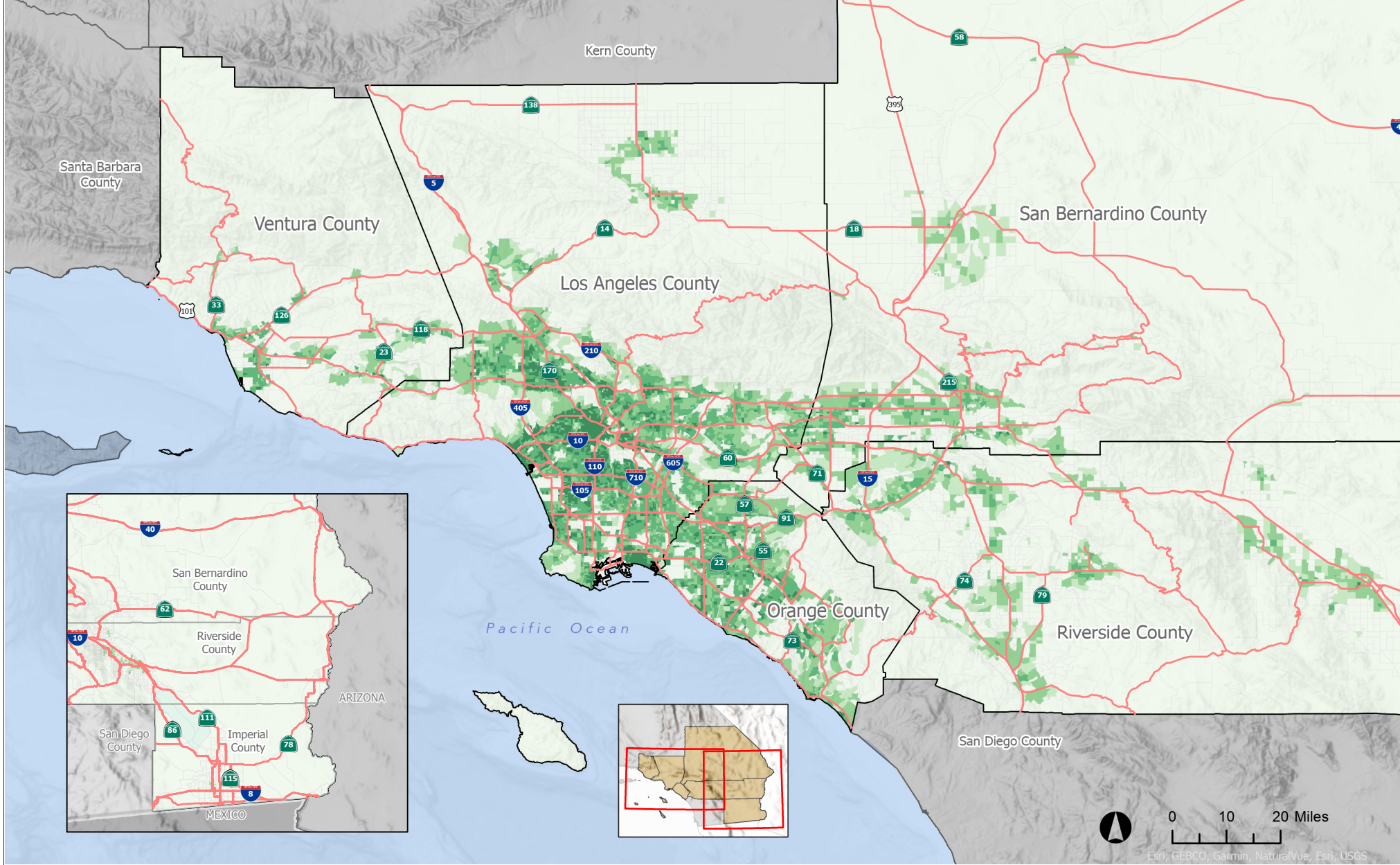
Over 500,000 people



MAP 2.5 2019 Employment

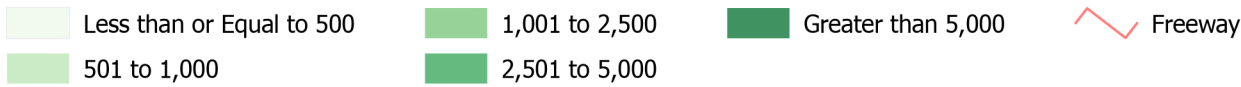


Source: SCAG 2023

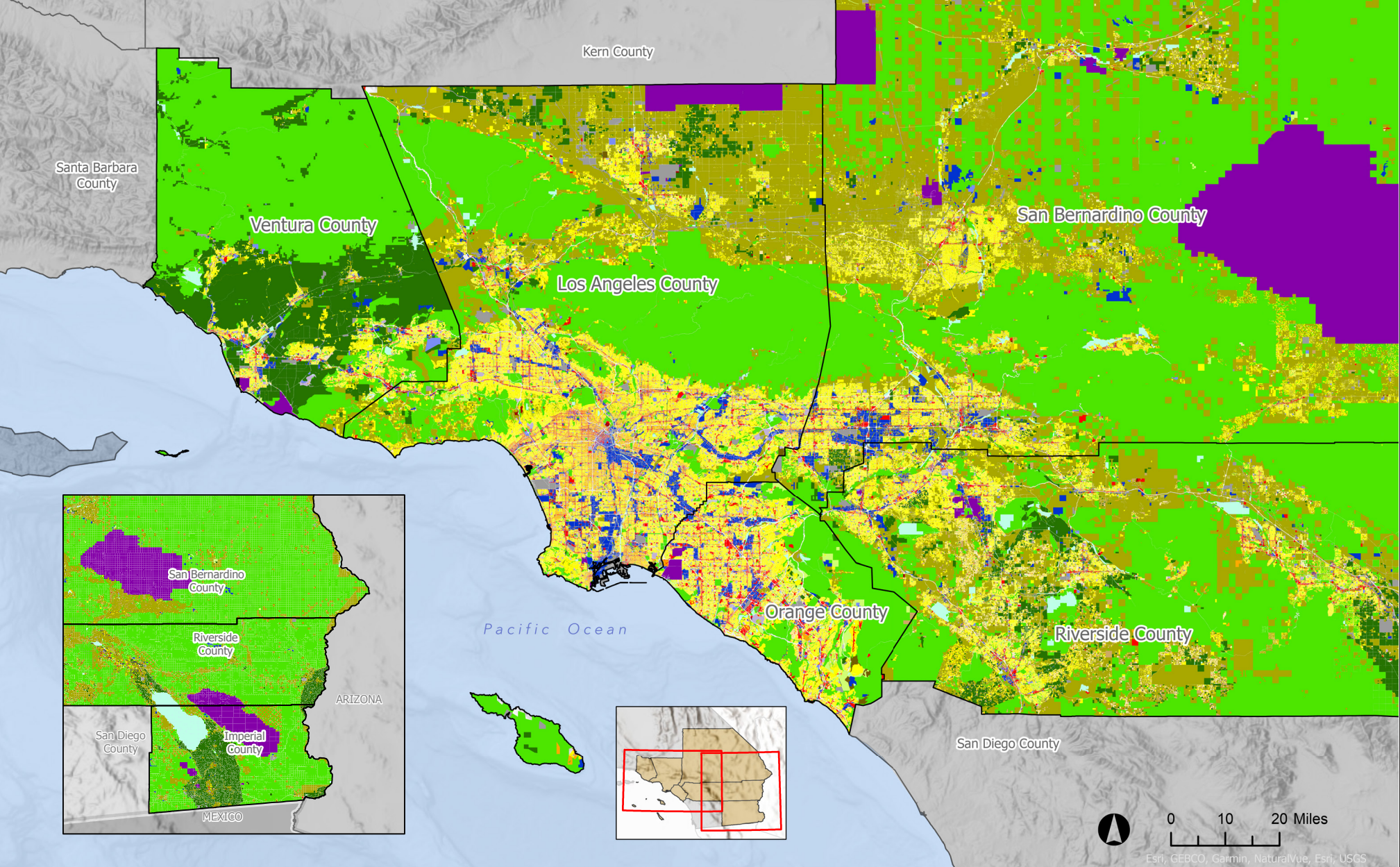


Esri, GEBCO, Garmin, NaturalVue, Esri, USGS

MAP 2.6 2019 Households



Source: SCAG 2023



MAP 2.7 Existing Land Use

- | | | | | |
|--|---|--|--|--|
| Single Family Residential | General Office | Industrial | Agriculture | Undevelopable |
| Multi-Family Residential | Commercial and Services | Transportation, Communications, and Utilities | Vacant | Unknown |
| Mobile Homes and Trailer Parks | Facilities | Mixed Commercial and Industrial | Water | |
| Mixed Residential | Education | Mixed Residential and Commercial | Specific Plan | |
| Rural Residential | Military Installations | Open Space and Recreation | Under Construction | |

Source: SCAG 2023

HOUSING**Current Conditions**

Southern California's housing crisis has been decades in the making. Despite market fluctuations, housing production has not kept up with demand. Years of underbuilding has resulted in a shortfall in the number of units needed to house the region and created issues such as cost burden and overcrowding. This also results in people living farther from where they work, necessitating long commutes and often contributing to regional congestion and pollution.

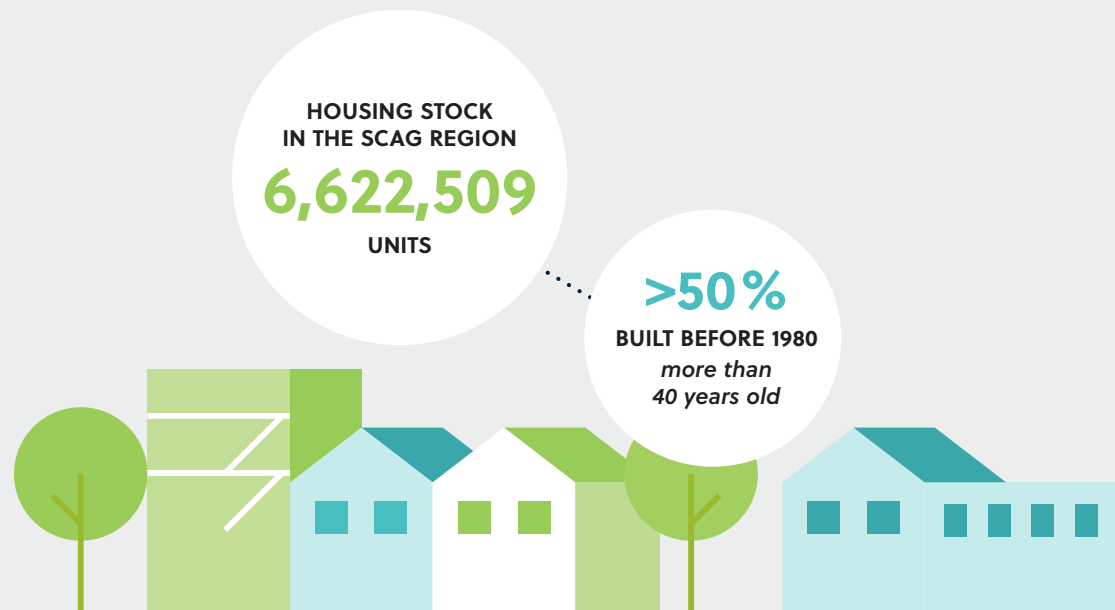
**LET'S GET TECHNICAL**

To read more about the existing housing conditions in the SCAG region, the challenges in addressing these issues and affirmative strategies that seek to counter the impacts of historic practices, check out the Housing Technical Report.

A lack of housing, including affordable housing, can lead to a variety of problems that affect our society at different levels. However, the impacts of the housing crisis are disproportionately burdensome on underserved communities, such as low-income households and communities of color. Historically, inequitable policies at all levels of government have led to the concerning disparities we see today.

The quantitative impacts of the housing crisis, such as overcrowding, cost burden and home ownership, disproportionately burden communities of color. Addressing the housing shortage not only means increasing

housing supply, it also means addressing equity and historic segregation patterns. Approaching the housing crisis through this lens is necessary for advancing equity and diversity across the region. Understanding the disparities resulting from historical inequities is central to SCAG's work as a regional planning organization—and is essential for successfully planning for a more racially just and equitable future. Over the past few years, SCAG has developed a regional housing program to address the needs of our region and, for the first time, a housing technical report is included in Connect SoCal.



Key Community Challenges

Housing Affordability: The desirability of the region has long influenced a higher than national-average home price. However, the lagging behind of housing production and stagnation of median incomes have exacerbated housing affordability in the region. The conventional indicator of housing affordability is the percentage of household income spent on housing. For example, housing expenditures that exceed 30 percent of household income have historically been viewed as an indicator of a housing affordability problem, both for rental and owner-occupied housing. Households that spend more than 30 percent of their income on housing are considered “overpaying” and will have less income to spend on both essential needs, such as food and transportation, and discretionary purchases. In 2012, 57 percent of SCAG-region renters spent more than 30 percent of their income on housing. By 2019, this figure dropped to 53.4 percent but climbed back to 55 percent by 2021. Severe cost burden, defined as households that spend at least 50 percent of their income on housing, represented 30.8 percent of all renters and decreased to 29.8 percent in 2021.

Unhoused Population: Communities across the region are grappling with an increase of unhoused neighbors. According to California Continuums of Care (CoC), the homeless count for CoCs across the SCAG region was 53,729 in 2012 and jumped to almost 85,000 in 2022, an increase of 58 percent over the last decade. During the Connect SoCal 2024 public outreach and engagement process, many people raised this as one of the top concerns facing the region and emphasized how this challenge spills over into other real or perceived quality-of-life concerns, such as access to sidewalks and safety on transit. While Connect SoCal does not directly examine or address the complex factors or solutions needed to understand and address homelessness, it is important to reflect this challenge in relationship to broader housing and transportation needs.

A recent comprehensive study on the California homelessness crisis found that the majority (89 percent) of unhoused persons lived in California prior to becoming unhoused, and the primary factors leading to homelessness were economic or social. The story of homelessness is a story of high housing costs and lack of options when housing is lost.¹⁷

Out-migration: While the region typically loses more residents to other states and counties than it gains, domestic out-migration increased notably early in the pandemic. While slow or negative growth can reduce projected housing need, domestic out-migration reflects the inability of Southern Californians to stay in the communities they call home. It is one economic response to a too -small housing supply, alongside overcrowding, cost burden, becoming unhoused, and the suppression of life-cycle ambitions (e.g., household formation and homeownership). This presents itself as a challenge to fostering resilient social and economic systems within the region’s communities.

Growing Sustainably, Slowly: The region can and has made progress in promoting land use patterns, including substantial housing growth, that do not consume natural lands or induce excessive travel demand. Given the diversity across the region, the evolution of how much each community will change between today and 2050 varies. However, regionwide, most of the housing and built environment that we will have in 2050 exists today. Turning the tide on long-standing land use patterns and transportation investments can take a long time, where implementation follows years of planning. This means that even though newer development is trending to be more sustainable than in the past, the pace of progress may be slower than needed.



LET'S GET TECHNICAL

See the Housing and Demographics and Growth Forecast Technical Reports for more detailed information.

ENVIRONMENT

Overview

What is the health of our people and environment? Despite significant improvements over the last several decades, the SCAG region still has some of the worst air quality in the country. Local air quality and the lack of dependable transportation options, active transportation, affordable housing, health care and job opportunities in many SCAG region communities can lead to poor health outcomes. The region is already facing the impacts of climate change, including extreme heat and severe wildfires. Heat-related events occurring from 2010 to 2019 resulted in more than 53,000 emergency room visits, 7,000 hospitalizations, and 600 deaths in California. Indicators show that the number and intensity of extreme-heat health events will worsen drastically throughout the state by midcentury. Extreme heat causes drier landscapes, which then make wildfires and drought more likely and extreme. In 2020, California experienced a record number of dry heat days due to a changing climate and had over 6,000 fires that burned millions of acres, making that year the largest wildfire season recorded in the state's modern history. Economic costs from wildfires include resources involved in fighting the fires, damage to property, health care bills, disrupted business costs, lost tax revenue, and decreased property values—and were estimated to be \$10 billion in 2020.

Natural lands offer important benefits to the region, including capturing carbon emissions and recharging groundwater resources. However, natural lands have decreased by roughly 50,000 acres, or 0.2 percent, between 2012 and 2019. Farmland decreased by 40,000 acres, or 3.5 percent, between 2012 and 2018. While farming practices can contribute to GHG emissions, these are typically far less than emissions in urban environments, and farm and grazing lands can provide co-benefits such as wildlife habitats, flood control and groundwater recharge. Our agricultural sector generates \$12.8 billion (2023 \$US) average annual output each year and employs an average of 53,000 workers.

As the region faces unprecedented challenges, it is important to coordinate regional land use and transportation strategies. It is also essential to address Southern California's growth and sustainability challenges in order to protect the SCAG region's natural resources and reduce future risks from climate change.

Key Environmental Challenges

Climate Change: This challenge includes increased wildfires, flooding, extreme heat, drought, sea-level rise and heavy storms, among other hazards. These impacts influence public health, communities, natural systems and the economy, as well as how we travel if there are disruptions and damages to our transportation system.

Poor Air Quality and Related Health Impacts: Across the SCAG region, transportation and land use decisions are shaping neighborhoods while also influencing the health outcomes of residents. The way a community is designed impacts the likelihood that a person will bike or walk to school, work or local shops; have access to healthy food or parks; and breathe air free of pollutants. Conditions in the places where people are born, live, learn, work and play affect a wide range of health risks and outcomes. These conditions are known as the Social Determinants of Health (SDOH), and they help explain why health outcomes (e.g., rates of asthma or diabetes) vary widely across the region. To improve health outcomes and reduce these inequities, it is critical to consider public health in integrated land use and transportation planning.

Loss of Open Space: The urbanization of the region over the past several decades has led to the consumption of hundreds of thousands of acres of natural land and farmland. The diverse natural landscapes of Southern California are an invaluable asset to the millions of people, native plants and animal species that call the SCAG region home. Our region's parks, open spaces and wildlife habitats provide us with important environmental services, like storing and providing clean drinking water, reducing pollution and mitigating urban heat-island effects.

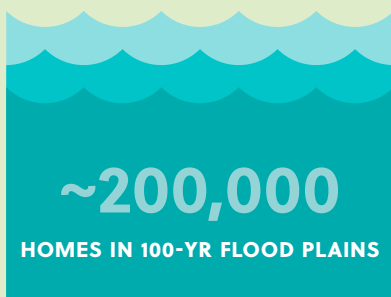
TAKE A CLOSER LOOK

The Health of Our Environment

Our choices about where to live or how to travel impact the quality of our environment. At the same time, the region is subject to a changing environment due to climate change.

Many homes in the region are at risk of climate-related hazards.

Communities at Risk



Consuming Our Resources

The region is home to a diverse range of natural lands and a robust agricultural sector; but these lands have been consumed over time to support the growth of our communities.



Air Quality



Air quality has steadily improved but still poses health risks to residents and can worsen due to extreme heat from climate change.

*Notes:

1. The 2015 8-hour ozone National Ambient Air Quality Standard (NAAQS) at 70 parts per billion (ppb).
2. South Coast Air Basin data for illustrative purposes. Days equals basin-days, which represents the number of days the 2015 8-hour ozone NAAQS was exceeded.

ECONOMY

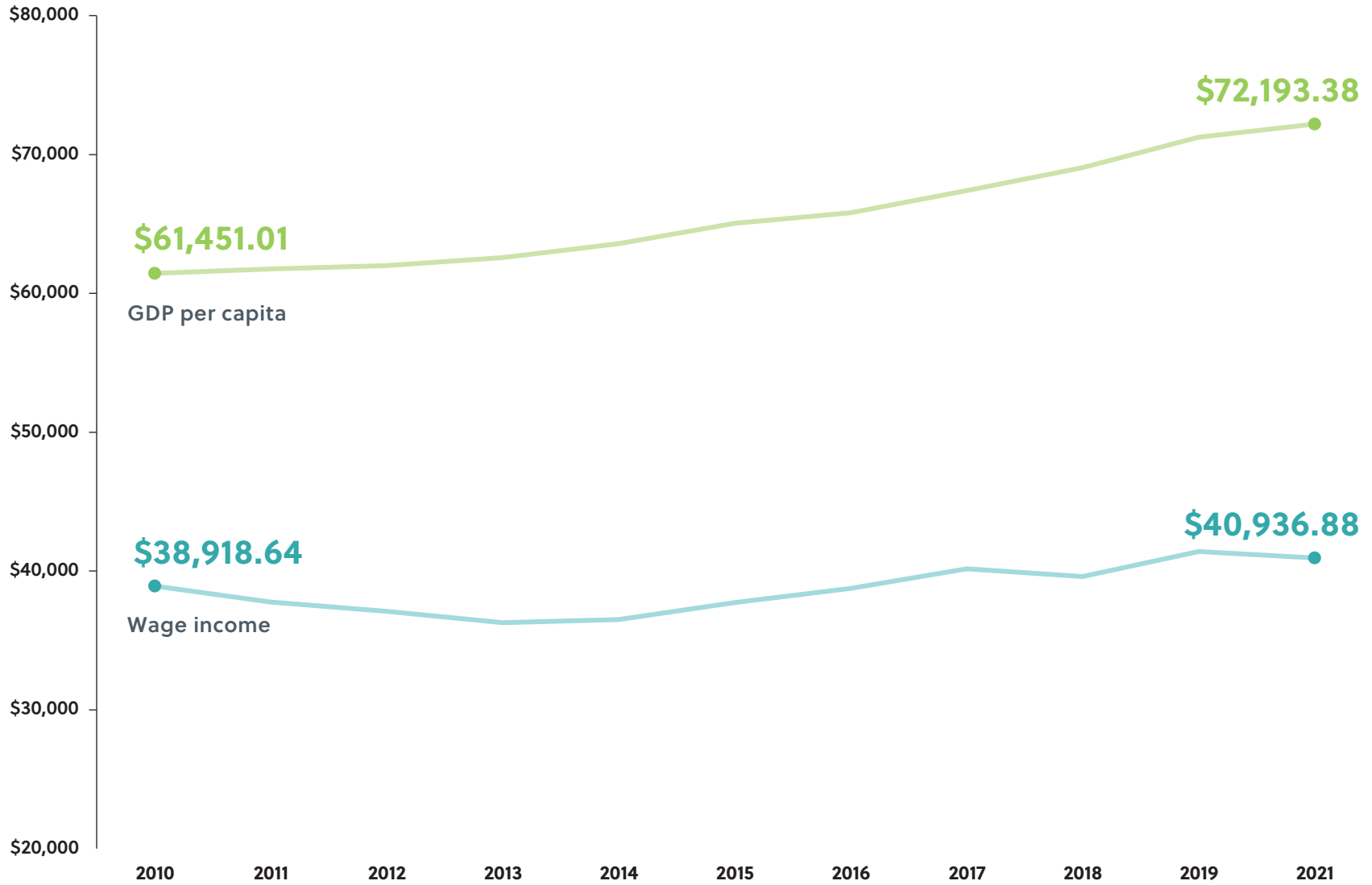
Overview

What is the state of the regional economy? SCAG's economic base is well diversified, from specialty manufacturing to logistics to the entertainment industry. The healthcare sector (NAICS 62) makes up the single-largest industry sector in the region, representing nearly 15 percent of SCAG employment in 2022. The information sector (NAICS 51) added the most jobs between 2021 and 2022, increasing the industry share of employment from 3.2 percent in 2021 to 4 percent in 2022. The region's ports are a global gateway to the rest of the U.S. Combined, the ports of Los Angeles and Long Beach terminals handle 35 percent of all waterborne containers entering and exiting the U.S. Global supply chains are interconnected, and changes in one area have subsequent and far-reaching ripple effects on transportation networks. This is especially true in the SCAG region, which serves as the premier trade gateway for the U.S.—and which ranks in the global top 10.

Between 2010 and 2021, real per capita gross domestic product (GDP) in the SCAG region increased by 17.5 percent (see Figure 2.3). Real per capita GDP is an indicator of the standard of living in a region. Higher per capita GDP means a region is producing more goods and services per person, and growth in per capita GDP suggests we have growing job opportunities and increasing productivity. The SCAG region's GDP grew faster than the U.S., which saw a 14 percent increase in real per capita GDP. However, SCAG region real per capita GDP growth was three times the growth in median real-wage income, which grew only 5.2 percent over the same period. Median real-wage income measures typical worker purchasing power. This disparity in growth between real per capita GDP and median real-wage income suggests that economic growth in the region is concentrated among a subset (upper income) of the population in the economy. Communities in the SCAG region that depend primarily on wage income are missing out on the economic prosperity suggested by the growth in GDP.

The COVID-19 pandemic and related disruptions also highlighted vulnerabilities in our economy. Disruptions in the supply chain put a strain on both the global and local network. Stay-at-home orders, often not applicable to occupations concentrated with lower-income workers, further exacerbated the impacts from the digital divide and highlighted the importance of reliable internet access for shopping and attending school, work and medical appointments.

FIGURE 2.3 Economic Growth is Inequitably Distributed in the SCAG Region



Notes: Wage income computed for adults (age 25+) in the labor force from ACS PUMS, 1-Year Samples 2010-2019, 2021. GDP per capita from REMI. Figures inflated to 2022 dollars using the CPI for Los Angeles-Long Beach-Anaheim MSA.

TAKE A CLOSER LOOK

Economic Trends in the Region

The COVID-19 pandemic and related disruptions highlighted vulnerabilities in our economy. The region's well-diversified economic base may not benefit all people in the region equally.



Digital Divide

The Internet, computer and smartphones have provided unprecedented access to information and helped transform our relationship to transportation—but there's a digital divide.

10% of people who live in the region do not have access to the internet

70% of the 10% are concentrated in low-income households

Source: 2021 CETF-USC Statewide Broadband Adoption Survey and U.S. Census Bureau, 2016–2020 ACS 5-Year Estimates

Goods Movement

Southern California has the largest container port complex in the United States. The region is also home to major border crossings with Mexico, air cargo facilities and an extensive highway and roadway network. This network supports two billion industrial square feet for manufacturing and warehouse and distribution facilities.



CHANGES AND CHALLENGES

Supply Chain Volatility

While shipment levels are back to pre-pandemic trends, freight supply chains are still grappling with constraints and degrees of instability.

Regulatory Requirements

State regulations require the transition of trucks and locomotives to clean technologies. Challenges related to timing and scalability of technology have economic considerations for the industry.

Community Impacts

Solving the complex and interrelated community and environmental issues surrounding goods movement will require new approaches that consider public health, safety, clean technology and workforce development.



Work From Home (percentage of workers age 16+)

2021 **19.34%**

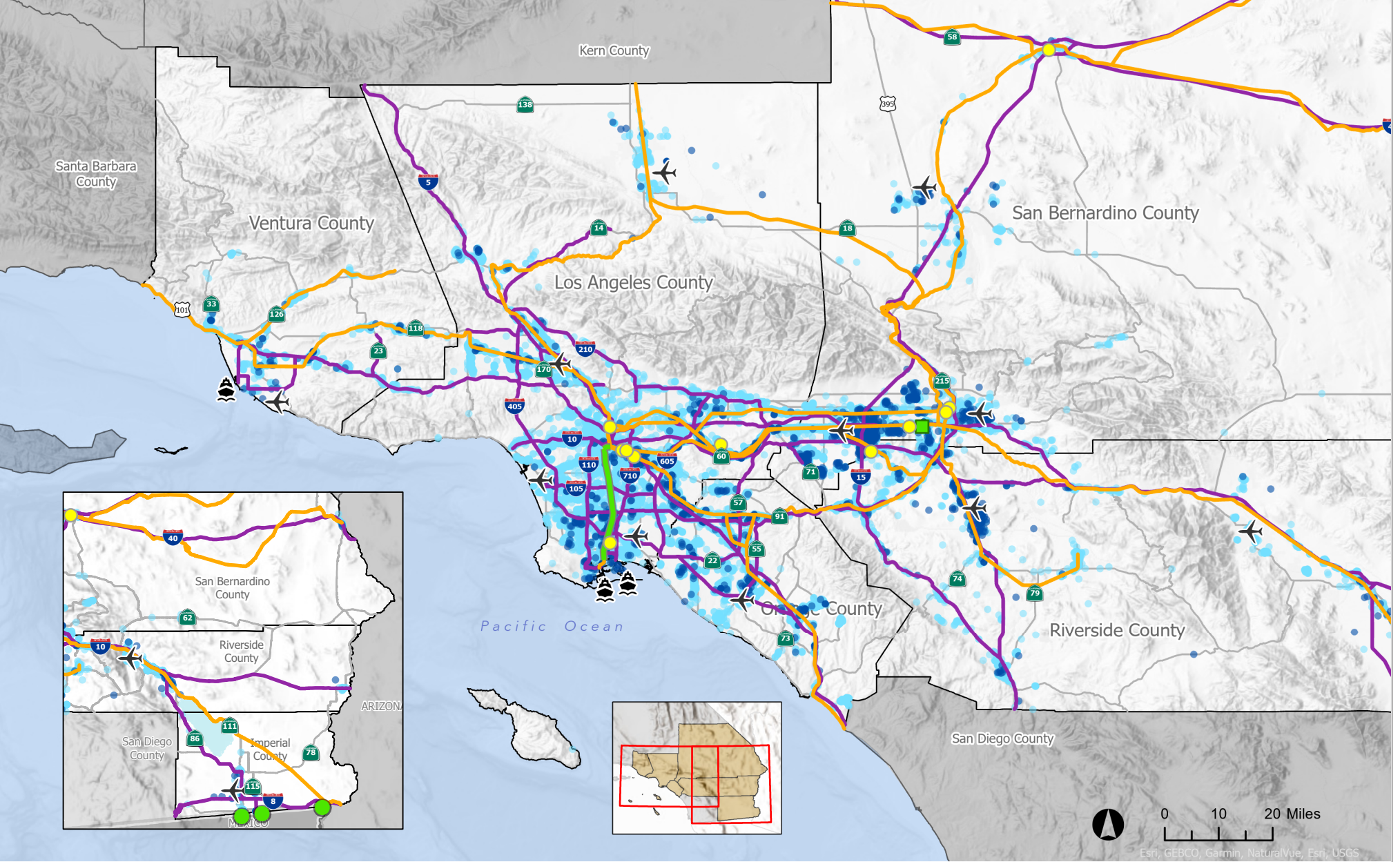
2019 **6.19%**

2012 **4.96%**











2006 **4.22%**

Working from home has rapidly increased since the pandemic, but not all jobs can be remote, and more analysis is needed to better understand this evolving trend.

Source: American Community Survey (2006, 2012, 2019 and 2021) 1-year samples, Table DPo4



MAP 2.8 Existing Regional Goods Movement System

-  Airports
-  Ports
-  Ports of Entry
-  Intermodal Facilities
-  Classification Facilities
-  Alameda Corridor
-  Main Line Rail
-  Major Freight Highway Corridors
- Warehouses**
-  < 50,000 sq ft
-  >= 50,000 sq ft

Source: SCAG 2023

Key Economic Challenges

Lack of economic opportunity: One of the top economic challenges raised by people throughout the region was the lack of higher-paying jobs within the region. Sometimes this was expressed as a lack of sufficient education and training to access those jobs. As we transition to clean energy technologies, it will be important to support residents in the necessary training to ensure that they have the skills to access opportunities within these related fields.

Population aging: By 2050, the region's median age is projected to increase to 43.8 years—up from 37.7 years in 2019 and 30.5 years in 1990. This will lead to a substantial change in the ratio of working-age individuals (16–64) to seniors (65+). In 1990, there were 6.8 working-age people per senior, and by 2050, there are projected to only be 2.9. This will likely put additional strain on retirement funding, including Social Security.

Increasing supply-chain complexities: Accommodating the needs of a growing goods movement sector across the supply chain is a challenge. Variables beyond the region's control, such as trade tariffs, the COVID-19 pandemic and other geopolitical tensions can impact how we can efficiently move goods within and through the region. Additionally, national, state and local policies will have an impact on both freight intermodal capacity and industrial development across goods movement industries.

TAKING ACTION

Implementation of Connect SoCal relies primarily on the actions and decisions of other transportation agencies, local jurisdictions and actors in the private sector to operate transit service, install new bike paths, approve new land uses or build new housing. SCAG's role for Plan implementation rests on collaboration with other agencies and stakeholders, policy leadership, our role as an information hub, through research—and, lastly, by providing resources to local agencies or jurisdictions to advance their planning efforts or implementation of Connect SoCal. Implementation strategies for Connect SoCal 2024 can be found in Chapter 3.

Regional Leadership

SCAG's role in implementing Connect SoCal 2024 is primarily through one of four ways: collaboration, funding administration, research and resources.

Collaboration and policy leadership: Coordinating policies across jurisdictions is crucial to successful Plan implementation. SCAG will collaborate with local governments, transit agencies and other stakeholders to align land use and transportation planning, streamline regulations and encourage cooperation.

SCAG resolutions include:

- Resolution on Commitment to Advancing Justice, Equity, Diversity and Inclusion in Southern California (July 2020)
- Climate Change Action Resolution (January 2021)
- Resolution for SCAG to Bridge the Digital Divide in Underserved Communities (February 2021)
- Water Action Resolution (October 2022)
- Goods Movement Supply Chain Resolution (March 2023)
- Regional Complete Streets Policy (March 2023)
- Clean Technology Policy (April 2023)

Federal funding administration: SCAG prepares the Federal Transportation Improvement Program (FTIP) every two years to implement projects and programs listed in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). As part of preparing the FTIP, SCAG ensures that included projects further the goals in Connect SoCal and assist the region in advancing key performance measures. Additionally, SCAG plays a critical role in project selection, programming and administration of certain federal formula and discretionary funds available to the region. Specific state and federal funding areas where SCAG plays a key role include:

- Carbon Reduction Program
- Congestion Mitigation and Air Quality Improvement Program
- Federal Highway Administration Discretionary Funds
- Federal Transit Administration Formula Funds
- Surface Transportation Block Grants
- Trade Corridor Enhancement Program
- Active Transportation Program

Data collection, analysis and research: To understand the region and help further policy advancement, SCAG leads and facilitates research in land use and transportation. Regional studies include:

- Last-Mile Freight Delivery Study (October 2020)
- Wilmington Freight Mitigation Study (January 2021)
- Accessory Dwelling Unit Potential in the SCAG Region (June 2021)
- Mobility Innovations and Pricing (March 2022)
- Curb Space Management Study (June 2022)
- SCAG Region Value Pricing – Regional Express Network: Concept of Operations (June 2022)
- Mobility as a Service Feasibility White Paper (July 2022)
- Other-To-Residential Toolkit (July 2022)
- Racial Equity Baseline Conditions Report (November 2022)
- Integrated Passenger and Freight Rail Forecast (December 2022)
- COVID-19 Mobility Study - SCAG & UC Davis (2023)
- SoCal Goods Movement Communities Opportunities Assessment (2023)
- Electric Vehicle Charging Station Study (February 2023)
- Regional Dedicated Transit Lanes Study (April 2023)
- Clean Technology Compendium (September 2023)

Local Technical Assistance Resources:

Local Information Services Program: Responding to the needs of local jurisdictions, SCAG has initiated the Local Information Services Program by providing tools, resources, technical assistance and training to local jurisdictions to support local planning projects. The program consists of three major services, which benefit local jurisdictions: Toolbox Tuesday Technical Webinars, Local Information Services Team (LIST) and GIS training services. The program has also created tools like the Safety Hub and the Housing Element Parcel Tool (HELPR). Overall, the purpose of the program is to:

1. Improve internal and external collaboration, education and engagement
2. Promote SCAG's available tools and resources
3. Provide personalized one-on-one (1:1) technical assistance to local jurisdictions
4. Enhance staff planning knowledge and technical capabilities

Go Human: To address the safety of people walking and biking in the region's transportation network, SCAG created the *Go Human* campaign, an award-winning community engagement program with the goals of reducing traffic collisions and encouraging people to walk and bike more in the SCAG region. With support from the California Office of Traffic Safety (OTS), SCAG's *Go Human* program has implemented four rounds of grant-funding opportunities since 2018, helping local organizations create and lead traffic-safety projects. With more than \$893,000 distributed through grant funds in the SCAG region, *Go Human* funding has supported 106 traffic-safety projects and reached more than 981,000 people. In April 2023, *Go Human* launched

its Community Hubs Program, which offers funding opportunities for community organizations to implement local traffic-safety and community-engagement strategies that leverage community gathering and resource sites or networks. The program aims to build street-level community resiliency and increase the safety of people most harmed by traffic injuries and fatalities, prioritizing Black, Indigenous and people of color; people with disabilities; and frontline workers, particularly those walking and biking.

Sustainable Communities Program: SCAG helps to advance Connect SoCal through the Sustainable Communities Program, which has facilitated over \$16.9 million in funding to local jurisdictions since the adoption of Connect SoCal in 2020. This adds to the \$17 million in funding to local jurisdictions through the SCP between the adoption of the 2016 RTP/SCS and Connect SoCal 2020. The funding program's goals are to provide needed planning resources to local jurisdictions so they can plan for active and multimodal transportation, sustainable land use and affordable housing—all to support the implementation of Connect SoCal and increase the region's competitiveness for federal and state funds. See Table 2.1 for the projects funded since 2020.

Regional Early Action Program: On July 5, 2023, SCAG was awarded \$237 million from the California Department of Housing and Community Development. This was part of the Regional Early Action 2.0 program to accelerate progress toward state housing goals and climate commitments through a strengthened partnership between the state, its regions and local entities. These resources will enable SCAG to fund projects and programs that support Connect SoCal implementation.


Plan Implementation

Since Connect SoCal was adopted in 2020, transportation agencies and local jurisdictions have taken actions to implement the Plan.

In housing, we have seen the positive impact that funding, collaboration, capacity building and action at the local level can have to spur housing policies that align with increased housing production and the Connect SoCal growth vision. In March 2021, SCAG adopted its 6th cycle Regional Housing Needs Assessment (RHNA)—based on Connect SoCal’s growth vision—by allocating units to cities and counties with the greatest job and transit access. To assist local jurisdictions through the RHNA and local housing plan—or housing element—update processes, the state created the Regional Early Action Planning (REAP) program in 2019 and the REAP 2.0 program in 2021. These actions represent the first time the state provided funding to regions to conduct the RHNA program and support regional housing-planning efforts.

Over the past three years, SCAG has used its REAP 1 grant funding to provide technical assistance to local jurisdictions, create development streamlining initiatives and develop a housing leadership academy, all to stimulate housing development in the Southern California region. These planning efforts are already paying dividends, with 114 of the SCAG region’s cities and counties having fully compliant housing elements. These 114 housing elements represent newly identified, developable sites for over one million new housing units in Southern California across all affordability levels. The adoption of housing elements across the region is a clear indication of how the region can realize the Connect SoCal growth vision.

In transportation, SCAG adopted the 2023 Federal Transportation Improvement Program (FTIP). SCAG prepares the FTIP every two years to implement projects and programs listed in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The FTIP identifies specific funding sources and fund amounts for each project, with the purpose of implementing Connect SoCal. Since Connect SoCal was adopted in 2020, SCAG has gained new responsibility for the selection of transportation projects to be funded with federal revenue sources. SCAG’s project selection process follows a performance-based evaluation and selection approach—and ensures that selected projects further Connect SoCal goals.



Over the past three years, SCAG has used its 2019 Regional Early Action Program (REAP 1) grant funding to provide technical assistance to local jurisdictions, create development streamlining initiatives and develop a housing leadership academy—all to stimulate housing development in Southern California.


Since 2020, several projects have been implemented, including but not limited to:

- **Redlands Rail Arrow Service in San Bernardino County:** The Arrow service is a new, nine-mile corridor operating between downtown San Bernardino and Redlands University and includes four new stations. Metrolink commuter rail also runs one roundtrip along this corridor as an extension of its San Bernardino Line to the downtown Redlands station.
- **LA Metro Crenshaw/LAX Light Rail:** Now in operation, the K Line connects to the Metro E Line (Expo), which travels between downtown LA and Santa Monica. In 2024, the K Line will also connect to the new LAX/Metro Transit Center Station, the new Aviation/Century Station and the Metro C Line (Green).
- **LA Metro Regional Connector:** In June 2023, Metro opened a rail line that provides a seamless journey from Azusa to Long Beach and from East Los Angeles to Santa Monica through the downtown Los Angeles core. The project includes three new underground stations between Little Tokyo and the Arts District and 7th Street/Metro Center Station.
- **Metrolink’s Southern California Optimized Rail Expansion (SCORE) Program:** Elements of Metrolink’s SCORE program are currently being implemented. It includes new grade crossings, station and signal improvements, and track additions that will allow much greater bi-directional train frequency and accelerate progress toward its zero-emissions future. Examples of projects include the Simi Valley Double Track, Chatsworth Station improvements, El

Monte Siding Extension Project and Rancho Cucamonga Siding Extension Project. In addition, the state of California will deliver high-speed rail service from San Francisco to Los Angeles/Anaheim in the future, and Brightline West will operate high-speed rail service between Las Vegas, the Victor Valley and Rancho Cucamonga by the end of the decade.

- **Aten Bike Path Project (City of Imperial):** Located on Aten Boulevard from Dogwood Road to Puerto Vallarta Avenue in the City of Imperial is an eight-foot-wide paved bike path, striping and signage for approximately one mile, and bike lanes and signage for another half mile. The project closes an active-transportation gap between a dense residential neighborhood and Imperial Valley College.
- **San Pablo Corridor Improvements (City of Palm Desert):** Following a SCAG-funded, 10-day demonstration event in 2016, the City of Palm Desert secured funding to install bicycle and pedestrian improvements along San Pablo Avenue. The improvements included a roadway reconfiguration that reduced vehicle lanes to add wider sidewalks, shade trees, street furniture, center median vehicle parking, three roundabouts and a separated bikeway.
- **Civic Center Bicycle Boulevard Project (City of Santa Ana):** The project was identified in the Downtown Santa Ana Complete Streets Plan (funded by SCAG in 2014). The City of Santa Ana secured Active Transportation Program funding to implement a bicycle boulevard along the Civic Center corridor in Downtown Santa Ana between the Civic Center and the Metrolink Station. The City installed pedestrian crossing improvements at seven intersections, including crosswalks, curb extensions and curb ramps. Additionally, the City installed four roundabouts and bikeway markings with signage along the corridor to reduce vehicle speeds and volumes.

- **Conejo School Road and Willow Lane Sidewalk and Bike Lanes Project (City of Thousand Oaks):** Located along Conejo School Road and Willow Lane from Hampshire Road to Hillcrest Drive in the City of Thousand Oaks, the City addressed a gap in its sidewalk network and installed one mile of bike lanes and signage.
- **Maine Avenue and Pacific Avenue Corridor Complete Streets Improvement (City of Baldwin Park):** Located along Maine Avenue and Pacific Avenue in the City of Baldwin Park, the City installed high-visibility crosswalks, pedestrian ramps and curb extensions. The City also reconfigured the corridor by removing a travel lane in each direction to install a protected Class IV bikeway for the entire length of the corridor.
- **I-8 Imperial Avenue Interchange (City of El Centro):** Caltrans undertook reconstruction of the I-8 interchange at Imperial Avenue to replace two lanes with a four-lane diamond-type overcrossing to provide improved access to Imperial Avenue.
- **I-15 Express Lanes (Riverside County):** The 15 miles of I-15 Express Lanes opened for service in April 2021. The Riverside County Transportation Commission, in partnership with Caltrans and the Federal Highway Administration, added two express lanes in each direction to the I-15 and extended them from State Route 60 near the San Bernardino County line to Cajalco Road in the City of Corona.



Since Connect SoCal was adopted in 2020, SCAG gained responsibility for the selection of transportation projects to be funded with federal revenue. SCAG's project selection process follows a performance-based evaluation and selection approach—and ensures that selected projects further Connect SoCal goals.

RECENT PLANS AND PROJECTS

Sustainable Communities

The following snapshots feature recent Sustainable Communities Program plans and projects completed in the region. The type of plans and projects funded can vary depending on the focus of each call for applications. Recent calls have included a focus on Smart Cities & Mobility Innovations; Housing & Sustainable Development; and Active Transportation & Safety.



City of Riverside PACT

Funding: \$374,944 (2016 SCP)

Plan Summary:

- The Riverside PACT is a unique planning document that includes an integrated, active transportation and recreation planning effort that combines streets, plazas, sidewalks, trails and streetscape design. This comprehensive plan includes a Pedestrian Target Safeguarding (PTS) Plan, an Active Transportation Plan (AT Plan), a Complete Streets Ordinance (CSO) and a Trails Master Plan (TMP). Together, these four plans represent the City of Riverside's "pact," or commitment, to creating robust, sustainable and accessible transportation options and public spaces for residents and visitors well into the future. These plans include creating funding strategies and opportunities to provide more transportation options such as walking, bicycling and taking public transit from one place to another.
- The Riverside PACT is supportive of Connect SoCal's core vision of Complete Streets, as it envisions means to enhance public rights of way in support of all roadway users and prioritizes outcomes in underrepresented communities.

- Through these combined forms of engagement, thousands of residents were reached as part of plan development, including those who may not have previously attended in-person meetings. Because the elements of the PACT were developed jointly, residents were uniquely empowered to cohesively develop their vision for active mobility and recreation in Riverside manner and then codify it through the Complete Streets Ordinance.
- The city codified the Complete Streets Ordinance in 2021 as part of the plan adoption.

Plan Outcomes:

- Incorporated bike lane and sidewalk recommendations from the Riverside PACT into the city's Annual Capital Improvement Paving Program for three fiscal years.
- Awarded \$7.8 million in grant funds for the HSIP Cycle XI Project, which includes the installation of citywide retroreflective backplates and Leading Pedestrian Interval Phasing. The PACT document includes both of these traffic-safety countermeasure improvements and also identified the citywide application of the improvements, which led to the project application's selection.

- Scheduled to receive the award for the 2023 SB 821 Pedestrian & Bicycle Facilities Improvements Grant in the amount of \$1.3 million. The grant application consists of pedestrian/bike improvements, audible pedestrian push buttons, flashing LED stop signs, high-visibility crosswalks, green bike lane striping and rectangular rapid-flashing beacons at twenty-four at 24 intersection locations. Half of the intersections on the list originated from intersection improvement recommendations from the PACT's Active Transportation Plan and Complete Streets Ordinance.
- Awarded \$16.4 million in ATP Grants, recently approved by the CTC.
- Continued a practice of incorporating pedestrian and bicycle improvements (including trails) from the PACT into development conditions of approval.
- Incorporated and expanded upon safety assessments within the Riverside PACT as part of the City's recently adopted Local Roadway Safety Plan.
- Received a \$1.4 million Recreational Trails Program grant to supplement the \$3.7 million Urban Greening Grant for the Gage Canal Trail project.

Imperial County Walk, Ride, Learn

Funding: \$224,000 (2016 SCP)

Project Summary:

- **Project Ride, Walk, Learn** is a non-infrastructure, educationally focused program that provides information to students and parents on bicycle and pedestrian safety, connects children and families by foot and bicycle to their schools and to the community at large, and has an added health and environmental component. Students were engaged through a multipronged program, including distribution of educational materials to students, parents and school staff, school assemblies, walk to school events, walk audits and bicycle rodeos.
- The program provided funding to the underserved communities of Calipatria, Niland, Heber, Seeley and Westmorland to support an educational Safe Routes to School program to increase awareness, identify safety concerns and provide direct resources to school sites.

Project Outcomes:

- **Community-Identified Infrastructure Improvements:** Through coordinated community walk audits, the project team identified several safety concerns. As a result of the program, the county implemented new rapid-flashing beacons at priority crossings and installed new high-visibility crosswalks to address safety concerns at school sites.
- **Cross-Collaboration With Partners:** This work resulted in a strengthened partnership between the County's Office of Education, the Partnering School Districts, the County Public Health Department and the County Public Works.
- **Coordinated, Replicable Activities Across School Sites:** The project model proved successful to implement across five schools in Imperial County and created a model that can be replicated across school sites.
- **School Staff Training:** Created training programs for school staff to continue the project beyond the grant award.

TABLE 2.1 Sustainable Communities Program Projects Approved Since 2020

COUNTY	PROJECT TYPE	AGENCY	PROJECT NAME
Active Transportation & Safety			
Los Angeles	Pedestrian Plan	LA County Public Health	Lennox Community Pedestrian Plan
Los Angeles	Network Visioning & Implementation	Los Angeles Dept. of Transportation	Wilshire Center/K-town AT Network Visioning
Los Angeles	Quick Build	City of Santa Monica	East Pico Safety Project
Riverside	Non-Infrastructure	Riverside County Public Health	Safe Routes for All - Coachella
Orange	First/Last Mile	OCTA	OCTA Bus Stop Safety and Accessibility Study
Riverside	Active Transportation Plan	City of Banning	Banning Comprehensive ATP
Los Angeles	Safe Routes	City of Lynwood	Lynwood Safe Routes To School (SRTS) Plan
Los Angeles	Network Visioning & Implementation	City of Pomona	Pomona Citywide Complete Streets Ordinance (CCSO)
Los Angeles	First/Last Mile	Montebello Bus Lines	First-Mile / Last-Mile Master Plan
Los Angeles	Safe Routes	City of Duarte	Safe Routes to School Program
Orange	Vision Zero	City of Santa Ana	Safe Mobility Santa Ana (SMSA) Plan Update
Housing & Sustainable Development (HSD)			
Los Angeles	Advanced ADU Bundle	Pasadena	City of Pasadena ADU Incentive Program
Los Angeles		Santa Monica	ADU Accelerator Program
Orange		Laguna Beach	ADU Ordinance and Toolkits
Orange	Preliminary ADU Bundle	Buena Park	Advancing ADU Implementation
Los Angeles		Compton	ADU Housing Opportunity
Orange		Garden Grove	Advancing Accessory Dwelling Unit Implementation Programs
Los Angeles		Paramount	Paramount Small Model Homes
Los Angeles		Santa Fe Springs	ADU Implementation Program: Prototypes and Procedural Manual
Los Angeles	EIFD Bundle	Covina	Covina Downtown Enhanced Infrastructure Financing District (EIFD)
Los Angeles		LAC/USC Health Village	LAC/USC Healthy Village Vision
Riverside		Yucaipa	Yucaipa EIFD

TABLE 2.1 Continued Sustainable Communities Program Projects Approved Since 2020

COUNTY	PROJECT TYPE	AGENCY	PROJECT NAME	
Housing & Sustainable Development (HSD) continued				
Los Angeles	Workforce Housing	Palmdale	Central Palmdale Workforce Housing Project WHAR12	
Los Angeles	EIFD	Heart of Hollywood (City of LA)	Heart of Hollywood Infrastructure Financing District	
Los Angeles	EIFD	One San Pedro (HACLA)	One San Pedro	
Riverside	Objective Development Standards Bundle	Coachella	Objective Design and Development Standards	
San Bernardino		Grand Terrace	Permitting Software For Expediting Housing Opportunities	
Los Angeles		Montebello	Streamlining Permitting Procedures	
Orange		Newport Beach	Newport Beach Objective Development Standards	
Los Angeles		Santa Fe Springs	Objective Design Standards and Design Manual	
Los Angeles		Santa Monica	Objective Development Standards	
Los Angeles		South Pasadena	Housing Application & Materials Streamlining and Training	
Orange		Westminster	Westminster Objective Development Standards	
Los Angeles		Specific Plan	San Dimas	San Dimas Downtown Specific Plan
San Bernardino		Specific Plan	Rialto	Foothill-Riverside Specific Plan Updates
Los Angeles	Specific Plan	Burbank	Media District Specific Plan Update	
Los Angeles	Objective Zoning Standards	South El Monte	South El Monte Zoning Code Comprehensive Update for Housing Streamlining	
Smart Cities & Mobility Innovations (SCMI)				
Los Angeles	Curb Space	Los Angeles Dept. of Transportation	Curb Zone Data Inventory for Digital Curb Management	
Los Angeles		City of Long Beach	Long Beach Curb Space Management Study	
Orange		City of Stanton	Stanton Citywide Curb Management Plan	
Los Angeles	Technology	San Gabriel Valley Council of Govts	GoSGV Engagement & Evaluation	
Riverside	Parking	City of Desert Hot Springs	Downtown and Light Industrial Parking Plan	
Orange		City of Garden Grove	Garden Grove Curb Data Study	
Orange	Technology	City of Laguna Woods	Laguna Woods Mobility Technology Plan	
San Bernardino	Technology	City of Rialto	Smart Cities Plan for Warehousing & Logistics	

Chapter 2 Endnotes

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3

The Plan

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Connect SoCal 2024 provides a comprehensive plan for moving the region toward a better future. Planning for a region as vast and complex as Southern California requires a continuing, cooperative and comprehensive approach that is performance-driven and outcome-based.



3.1

Purpose

The Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) development process assesses regional alignment.

Since SCAG's first joint RTP/SCS in 2012, the region has nurtured strategies like Complete Streets, Transportation Demand Management and Sustainable Development. The region has also developed new ideas like Mobility-as-a-Service (MaaS) and Universal Basic Mobility.

Connect SoCal 2024 carries forward policy direction established in Connect SoCal 2020, as well as more recent Regional Council actions that address emerging issues facing the region. Connect SoCal is an important planning document for the region, allowing public agencies to implement transportation projects in a coordinated manner while qualifying for federal and state funding. Connect SoCal also supports local jurisdictions in making informed land use planning and housing development decisions.

PLAN STRUCTURE

Key Elements

The Plan represents the vision for the region and the planned transportation investments, policies and strategies that will integrate with the forecasted development pattern to achieve the Plan’s goals. The Plan includes robust financial analysis that considers operations and maintenance costs to ensure our existing transportation system’s reliability, longevity, resilience and cost-effectiveness. It includes information collected from local agencies, like project lists from County Transportation Commissions (CTCs), and future land use and growth information from local jurisdictions. These provide the foundation for the Plan elements and the shape of where we’re headed. However, there is a gap between what we can achieve from this bottom-up process and what we must achieve to meet our performance requirements or reach our goals. This gap is addressed through a set of Regional Strategic Investments, supported by Regional Planning Policies and Implementation Strategies.

Elements of the Plan include:

Requirements: Connect SoCal meets both federal and state requirements for developing an RTP/SCS. For a full outline of the requirements of the Plan, see the Supplementals section.

Vision and Goals: The vision and goals of the Plan articulate where we want to be in the future, based on input from stakeholders and the public.

Regional Planning Policies: These policies provide guidance for integrating land use and transportation planning to realize the vision of Connect SoCal. They offer a resource by which CTCs or local jurisdictions, when seeking resources from state or federal programs, can refer to specific policies to demonstrate alignment with the RTP/SCS.

Project List: The project list details every Plan investment. This includes key input from CTCs on their planned near-term and long-term projects.

Forecasted Regional Development Pattern: SCAG develops a forecasted development pattern that details where future jobs and housing will be located, based on expert projection, existing planning documents, regional policies and review by local jurisdictions.

Regional Strategic Investments: These investments, which are funded by new revenues, are necessary to supplement the local input received from CTCs and local jurisdictions in order to reach performance targets and goals.

Implementation Strategies: These strategies include areas where SCAG will lead, partner or support other responsible parties. SCAG’s methods of implementation can vary from convening, research or resource roles, depending on the specific strategy.

HOW IT WORKS

**Connect SoCal
Performance-Based
Planning**

VISION AND GOALS

SCAG leads the region by defining where we want to go and outlining strategies to get us there.

Leadership

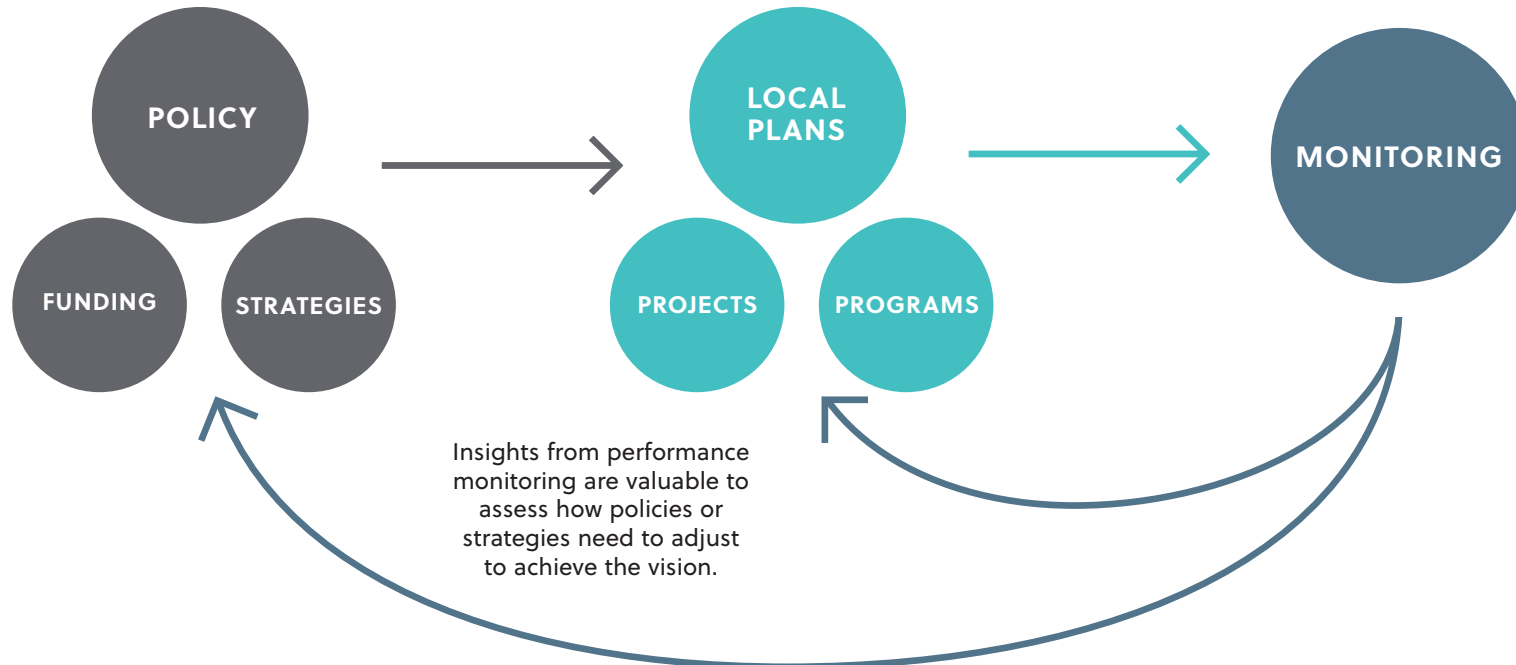
SCAG works with local jurisdictions, transportation commissions, state and federal agencies and various stakeholder groups to identify how we will work together to achieve the regional vision.

Implementation

Jurisdictions take action at the local level to implement work that moves toward achieving this regional vision.

Evaluation

Measurement of implementation work and outcomes acts as a benchmark on progress toward achieving the vision.



PLAN DEVELOPMENT

It's About Collaboration

SCAG develops Connect SoCal in collaboration with hundreds of stakeholders, input from thousands of Southern Californians, and leadership from 149 Policy Committee members and Regional Council members. The transportation projects and investments included in Connect SoCal are sourced primarily from project lists submitted from County Transportation Commissions and supplemented by a set of regional strategic investments. To understand the existing and potential future development pattern of the region, SCAG reached out to all 197 jurisdictions in Southern California to understand their land uses, plan designations and growth outlooks. Throughout the development of the Plan policies, strategies, and technical and analytical elements, SCAG staff met with various public agency staff and other stakeholders through regular Technical Advisory Committees and Working Groups.

Consistency and consultation: During the development of the Plan, SCAG reviewed thousands of planning documents. These documents were developed by cities, counties and transportation agencies to promote consistency between local plans, the Regional Transportation Plan, and federal and state documents like the California Transportation Plan. The development process included engaging with each County Transportation Commission to develop the Project List and consulting with local jurisdictions on the forecasted regional development pattern during the Local Data Exchange process.

Stakeholder and public engagement: Throughout Plan development, SCAG engaged hundreds of stakeholders through Regional Planning Working Groups and Technical Advisory Committees. These groups, consisting of representatives from state, federal and local governments, plus subject-matter experts, helped provide input and advice on many elements of Plan development. In Spring 2023, SCAG hosted 20 in-

person and seven virtual open-house style workshops. SCAG partnered with 16 community based organizations, attended 20 pop-up events and collected over 3,600 survey responses.

Policy Leadership:

SCAG's Regional Council and Policy Committees meet regularly to provide direction for SCAG's work. In June 2022, the Regional Council adopted a Policy Development Framework to articulate an approach for Connect SoCal 2024 development, including the creation of three special Regional Council subcommittees to dive deeper into key issues areas for Connect SoCal:

- **Racial Equity and Regional Planning:** Identify opportunities to advance racial equity through the policies and strategies in Connect SoCal, and guide how planning and investments over the next 30 years can address and rectify the effects of racially discriminatory policies in the SCAG region.
- **Resilience and Conservation:** Advance the direction set forth in the SCAG Regional Council Resolution on Climate Change Action and Water Action. Consider opportunities for enhanced resilience and resource conservation— and develop recommendations on how Connect SoCal can support our communities in adapting to changing conditions or mitigating risks to become more resilient.
- **Next Generation Infrastructure:** Build on Connect SoCal 2020 and provide guidance on the priorities and strategies for Connect SoCal 2024, reflecting the rapidly evolving developments across the region specific to the future of mobility and associated implications for public policy.



LET'S GET TECHNICAL

Refer to the Public Participation and Consultation Technical Report for more information on Plan development and stakeholder involvement. Information can also be found in the Supplementals section.

THOSE WHO BENEFIT

Demographics of Change

As of the Connect SoCal 2024 planning base year of 2019, the SCAG region was home to 18,828,000 people; 6,193,000 households; and 8,976,000 jobs. A beginning step for the regional planning process is understanding who we are planning for in the future. The regional and county growth forecasts (Table 3.1) reflect recent and past trends and expert-derived demographic and economic assumptions. In contrast to short-range forecasts, which focus on business cycles and market trends, a 30-year time horizon relies more heavily on births, deaths, migration and the strength of a region's economic base compared to the nation as a whole. Due to changes in these trends and assumptions, SCAG is projecting just over half the level of population growth over this Plan's horizon as was anticipated in Connect SoCal 2020.

Consistent with global trends, the older-age population of the SCAG region is steadily growing. Understanding this demographic shift is vital for planning for the future. We want to better comprehend how an older population will live and travel—and how we can ensure they continue to fully engage in their communities. One of the clearest implications is in housing demand. Older people tend to live alone or in smaller households. Other major implications include declining transportation revenue, as spending patterns differ, and reduced participation in the labor force. Due to a strong mix of industries and low unemployment, the Southern California economy will likely need to rely even more heavily on in-migrants and immigrants over the longrun.



LET'S GET TECHNICAL

For more information of the changing demographics in the SCAG region, review the Demographics and Growth Forecast Technical Report.

SCAG is projecting just over half the level of population growth over this Plan's horizon as was anticipated in Connect SoCal 2020. Consistent with global trends, the older-age population in the SCAG region is steadily growing. Understanding this demographic shift is vital for planning for the future.

TABLE 3.1 Comparing 30 Years of Growth: Past and Future

TOTAL POPULATION	1990	2019	2035	2050	1990–2019	2019–2050
					PAST GROWTH	FUTURE GROWTH
Imperial	109,000	181,000	198,000	210,000	72,000	29,000
Los Angeles	8,863,000	10,046,000	10,449,000	10,767,000	1,183,000	721,000
Orange	2,411,000	3,191,000	3,299,000	3,439,000	780,000	248,000
Riverside	1,170,000	2,386,000	2,784,000	2,992,000	1,216,000	606,000
San Bernardino	1,418,000	2,175,000	2,357,000	2,623,000	757,000	448,000
Ventura	669,000	849,000	858,000	852,000	180,000	3,000
SCAG	14,640,000	18,828,000	19,945,000	20,883,000	4,188,000	2,055,000

TOTAL HOUSEHOLDS	1990	2019	2035	2050	1990–2019	2019–2050
					PAST GROWTH	FUTURE GROWTH
Imperial	33,000	52,000	65,000	72,000	19,000	20,000
Los Angeles	2,990,000	3,393,000	3,933,000	4,139,000	403,000	746,000
Orange	827,000	1,069,000	1,196,000	1,253,000	242,000	184,000
Riverside	402,000	744,000	965,000	1,062,000	342,000	318,000
San Bernardino	465,000	657,000	835,000	953,000	192,000	296,000
Ventura	217,000	278,000	318,000	318,000	61,000	40,000
SCAG	4,934,000	6,193,000	7,311,000	7,798,000	1,259,000	1,605,000

TOTAL EMPLOYMENT	1990	2019	2035	2050	1990–2019	2019–2050
					PAST GROWTH	FUTURE GROWTH
Imperial	49,000	69,000	82,000	91,000	20,000	22,000
Los Angeles	4,562,000	5,031,000	5,386,000	5,433,000	469,000	402,000
Orange	1,288,000	1,805,000	1,942,000	2,019,000	517,000	214,000
Riverside	358,000	847,000	1,057,000	1,185,000	489,000	338,000
San Bernardino	450,000	860,000	1,035,000	1,145,000	410,000	285,000
Ventura	274,000	363,000	384,000	376,000	89,000	13,000
SCAG	6,980,000	8,976,000	9,885,000	10,248,000	1,996,000	1,272,000

LOOKING FORWARD

Creating an Equitable Future

SCAG has made a commitment and, in some cases, has the legal obligation to analyze and address the inequities that the government and planning profession, and others have created by systemically driving and perpetuating societal differences along racial lines. These inequities have resulted in vastly different living and social conditions, as well as reduced access to opportunities.



As part of Connect SoCal development, SCAG convened the Racial Equity & Regional Planning Subcommittee, which recommended that Connect SoCal 2024 function as a vehicle to promote racial equity. In this way, it can serve to address the historic impacts of systemic racism and coordinate and implement equity-centered activities across the region. SCAG aimed to consistently apply an equity lens while developing the Plan—and the Technical Reports, too, which address specific equity issues relevant to their respective topics.

While SCAG considers potential impacts on people of color and low-income households in our regional growth, transportation and economic development planning and analysis, SCAG recognizes that more affirmative approaches that seek to counter the effects of historic practices are needed to advance equity and social justice across the region. It is imperative that SCAG approach this work with a keen understanding of the diversity of the region—including sovereign Tribal Governments and Communities—to ensure that efforts to advance racial equity are inclusive and responsive to the needs across the region. Some key strategies for improving equity in the region include:

Priority for Equity Communities:

Prioritization of historically marginalized communities is a key focus for SCAG and

state and federal funding programs, which is why it was elevated as a priority by the Subcommittee. Prioritized capacity-building and funding efforts support historically marginalized communities—often communities of color—to develop programs that respond to community-identified needs and advance community-driven solutions.

Reconnecting Communities: Historic physical and economic segregation was caused by U.S. housing and transportation policies and led to decades of inequalities. We are planning policies and projects that involve removing, retrofitting or mitigating highways or other transportation facilities that create barriers to community connectivity, including mobility, access or economic development.

Affirmatively Furthering Fair Housing: Our goal is to take meaningful actions that address significant disparities in housing needs and access to opportunity, replace segregated living patterns with truly integrated and balanced living patterns, transform racially and ethnically concentrated areas of poverty into areas of opportunity, and foster and maintain compliance with civil rights and fair housing laws.

To further these strategies, SCAG develops studies and programs focused on creating more equitable outcomes for the region, including the following examples:

Mobility Innovations and Pricing Study:

This study focused on the potential equity implications of road pricing and other innovative transportation policies in the region. The project served as a foundational step toward understanding the equity implications of these strategies and calls for increasing community participation in policymaking processes.

Go Human Program: SCAG staff provides traffic safety resources to local jurisdictions and community organizations, including co-branded safety advertisements and the Kit of Parts Lending Library, which creates temporary demonstrations of street treatments. Additionally, in three funding rounds since 2020, the *Go Human* Mini-Grant program awarded more than \$845,000 to 85 projects developed and led by community-based organizations, engaging more than 400,000 people on traffic safety. This program builds street-level community resilience and increase the safety of people most harmed by traffic injuries and fatalities, including without limitation, Black,

**LET'S GET TECHNICAL**

See the Mobility and Equity Analysis Technical Reports for more details.

Indigenous and People of Color; people with disabilities; and frontline workers, particularly those walking and biking.

Inclusive Economic Recovery Strategy

(IERS): This report was developed to address the long-standing social and economic challenges heightened by the COVID-19 pandemic. With over 50 recommendations in the areas of housing, transportation, and workforce and economic development, the IERS reflects priorities and needs raised during stakeholder convenings and sets forth strategies for SCAG's role in advancing equitable regional recovery and growth. Strategy development was guided by five core principles, with the primary intent of fostering greater economic opportunity for women and communities of color and narrowing the economic disparities existing in our local and regional economies today. SCAG received one-time state grant funding to implement several high-impact recommendations from the IERS.

Sustainable Communities Program Call for Applications for Civic Engagement, Equity and Environmental Justice:

This funding opportunity prioritizes awards to Priority Populations that are disadvantaged and historically underserved to accelerate infill development, provide housing for all incomes, reduce vehicle miles traveled

(VMT) and greenhouse gas (GHG) emissions, affirmatively further fair housing (AFFH) and implement Connect SoCal. This program includes a co-applicant structure and encourages partnerships between local agencies and community-based organizations (CBOs).

Equitable engagement and decision-making are the foundation of a more equitable future—increasing inclusive and meaningful representation of community-centered solutions. Using an equity lens, SCAG developed the 2022 Public Participation Plan to guide all of SCAG's public participation activities. This plan influenced the strategies used during the Connect SoCal 2024 outreach conducted in Spring 2023. The strategies aimed to provide more opportunities to reach underrepresented communities, such as partnering with Community Based Organizations, participating in existing community events, and holding in-person and virtual workshops at varied times of the day. SCAG will carry the take-aways and lessons learned from the Connect SoCal 2024 outreach process into future work efforts, aiming to reflect the region's needs and vision for a more equitable future in every aspect of regional planning.

3.2

The Heart of the Plan

Connect SoCal 2024 is a plan that includes projects, investments, policies and strategies to help the region achieve its vision for a better future. This section details the Plan's goals and the various elements necessary to bring this vision to fruition.

Though these elements are organized within the pillars of Mobility, Communities, Environment and Economy, the conditions of our region and impacts of our decisions are all intertwined.

Investment decisions for our transportation system impact the quality of our environment and the resilience of our economy, while our decisions about how to develop our communities impact demands on our transportation system and our residents' access to opportunities.

A VISION FOR 2050

Looking Toward the Future

The Vision and Goals for Connect SoCal 2024 are rooted in the direction set forth by Connect SoCal 2020, reflecting both SCAG's statutory requirements and the emerging trends and persistent challenges facing the region. SCAG then engaged with stakeholders and members of the public on a draft vision for Connect SoCal in 2050 and a set of draft goals. Reflecting that input, SCAG's vision for Southern California in the year 2050 is "A healthy, prosperous, accessible and connected region for a more resilient and equitable future." The following goals and subgoals will help SCAG to achieve this vision:

Mobility: Build and maintain a robust transportation network

- Support investments that are well-maintained and operated, coordinated, resilient and result in improved safety, improved air quality and minimized greenhouse gas emissions
- Ensure that reliable, accessible, affordable and appealing travel options are readily available, while striving to enhance equity in the offerings in high-need communities
- Support planning for people of all ages, abilities and backgrounds

Communities: Develop, connect and sustain livable and thriving communities

- Create human-centered communities in urban, suburban and rural settings to increase mobility options and reduce travel distances
- Produce and preserve diverse housing types in an effort to improve affordability, accessibility and opportunities for all households

Environment: Create a healthy region for the people of today and tomorrow

- Develop communities that are resilient and can mitigate, adapt to and respond to chronic and acute stresses and disruptions, such as climate change
- Integrate the region's development pattern and transportation network to improve air quality, reduce greenhouse gas emissions and enable more sustainable use of energy and water
- Conserve the region's resources

Economy: Support a sustainable, efficient and productive regional economic environment that provides opportunities for all people in the region

- Improve access to jobs and educational resources
- Advance a resilient and efficient goods movement system that supports the economic vitality of the region, attainment of clean air and quality of life for our communities

SCAG's vision for Southern California in the year 2050: A healthy, prosperous, accessible and connected region for a more resilient and equitable future.

Regional Planning Policies

SCAG developed a set of Regional Planning Policies to guide decision-making in the region that aligns with the Plan’s vision and achievement of our goals. These policies carry forward priorities that have been refined over several planning cycles to promote a multimodal transportation system and sustainable land use and development. The policies listed in the Regional Planning Policies section near the end of this chapter incorporate recent discussions and direction from SCAG’s Regional Council, Policy Committees and special subcommittees. The categories covered by these policies are detailed in each of the following sections.



Connect SoCal 2024 represents our most up-to-date understanding of the region, along with the policies, strategies and projects to advance the region’s mobility, economy and sustainability through 2050.

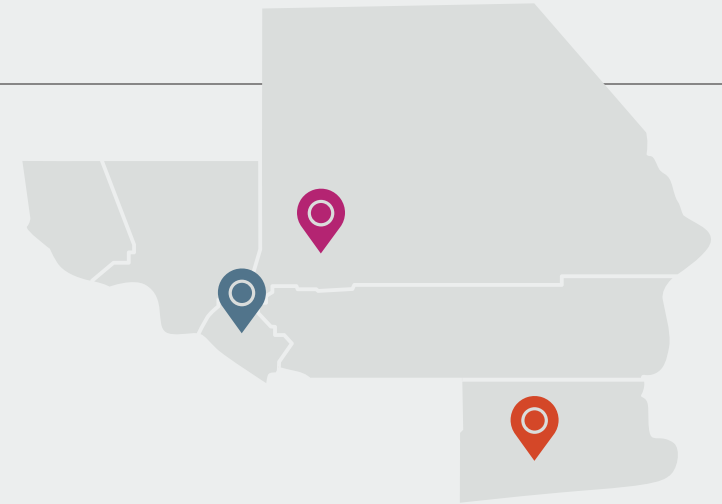
MOBILITY IN 2050

The Future of Movement

How will we move and increase access to opportunities in 2050? Transportation and its corresponding technologies connect us to places and allow us to move between home and important destinations like work, school or the grocery store. Our community’s land use pattern determines the distribution of these destinations which, when combined with available transportation options, either support or negatively impact our ability to meet our needs. Historically, patterns such as racial segregation, gentrification and displacement have limited mobility and access for communities of color. These historic inequities have present-day impacts that surface in a variety of ways, including increased exposure to air pollution, noise and traffic collisions. Ensuring mobility and accessibility is important, especially in the region’s Priority Equity Communities, which are census tracts with a greater concentration of populations that have been historically marginalized and are susceptible to inequitable outcomes based on several socioeconomic factors. Additionally, it is critical that SCAG and our partner transportation agencies work in collaboration with communities most impacted by socioeconomic, environmental and transportation burdens. For people across the region to thrive, a healthy mobility ecosystem needs to exist, one where various modes of transportation work in tandem to meet the needs of the community.

In the Spring 2023 public outreach survey, SCAG asked thousands of people across the region what would be the ideal mode to access various activities. About 30 percent or more of respondents would prefer to walk/bike/roll when traveling to school or childcare, for errands and to social activities. In contrast, for work trips, about 25 percent would prefer to take transit and 25 percent would prefer to drive alone. The mismatch between this expressed preference and the data on how we move today in Chapter 2—where 66 percent of commute trips are made by driving alone—indicates that there is pent-up demand for more options.

Connect SoCal 2024 includes investments, policies and programs for improving access to a robust multimodal transportation system that is reliable and safe for all users. Achieving the Plan vision requires ensuring that the current network is well-maintained and that policies are in place to support an efficient and coordinated operation of the system. This section highlights the investments and areas of focus for ensuring a robust transportation network in the region.



MOBILITY STORIES

Traveling in the Region Tomorrow

Santa Ana, CA: A freshman at Santa Ana College relies on the OC Streetcar to get to class. When she needs to get to her internship in Corona, she takes Metrolink. For other trips, she relies on her Mobility Wallet to make the best choice, depending on cost and speed. Sometimes this means taking a dockless shared bike for some extra exercise or renting a shared electric vehicle to make a longer trip.

San Bernardino, CA: A senior citizen lives in an assisted living facility. He can no longer safely operate a vehicle but still maintains an active social and civic life. He uses an app to reserve paratransit rides that transport him to appointments and community meetings. For shorter trips, he uses his motorized scooter on neighborhood sidewalks but plans his routes through streets with the most trees to keep cool in the shade.

El Centro, CA: A mom uses her electric car to drive her son to daycare and to get to work. She lives in an apartment that only has one charger, but she is able to rely on the robust public charging infrastructure to always have enough charge to get where she needs to go. She likes to ride her bike with her son to visit family on the weekends and feels safe doing so, thanks to the new bike paths.

Mobility Policies and Strategies

The following list provides a brief description of the categories that Connect SoCal 2024 uses to frame the Regional Planning Policies and Implementation Strategies detailed below.

- System Preservation and Resilience:** Maintaining the operational efficiency of our transportation system is crucial. Unfortunately, demand on the system has increased over the decades without sufficient maintenance reinvestment. This has greatly influenced the number of roadways and bridges that have fallen into an unacceptable state of disrepair. Part of the challenge is to ensure that projects in the Plan follow a “fix-it-first” principle and that life-cycle costs, such as maintenance and preservation expenses, are considered and planned for during the development of infrastructure projects. Another part of the challenge is securing sufficient revenue to maintain both existing and new infrastructure in a state of good repair. This is a significant concern for our local streets and roads because every trip begins with them and, regardless of mode, we all rely upon a well-maintained local street and road system to support other critical mobility and safety goals.
- Complete Streets:** Complete Streets, which are planned, designed, operated and maintained for safe, convenient and comfortable access and travel for users of all ages and abilities, will support people walking, bicycling and using micromobility devices.
- Transit and Multimodal Integration:** Strategies for improving the transportation system are dependent on integration with our growth and land use patterns. The availability, access and efficiency of different modes, including transit/rail, walking, bicycling and other forms of active transportation—including driving—all depend on a close relationship with how our region uses land and how we grow. This is particularly true when it comes to improving and building a transit/rail system that can best serve people in communities throughout our region.
- Transportation Systems Management (TSM):** TSM is a series of techniques, including transportation demand management, designed to maximize the functional capacity and efficiency of the existing transportation system. Effective TSM strategies reduce traffic congestion, improve air quality and safety, and reduce or eliminate the need to construct new and expensive transportation infrastructure. Many TSM strategies seek to optimize the operation of the existing transportation system through use of Intelligent Transportation Systems (ITS). An example of this would be transit signal prioritization or advanced technologies that can anticipate changing traffic conditions and provide real-time information to drivers, allowing them to make more informed decisions.
- Transportation Demand Management (TDM):** TDM strategies and investments can reduce the demand for roadway travel, particularly during peak times or on congested routes. Shifting trips to less congested times, such as through congestion pricing, can optimize the use of existing roadway capacity. Shifting trips from single occupancy vehicles (SOVs) to other modes often costs significantly less than roadway or transit capital expansion projects. TDM strategies add transportation choices that improve sustainability, public health and quality of life by reducing congestion, air pollution and GHG emissions. When transit ridership, carpooling, bicycling and walking increase, the efficiency of the entire transportation system improves, bringing many benefits to the region. Connect SoCal allocates \$16.9 billion through 2050 to implement TDM strategies throughout the region.

- **Technology Integration:** Emerging technology has the potential to expand transportation choices and equity throughout the region. By providing more options for local and regional trips, emerging technologies may shift trips to less environmentally damaging modes, minimize negative environmental impacts associated with current vehicle use, increase system efficiency, improve safety and reduce auto-related collisions and fatalities. However, realizing these potential benefits (and avoiding potential negative impacts) is dependent on the rate of technology development and adoption of a wide range of public and private sector innovations. Some of these technologies, such as alternative fuel and powered vehicles, micro-mobility, bike sharing and microtransit, have a mitigating influence on GHG emissions. Others, such as ride-hailing and automated vehicles, will likely increase VMT and GHG emissions if their business models do not adapt to eliminate or reduce single-passenger rides and “deadheading,” where vehicles are driven with zero passengers. Therefore, it is vitally important to adopt strategies and policies that encourage shared rides.
- **Safety:** Maintaining the safety of all people who travel in our region is important at the local, regional, state and federal level. SCAG develops targets for safety that are updated every two years. Improving safety directly impacts the well-being and confidence of people who are walking, biking and rolling, as well as their willingness to choose active transportation. This is particularly pronounced for certain groups, such as children, older adults and individuals with disabilities who may need extra time and specific information to navigate and cross roads safely and securely. Additionally, returning transit/rail riders may be more likely to resume using transit/rail services in a safe and secure environment.

- **Funding the System/User Fees:** The cost of a multimodal transportation system that will serve the region’s projected growth in population, employment and demand for travel surpasses the projected revenues expected from existing sources, including the gas tax, our historic source of transportation funding. The purchasing power of our gas tax revenues is decreasing and will continue on a downward trajectory while transportation costs escalate. Projected revenues will continue to decline as fuel efficiency improves and the number of alternative-fuel and alternative-powered vehicles continues to grow. To backfill limited state and federal gas tax revenues, our region has continued to rely on local revenues to meet transportation needs. In fact, 47 percent of the region’s core revenues are from local sources. Efforts are underway to explore how we can transition from our current system based on fuel taxes to a more direct system based on user fees. In addition to generating revenues, user fees are among the most impactful VMT and GHG reduction strategies for the transportation sector. However, a sensible system of user fees must be designed with policies that address fairness and equity concerns.



LET’S GET TECHNICAL

Review the Mobility, Congestion Management and Transportation Finance Technical Reports for further discussion of these critical aspects of transportation planning.

Project List

Connect SoCal includes \$750.1 billion of investment in our regional transportation system. SCAG collects projects submitted by County Transportation Commissions (CTCs) based on their county-level or district-level needs and goals that align with the Regional Goals. Working with the project-level data provided by the CTCs, SCAG assesses transportation performance at the system level. (See Chapter 5 for more details.) The Connect SoCal Project List includes both near-term and long-term investments. The Federal Transportation Improvement Program (FTIP) reflects near-term investments that form the foundation of the RTP project investment strategy and represents the first six years of already-committed funding for projects requiring federal approval or those that are regionally significant. The RTP reflects long-term investments and contains a financially constrained set of transportation projects above and beyond the FTIP, including projects submitted from the CTCs and additional Regional Strategic Investments needed to achieve our goals and performance targets.

The projects submitted by each CTC reflect the needs and goals of each county, but they also align with the Regional Goals. Many projects are the result of performance-based planning decisions at the county or district level, such as through the State Highway Operation and Protection Program (SHOPP). Additionally, the CTCs provide performance details on projects that assist in SCAG's performance monitoring and target setting process. As mentioned above, when SCAG evaluates performance of the Plan, it does so at the regional, or system, level to consider the impacts of strategies and policies that support planned investments.



LET'S GET TECHNICAL

You can read more about regional analysis in the Performance Monitoring Technical Report and in Chapter 5 of this book.

The Connect SoCal Project List includes both near-term and long-term investments. These projects reflect the needs and goals of each county as well as additional Regional Strategic Investments to achieve our goals and performance targets.

TAKE A CLOSER LOOK

Focusing on System Efficiency

In the face of declining transportation revenues and escalating costs, the solution is to better manage our transportation system. We will continue to make substantial investment in infrastructure to improve mobility and accessibility for travelers on all modes of transport. But capital investment alone is not sufficient to achieve our vision for the region's future or meet our greenhouse gas (GHG) emission reduction goals. Instead, Connect SoCal includes programs and technologies that leverage the existing transportation system in more sustainable ways, including investments that help manage the system, address mobility inequities, improve travel choices and reliability, and provide travel incentives for the region to meet Plan goals.

Connect SoCal includes innovative and interconnected mobility strategies at the intersection of land use, transportation and technology that further enhance SCAG's commitment to address key issues and emerging challenges through various regional strategic investments. These strategies leverage existing transportation infrastructure in more sustainable ways to improve multi-modal and Complete Streets planning, support implementation of innovative technology and exercise demand management through pricing and incentives.

These strategies can improve the traveler experience through dedicated lanes and mobility hubs—and support seamless trip planning and increase access to information through Intelligent Transportation Systems (ITS) strategies, including Mobility as a Service and Smart Cities innovations. Connect SoCal supports the integration of pricing strategies to manage demand, while also investing in Universal Basic Mobility to address potential equity implications.

Taken together, Connect SoCal 2024's strategies and investments optimize system performance while realizing GHG emission reductions.

Regional Strategic Investments

These Regional Strategic Investments reflect what is necessary to maintain a state of good repair of our existing network, support a multimodal network and fund system improvements and maintenance. These investments go beyond the projects submitted directly from County Transportation Commissions and are necessary to meet our targets, requirements and goals, including but not limited to GHG reduction, safety and asset management.

System Preservation and Resilience: Highways, Local Streets and Roads

Operations and maintenance (including for transit) is the largest cost category in Connect SoCal 2024. This refers to the cost of providing preventative maintenance, rehabilitation and preservation of our current regional highways and local streets and roads over the life of the Plan. "Fix-it-First" has been a guiding principle for prioritizing transportation funding in SCAG's RTPs for the last decade. The cost of rebuilding roadways is 14 times greater than preventative maintenance. Preservation of the transportation system can extend pavement life in a cost-effective manner and can also improve safety. This Plan includes \$75.4 billion toward the preservation, operation and resilience needs of the state highway system and \$87.7 billion towards the preservation, operation and resiliency needs of regionally significant local streets and roads. These amounts reflect both the projected investments by each County Transportation Commission plus an additional Regional Strategic Investment to maintain existing asset conditions. However, there is not sufficient available revenue to significantly reduce the regional deferred maintenance backlog, especially for local streets and roads.

Managing the System

Better management of the existing transportation system through demand management strategies and Intelligent Transportation Systems (ITS) yields significant mobility benefits in a cost-effective manner. Connect SoCal 2024 increases investment and strengthens policy levers to optimize system performance while realizing greenhouse gas reduction quickly and efficiently. Strategies from SCAG’s TDM Strategic Plan provide an objectives-driven, performance-based process to identify and promote TDM strategies and programs across the region. SCAG will pursue implementation of these strategies in coordination with regional and local partners.

Regional Express Lanes Network: Concept of Operations and

Buildout: The regional express lane network integrates congestion pricing to optimize existing capacity on freeways and offer users greater travel-time reliability and choices. Express lanes, when appropriately priced to reflect demand, can outperform non-priced lanes in terms of throughput, especially during congested periods. Express lanes operate on the principle of congestion pricing—when more vehicles are using those lanes, the price increases accordingly to manage congestion in the lanes. Express lanes and toll roads also generate revenues that fund construction and operation of the facilities and can relieve air pollution and GHG emissions associated with congestion. The Concept of Operations is prepared to facilitate collaborative decision-making in identifying the policy, design and operational requirements of the regional express lane network.

Intelligent Transportation System (ITS): SCAG’s ITS program plans for transportation technology advancements and assesses potential impacts to the transportation system. It also supports the effective implementation of technology through the integration of ITS into common architecture via participation with regional partners in the implementation and maintenance of Regional ITS architecture. This includes, but is not limited to, continuing to maintain and update the multi-county Regional ITS Architecture, incorporating revisions to

existing projects and any proposed new projects as part of the RTP/SCS development, and participating in statewide and county Regional ITS Architecture update efforts.

Smart Cities: This program must evolve and adapt to the latest trends and technologies. SCAG will update the Smart Cities Vision Plan (by July 2026) and develop critical research reports focused on emerging technologies.

Future Workplace: This initiative focuses on the strategies, implementation and impacts of telework and tele-everything as the world shifts to post-pandemic behaviors—through the lens of smart cities and transportation demand management.

Transit and Multimodal Integration: Regional Enhancements and Improvements

The region has ambitious goals to reduce greenhouse gas emissions in the transportation sector—the largest source of carbon dioxide emissions in California and a primary driver of climate change. We will do this, in part, by reducing single-occupancy vehicle trips and increasing transit/rail mode share. A key step toward meeting these goals, as well as local and county goals for mobility and equity, can come from improving the speed and reliability of transit/rail services throughout the region. Since 1991, the region has spent over \$196 billion on transit (in 2019 dollars). However, supporting the planned investment of the transit/rail agencies and County Transportation Commissions in the region requires additional investments. As with previous Plans, these investments include High Quality Transit Corridors identified in partnership with our regional transit agencies. Connect SoCal assumes additional regional strategic investment in transit service improvements on these corridors, contingent upon new revenue sources.

Dedicated Transit Lanes: SCAG’s Regional Dedicated Transit Lanes Study explored the opportunities, needs, challenges and best practices

for developing a regional network of dedicated bus lanes and other transit priority treatments. The regional transit priority network is intended to enable enhanced transit services, improved mobility, accessibility and sustainability.

Zero-Emission Bus Acceleration: All transit agencies are required to transition to 100 percent zero-emission bus fleets by 2040 (Innovative Clean Transit regulation), a decade before the horizon year of Connect SoCal. Many agencies have already begun to transition their fleets, including the Antelope Valley Transit Authority (AVTA), which became the first all-electric transit agency in North America in 2022. Due to this significant undertaking and given both the higher upfront costs and supportive infrastructure, additional funding is needed to support the transition.

Mobility Hubs: Mobility hubs are places where we can seamlessly connect with multiple modes of transportation in a safe, comfortable and accessible environment. Mobility hubs include a range of transportation options—but, typically, at least two—that connect and interact with one another (e.g., transit/rail, car share, bike share, etc.). They typically improve connectivity to transit/rail and are the infrastructure foundation for multimodal trip planning and promoting mode-shift. They are considered essential for a safe and convenient transfer between transportation modes. SCAG’s strategy is to focus targeted investments in a set of prioritized mobility hubs distributed across the region.

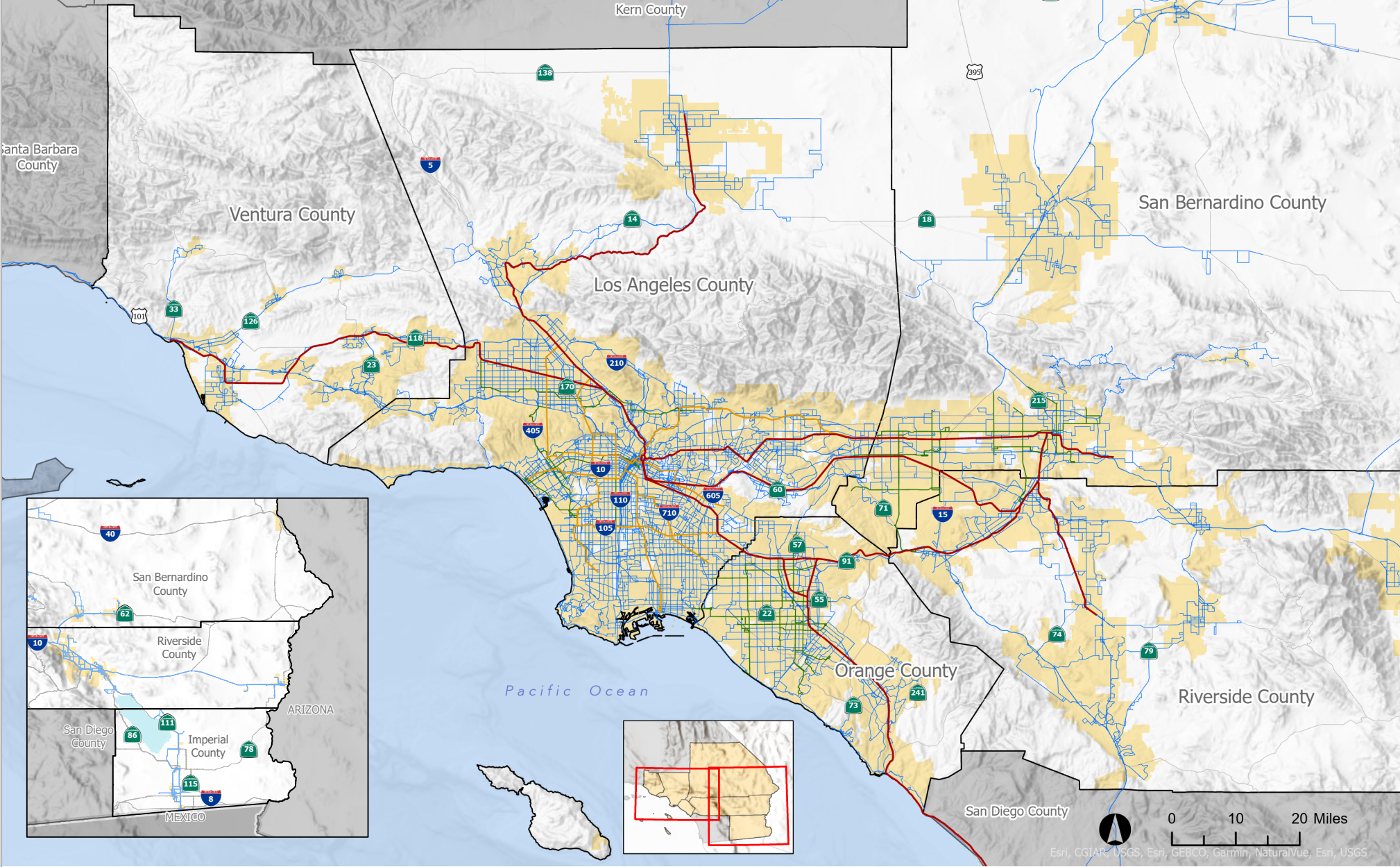
Metrolink SCORE Buildout: This transformation of Metrolink, from a service profile primarily oriented to downtown Los Angeles peak-period commuters, to one that also serves a broader set of trips with more options to better align with changing travel patterns, such as more trips to activity centers throughout Southern California (including medical facilities, educational institutions and cultural centers), more non-work trips, and fewer peak-hour commuters due to work-from-home and hybrid work schedules.

Complete Streets: Planning for All Users

Planning for a future where everyone has safe, affordable, reliable and sustainable transportation options requires additional transportation investments.

Complete Streets: These streets are designed to support safety, comfort and mobility for all road users. They are accessible to people of all ages and abilities, regardless of whether they are driving, walking, bicycling, rolling or riding transit/rail. The approaches vary based on community context, but elements often include comfortable sidewalks, bicycle lanes, transit priority lanes and signals, high-quality transit stops, frequent and safe crosswalks, median islands, accessible signals, curb extensions, modified vehicle travel lanes, streetscape and landscape treatments. They may also accommodate and optimize new technologies and micromobility devices, first mile/last mile connections to transit/rail and curbside management strategies including last-mile deliveries. SCAG’s strategy is to focus targeted investments on corridors on the High Injury Network (HIN), where safety issues are concentrated and improvements to eliminate these issues would encourage mode shift.

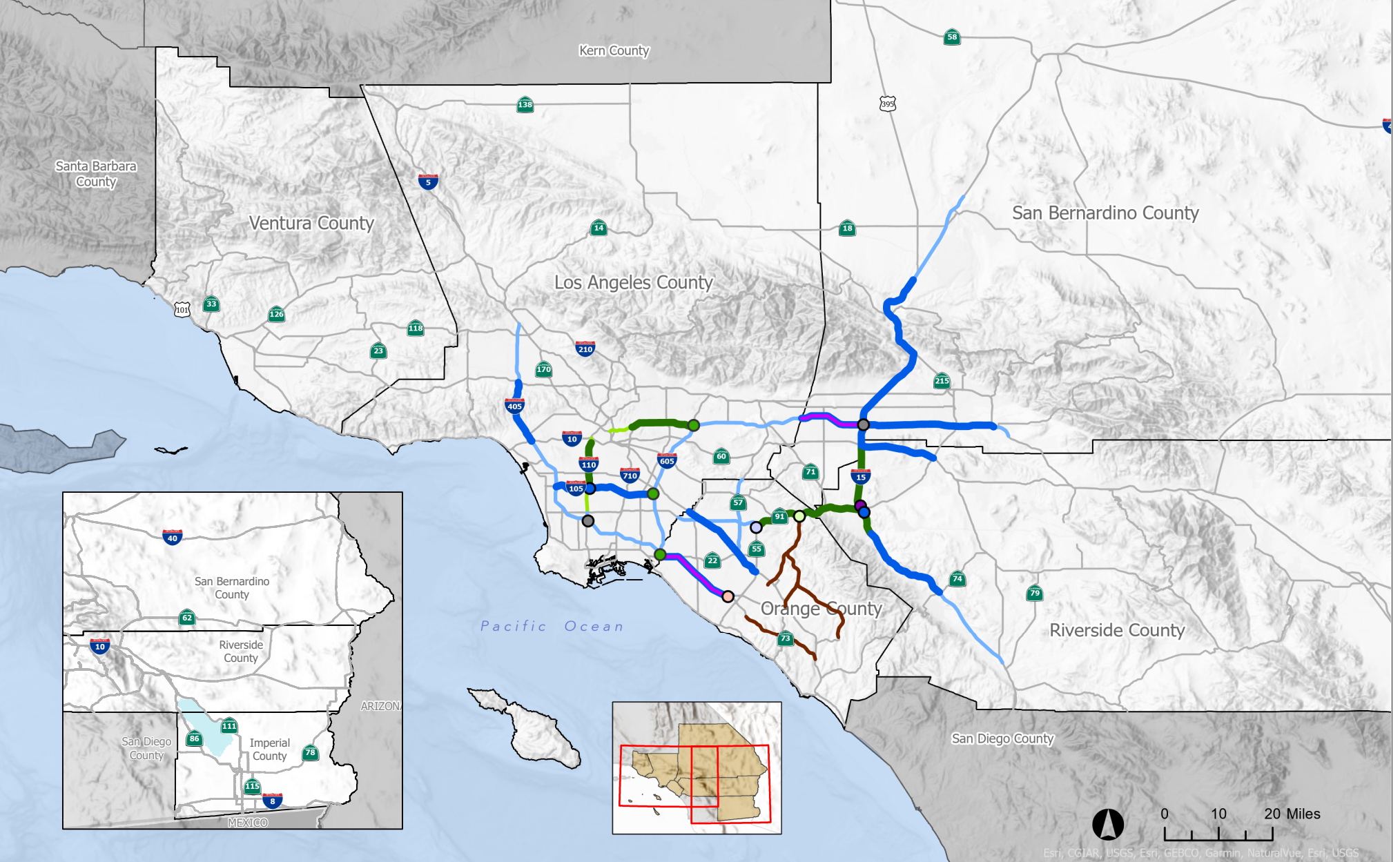
Safe Routes to School (SRTS): The primary goal of these programs is to encourage and facilitate active transportation options while enhancing the safety and accessibility of routes used by people walking, biking or rolling. These programs often involve a combination of infrastructure improvements, educational campaigns and policy changes to create safer environments for traveling via active transportation. SCAG’s strategy is to focus targeted investments on corridors within the High Injury Network (HIN) and located in close proximity to K–12 schools.



MAP 3.1 Planned Transit Network

- Freeway
- Metrolink
- Urban Rail
- Rapid Bus and Bus Rapid Transit
- Bus Routes

Source: SCAG 2022



MAP 3.2 Regional Express Lane Network

- █ Existing Dual Lane Express Lane
- █ Existing Single Lane Express Lane
- █ Existing Toll Roads
- █ Planned Dual-Lane Segment
- █ Planned Express Lane Network
- █ Under Construction
- Existing Express Lane Direct Connector
- Existing HOV-to-Express Lane Direct Connector Conversion
- Planned Toll Road-to-Express Lane Direct Connector Conversion
- Planned Express Lane Direct Connector
- Planned HOV-to-Express Lane Direct Connector Conversion
- Under Construction General Purpose-to-Express Lane Direct Connector Conversion
- Under Construction Express Lane Direct Connector

Source: SCAG 2023

COMMUNITIES IN 2050

The Future of Development

Where will we live? Communities in the SCAG region range from dense urban cores to rural towns. The design and land use patterns of our communities impact where people live and work and how they get around. While most of the communities that we will have in 2050 exist today, our communities can evolve in ways that make them more inclusive, accessible and sustainable. This section highlights the process for developing a regional development pattern for 2050 and the policy and strategy areas that will help the region reach its goals and achieve our vision for 2050.

It is important to underscore that it takes time to change land use patterns. In the 2010 Census—just before SCAG adopted its first RTP/SCS in 2012—the region had 18,051,534 residents living in 5,847,909 households. In the following decade, this grew 4.3 percent and 7.0 percent, respectively, sometimes in more infill or location-efficient places than in decades prior. Nonetheless, by 2021, only 6.9 percent of the region’s total housing units had been built since 2010 (ACS 1-yr). This decade or so of increasingly sustainable growth is due to leadership at the local level. However, local jurisdictions need more support. In the survey to local jurisdictions included as part of the Local Data Exchange process for Connect SoCal development, over half of respondents noted budget limitations and limited staff capacity as the key barriers to updating their local plans. The same percentage of respondents stated that additional grant or budget funding would allow them to incorporate the regional Sustainable Communities Strategies into their General Plans.

The Regional Housing Needs Allocation plan tied RHNA’s regulatory requirement for cities and counties to the RTP/SCS by allocating units based on the region’s growth vision. While the ultimate oversight for this land-use law is the purview of the State Housing and Community Development Department, the allocation methodology was developed and adopted by SCAG’s Regional Council with a clear intent to align regional housing and the climate vision embedded in SCAG’s RTP/SCS. In contrast to past cycles when RHNA followed anticipated future population growth, the majority of the target (836,857) units was allocated to address existing housing need during the 6th cycle. The allocation was based on the jurisdictions’ levels of job access and transit access. This is nearly as much housing as the whole region produced in the last 20 years.

Community Policies and Strategies

The following list provides a brief description of the categories that Connect SoCal 2024 uses to frame its Regional Planning Policies and Implementation Strategies.

- **Priority Development Areas (PDAs):** These geographies articulate the Plan vision and evaluate our progress toward locating new households and jobs where people have opportunities for alternative modes of transportation or to take short trips. See the Priority Development Areas section for more details.
- **Housing the Region:** Providing sufficient housing opportunities throughout the region will require a range of strategies and methods to increase both the production of and access to a wide range of housing types.

- **15-Minute Communities:** A 15-minute community is one in which you can access all of your basic, day-to-day needs, services and amenities within a 15-minute walk, bike or roll from your home. This is where people are able to make fewer and/or shorter trips due to the proximity of activity centers and destinations. For SCAG’s purposes, this represents a framework for making our cities more inclusive, more equitable and more efficient by providing a range of mobility options and overall reduction in single-occupant vehicle trips.
- **Equitable Engagement and Decision-Making:** Fostering strong and resilient communities depends not just on our built environment but also on our social networks. Striving for more equitable engagement and decision-making can ensure that our communities reflect the priorities of the people within them.

Forecasted Regional Development Pattern

As part of developing a Sustainable Communities Strategy per Senate Bill 375 (SB 375), SCAG must include a “forecasted development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies...” will enable SCAG to reach its GHG emission reduction target of 19 percent below 2005 levels by 2035. This Forecasted Regional Development Pattern details where people, households and employment will be located through 2050, the horizon year of the Plan.

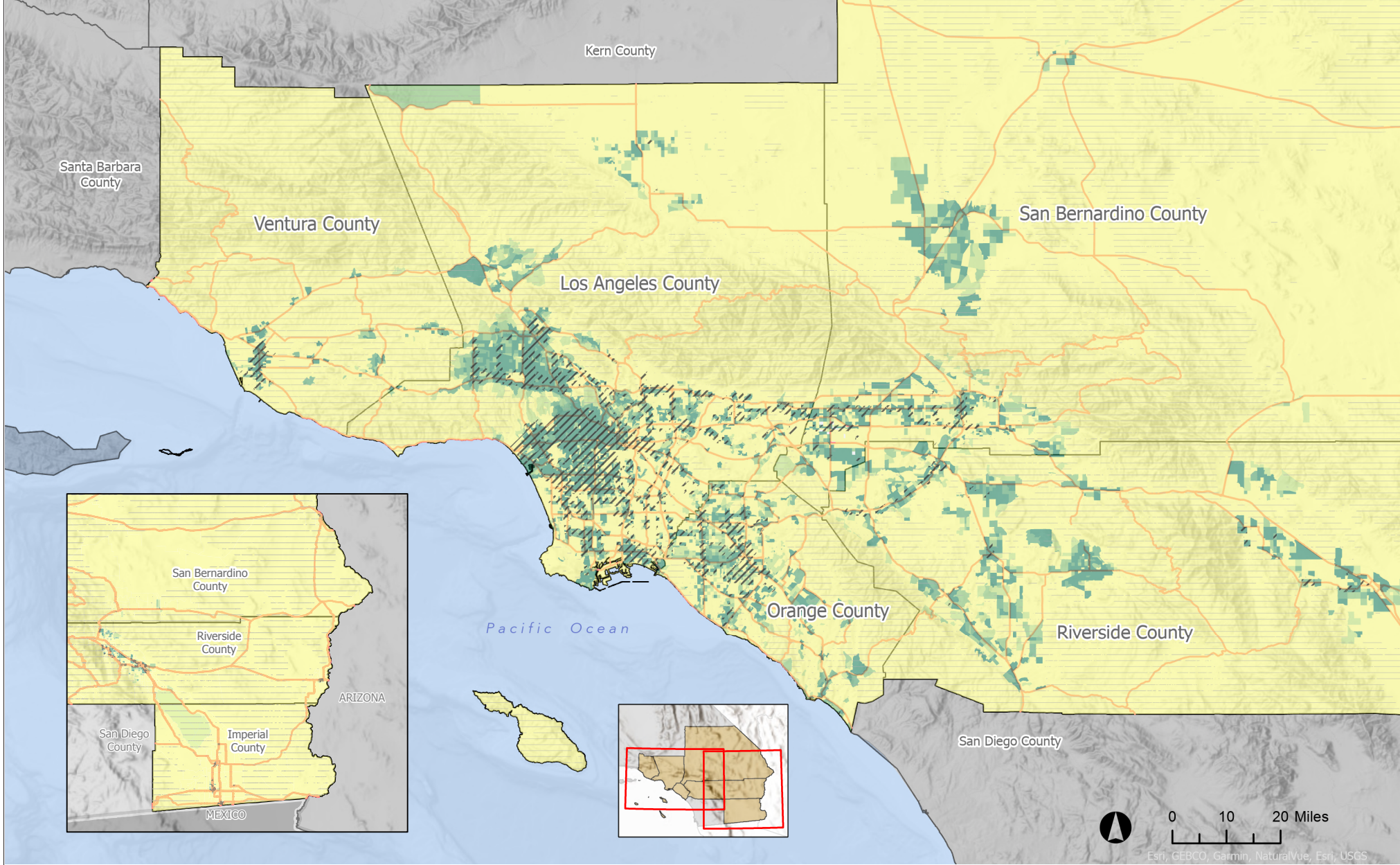


LET’S GET TECHNICAL

For further discussion of critical aspects of regional planning, review the Land Use and Communities Technical Report.

To develop this forecast, SCAG first prepared a Regional Growth Forecast to understand how many people, households and jobs we needed to plan for. Then SCAG developed a preliminary Forecasted Regional Development Pattern based on local general plans and known development entitlement agreements. RHNA allocations, to the extent that they had been embedded into certified housing elements, were taken into account. In addition, regional sustainability strategies from the final, adopted Connect SoCal 2020, including priority growth and environmentally constrained areas, were embedded into the forecast. These are detailed further in the Priority Development Area and Green Region Resource Area sections. Then SCAG met with local jurisdictions across the region to verify that our understanding of the future matched with local planning efforts. This input from local jurisdictions was integrated into the Forecasted Regional Development Pattern for Connect SoCal 2024.

The Regional Growth Forecast assumes the region is successful in alleviating much of the latent housing demand that has built up over past decades by projecting 30 percent higher household growth during the 2020s than Connect SoCal 2020. This reflects changes to state- and local-housing-supportive policy as well as stronger housing production numbers in recent years, including ADUs, which are historically undercounted. In contrast to past cycles in which local review usually yields lower household growth and higher job growth, the locally reviewed Connect SoCal 2024 household forecast was actually 2.3 percent higher than the preliminary version developed with a demographic panel of experts. This accelerated production reflects the optimism on the part of local jurisdictions to meet the housing needs of today and tomorrow. In addition to far more near-term household growth, the Forecasted Regional Development Pattern also demonstrates housing growth in generally more sustainable locations within the region than the prior Plan. The share of household growth in Connect SoCal 2024 in more than one priority area and outside environmental constraint areas was 38 percent compared to only 36 percent in Connect SoCal 2020.



MAP 3.3 Forecasted Regional Development Pattern



Source: SCAG 2023. Note: The map identifies Tier2 TAZ Household Density Growth between 2019 - 2050 (Households per Square Mile)

TAKE A CLOSER LOOK**Housing the Region**

Housing in the SCAG region has long added to a higher cost of living than other areas of the country, due to the desirability of the region's natural amenities and strong, diversified economic base and past periods of housing underproduction compared to population growth.



The Regional Housing Needs Allocation process takes place every eight years, as required by state law, or every other RTP/SCS cycle. The most recent (6th cycle) RHNA allocation was adopted by SCAG's Regional Council in 2021 and relied on input data from Connect SoCal 2020. As part of the 6th cycle RHNA, the state department of Housing and Community Development (HCD) included explicit measures for existing housing needs—specifically, overcrowding and cost-burden rates—in their determination of the SCAG region's total housing need of 1,341,827. Put simply, the emphasis of RHNA shifted substantially toward addressing existing need, whereas in prior cycles it had focused almost entirely on need due to anticipated population growth.

RHNA and Connect SoCal

In contrast to a housing-planning target that is required by state housing law in the RHNA process, SCAG's Connect SoCal forecast process is an expert-derived assessment of reasonably foreseeable future growth from 2019–2050 pursuant to federal and state statute. This includes assessing the possible impact of policy—the expectation is that SCAG and local jurisdictions take into account the increase in available sites

resulting from RHNA when developing the growth forecast. Despite a substantially reduced population projection compared to prior plans, it is expected that household growth over the Connect SoCal horizon will exceed the 6th cycle RHNA housing unit need. This is in part a reflection of changes to state and local housing-supportive policy and strong recent housing production. After local review of growth forecasts, the number of households projected for the region by 2050 actually increased by 2.3 percent. In contrast to past periods, SCAG projects household growth to dramatically exceed population growth, reflecting a gradual catch-up to past housing undersupply.

Ensuring that these homes can and will be built within the region calls for additional supportive policies and strategies.

**LET'S GET TECHNICAL**

For more information on how the RHNA relates to our demographic forecast, explore the [Demographic and Growth Forecast Technical Report](#). For more information on housing strategies, see the [Housing Technical Report](#).

Priority Development Areas

Priority Development Areas (PDAs) are areas within the SCAG region where future growth can be located to help the region reach Plan goals. Generally, this means that people in these areas have access to multiple modes of transportation or that trip origins and destinations are closer together, allowing for shorter trips. PDAs are a technical tool to facilitate Plan development and analysis, and are used for different purposes, such as growth visioning, performance measurement or grant applications. However, as a general principle, development in overlapping PDAs indicates a greater alignment with Plan goals. PDAs are based on both existing conditions and future infrastructure, meaning that their boundaries reflect a snapshot in time based on data available at the time of Plan development. As such, these boundaries reflect a guide, and the location of PDAs used by local jurisdictions or for various programs or grants may differ. PDAs in Connect SoCal 2024 include Neighborhood Mobility Areas (NMAs), Transit Priority Areas (TPAs), Livable Corridors and Spheres of Influence (SOIs) (in unincorporated areas only).


PDAs follow the principles of center-focused placemaking, providing locations where many Connect SoCal strategies can be fully realized. Additionally, PDAs assist with guiding the Forecasted Regional Development Pattern. Connect SoCal's PDAs—NMAs, TPAs, Livable Corridors and SOIs—account for 8.4 percent of the region's total land area. However, implementation of SCAG's recommended growth strategies will help these areas accommodate 67 percent of forecasted household growth and 55 percent of forecasted employment growth between 2019 and 2050. This more compact form of regional development, if fully realized, can reduce travel distances, increase mobility options, improve access to workplaces and conserve the region's resource areas.

From May to December 2022, jurisdictions were tasked with reviewing the PDA layers and the Forecasted Regional Development Pattern to ground regional strategies at the local level. This local feedback helps ensure our regional PDA strategies are best reflected at the local level and produce the strongest regional outcome.

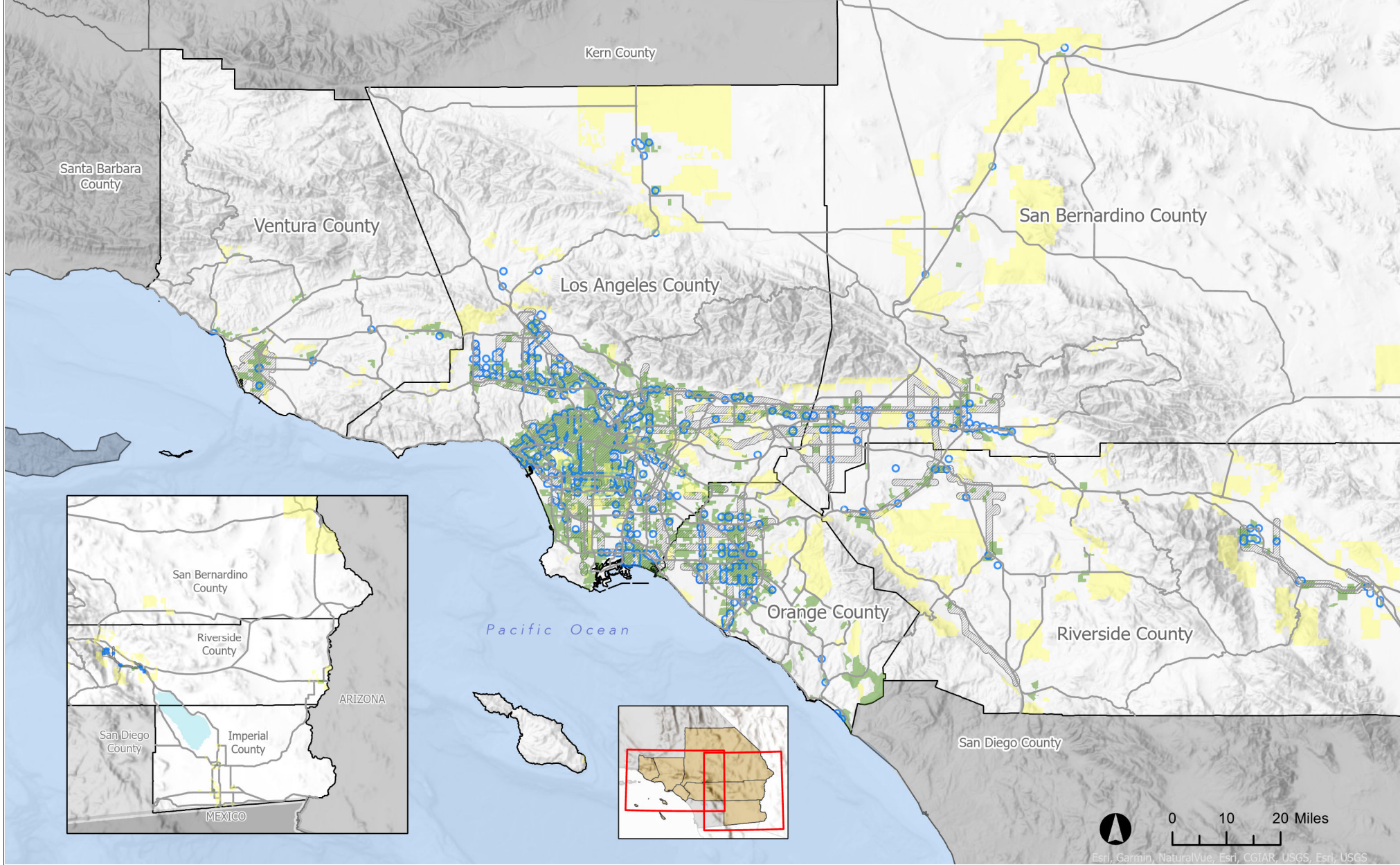
Although the region will see benefits from infill development, jurisdictions are encouraged to actively acknowledge and plan for potential impacts, including displacement for both residents and small businesses. Production and preservation of permanent affordable housing to complement infill strategies is essential for achieving equitable outcomes. These priorities are reflected in Regional Planning Policies.

- **Neighborhood Mobility Areas (NMAs)** include four elements that reflect potential to improve, restore and enhance safe and convenient connections to schools, hospitals, shopping, services, places of worship, parks, greenways and other destinations. The four elements of an NMA are: 1) intersection density, 2) low-speed streets, 3) land use diversity, and 4) accessibility to amenities within one-mile using street network distances. NMAs exist in each county and throughout the region, and can vary in their specific form, regardless of whether the NMA is located in a dense urban neighborhood or a historic business district. SCAG developed a region-wide map of neighborhood mobility to help further strategies and policies within Connect SoCal 2024.
- **Livable Corridors** are areas where local jurisdictions can plan and zone for increased density at nodes along key corridors and "redevelop" single-story underperforming retail with well-designed, higher-density housing and employment centers. Growth at strategic nodes along key corridors, many of which are within High Quality Transit Corridors (HQTCs), will make transit a more convenient and viable option. The Livable Corridors network is developed utilizing select variables from past plans like HTQCs and input from local jurisdictions during the Local Data Exchange process. Additionally, this strategy integrates certain transit improvements, including Bus Rapid Transit (BRT), other features improving bus performance and user experience, and certain active transportation improvements to support safe bicycling and walking.

- **Transit Priority Areas (TPAs)** are areas within one half mile of existing or planned major transit stops in the region. A major transit stop is defined in state statute as a site containing an existing or planned rail or bus rapid transit station, a ferry terminal served by either bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. TPAs are where transit-oriented development (TOD) can be realized – where people can live, work and play in higher-density, compact communities with ready access to a multitude of safe and convenient transportation alternatives. Focusing regional growth in areas with planned or existing major transit stops is key to achieving equity, economic and environmental goals. Infill within TPAs can reinforce the assets of existing communities, efficiently leveraging existing infrastructure and potentially lessening impacts on natural and working lands.
- **Spheres of Influence (SOIs)** are existing or planned service areas within the planning boundary outside of an agency’s legal boundary. The intent of an SOI is to promote the efficient, effective and equitable delivery of local and regional services for existing and future residents and to encourage a collaborative process between agencies. A city will periodically annex parcels in an SOI into the city limits to include new developments or areas with infrastructure needs. Unlike the other three PDAs, spheres of influence are exclusively found in the unincorporated areas of SCAG’s six counties. Prioritizing unincorporated county growth within existing SOIs discourages urban sprawl and the premature conversion of agricultural and natural lands—and typically makes more efficient use of infrastructure that can reduce costs to taxpayers. As a result, only 7 percent of the region’s future household growth will be located in SOIs outside of incorporated city boundaries from 2019 to 2050.



Priority Development Areas (PDAs) are areas within the SCAG region where future growth can be located to reach Plan goals. Generally, people in these areas will have access to multiple modes of transportation or trip origins and destinations will be closer together, allowing for shorter trips.



MAP 3.4 Priority Development Areas

-  Livable Corridor (LC)
-  Sphere of Influence (SOI)
-  Neighborhood Mobility Area (NMA)
-  Transit Priority Area (TPA)
-  Freeway

Source: SCAG 2023

Green Region/Resource Areas

Green Region/Resource Areas (GRRAs) derive from SB 375 statute and SCAG’s responsibility to “gather and consider the best practically available scientific information regarding resource areas and farmland in the region.” The GRRAs depict the region’s natural assets—areas with acute risks from climate change—and highlight areas where future growth could result in negative environmental impacts if left unaddressed. These areas were considered alongside the Priority Development Areas in the preparation of SCAG’s Forecasted Regional Development Pattern. As the region faces unprecedented challenges in balancing housing and employment growth with resource conservation, it is important to coordinate regional land use and transportation strategies and seize opportunities to improve resilience, protect the SCAG region’s natural assets and reduce future risks from climate change.

To determine areas most sensitive to growth, SCAG staff identified locations in the region where these layers overlap to ascertain the overall intensity of these convergences. For instance, areas at risk for both flood and wildfire would be deemed more sensitive to growth than areas with only wildfire risk. An example is the Lake Matthews area in Riverside County, where portions of land fall in very high wildfire severity zones (as identified by CAL FIRE) and also fall in 100-year flood hazard areas (as identified by FEMA).

Since projects that fall within GRRAs often must take actions to address environmental impacts, areas with multiple convergences of GRRAs topic areas will likely be more costly to develop due to more intense legal requirements. Therefore, SCAG’s approach of de-emphasizing growth in areas with the highest number of convergences is sensitive to market considerations. Further, the preservation and restoration of GRRAs can reduce risks from climate change and promote future resilience in the region. For instance, preserving natural lands and open space areas helps to sequester climate pollution and also promotes groundwater recharge.

These data layers, or areas most sensitive to growth, were mapped and provided as an information resource during the review period by local jurisdictions alongside the Priority Development Areas. Growth was de-emphasized and prioritized elsewhere in the preliminary Forecasted Regional Development Pattern. In the Connect SoCal 2024 Forecasted Regional Development Pattern, household and employment growth in GRRAs has not been completely eliminated.

GRRAs consist of the following 10 topic areas:

Flood Areas: FEMA delineates areas that are subject to inundation by a flood with a 1 percent or greater chance of being equaled or exceeded during any given year. This type of flood is commonly referred to as the 100-year flood or base flood. The 100-year flood areas have a 26 percent chance of occurring during a 30-year period, the length of many mortgages.

Coastal Inundation (Sea Level Rise): Potential inundation of coastal areas resulting from a projected 3-foot rise in sea level above current Mean Higher High Water (MHHW) conditions.

Wildfire Risk: State law requires CAL FIRE to designate areas, or make recommendations for local agency designation of areas at risk from significant fire hazards based on fuels, terrain, weather and other relevant factors. These areas at risk of interface fire losses are referred to by law as “Fire Hazard Severity Zones” (FHSZ). Also included are areas along the edge of established communities, called “Wildland-Urban Interface,” as well as areas where human habitation is mixed with areas of flammable wildland vegetation (called “Wildland-Urban Intermix” zones).

Open Space and Parks: All publicly owned open space, including those with fee ownership, as identified in the California Protected Areas Database (CPAD), the California Conservation Easement Database (CCED) and the County of Ventura Save Our Agricultural Resources (SOAR).

Endangered Species and Plants: Location and condition of species of rare and sensitive plants, animals and natural communities in California.


Sensitive Habitat Areas: Areas with a high concentration of animals and plant life that are sensitive to growth, such as wetlands, habitat connectivity areas and areas rich with natural resources to support various species.

Natural Community and Habitat Conservation Plans: These plans identify and provide for the regional protection of plants, animals and their habitats, while allowing compatible and appropriate economic activity.

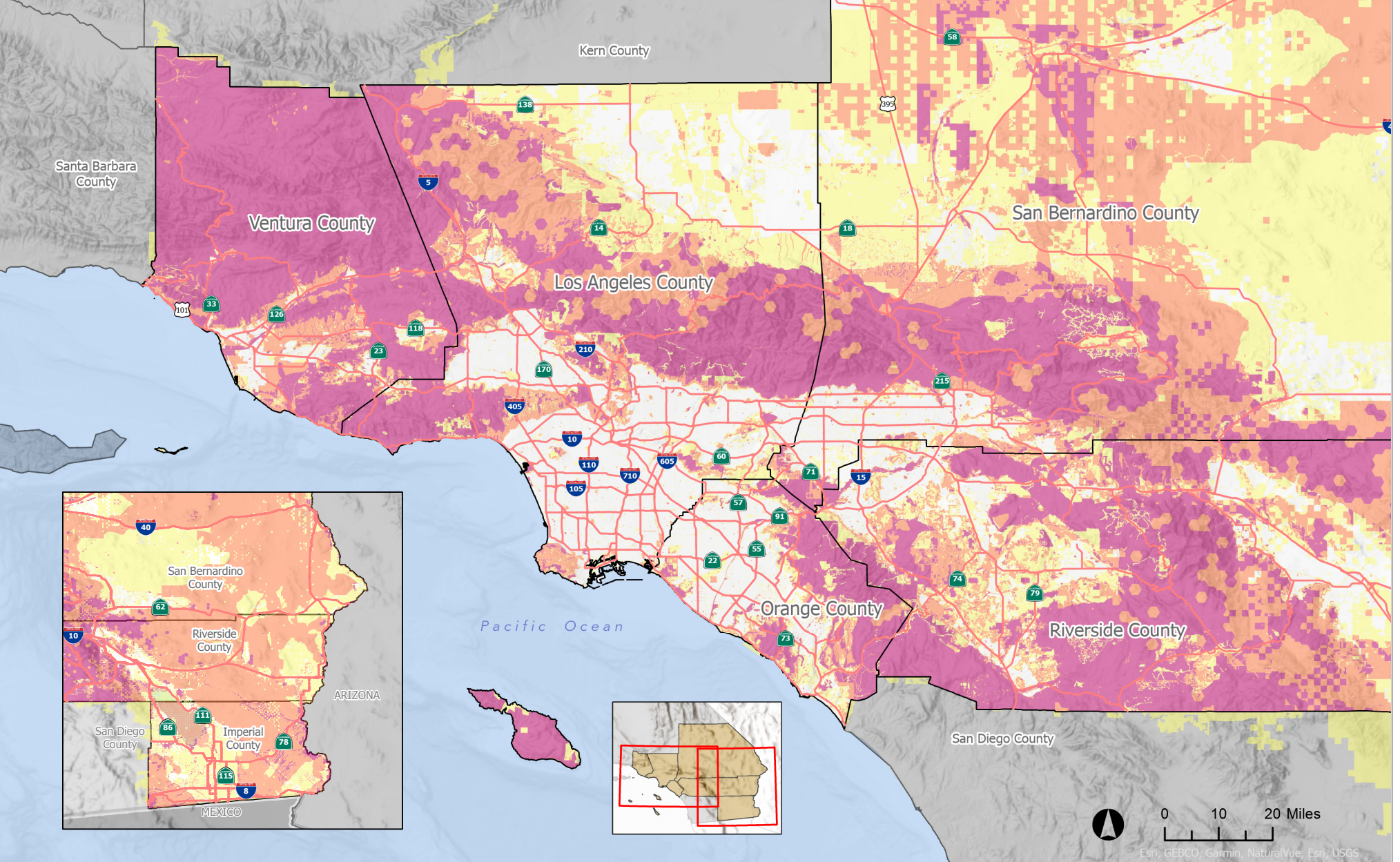
Tribal Lands: Locations of the 16 Federally Recognized Tribal entities in the SCAG region.

Military Installations: Military lands managed by the U.S. Department of Defense.

Farmlands: Agricultural and working lands as defined by the Farmland Mapping & Monitoring Program (FMMP) in the Division of Land Resource Protection in the California Department of Conservation.



Green Region/Resource Areas (GRRAs) derive from SB 375 statute and SCAG's responsibility to "gather and consider the best practically available scientific information regarding resource areas and farmland in the region." The GRRAs depict the region's natural assets—areas with acute risks from climate change—and highlight areas where future growth could result in negative environmental impacts if left unaddressed.



MAP 3.5 Green Region Resource Areas



Source: SCAG 2023

Regional Strategic Investments

Connect SoCal is a financially constrained plan in terms of transportation revenues and expenditures. This Plan includes Regional Strategic Investments to support community stabilization and provide supportive infrastructure for housing. However, we know that alleviating the severity of the housing crisis requires a commiserate commitment of resources. Therefore, this Plan calls for the development of stable, dedicated funding streams to support local jurisdictions in implementing their housing elements.


Housing the Region

The extraordinary cost of producing housing is a significant barrier to growth throughout Southern California, but also to achieving the level of infill and transit-oriented development anticipated in Connect SoCal. Additional support is needed to ensure that resources are available to support housing production, address displacement pressures and ensure sufficient supportive infrastructure is provided alongside housing.

Resources for Community Stabilization: Historically, investments in transportation infrastructure, including both roadways and transit, has resulted in displacement pressures on existing communities. More tools and resources are needed to address these issues and affirmatively further fair housing.

Financing Mechanisms: Tax Increment Financing and other tools are needed to fund supportive infrastructure, such as transit and sidewalks. These can be paired with investments in affordable housing, that may also include climate resilience and adaptation measures, to ensure that new and returning residents have connectivity to opportunities.

Comprehensive and Dedicated Funding for Housing: Since the last Plan, the region has seen the benefits of funding for housing through REAP 1. As noted, housing elements across the region demonstrate clear alignment with Connect SoCal and our growth vision—leading to this Plan’s projection of 30 percent higher household growth during the 2020s than Connect SoCal 2020. To further support the scale of housing production needed in the region, it is imperative to identify dedicated funding streams that can support tackling the barriers to housing production and affordable housing production, preservation and protections in the region.



Alleviating the housing crisis requires commitment of resources. Support is needed to overcome significant cost barriers associated with producing housing, particularly in the infill and transit-oriented areas prioritized in Connect SoCal.

ENVIRONMENT IN 2050

The Future of Sustainability

How will we improve our environment by 2050? The health of our region, both its land and the people living here, is interconnected with the choices we make in how we move and where we live and work. Preserving our natural resources and improving our air quality are dependent on how we travel and how our communities evolve. This section highlights the areas where additional focused policy and strategy are needed to improve our environment. It also includes a brief discussion of the Plan's environmental mitigation.

Environmental Policies and Strategies

The following list provides a brief description of the categories that Connect SoCal 2024 uses to frame the Regional Planning Policies and Implementation Strategies detailed later in this chapter. See the Land Use and Communities Technical Report for further discussion of these critical aspects of regional planning.

- **Clean Transportation:** Transitioning to cleaner vehicles, both transit fleets, trucks and passenger vehicles, is important for supporting cleaner air quality. This requires ensuring the availability of these new technologies but also a regional charging or refueling infrastructure to support cleaner vehicles.
- **Natural and Agricultural Land Preservation:** Preserving natural and agricultural lands can strengthen our communities, improve essential resources like our air, water and food, protect and enhance biodiversity, and capture greenhouse gases instead of allowing them to concentrate in the atmosphere.
- **Climate Resilience:** The critical issues and challenges presented by climate change require planning beyond the borders of a single city or county. Effective emergency response to large wildfires, for example, requires coordination amongst multiple agencies and local jurisdictions. Climate change's adverse impacts on the natural, social, economic and built environment—including transportation systems—can disrupt quality of life in an acute as well as steadily declining fashion. This issue can be most effectively addressed through regional coordination and solutions finding.
- **Sustainable Development:** Sustainable development can help support the region's ability to thrive with essential resources that maintain quality of life and a growing economy, such as water, energy and food supply, while also enabling future generations to thrive amidst both forecasted and unforeseen challenges.
- **Air Quality:** Transportation, especially the goods movement sector, contributes the overwhelming majority of air pollutant emissions that cause ozone pollution. A comprehensive and coordinated regional solution with integrated land use and transportation planning from all levels of governments will be required to achieve the needed emission reductions.

TAKE A CLOSER LOOK**Building a Resilient Region**

Similar to equity, resilience requires comprehensive consideration in transportation planning efforts. Resilience refers to the capacity of the region’s built, social, economic and natural systems to anticipate and effectively respond to changing conditions, acute shocks and chronic stressors by creating multiple opportunities for a sustainable, thriving and equitable future. Shocks are sudden and acute events that threaten immediate safety and well-being, such as earthquakes and wildfires. Stressors are ongoing challenges, often known or foreseen, that weaken built, social, economic and natural systems, such as persistent air quality issues or transportation system disrepair. One major known challenge that contributes to the occurrence of acute shocks and chronic stressors is climate change. Actions that can reduce the impacts of these shocks or address chronic stressors can vary, depending on the particular challenge and its impact on the region’s systems.

Steps Toward Resilience

Recognizing the importance of resilience, SCAG’s Regional Council adopted the Climate Change Action Resolution (Resolution No. 21-628-1) in January 2021 and resolved to develop a Regional Resilience Framework to “help the region plan and prepare for a changing climate, as well as potential near- and long-term disruptions to Southern California.”

SCAG formally affirmed the drought and water-shortage emergency in Southern California and called on local and regional partners to join together to adopt an “all of the above” approach to addressing the region’s water challenges and catalyzing opportunities across a six-county region that’s home to nearly 19 million people. Clean, safe, affordable and reliable water supply is central to Southern California’s people, economy and natural systems—and necessary to support the region’s projected growth. In an effort to support partners in tackling the region’s deepening water crisis, SCAG’s Regional Council unanimously adopted a Water Action Resolution (Resolution No. 22-647-3) in October 2022 to reduce water use; improve water conservation, reuse and efficiency; enhance water systems’ health and resilience; pursue and potentially implement new water supply and storage opportunities; and support

investments in water infrastructure and conservation practices that support the region’s economic and population growth and foster planning for the region’s housing needs. This resolution also called on SCAG to “identify, recommend and integrate into Connect SoCal 2024 policies and strategies to align investments in water infrastructure with housing needs and the adopted growth forecast and development pattern.”

Building on SCAG’s ongoing resilience efforts, staff used a lens of resilience in the development of Connect SoCal to consider and address the shocks and stressors facing the region, including those currently present and those expected up to 2050 and beyond.

**LET’S GET TECHNICAL**

For more detailed information on water infrastructure and conservation practices, see the [Land Use and Communities Technical Report](#).

Discussions on how Connect SoCal strengthens regional resilience can be found in many [Technical Reports](#) and is included in the [Regional Planning Policies and Implementation Strategies of the Plan](#).

Regional Strategic Investments

Achieving the region’s environmental goals requires strategic investments to support the transition to clean transportation technologies and resources that facilitate the ability to leverage advance mitigation for project delivery. The state’s bold policy leadership requires the transition of our transit fleets, trucks and passenger vehicles to cleaner technology. The region must rise to meet the moment by investing in the adequate supporting infrastructure for all vehicle classes. (See the Mobility and Economy Regional Strategic Investments for a discussion of other clean transportation transitions.)

Clean Transportation

In 2022, CARB adopted the Advanced Clean Cars II (ACC II) regulation. This regulation mandates that beginning in 2035, all new passenger cars, trucks and SUVs sold in California will be zero emissions. Zero-emission vehicles currently make up roughly 19 percent of new vehicles sold in California and comprise 2.8 percent of the light-duty vehicle fleet in the SCAG region. This represents an increase from one percent of vehicles sold in 2012. To meet the goals of ACC II, the California Energy Commission (CEC) estimates a need for 1.2 million chargers statewide. According to the CEC, there are currently approximately 27,000 Level 2 and 2,600 direct current fast-charging (DCFC) chargers in the region. However, both financial and infrastructure barriers are keeping many people in the region from transitioning to clean transportation.

PEV rebate program: Currently, both national (e.g., Inflation Reduction Act of 2022, Clean Vehicle Credit) and state rebate programs exist (e.g., CARB Clean Vehicle Rebate Project). However, the higher price of electric vehicles compared to conventional vehicles remains a barrier for many buyers. Low-income communities are the most impacted from older-vehicle emissions, and an additional rebate program could serve to both accelerate the transition to cleaner vehicles and ensure that the related health also benefit SCAG’s Priority Equity Communities. SCAG is proposing a PEV rebate program that will provide additional funding to incentivize the purchase of electric vehicles.

Natural and Agricultural Lands Preservation

Advance Mitigation: California state law allows agencies to establish voluntary advanced mitigation programs in selected areas, providing an opportunity for infrastructure project lead agencies (such as County Transportation Commissions) to identify potential impacts early in the planning stages and work with regulatory agencies to improve certainty, expedite project delivery and reduce permitting costs. Regional advance mitigation programs (RAMP) allow state and federal agencies to consider the environmental impacts and mitigation needs of multiple planned infrastructure projects and urban development all at once—and satisfy those mitigation requirements early in the project-planning and environmental-review process.*

*Note that the RAMP was previously a mitigation measure in the Connect SoCal 2020 PEIR (SMM BIO-2). In this cycle, the RAMP has been elevated to a plan feature, which reduces impacts. CEQA permits the incorporation of environmental considerations into the project design, thereby reducing environmental impacts and associated mitigation. See e.g., CEQA Guidelines 15070(b)(1) and CEQA Guidelines Appendix F: Energy Conservation. In the case of the adoption of a plan, policy, regulation or other public project, mitigation measures can be incorporated into the plan, policy, regulation or project design (CEQA Guidelines 15126.4(a)(2)).

Environmental Mitigation

As previously discussed, Connect SoCal 2024 regional policies and implementation strategies may serve to mitigate potential environmental impacts in that they lead to sustainable development and improved environmental outcomes for air quality and GHG emissions.

In addition, as the lead agency for the Plan, SCAG prepares a Program Environmental Impact Report (PEIR) for Connect SoCal 2024 as required by the California Environmental Quality Act (CEQA). The PEIR evaluates potential environmental impacts of Connect SoCal 2024 when compared with existing conditions. It identifies mitigation measures at the program level to mitigate or avoid potentially significant adverse environmental impacts to the maximum extent feasible for those resource areas that would be affected by the Plan. The Connect SoCal 2024 PEIR analyzes all 20 environmental topics from Appendix G of the CEQA Guidelines.

SCAG's mitigation approach is consistent with the general role played by a metropolitan planning organization (MPO), including developing and sharing information, collaborating with partners and developing regional policies. SCAG does not have the land use or decision-making authority over individual transportation and land use projects—and cannot impose or implement project-level mitigation measures. Transportation project implementation and land use development decisions are subject to their own environmental review process by local lead agencies, and such agencies have the sole discretion as lead agencies to determine and impose the appropriate project-level mitigation measures. The Connect SoCal 2024 PEIR mitigation approach bifurcates mitigation measures into SCAG mitigation measures and project-level mitigation measures.

For example:

- SCAG mitigation measures are program-wide measures for implementation by SCAG to address potentially significant, adverse, large-scale and regional environmental impacts over the lifetime of the Plan.
- Project-level mitigation measures are example measures for lead agencies to consider for subsequent project- and site-specific environmental reviews to reduce identified impacts as appropriate and feasible.



LOOKING FOR MORE?

For a complete list of environmental mitigation measures and approaches, refer to the Connect SoCal 2024 PEIR website at: <https://scag.ca.gov/peir>

ECONOMY IN 2050

The Future of Prosperity

How will we support a robust economy? The functioning of the regional economy is intertwined with the decisions and investments we make relative to our transportation network and communities. Our economy can be constrained if people can't afford to live here and if employers can't retain workers. Conversely, elements of our economy, such as the goods movement sector, can impact our ability to meet other goals—such as air quality. This section highlights areas where we need additional policies or strategies to ensure a robust regional economy. These strategies and investments improve the efficiency of the region's transportation network, which generates jobs by reducing the costs of getting to work and transporting goods.

Economic Policies and Strategies

The categories for the Regional Planning Policies and Implementation Strategies detailed below are focused on the following critical aspects of ensuring a strong and fair economy:

- **Goods Movement:** Transporting goods involves a highly complex system of raw, semi-finished and finished materials and products used by businesses and residents that often relies upon multiple modes of transportation (e.g., ships, trucks, trains, planes, etc.). The efficient movement of these goods is a critical component of a strong economy. They support industries and activities that provide jobs, tax revenue and resources that bolster innovation and creativity, and access to local and world markets through trade. This movement



LET'S GET TECHNICAL

For more details, review the *Economic Impact Analysis Technical Report*.

depends directly upon the physical infrastructure that comprises the transportation network, such as interstates and highways, rail lines and yards, ports and local roadway access that connects to industrial warehouses, distribution facilities and other facilities.

- **Broadband:** Broadband is a term that covers any high-speed internet access with minimum speeds of 25/3 megabits per second (Mbps). Broadband relies on a network of communications infrastructure, including middle-mile physical infrastructure to connect to global networks and last-mile connections by local carriers. The region relies on this digital infrastructure to support our transportation network and provide access to jobs, education and other vital daily needs, like commerce and healthcare.
- **Universal Basic Mobility:** Universal Basic Mobility (UBM) programs provide qualified residents with subsidies for transit and other mobility services. UBM aims to address existing inequities in the transportation system and improve accessibility to jobs and services.
- **Workforce Development:** These initiatives educate and train individuals to meet the needs of current and future businesses and industry in order to maintain a sustainable and competitive economic environment.
- **Tourism:** This relates to the travel of not just those visiting from outside the region but also from within the region to reach the region's many destinations and attractions. This sector of the economy employs nearly 500,000 people and generates over \$2 billion in local tax revenues.

Regional Strategic Investments

There are several strategic investments that are necessary to support a sustainable, efficient and productive regional economy. By investing in a more efficient goods movement network, Universal Basic Mobility and improved access to recreational trails, SCAG is not only making broad improvements to the general regional economy but is focusing specifically on areas of disparity—and making it possible to improve the health and access of under-resourced communities.

Goods Movement

The efficient movement of goods is critical to a strong economy and improves quality of life in the SCAG region by providing essential goods and supplies to residents and businesses, generating employment opportunities and providing access to markets through trade. However, increased volumes of goods moving across the transportation system also contribute to greater congestion, safety concerns and harmful emissions. It is critical to integrate land use decisions and technological advancements to minimize environmental and health impacts while fostering continued growth in trade and commerce.

Bottleneck Relief: As part of Connect SoCal and SCAG's comprehensive regional goods movement planning, bottleneck relief analysis and implementation strategy development has served to identify areas with the worst congestion and delay characteristics. Targeted regional investments will implement a menu of improvement strategies focused on freight corridors to improve the flow of people and goods.

ITS Strategy, Technology Initiatives: Goods movement Intelligent Transportation Systems and technology components of equipment, facilities and systems are increasingly shifting to automation, routing platforms and app-developed platforms. As part of SCAG's comprehensive regional goods movement planning, targeted regional investments will implement a menu of improvement strategies focused on newer technologies that can optimize how goods flow throughout the region.

Arterial O&M, Pavement Management, First/Last Mile Delivery: Through SCAG's comprehensive regional goods movement planning and Last Mile Freight Delivery Study (LMFDS), SCAG identifies numerous changes with respect to technologies, shifting supply chains and increasing deliveries of goods directly to residents and businesses. SCAG also highlights the importance of addressing local pavement conditions along critical goods movement routes throughout the region. Targeted regional investments will implement a menu of improvement strategies focusing on preserving and managing pavement systems from goods movement impacts.

Zero-Emission: SCAG's Last Mile Freight Program (LMFP) and Zero-Emission Truck Infrastructure (ZETI) Roadmap Study are providing planning and implementation support to facilitate the region's transition to a zero-emission goods movement system. Targeted regional investments will support zero-emission vehicles and infrastructure to realize the regions' goods movement industries' transition to clean technologies.

Universal Basic Mobility

Universal Basic Mobility (UBM) programs provide qualified residents with subsidies for transit and other mobility services. In doing so, they aim to address existing inequities in the transportation system and improve accessibility to jobs and services. At its core, UBM combines a mix of partnerships and policies to support safe and efficient access to a range of mobility services. UBM program participants are typically provided with monthly subscriptions of prepaid cards to access mobility services. UBM can also help disadvantaged community members gain payment credentials by waiving annual fees on debit cards and transition cash users into digital payment users. In this way, UBM can help address payment barriers that technologies can impose upon disadvantaged communities while also making broader access to shared mobility options possible beyond traditional, fixed-route transit. SCAG anticipates focusing on partnerships with affordable housing developers throughout the region to subsidize a range of transportation services, improve livability and lower the cost burden of travel. These efforts will also need to be complemented by efforts to expand travel choices and access to opportunity for low-income households.

Tourism: Access to Recreational Trails and Scenic Byways

This initiative provides funds to develop non-motorized recreational trails and related facilities, including trails and pathways that provide access to local and regional parks. This includes considering transit-oriented accessibility to offer more options for people to reach open space. The recreational trails and scenic byways component is similar to the Recreational Trails Program Non-Motorized.

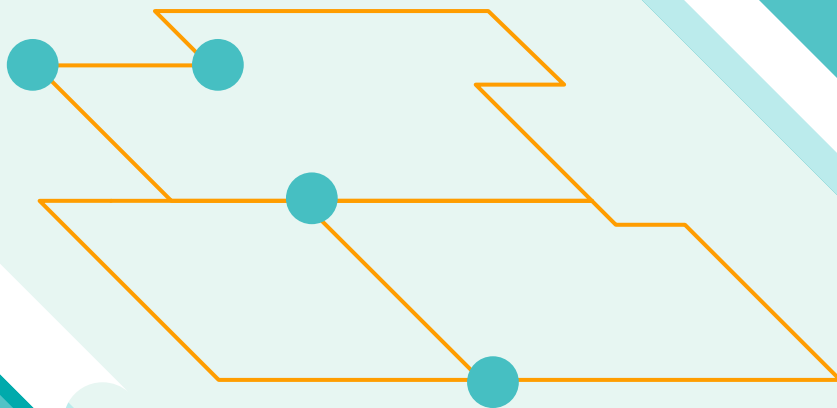
3.3

Regional Planning Policies

The Regional Planning Policies provide guidance for integrating land use and transportation planning to realize the vision of Connect SoCal.

The policies have been refined over several planning cycles to promote multimodal transportation investments and local development that align with the regional growth vision. The policies also incorporate recent direction from SCAG's Regional Council, Policy Committees and special subcommittees.

The Regional Planning Policies are a resource for County Transportation Commissions (CTCs) and local jurisdictions, who can refer to specific policies to demonstrate alignment with the Regional Transportation Plan/Sustainable Communities Strategy when seeking resources from state or federal programs.



MOBILITY



System Preservation and Resilience

- 01. Prioritize repair, maintenance and preservation of the SCAG region's existing transportation assets, following a "Fix-It-First" principle
- 02. Promote transportation investments that advance progress toward the achievement of asset management targets, including the condition of the National Highway System pavement and bridges and transit assets (rolling stock, equipment, facilities and infrastructure)

Complete Streets

- 03. Pursue the development of Complete Streets that comprise a safe, multimodal network with flexible use of public rights-of-way for people of all ages and abilities using a variety of modes (e.g., people walking, biking, rolling, driving, taking transit)
- 04. Ensure the implementation of Complete Streets that are sensitive to urban, suburban or rural contexts and improve transportation safety for all, but especially for vulnerable road users (e.g., older adults, children, pedestrians, bicyclists, etc.)

- 05. Facilitate the implementation of Complete Streets and curb space management strategies that accommodate and optimize new technologies, micromobility devices and first/last mile connections to transit and last-mile delivery
- 06. Support implementation of Complete Streets improvements in Priority Equity Communities, particularly with respect to Transportation Equity Zones, as a way to enhance mobility, safety and access to opportunities

Transit and Multimodal Integration

- 07. Encourage and support the implementation of projects, both physical and digital, that facilitate multimodal connectivity, prioritize transit and shared mobility, and result in improved mobility, accessibility and safety
- 08. Support connections across the public, private and nonprofit sectors to develop transportation projects and programs that result in improved connectivity
- 09. Encourage residential and employment development in areas surrounding existing and planned transit/rail stations
- 10. Support the implementation of transportation projects in Priority Equity Communities, particularly with respect to Transportation Equity Zones, as a way to enhance mobility, safety and access to opportunities
- 11. Create a resilient transit and rail system by preparing for emergencies and the impacts of extreme weather conditions

Transportation System Management

- 12. Pursue efficient use of the transportation system using a set of operational improvement strategies that maintain the performance of the existing transportation system instead of adding roadway capacity, where possible
- 13. Prioritize transportation investments that increase travel time reliability, including build-out of the regional express lanes network

Transportation Demand Management

- 14. Encourage the development of transportation projects that provide convenient, cost-effective and safe alternatives to single-occupancy vehicle travel (e.g., trips made by foot, on bikes, via transit, etc.)
- 15. Encourage jurisdictions and TDM practitioners to develop and expand local plans and policies to promote alternatives to single occupancy vehicle travel for residents, workers and visitors
- 16. Encourage municipalities to update existing (legacy) TDM ordinances by incorporating new travel modes and new technology and by incorporating employment and residential sites of certain populations—for example, employers who have less than 250 employees (below the 250 or more employees threshold identified in AQMD’s Rule 2202)

Technology Integration

- 17. Support the implementation of technology designed to provide equal access to mobility, employment, economic opportunity, education, health and other quality-of-life opportunities for all residents within the SCAG region
- 18. Advocate for data sharing between the public and private sectors to effectively evaluate the services’ benefits and impacts on communities while protecting data security and privacy

- 19. Advocate for technology that is adaptive and responsive to ensure it remains up to date and meets the evolving needs of users and stakeholders
- 20. Promote technology that has the capacity to facilitate economic growth, improve workforce development opportunities, and enhance safety and security
- 21. Proactively monitor and plan for the development, deployment and commercialization of new technology as it relates to integration with transportation infrastructure

Safety

- 22. Eliminate transportation-related fatalities and serious injuries on the regional multimodal transportation system
- 23. Integrate the assessment of equity into the regional transportation safety and security planning process, focusing on the analysis and mitigation of disproportionate impacts on disadvantaged communities
- 24. Support innovative approaches for addressing transit safety and security issues so that impacts to transit employees and the public are minimized and those experiencing issues (e.g., unhoused persons) are supported
- 25. Support the use of transportation safety and system security data in investment decision-making, including consideration of new highway and transit/rail investments that would address safety and security needs

Funding the System/User Fees

- 26. Promote stability and sustainability for core state and federal transportation funding sources
- 27. Establish a user fee-based system that better reflects the true cost of transportation, provides firewall protection for new and existing transportation funds, and represents equitable distribution of costs and benefits
- 28. Pursue funding tools that promote access to opportunity and support economic development through innovative mobility programs
- 29. Promote national and state programs that include return-to-source guarantees while maintaining the flexibility to reward regions that continue to commit substantial local resources
- 30. Leverage locally available funding with innovative financing tools to attract private capital and accelerate project delivery
- 31. Promote local funding strategies that maximize the value of public assets while improving mobility, sustainability and resilience

COMMUNITIES



Priority Development Areas

- 32. Promote the growth of origins and destinations, with a focus on future housing and population growth, in areas with existing and planned urban infrastructure that includes transit and utilities
- 33. Promote the growth of origins and destinations, in areas with a proclivity toward multimodal options like transit and active transportation, to reduce single occupant vehicle (SOV) dependency and vehicle miles traveled
- 34. Seek to realize scale economies or a critical mass of jobs and destinations in areas across the region that can support non-SOV options and shorter trip distances, combined trips and reduced vehicle miles traveled

Housing the Region

- 35. Encourage housing development in areas with access to important resources and amenities (economic, educational, health, social and similar) to further fair housing access and equity across the region
- 36. Encourage housing development in transit-supportive and walkable areas to create more interconnected and resilient communities

- 37. Support local, regional, state and federal efforts to produce and preserve affordable housing while meeting additional housing needs across the region
- 38. Prioritize communities that are vulnerable to displacement pressures by supporting community stabilization and increasing access to housing that meets the needs of the region
- 39. Promote innovative strategies and partnerships to increase homeownership opportunities across the region with an emphasis on communities that have been historically impacted by redlining and other systemic barriers to homeownership for people of color and other marginalized groups
- 40. Advocate for and support programs that emphasize reducing housing cost burden (for renters and homeowners), with a focus on the communities with the greatest needs and vulnerabilities
- 41. Support efforts to increase housing and services for people experiencing homelessness across the region

15-Minute Communities

- 42. Promote 15-minute communities as places with a mix of complementary land uses and accessible mobility options that align with and support the diversity of places (or communities) across the region. These are communities where residents can either access their most basic, day-to-day needs within a 15-minute walk, bike ride or roll from their home or as places that result in fewer and shorter trips because of the proximity of complementary land uses
- 43. Support communities across the region to realize 15-minute communities through incremental changes that improve equity, quality of life, public health, mobility, sustainability, resilience and economic vitality
- 44. Encourage efforts that elevate innovative approaches to increasing access to neighborhood destinations and amenities through an array of people-centered mobility options

Equitable Engagement and Decision-Making

- 45. Advance community-centered interventions, resources and programming that serve the most disadvantaged communities and people in the region, like Priority Equity Communities, with strategies that can be implemented in the short-to-long-term
- 46. Promote racial equity that is grounded in the recognition of the past and current harms of systemic racism and one that advances restorative justice
- 47. Increase equitable, inclusive, and meaningful representation and participation of people of color and disadvantaged communities in planning processes

ENVIRONMENT



Sustainable Development

- 48.** Promote sustainable development and best practices that enhance resource conservation, reduce resource consumption and promote resilience
- 49.** Implement the Forecasted Regional Development Pattern of Connect SoCal 2024, consisting of household and employment projections that have been reviewed and refined by jurisdictions and stakeholders to advance this shared framework for regional growth management planning
- 50.** Support communities across the region to advance innovative sustainable development practices
- 51.** Recognize and support the diversity of communities across the region by promoting local place-making, planning and development efforts that advance equity, mobility, resilience and sustainability

Air Quality

- 52.** Reduce hazardous air pollutants and greenhouse gas emissions and improve air quality throughout the region through planning and implementation efforts
- 53.** Support investments that reduce hazardous air pollutants and greenhouse gas emissions
- 54.** Reduce the exposure and impacts of emissions and pollutants and promote local and regional efforts that improve air quality for vulnerable populations, including but not limited to Priority Equity Communities and the AB 617 Communities

Clean Transportation

- 55.** Accelerate the deployment of a zero-emission transportation system and use near-zero-emission technology to offer short-term benefits where zero-emissions solutions are not yet feasible or commercially viable
- 56.** Promote equitable use of and access to clean transportation technologies so that all may benefit from them
- 57.** Consider the full environmental life cycle of clean transportation technologies, including upstream production and end of life as an important part of meeting SCAG's objectives in economic development and recovery, resilience planning and achievement of equity
- 58.** Maintain a technology-neutral approach in the study of, advancement of and investment in clean transportation technology

Natural and Agricultural Lands Preservation

- 59. Prioritize the climate mitigation, adaptation, resilience and economic benefits of natural and agricultural lands in the region
- 60. Support conservation of habitats that are prone to hazards exacerbated by climate change, such as wildfires and flooding
- 61. Support regional conservation planning and collaboration across the region
- 62. Encourage the protection and restoration of natural habitat and wildlife corridors
- 63. Encourage the conservation of agricultural lands to protect the regional and local food supply and the agricultural economy
- 64. Encourage policy development of the link between natural and agricultural conservation with public health

Climate Resilience

- 65. Prioritize the most vulnerable populations and communities subject to climate hazards to help the people, places and infrastructure that are most at risk for climate change impacts. In doing so, recognize that disadvantaged communities are often overburdened
- 66. Support local and regional climate and hazard planning and implementation efforts
- 67. Support nature-based solutions to increase regional resilience of the natural and built environment
- 68. Promote sustainable water use planning, practices and storage that improve regional water security and resilience in a drier environment
- 69. Support an integrated planning approach to help local jurisdictions meet housing production needs in a drier environment

Regional Planning Policies provide guidance for integrating land use and transportation planning to realize the vision of Connect SoCal. The policies have been refined over several planning cycles to promote multimodal transportation investments and local development that align with the regional growth vision.

ECONOMY



Goods Movement

- 70. Leverage and prioritize investments, particularly where there are mutual co-benefits to both freight and passenger/commuter rail
- 71. Prioritize community and environmental justice concerns, together with economic needs, and support workforce development opportunities, particularly around deployment of zero-emission and clean technologies and their supporting infrastructure
- 72. Explore and advance the transition toward zero-emission and clean technologies and other transformative technologies, where viable
- 73. Advance comprehensive, systems-level planning of corridor/supply chain operational strategies that is integrated with road and rail infrastructure and inland port concepts
- 74. Ensure continued, significant investment in a safe, secure, clean and efficient transportation system—including both highways and rail—to support the intermodal movement of goods across the region

Broadband

- 75. Support ubiquitous regional broadband deployment and access to provide the necessary infrastructure and capability for Smart Cities strategies—to ensure the benefits of these strategies improve safety and are distributed equitably
- 76. Develop networks that are efficient, scalable, resilient and sustainable to support transportation systems management, operations services and “tele-everything” strategies that reduce vehicle miles traveled, optimize efficiency and accommodate future growth of regional economies
- 77. Encourage investments that provide access to digital activities that support educational, financial and economic growth
- 78. Advocate for current, accurate data to identify opportunity zones and solutions that support the development of broadband services to community anchor institutions and local businesses
- 79. Promote an atmosphere that allows for healthy competition and speed-driven innovative solutions while remaining technologically neutral
- 80. Use a bottom-up approach to identify and support a community’s broadband needs

Universal Basic Mobility

- 81. Encourage partnerships and policies to broaden safe and efficient access to a range of mobility services that improve connections to jobs, education and basic services
- 82. Promote increased payment credentials for disadvantaged community members and the transition of cash users to digital payment technologies to address payment barriers

Workforce Development

- 83. Foster a positive business climate by promoting regional collaboration in workforce and economic development between cities, counties, educational institutions and employers
- 84. Encourage inclusive workforce development that promotes upward economic mobility
- 85. Support entrepreneurial growth with a focus on underrepresented communities
- 86. Foster a resilient workforce that is poised to effectively respond to changing economic conditions (e.g., market dynamics, technological advances and climate change)
- 87. Inform and facilitate data-driven decision-making about the region's workforce

Tourism

- 88. Consult and collaborate with state, county and local agencies within the region that are charged with promoting tourism and transportation
- 89. Encourage the reduced use of cars by visitors to the region by working with state, county and city agencies to highlight and increase access to alternative options, including transit, passenger rail and active transportation

3.4

Plan Fulfillment

SCAG is just one of many governments and public agencies that collectively plan, construct, operate and maintain the region's transportation system. However, SCAG has no authority to implement transportation projects.

Likewise, SCAG's work in developing a regional land use pattern helps to facilitate local development projects, but SCAG has no land use or decision-making authority.

This Plan allows public agencies that implement transportation projects to do so in a coordinated manner and charts a course for local governments to sustainably accommodate future development. SCAG can support these direct implementation efforts by providing policy leadership, research or targeted resources.



IMPLEMENTATION

Strategies at Work

The following set of Implementation Strategies articulate priorities for SCAG efforts in fulfilling or going beyond the Regional Planning Policies. This includes areas where SCAG will Lead, Partner or Support other responsible parties. SCAG's methods of implementation can vary from collaborative policy leadership, research or resource roles like the examples discussed in Chapter 2.

Generally, successful implementation of Connect SoCal relies on many actors, including decision-makers beyond SCAG. These strategies represent near-term efforts to be undertaken by SCAG, in collaboration with other agencies and local jurisdictions, that will be further specified as part of SCAG's Overall Work Program development process.



To implement Connect SoCal 2024, SCAG will collaborate with local jurisdictions, transportation agencies and stakeholders to advance local planning efforts by providing resources, research and data, technical assistance and grant programs.

Mobility

STRATEGY	SCAG ROLE	OTHER RESPONSIBLE PARTIES
System Preservation and Resilience		
Per federal requirements, establish and monitor regional targets for pavement conditions, bridge conditions and transit/rail assets, in coordination with Caltrans	Lead	Support: Local jurisdictions, transit/rail agencies, CTCs
Repair, operate, maintain and preserve the SCAG region's transportation assets in a state of good repair	Support	Lead: Caltrans, local jurisdictions, transit/rail agencies, CTCs
Collaborate to work toward a regional asset management approach	Partner	Lead: Local jurisdictions, transit/rail agencies, CTCs
Evaluate projects submitted for inclusion in the FTIP and RTP/SCS according to contributions in achieving system-performance targets	Lead	Support: Caltrans, transit/rail agencies, CTCs
Complete Streets		
Support implementation of Complete Streets demonstrations (including those addressing curb space management) to accommodate and optimize new technologies and micromobility devices, first/last mile connections to transit and last-mile deliveries	Partner	Lead: Local jurisdictions, transit/rail agencies, CTCs
Support community-led Complete Streets plans and projects, including those that take into account how to mitigate or adapt to climate change impacts (e.g., extreme heat)	Partner	Lead: Local jurisdictions, transit/rail agencies, CTCs
Encourage data-driven approaches to inform Complete Streets policies	Lead	Support: Local jurisdictions, transit/rail agencies, CTCs
Develop a Complete Streets network and integrate Complete Streets into regional policies and plans, including consideration of their impacts on equity areas	Lead	Support: Local jurisdictions, transit/rail agencies, CTCs
Engage regional stakeholders in Complete Streets policy and plan development, implementation and evaluation	Lead	Support: Local jurisdictions, transit/rail agencies, CTCs
Provide leadership at the state and regional levels to promote Complete Streets, including involvement on the statewide Complete Streets Advisory Committee and the Active Transportation Technical Advisory Committee	Lead	n/a

Mobility

STRATEGY	SCAG ROLE	OTHER RESPONSIBLE PARTIES
Transit and Multimodal Integration		
* All Modes. Increase multimodal connectivity (e.g., first/last mile transit and airport connections), which includes planning for and developing mobility hubs throughout the SCAG region	Support	Lead: Transit/rail agencies, local jurisdictions, CTCs
All Modes. Enable a more seamless mobility experience through the implementation of Mobility as a Service (MaaS). This may include leveraging Cal-ITP's support, initiate open-loop payment demonstrations, and test shared-product systems and post-payment solutions.	Support	Lead: Transit/rail agencies, local jurisdictions Support: Private sector companies
* All Modes. Test, deploy and scale new and shared mobility services, including micromobility (e.g., bike share, e-scooters, etc.) and microtransit pilot projects	Support	Lead: Local jurisdictions, CTCs, transit/rail agencies, private sector companies
Transit/Rail. Expand the region's dedicated lanes network—including new bus rapid transit, dedicated bus lanes, express bus service on managed and express lanes—as well as the region's urban and passenger rail network and transit/rail signal priority treatments. Improve transit/rail frequency, reliability, and fare and scheduling integration across operators	Partner and Support	Lead: Transit/rail agencies, CTCs Partner and Support: Local jurisdictions
Transit/Rail. Improve transit/rail safety and security for riders, including promoting best practices through SCAG advisory committees and working groups	Support	Lead: Transit/rail agencies, CTCs, local jurisdictions
* Transit/Rail. Through land use planning, build residential development along high-frequency transit corridors and around transit/rail facilities and centers	Partner	Lead: Local jurisdictions Support: Transit/rail agencies, CTCs
* Active Transportation. Support community-led active transportation and safety plans, projects and programs (e.g., Safe Routes to Schools) Partner with local jurisdictions on demonstrations and quick-build projects through SCAG's <i>Go Human</i> initiative	Partner	Lead: Local jurisdictions, transit/rail agencies, CTCs
* Active Transportation. Expand the region's networks of bicycle and pedestrian facilities. This includes creating more low stress facilities, such as separated bikeways and bike paths, slow streets, and open streets	Partner and Support	Lead: Local jurisdictions Partner and Support: CTCs
Streets and Freeways. Reconnect communities by removing, retrofitting or mitigating transportation facilities such as highways or railways that create barriers to community connectivity	Partner	Partner: local jurisdictions, CTCs, Caltrans

* (Asterisks) denote strategies that support quantified GHG emission strategies that help to reach SCAG's target.

Mobility

STRATEGY	SCAG ROLE	OTHER RESPONSIBLE PARTIES
Transportation System Management		
Develop a regional Transportation System Management and Operations (TSMO) plan that integrates Intelligent Transportation System (ITS) strategies to maximize the efficiency of the existing and future transportation system	Lead	Support: Caltrans, CTCs, transit/rail agencies
Evaluate projects submitted for inclusion in RTP/SCS and FTIP for progress in achieving travel-time reliability in the SCAG region	Lead	Support: Caltrans, CTCs, transit/rail agencies
Transportation Demand Management		
Incentivize and promote the development of more Transportation Management Agencies/Organizations (TMAs/TMOs)	Support	Lead: CTCs
Facilitate partnerships and provide a forum between public and private sector TDM practitioners and stakeholders to develop and implement policies, plans and programs that encourage the use of transportation alternatives	Lead	Support: Local jurisdictions, CTCs, air district, TMAs/TMOs
Develop and promote the use of a regional TDM data clearinghouse. Leverage data and TDM Toolbox best practices to identify cost-effective strategies	Partner	Lead: Local jurisdictions, CTCs, TMAs/TMOs
Collaborate to develop regional and localized marketing campaigns that promote TDM modes such as transit, carpool, walking and biking to school	Support	Lead: Local jurisdictions, transit/rail agencies
Technology Integration		
Develop a Smart Cities Vision Plan, and periodically revise the Technology Guiding Principles to inventory existing policies, evaluate emerging technologies, recommend best practices, implement ITS priorities, assess current trends and research, identify pilot opportunities and improve transportation system safety and efficiency	Lead	Support: SCAG Policy committees, Caltrans, CTCs, local jurisdictions
Provide local technical assistance grants in support of innovative technology solutions that reduce VMT and GHG emissions. Pursue funding and partners to continue the testing and deployment of emerging technologies	Lead	Support: Local jurisdictions, CBOs, CTCs, SCAG policy committees

Mobility

STRATEGY	SCAG ROLE	OTHER RESPONSIBLE PARTIES
Technology Integration (continued)		
Implement ITS priorities to improve the safety and efficiency of the current transportation system	Partner	Lead: CTCs Support: FHWA, Caltrans, local jurisdictions.
Further develop a Regional Configuration Management process among CTCs, Caltrans districts, ports and local governments to ensure consistent and compatible integration of ITS technologies and interoperable operations	Support	Lead: Caltrans, local jurisdictions, CTCs
Conduct regional assessment of current and planned Connected and Automated Vehicle (CAV) implementation in the SCAG region to determine opportunity zones for future deployments and develop toolkits and best practices for local jurisdictions	Lead	Support: CTCs, Caltrans, local jurisdictions
Safety		
Integrate equity into regional safety and security planning processes through analysis of the disproportionate impacts on disadvantaged communities and vulnerable roadway users, like pedestrians, bicyclists, older adults and young people	Partner	Partner: CTCs, Caltrans, local jurisdictions, CBOs, regional bike/ped organizations
Promote implementation of data-driven approaches to guide transportation safety and security investment decision-making, including development of High Injury Networks and innovative safety modeling tools	Lead	Partner: Local jurisdictions Support: Caltrans, FHWA
Provide leadership at the state and regional levels to promote transportation safety and security planning, including involvement on the statewide Strategic Highway Safety Plan (SHSP) Steering Committee and Executive Leadership Committee	Lead	Partner: Caltrans, regional safety stakeholder groups
Evaluate projects submitted for inclusion in RTP/SCS and FTIP for their progress in achieving safety targets in the SCAG region	Lead	Partner: Caltrans, CTCs Support: Transit/rail agencies
Work with local, state and federal partners to advance safer roadways, including reduced speeds to achieve zero deaths and reduce GHGs	Partner	Partner: Local jurisdictions, Caltrans, FHWA

Mobility

STRATEGY	SCAG ROLE	OTHER RESPONSIBLE PARTIES
Funding the System/User Pricing		
*Coordinate with local, regional, state and national partners to support transition to a mileage-based user fee	Support	Lead: Caltrans, FHWA Support: CTCs
*Support local and regional partners on implementation of dynamic and congestion-based pricing programs, including facilitation of regional coordination	Support	Lead: Caltrans, CTCs Support: Local jurisdictions, FHWA
*Continue development and support for job-center parking pricing, including through Smart Cities and the Mobility Innovations Sustainable Communities Program (SCP) grant program	Support	Lead: Local jurisdictions Support: CTCs
*Continue to coordinate with regional partners to support build-out of regional express lanes network	Support	Lead: Caltrans, CTCs, toll authorities Support: Local jurisdictions, transit/rail agencies
Study and pilot transportation user-fee programs and mitigation measures that increase equitable mobility	Lead	Support: Caltrans, CTCs, local jurisdictions, mobility service providers, CBOs, regional partners
Conduct education and outreach work to support the public acceptance of user fees	Lead	Support: Caltrans, CTCs, transit/rail agencies

** (Asterisks) denote strategies that support quantified GHG emission strategies that help to reach SCAG's target.*

Communities

STRATEGY	SCAG ROLE	OTHER RESPONSIBLE PARTIES
Priority Development Areas		
Support local jurisdictions and implementing agencies' strategies to promote plans and projects within PDAs by providing awards, grants and technical assistance	Support	Partner: Local jurisdictions, private developers, SGC, partner agencies
Develop housing in areas with existing and planned infrastructure and availability of multimodal options, and where a critical mass of activity can promote location efficiency	Partner	Partner: Local jurisdictions
Housing the Region		
Provide technical assistance for jurisdictions to complete and implement their housing elements and support local governments and Tribal Entities to advance housing production	Partner	Partner: Local jurisdictions
Identify and pursue partnerships at the local, regional, state and federal levels to align utility, transit and infrastructure investments with housing development and equitable outcomes across the region	Partner	Partner: Local jurisdictions, partner agencies and infrastructure providers, such as utilities
Research and explore innovative homeownership models that can reduce costs and increase housing production in the region. Explore strategies to engage households of color and communities that are underrepresented as homeowners	Support	Partner: Local jurisdictions, partner agencies
Research community stabilization (anti-displacement) resources that can be utilized to address displacement pressures, such as preservation and tenant protections for communities across the region and Affirmatively Further Fair Housing	Support	Partner: Local jurisdictions, partner agencies
15-Minute Communities		
*Develop technical-assistance resources and research that support 15-minute communities across the SCAG region by deploying strategies that include, but are not limited to, redeveloping underutilized properties and increasing access to neighborhood amenities, open space and urban greening, job centers and multimodal mobility options	Lead	Partner: Local jurisdictions, private developers
*Identify and pursue funding programs and partnerships for local jurisdictions across the region to realize 15-minute communities	Partner	Partner: COGs, SGC, local jurisdictions

* (Asterisks) denote strategies that support quantified GHG emission strategies that help to reach SCAG's target.

Communities

STRATEGY	SCAG ROLE	OTHER RESPONSIBLE PARTIES
Equitable Engagement and Decision-Making		
Develop an Equity Assessment Tool that can be utilized by SCAG in program development and delivery, and develop a complementary tool that can be incorporated into local assistance/subrecipient programming and delivery	Lead	Support: Local jurisdictions, CTCs
Develop an agency-wide Community Based Organization (CBO) Partnering Strategy that outlines tools and resources for partnering with CBOs to increase inclusive and equitable engagement opportunities	Lead	Support: Local jurisdictions, CTCs
Develop a pilot program that prioritizes comprehensive solutions, capacity building, engagement, planning and investment in the most underserved communities in the region (one in each county during the pilot phase)	Partner	Support: Local jurisdictions, CTCs
Develop a resource guide and training for equitable and culturally relevant stakeholder engagement for public agencies, including SCAG, that recognizes community contexts and histories, existing community resources and engagement opportunities	Lead	Support: Local jurisdictions, CTCs
Align with appropriate state and federal partners to identify and utilize equity-centered measures to track outcomes, progress and lessons learned from Connect SoCal implementation	Partner	Partner: State and federal agencies

Environment

STRATEGY	SCAG ROLE	OTHER RESPONSIBLE PARTIES
Sustainable Development		
Monitor and pursue funding opportunities that can foster sustainable and equitable land use and development across the SCAG region. Explore the feasibility of creating a pilot grant program to support local planning and/or implementation	Lead	Partner: Local jurisdictions
Research the availability of resources that can support the development of water and energy-efficient building practices, including green infrastructure	Lead	n/a
Air Quality		
Coordinate with local, regional, state and federal partners to meet federal and state ambient air-quality standards and improve public health	Partner	Partner: Partner: Air districts, CARB, U.S. EPA, CTCs, local jurisdictions
Support local and regional partners by identifying funding opportunities that will help achieve greenhouse gas emission reduction and provide technical assistance and resources, when available	Support	Lead: Local jurisdictions, CBOs, regional partners
Clean Transportation		
Maintain a robust Clean Technology Program that focuses on planning, research, evaluation, stakeholder support and advocacy	Lead	Partner: CTCs, private sector companies
Share information and provide technical assistance to local jurisdictions and operators on opportunities to upgrade their fleets and accelerate deployment of supporting infrastructure	Lead	Partner: Local jurisdictions, transit/rail agencies, CTCs
Investigate how zero-emission vehicles can strengthen resilience through vehicle-to-grid technologies or other opportunities where batteries can be used to enhance capacity of renewable energy sources	Lead	n/a
Investigate opportunities to install charging stations that can be used by multi-unit dwellers that don't have the same opportunities for charging as single-family homeowners	Lead	Lead: Local jurisdictions

Environment

STRATEGY	SCAG ROLE	OTHER RESPONSIBLE PARTIES
Clean Transportation (continued)		
Facilitate development of EV charging infrastructure through public-private partnerships	Support	Lead: Local jurisdictions
*Assist local jurisdictions in developing an incentive program to further adoption of zero-emission passenger vehicles	Lead	Partner and Support: Local jurisdictions, CTCs federal and state agencies
Support the deployment of clean transit and technologies to reduce greenhouse gas emissions as part of the CARB innovative clean technology (ICT) rule	Partner and Support	Lead: Transit/rail agencies, CTCs Partner and Support: Local jurisdictions
Natural and Agricultural Lands Preservation		
Identify and leverage resources for research, policies and programs to conserve and restore natural and agricultural lands	Lead	Partner and Support: Local jurisdictions, CTCs, partner agencies, local universities, research institutions
Explore opportunities to increase and quantify the carbon sequestration potential and resilience benefits of natural and agricultural lands—and pursue funding for implementation and demonstration projects	Lead	Partner and Support: Local jurisdictions, CTCs, partner agencies, local universities, research institutions
Work with implementation agencies to support, establish or supplement regional advance mitigation programs (RAMP) for regionally significant transportation projects to mitigate environmental impacts, reduce per-capita VMT and provide mitigation opportunities through the Intergovernmental Review Process	Partner	Lead: Local jurisdictions, CTCs, partner agencies
Continue efforts to support partners in identifying priority conservation areas—including habitat, wildlife corridors, and natural and agricultural lands—for permanent protection	Partner	Lead: Local jurisdictions, CTCs, partner agencies, regional partners
Support the integration of nature-based solutions into implementing agency plans to address urban heat, organic waste reduction, habitat and wildlife corridor restoration, greenway connectivity and similar efforts	Support	Lead: Local jurisdictions, CTCs, partner agencies

* (Asterisks) denote strategies that support quantified GHG emission strategies that help to reach SCAG's target.

Environment

STRATEGY	SCAG ROLE	OTHER RESPONSIBLE PARTIES
Climate Resilience		
Support use of systems-based risk-management methods and tools to help implementation agencies identify and reduce resilience risks for vulnerable communities	Support	Local jurisdictions, CTCs, partner agencies, regional partners
Develop partnerships and programs to support local and regional climate adaptation, mitigation and resilience initiatives	Lead	Partner and Support: Local jurisdictions, CTCs, partner agencies, CBOs, local universities
Provide local and regional partners with resources, education and trainings to identify and protect areas vulnerable to climate effects and other resilience shocks and stressors, particularly for low-income communities and communities of color	Support	Lead: Local jurisdictions, CTCs, partner agencies, CBOs
Support implementing agencies' efforts to include climate-ready home-hardening strategies in housing construction to minimize the potential loss of housing units stemming from climate-related hazards	Support	Lead: Local jurisdictions, CTCs, partner agencies, business community, CBOs
Research existing and potential options to fund the climate resilience efforts of implementation agencies	Lead	Support: Local jurisdictions, CTCs, partner agencies, business community, CBOs
Support integration of climate vulnerability assessments into infrastructure planning and delivery for implementing agencies	Support	Lead: CTCs, transit/rail agencies
Collaborate with partners to foster adoption of systems and technologies that can reduce water demand and/or increase water supply, such as alternative groundwater recharge technologies, stormwater capture systems, urban cooling infrastructure and greywater usage systems	Partner	Lead: Local jurisdictions, CTCs, partner agencies, business community, CBOs

Economy

STRATEGY	SCAG ROLE	OTHER RESPONSIBLE PARTIES
Goods Movement		
Leverage the Last Mile Freight Program to develop and implement operational concepts with a core focus on last-mile delivery strategies across urban and rural communities	Lead	Support: CTCs, local jurisdictions, CBOs, Caltrans
Manage the implementation and transition to near-zero and zero-emission technologies for medium- and heavy-duty vehicles and supporting infrastructure	Partner	Support: Mobile Source Air Pollution Reduction Review Committee (MSRC), private sector companies, local jurisdictions
Facilitate the development of integrated rail partnerships between passenger/commuter rail, private rail operators and public agencies to advance investment opportunities	Lead	Support: Ports, Class I Railroads, CTCs
Engage communities throughout the SCAG region on environmental justice concerns, economic needs and workforce development priorities	Lead	Support: Local jurisdictions, CBOs
Perform a complete update to the SCAG Comprehensive Regional Goods Movement Plan and Implementation Strategy, including assessment of innovative strategies and concepts	Lead	Support: Consultant
Continue to coordinate with federal and state partners on goods movement planning efforts, including the Last Mile Freight Program (LMFP), to position the SCAG region for further funding opportunities	Lead	Support: U.S. DOT, Federal Railroad Administration, Maritime Administration
Broadband		
Implement “Dig-Once Dig-Smart” policies to install broadband, EV charging stations and Smart Cities related infrastructure whenever highway/roadway improvements occur	Support	Lead: Local jurisdictions, CTCs/Caltrans
Promote the use of a regional or statewide universal permit, ordinance and fee for expedited broadband, EV charging and Smart Cities infrastructure deployment	Lead	Support: CTCs, Caltrans, local jurisdictions
Secure grant funding for underserved local jurisdictions for broadband infrastructure development	Lead	Support: Local jurisdictions, regional broadband consortiums, state agencies

Economy

STRATEGY	SCAG ROLE	OTHER RESPONSIBLE PARTIES
Universal Basic Mobility		
Form partnerships with affordable housing developers in the region to subsidize a range of transportation services that improve livability, lower transportation costs, and expand travel choices and access to opportunity for low-income households	Partner	Lead: Affordable housing developers, local jurisdictions CTCs, transit/rail agencies, mobility providers
Continue to develop an understanding of low-income travel patterns and needs, and the impact of shocks (e.g., COVID and telework adoption) on low-income travel	Lead	Support: Caltrans, CTCs, transit/rail agencies
Pursue and encourage outreach opportunities with low-income populations, particularly drivers	Lead	Support: Caltrans, CTCs, local jurisdictions
Workforce Development		
Provide technical assistance to help local jurisdictions realize their economic and workforce-development goals	Partner	Lead: Local jurisdictions
Encourage the growth of, and equitable access to, family-supporting jobs throughout the region	Partner	Lead: Local jurisdictions, employers, educational institutions
Develop resources for understanding, analyzing and communicating complex regional economic and workforce data	Lead	Partner: Workforce development boards, community colleges, local jurisdictions, employers
Tourism		
Initiate and organize regular meetings between agencies that manage travel and tourism in the region and state to better inform planning efforts and align with travel and tourism needs—particularly with upcoming, large-scale events that include the 2026 FIFA World Cup and 2028 Summer Olympics	Support	Lead: Travel and tourism agencies, FHWA, FTA, FLMAs, Caltrans, CTCs, transit/rail agencies, local jurisdictions

4

Financial Summary

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One of the most important elements of the Plan is to ensure that the cost of our investments in the region can be balanced with and supported by the revenues we receive.

4.1

Paying Our Way Forward



This chapter identifies revenues SCAG expects to be available to support surface transportation investments identified in Connect SoCal. The SCAG region has secured resources necessary to support transportation investments detailed in past Plans, and our current financial plan will continue to meet milestones to implement Connect SoCal.

The financially constrained Connect SoCal includes both a “traditional” core revenue forecast comprising existing local, state and federal sources—and a separate forecast of more innovative, but reasonably available, sources of revenue to implement a program of improvements to keep people and goods moving.

The financial plan further documents progress since past Plans and describes steps to obtain revenues for implementing the region’s transportation vision.

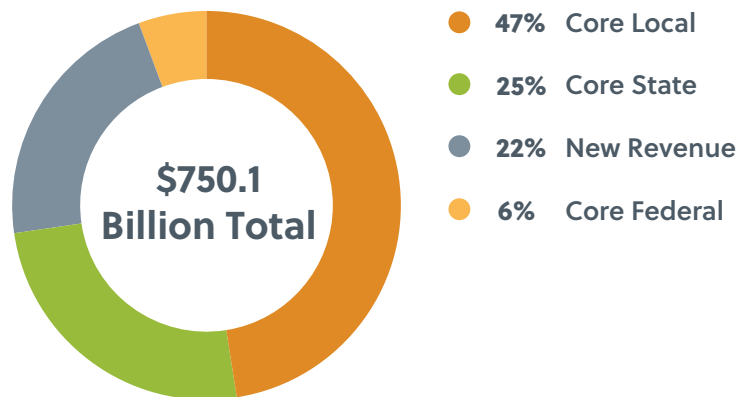
FINANCIAL FORECAST

Revenue Sources

The SCAG region’s financially constrained Connect SoCal plan includes revenues from both core and new reasonably available revenue sources—which together total \$750.1 billion from FY2024–25 through FY2049–50, as illustrated in FIGURE 4.1. For core sources, the Plan is funded 61 percent by local sources, 32 percent by state sources and 7 percent by federal sources. As shown in FIGURE 4.2, capital projects

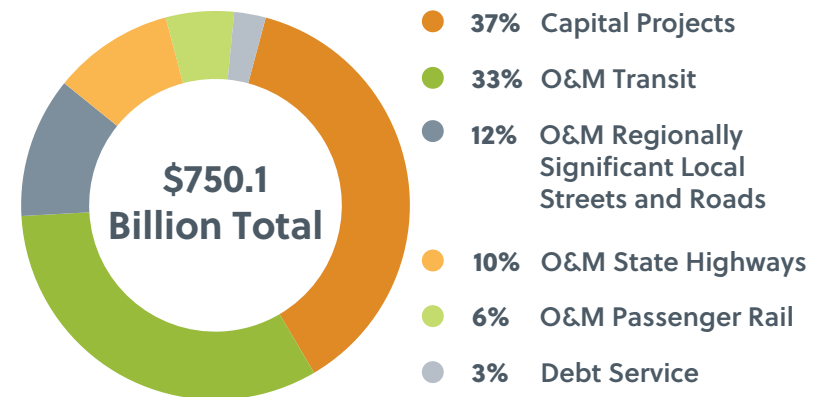
total \$280.2 billion in nominal (i.e., year-of-expenditure) dollars. Operating and maintenance costs total \$450.1 billion, while debt service obligations total \$19.7 billion. Transit-related costs comprise the largest share of operations and maintenance costs for the region, totaling \$244.5 billion.

FIGURE 4.1 FY2025–FY2050 RTP/SCS Revenues (in Nominal Dollars, Billions)



Note: Numbers may not sum to total due to rounding
 Source: SCAG Financial Model 2023

FIGURE 4.2 FY2025–FY2050 RTP/SCS Expenditures (in Nominal Dollars, Billions)



Note: Numbers may not sum to total due to rounding
 Source: SCAG Financial Model 2023

The financial plan highlights the importance of finding new and pioneering ways to pay for transportation, including an ever-expanding backlog of projects necessary to preserve our existing transportation system. Nationally, we continue to face an insolvency crisis with the Federal Highway Trust Fund, which is funded by excise taxes on fuel. The federal gas tax remains unchanged since 1993, and fuel tax receipts have declined precipitously as fuel efficiency has increased. In 2021, on a broad bipartisan basis, the United States Congress passed the Infrastructure Investment and Jobs Act (IIJA), which provides a substantial influx of new federal funding through new and existing programs. However, the IIJA expires in FY2025–26 and has been touted as a “once in a generation” investment in our nation’s transportation system. California’s passage of the Road Repair and Accountability Act of 2017 (Senate Bill 1) provides a significant influx of new state revenue through a state gas tax increase and other transportation fees, yet only a fraction of our needs is funded through state sources. Our region continues to rely heavily on local sources of tax revenue. Eight county-level, local option sales tax measures in the region are the key reason that local sources generate 58 percent of core revenues for transportation improvements. Our region’s success in providing local sources of transportation funding also increases our ability to secure federal and state funding that requires local contribution.

Our region has faced multiple changes in recent years that present challenges for funding and financing the transportation system, but also opportunities that could help us transition to a future with more stable and sustainable sources of transportation funding. The COVID-19 pandemic has had a significant impact on travel patterns and economic activity, and it remains to be seen to what degree our recovery will lead to a “new normal” in the region. Recent increases in inflation and concerns about a recession may impact people’s spending and travel habits in the short term, and the need for resiliency could greatly increase the magnitude of investments needed to maintain and preserve the transportation system. For the financial plan, we strive to forecast long-term financial consistency while closely monitoring the impact of recent changes.

It is vital that we find new ways to make transportation funding more sustainable in the long term. Efforts are underway to explore how we can transition from our current system, based on fuel taxes, toward a more direct system of user fees. User fees are linked directly to how people travel. They can support our infrastructure needs and promote a more balanced transportation system by encouraging residents and visitors to consider the effects that their travel choices have on the larger transportation ecosystem. User fees can be structured and implemented to serve as a critical tool for advancing environmental, economic and equity-related goals, including reducing traffic congestion and vehicle miles traveled, while encouraging increased uptake of active transportation modes and boosting transit ridership. In our region, numerous policy and technical studies have been conducted on the subject. However, more work is planned to examine and demonstrate the viability of user-fee systems, including toll networks, mileage-based user fees to replace fuel taxes, and congestion pricing zones that levy fees based on time-of-day and congestion levels. Connect SoCal includes these user fee–based funding strategies to support system management, preservation and resilience, and to contribute to the region’s greenhouse gas reduction goals. SCAG further considers the potential equity concerns that accompany user fee policies and assumes mitigation measures, such as the establishment of a mobility equity fund. This can provide resources that can increase access for priority equity communities, particularly transportation equity zones (TEZs).

In 2022, SCAG conducted the Mobility Innovations and Pricing (MIP) project, which focused on the potential equity implications of road pricing and other innovative transportation policies in the SCAG region. Developed in the context of SCAG’s MIP project, TEZs are a way to analyze the impacts of mobility innovations for communities experiencing transportation-related burdens. The MIP study showed that a pricing strategy, done the right way, can be a tool to help underserved communities. In particular, the MIP project focused on equity mitigation strategies intended to adjust the parameters of a pricing program to prioritize those that may be most adversely impacted. In addition to subsidies and payment accessibility considerations, credits were explored—transportation credits to specific communities that can be applied to any mode of transportation. Credits can be deployed to incentivize sustainable trips and can be targeted geographically or demographically, together with investment in robust mobility options. SCAG continues to conduct research on supporting policies that focus on designing an equitable transportation system, including setting the framework for Universal Basic Mobility for the SCAG region.

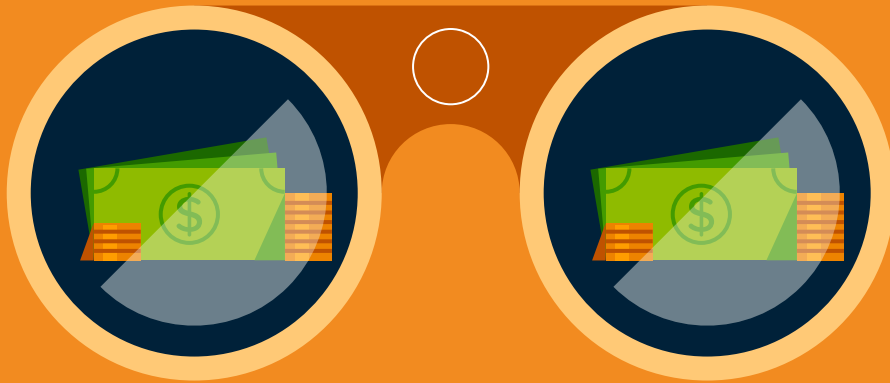
**LET’S GET TECHNICAL**

For more details, turn to the Transportation Finance Technical Report.

4.2

Economic Outlook

SCAG assesses trends and other factors to inform the key assumptions in its financial model. This work provides clarity as to what revenues will be available to support the region's surface transportation investments. For Connect SoCal to meet the federal fiscal constraint requirement, there must be sufficient revenue available to support expenditures.



TRENDS

Overview

SCAG's financial model reflects historical growth trends and reasonable future expectations for key revenue sources. These include:

- Inflation
- Construction cost increases
- Retail sales growth
- Fuel consumption
- Status of the Federal Highway Trust Fund
- Status of the State Highway Account
- Local sales tax measures
- Multimodal system preservation and maintenance

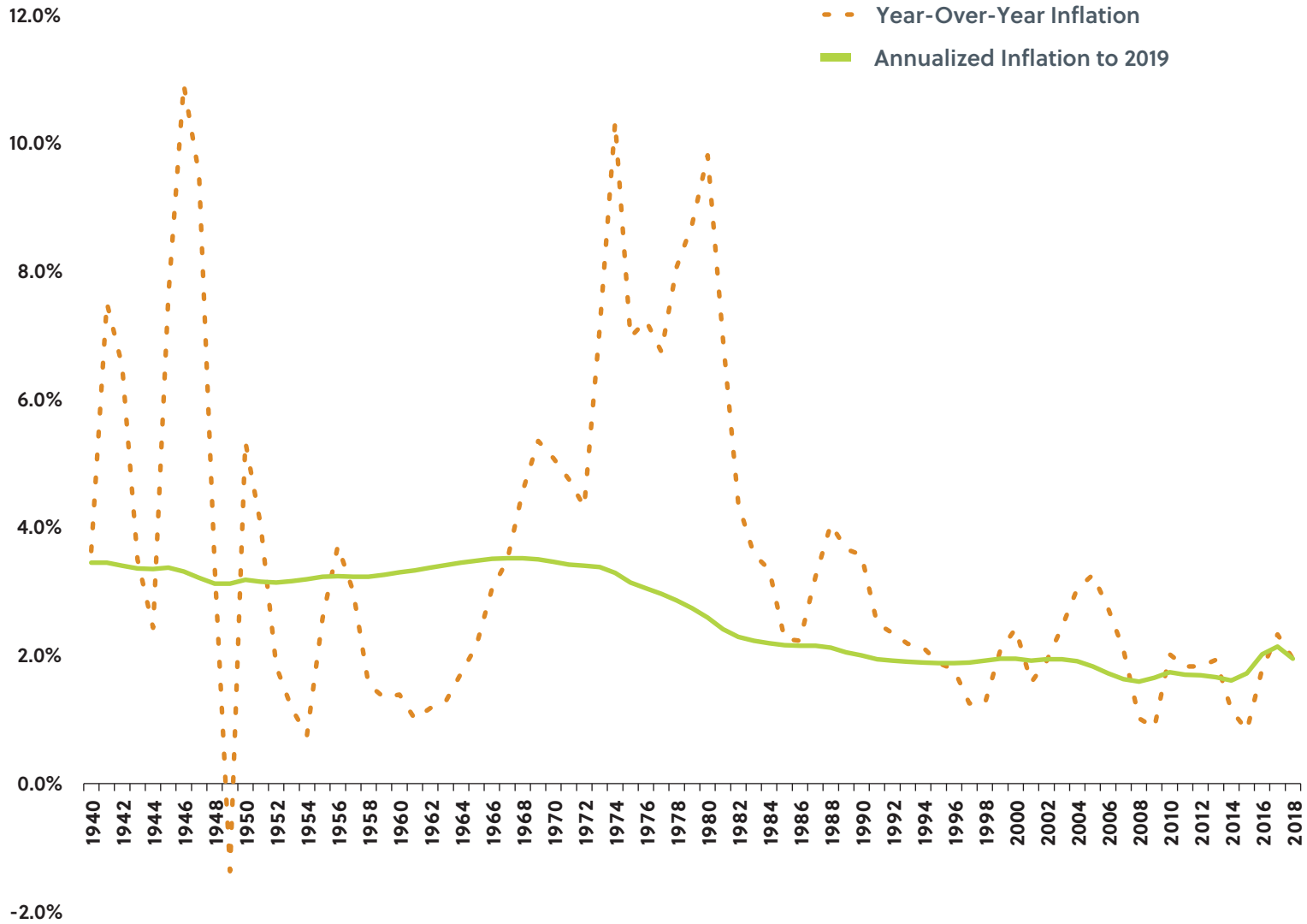
Inflation

Inflation can have profound impacts over the long-term time horizon of the Plan. SCAG's revenue model accounts for historical inflation trends, as measured by the Gross Domestic Product (GDP) Price Deflator metric and the Consumer Price Index. FIGURE 4.3 shows the trends in inflation by the GDP Price Deflator. Although inflation rates have varied considerably over time, they have generally trended between two and four percent. Accordingly, a 2.3 percent inflation rate is used to adjust constant dollar (revenue) forecasts into nominal (or year-of-expenditure) dollars.

Construction Cost Increases

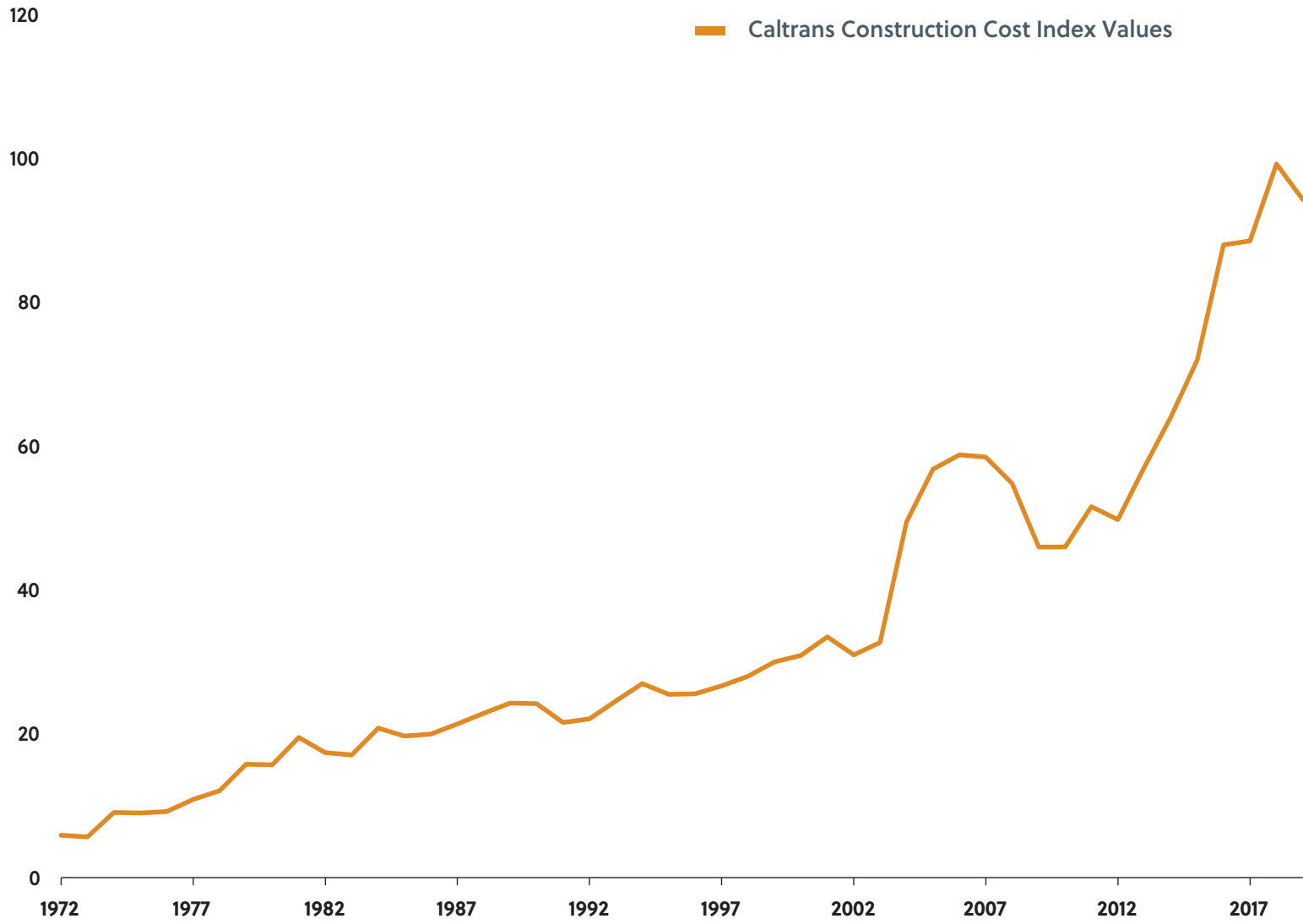
The rise in construction costs can further erode the purchasing power of transportation revenues. FIGURE 4.4 shows changes in California highway construction costs since the early 1970s, which is well above general inflation. The financial plan uses a 4.6 percent annual escalation factor to estimate future and nominal (or year-of-expenditure) costs. Given the differential between long-term inflation (2.3 percent annually) and capital cost escalation, the purchasing power of transportation revenue sources is expected to decrease by over 70 percent by the end of the planning period.

FIGURE 4.3 Historical Inflation Trends (Annual Inflation)



Source: Congressional Budget Office and Federal Highway Administration

FIGURE 4.4 Caltrans Construction Cost Index Values, 1972–2019 (2020 = 100)



Source: California Department of Transportation

Retail Sales Growth

Changes in personal consumption patterns and overall population are the main contributors to the growth in retail sales. Suppressed consumer spending during the initial pandemic period resulted in significant declines in retail sales. Likewise, recessions and economic slowdowns also reduce personal consumption. Over the 30-year period from FY1985–86 to FY2015–16, statewide retail sales grew by 1.5 percent annually in real terms (when the effects of inflation are eliminated). The financial plan assumes retail sales growth in the SCAG region ranging from 1.0 percent to 3.3 percent annually in real terms consistent with historical trends.

Fuel Consumption

Excise taxes on gasoline and diesel fuels are the basis of most federal and state transportation funding sources. Since these taxes are based on cents-per-gallon purchased, they depend on fuel consumption. Though changes in regional vehicle miles traveled will continue to play a role during the Plan period, increases in conventional fuel efficiency and the adoption of alternative fuel and alternative-powered vehicles will reduce overall fuel consumption. The financial plan assumes that increases in vehicle fuel efficiency and the shift to zero-emission vehicles due to implementation of the California Air Resources Board's (CARB) Advanced Clean Cars II regulations—which ban the sale of new, gasoline-powered passenger cars, trucks and SUVs in California beginning in 2035—will reduce fuel consumption by 3.6 percent per year during the Plan period. Additionally, CARB's Advanced Clean Fleets regulations, which has the goal of achieving a zero-emissions truck and bus fleet in California by 2045, will reduce transportation revenue that is dependent on the consumption of diesel fuel. Some estimates suggest

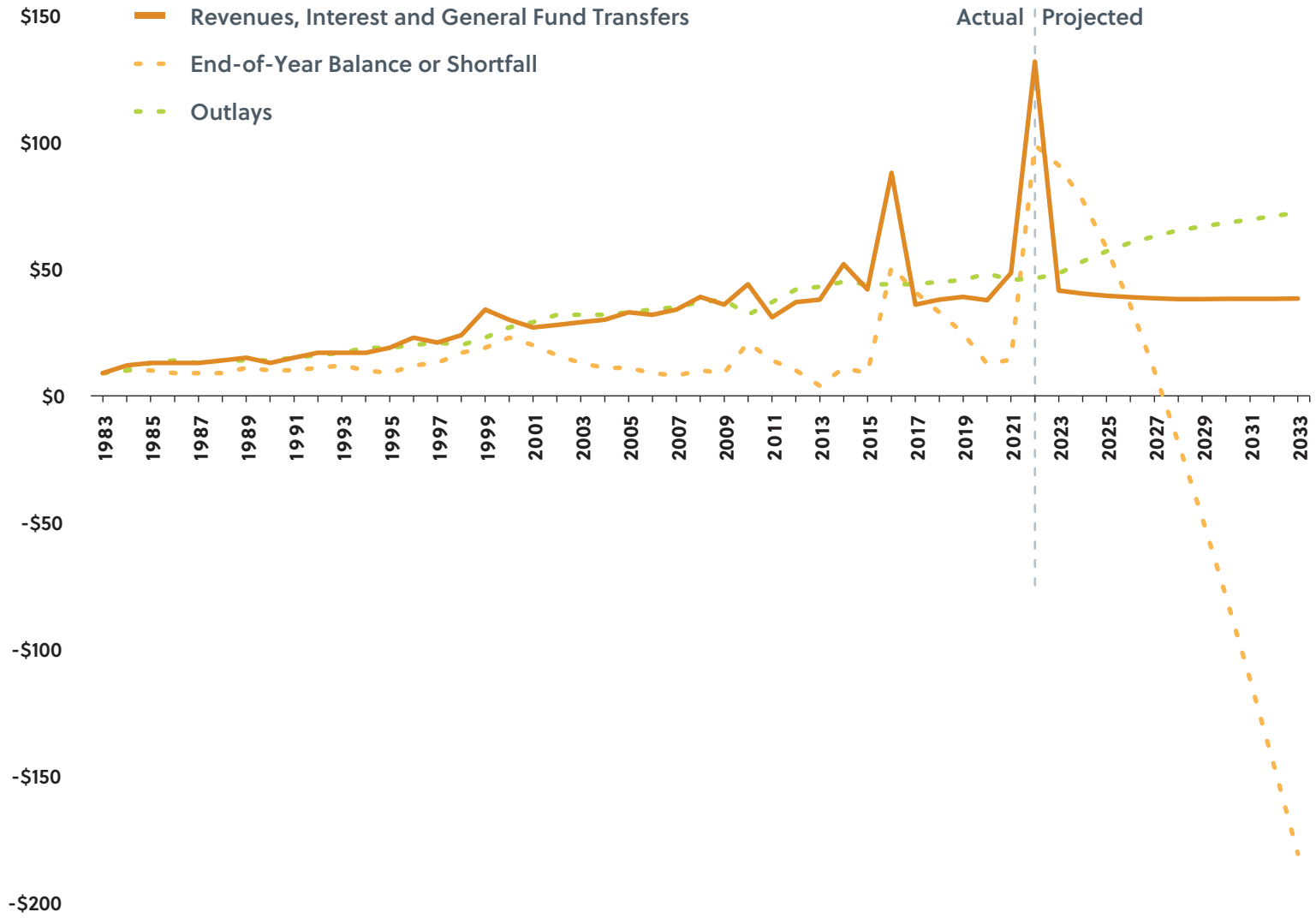
that large-scale fleet conversion to zero-emission vehicles could result in up to a 75 percent loss of fuel tax revenues for the region. Senate Bill 1 increased state fuel tax rates and will index these taxes to inflation in future years using the California Consumer Price Index (CPI). Senate Bill 1 did not entirely account for the increases in conventional fuel efficiency and the adoption of alternative fuel and powered vehicles.

Status of the Federal Highway Trust Fund

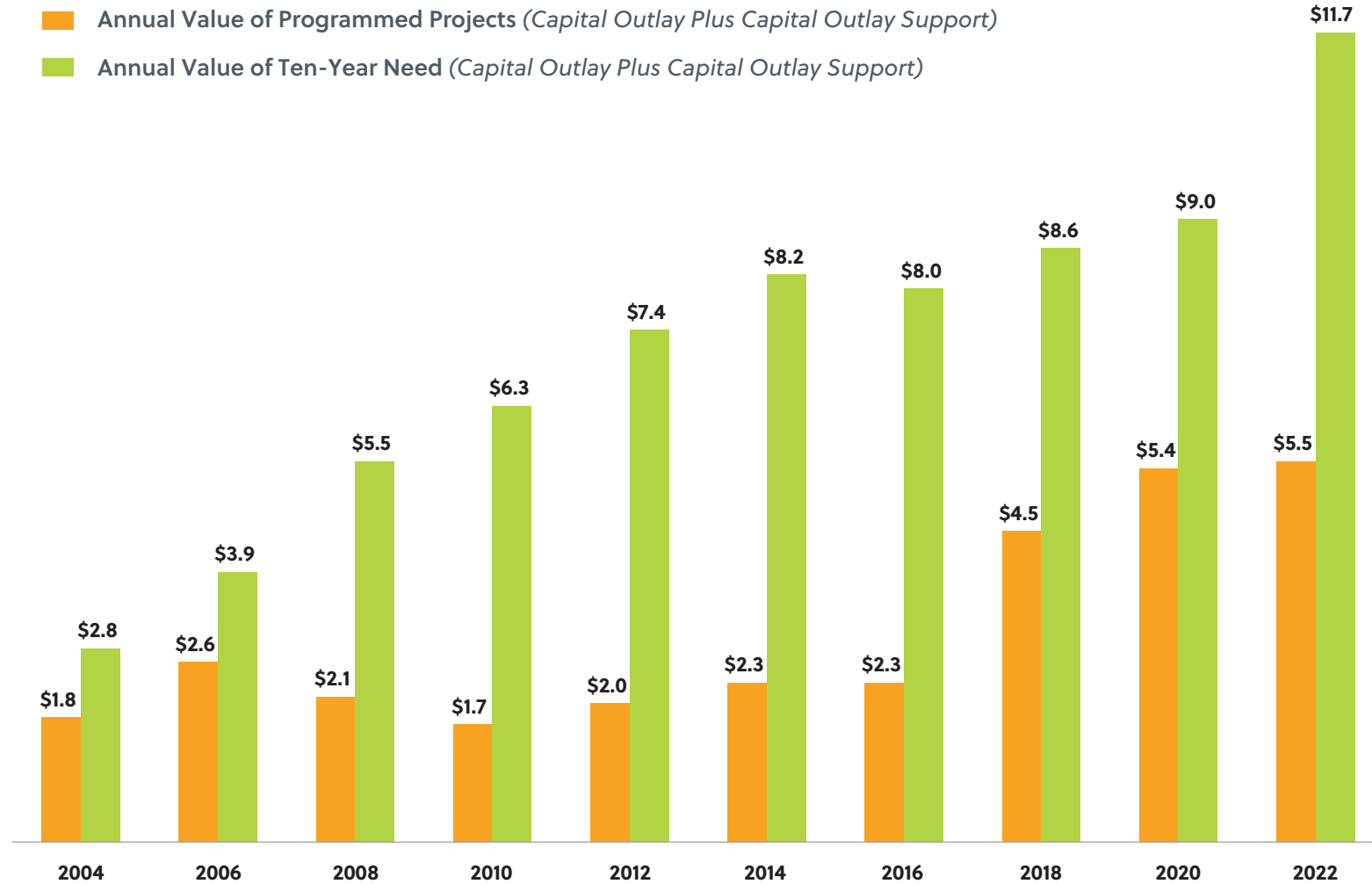
The Federal Highway Trust Fund provides federal highway and transit funding from a nationally imposed 18.3 cent-per-gallon gasoline excise tax. Since 2008, the Trust Fund has failed to meet its obligations and has required the United States Congress to make transfers from the General Fund to keep it solvent. The negative balances shown in FIGURE 4.5 illustrate the projected inability of the Trust Fund to pay its obligations into the highway account.

At the time of the Connect SoCal Plan, three decades have passed without substantive Congressional agreement on a long-term solution for providing adequate funding for the Trust Fund. IIJA relies on a one-time transfer of General Fund revenues to extend the near-term solvency of the Trust Fund through 2027. It does not address the present, long-term structural deficiency that exists in funding the Trust Fund. Although the financial plan assumes that Congress will reach agreement on reauthorizing federal spending for transportation programs over the Connect SoCal horizon, the core revenues available from the Trust Fund are expected to decline due to increasing fuel efficiency and other factors.

FIGURE 4.5 Status of the Federal Highway Trust Fund (\$ Billions)



Source: Congressional Budget Office and Federal Highway Administration

FIGURE 4.6 Status of the State Highway Operation and Protection Program (SHOPP)

Source: California Department of Transportation

Status of the State Highway Account

Senate Bill 1 increased the gas excise tax by 12 cents per gallon to 47.3 cents per gallon (as of July 1, 2019) and further indexed the gas tax to inflation going forward. As of July 1, 2023, the state gas excise tax is set at 58 cents per gallon. Prior to passage of Senate Bill 1, the state gas excise tax rate of 18 cents per gallon remained unadjusted for more than 20 years. Gas tax revenues remain the primary source of funding for the State Highway Operation and Protection Program (SHOPP), which funds projects to maintain the state highway system. As shown in FIGURE 4.6, previous levels of funding have been considerably less than actual needs. Statewide, the 2021 Ten-Year SHOPP Plan identifies \$116.8 billion in ten-year statewide needs, while available statewide funding is only \$55.3 billion. While Senate Bill 1 provides a key down payment, continued underinvestment in the maintenance needs of the state highway system will only increase the cost of bringing our highway assets back to a state of good repair.

Local Sales Tax Measures

The SCAG region continues to rely heavily on local sales tax measures for the timely delivery of transportation projects. While most counties impose a 0.5 percent sales tax to fund transportation projects, Los Angeles County effectively imposes a permanent 2 percent sales tax (a combination of four 0.5 percent sales taxes: Proposition A, Proposition C, Measure R and Measure M) as Measure M increases from 0.5 to 1.0 percent upon the expiration of Measure R. Riverside County's Measure A expires in 2039. Measure I in San Bernardino County expires in 2040, followed by Orange County's Measure M in 2041. Measure D in Imperial County expires in 2050. Ventura County is the only county in the region without a dedicated sales tax for transportation.

Multimodal System Preservation and Maintenance

Future transit and passenger rail operations and maintenance costs depend on a variety of factors, such as future revenue miles of service, labor contracts and the age of rolling stock. Over the nearer term, the COVID pandemic and initial recovery have resulted in greater uncertainty about service levels, as transit and passenger rail operators responded to significant ridership losses and associated drops in farebox revenues. For Connect SoCal, transit and passenger rail operations and maintenance costs are estimated based upon historical increases. The regional average annual increase (3.3 percent) is used for most operators. These forecasts are consistent with historical data.

Although the passage of Senate Bill 1 provided much-needed funding for system preservation, the condition of local streets and roads continue to require additional funding beyond our means, and we are unable to significantly improve roadways from their current conditions. As we shift to a zero-emission transportation system, there will be a greater decline of transportation revenue sources that are dependent on fuel taxes, further deteriorating pavement and bridge conditions.

TABLE 4.1 Multimodal System Preservation and Maintenance Needs (in Nominal Dollars, Billions)

SYSTEM	NEEDS INCLUDED IN ESTIMATE	TOTAL COST
Transit	Operations and Maintenance (O&M) Existing Service; O&M Service Expansion; O&M Major New Service; Preservation	\$244.5
Passenger Rail	O&M Existing Service; O&M Service Expansion; O&M Major New Service; Preservation	\$42.6
Regionally Significant Local Streets and Roads*	Pavement; Essential Components; Bridges; Goods Movement Corridors; Active Transportation Safety Improvements	\$87.7
State Highways	Bridges, Pavement, Roadside; Mobility, Collision Reduction; Mandates, Facilities; Emergency Response	\$75.4
TOTAL		\$450.1

* Includes \$8.8 billion for active transportation

Note: Numbers may not sum to total due to rounding

Source: SCAG Financial Model 2023

4.3

Revenues and Expenditures



The SCAG financial plan summarizes federal, state and local revenue sources to pay for transportation, system preservation and improvements over the next 25 years. This section details the region’s reasonably available revenue sources and the expenditures.

SCAG relies on a financial model to forecast revenues over the entire Connect SoCal planning horizon and includes forecasted expenditures for capital improvements, operations and maintenance of the transportation system, as well as debt repayment costs for the region.

Balancing revenues and expenditures is necessary to meet Connect SoCal’s fiscal constraint requirements. The financial plan highlights the importance of finding new and innovative ways to pay for transportation, including an ever-expanding backlog of projects to preserve our existing transportation system.

CATEGORIES

Core & Reasonably Available Revenues

The Connect SoCal financial plan includes two types of revenue forecasts. Both are included in the financially constrained Plan:

- Core revenues
- New reasonably available revenues

The core revenues identified are existing transportation funding sources projected to FY2049–50. The core revenue forecast does not include assumptions about any future increases in state or federal gas excise tax rates (other than those previously described as related to Senate Bill 1 or adoptions of new tax measures). These core revenues provide a benchmark from which additional funding can be identified.

Federal guidelines also permit the inclusion of new revenues that are reasonably available in the financial plan. Further, the Plan includes strategies for ensuring the availability of these new transportation funding and financing sources. The region's reasonably available revenues include new sources of transportation funding that are likely to materialize within the Connect SoCal timeframe. These sources include:

- Adjustments to the existing federal gas tax rates to compensate for loss of purchasing power
- Replacement of existing state and federal gas excise taxes with more direct mileage-based user fees
- Federal credit assistance and bond proceeds
- Private investment participation
- A local road charge program
- Value capture strategies

Expenditures

Transportation expenditures in the SCAG region are summarized into three main categories:

- Capital costs for transit, passenger rail, state highways, and local streets and roads (including regionally significant arterials). This category includes programmatic investments in transportation demand management (TDM), transportation system management (TSM), etc.
- Operating and maintenance costs for transit, passenger rail, state highways, and local streets and roads (including regionally significant arterials)
- Debt service payments (for current and anticipated bond issuances)

Core Revenues

SCAG's regional financial model forecasts transportation revenues over the entire Connect SoCal time horizon. The revenue model is comprehensive and provides data by county and funding source. The revenue forecast was developed using the following framework:

- Incorporate financial planning documents developed by County Transportation Commissions and transit operators in the region, where available
- Ensure consistency with local, state and federal planning documents
- Utilize published data sources to evaluate historical trends
- Conduct sensitivity testing of assumptions to augment local forecasts, as needed

The region's revenue forecast horizon for the financial plan is FY2024–25 through FY2049–50. TABLE 4.2 shows these core revenues in five-year increments by county.

TABLE 4.2 Core Revenue Forecast (in Nominal Dollars, Billions)

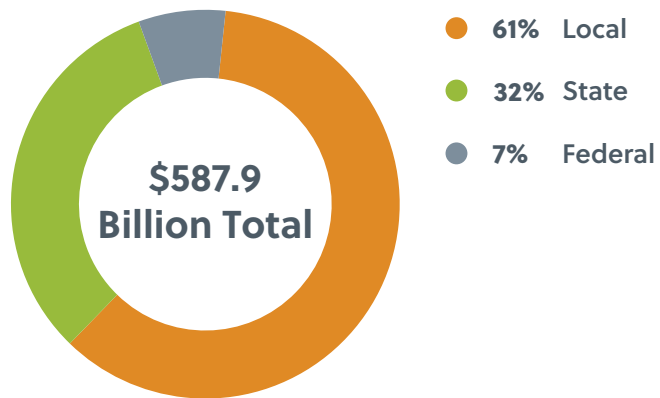
COUNTY	FY2025–FY2029	FY2030–FY2034	FY2035–FY2039	FY2040–FY2044	FY2045–FY2050	TOTAL
Imperial	\$0.6	\$0.6	\$0.7	\$0.9	\$1.4	\$4.2
Los Angeles	\$55.6	\$60.4	\$69.2	\$80.0	\$111.6	\$376.8
Orange	\$13.2	\$14.8	\$17.6	\$18.3	\$25.1	\$88.9
Riverside	\$8.9	\$9.7	\$11.5	\$10.8	\$16.0	\$56.9
San Bernardino	\$6.9	\$7.4	\$8.7	\$8.8	\$12.6	\$44.5
Ventura	\$2.4	\$2.5	\$2.9	\$3.5	\$5.2	\$16.6
Total	\$87.6	\$95.4	\$110.7	\$122.3	\$172.0	\$587.9

Note: Numbers may not sum to total due to rounding

Source: SCAG Financial Model 2023

**FIGURE 4.7 Core Revenues
(in Nominal Dollars)**

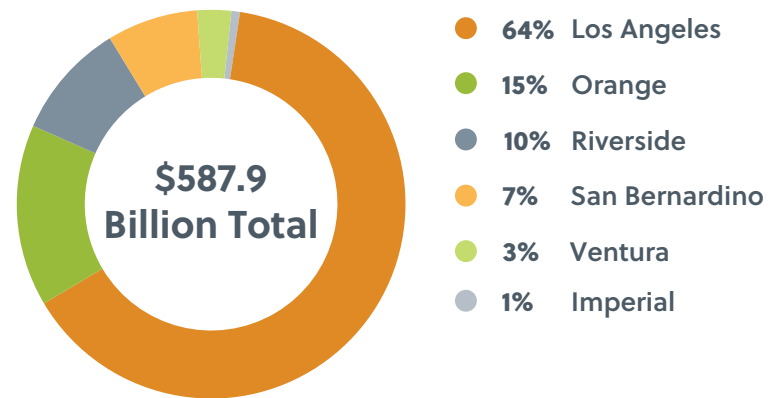
The majority of core revenues in the SCAG region come from local sources (61 percent). The share of state sources (32 percent) is relatively unchanged since the last RTP/SCS.



Note: Numbers may not sum to total due to rounding
 Source: SCAG Financial Model 2023

**FIGURE 4.8 Core Revenues by County
(in Nominal Dollars)**

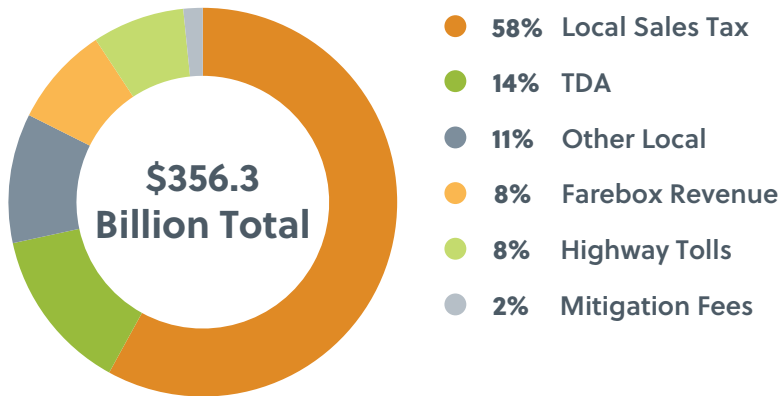
This figure shows the breakdown of core revenues by county. With four local sales tax measures, Los Angeles County accounts for 64 percent of the core revenue funding available in the SCAG region.



Note: Numbers may not sum to total due to rounding
 Source: SCAG Financial Model 2023

**FIGURE 4.9 Core Revenues, Local Sources
(in Nominal Dollars)**

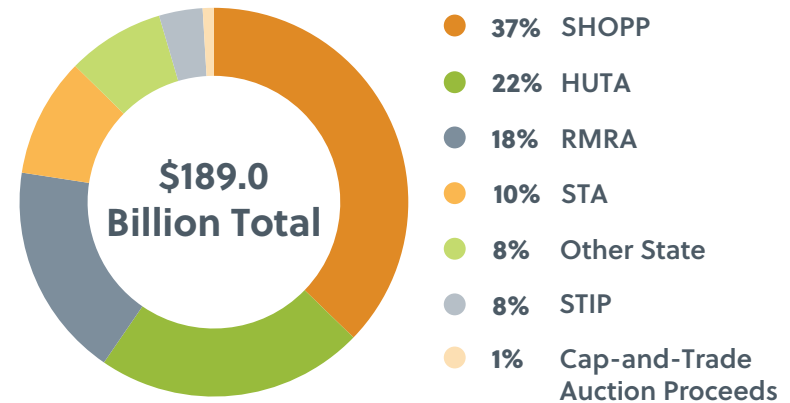
Local sales taxes provide the largest single source of local core revenue funding. These taxes account for more than half (58 percent) of local core revenue sources in the Plan.



Note: Numbers may not sum to total due to rounding
 Source: SCAG Financial Model 2023

**FIGURE 4.10 Core Revenues, State Sources
(in Nominal Dollars)**

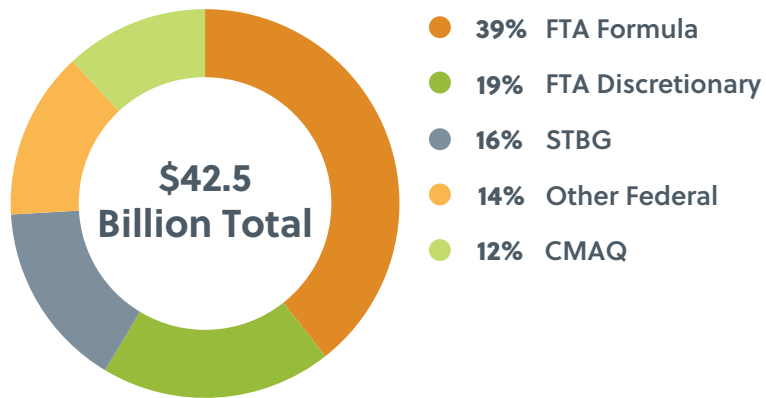
The SHOPP is the single largest source of state core revenue funding (37 percent), followed by the two other sources most influenced by Senate Bill 1: the Highway User Tax Account (HUTA) (22 percent) and the Road Maintenance and Rehabilitation Account (RMRA) (18 percent). Together, these three sources account for more than three-quarters of the state core revenue funding available.



Note: Numbers may not sum to total due to rounding
 Source: SCAG Financial Model 2023

FIGURE 4.11 Core Revenues, Federal Sources (in Nominal Dollars)

Federal sources are expected to comprise a small portion of overall transportation funds (\$41 billion or seven percent share of core revenues). This is consistent with past Plans. Federal Transit Administration (FTA) funds account for 61 percent of federal core revenue funding in the SCAG region. The financial plan also assumes that Congestion Mitigation and Air Quality (CMAQ) funding will decline over the life of the Plan due to the region achieving attainment for a number of criteria pollutants and reducing the severity level of others.



Note: Numbers may not sum to total due to rounding
Source: SCAG Financial Model 2023

New Reasonably Available Revenues

There are several new funding sources that are reasonably expected to be available for Connect SoCal. The following guiding principles were used for identifying reasonably available revenues:

- Establish a user fee–based system that better reflects the true cost of transportation, provides firewall protection for new and existing transportation funds, and ensures an equitable distribution of costs and benefits
- Pursue funding tools that promote access to opportunity and support economic development through innovative mobility programs
- Promote national and state programs that include return-to-source guarantees while maintaining flexibility to reward regions that continue to commit substantial local resources
- Leverage locally available funding with innovative financing tools (e.g., tax credits and expansion of the Transportation Infrastructure Finance and Innovation Act [TIFIA]) to attract private capital and accelerate project delivery
- Promote local funding strategies that maximize the value of public assets while improving mobility, sustainability and resilience

TABLE 4.3 identifies categories of new and innovative funding sources that are considered to be reasonably available and are included in the financially constrained Plan. These sources were identified on the basis of their potential for revenue generation, historical precedence and the likelihood of their implementation within the time frame of Connect SoCal. For each funding source, SCAG has examined the policy and legal context of implementation and has prepared an estimate of the potential revenues generated. The implementation of road-user charges, in particular, will require further collaboration with the U.S. Department of Transportation, the California State Transportation Agency, the California Transportation Commission, Caltrans, business and other key parties on the California Road Charge Pilot Program to address key implementation factors. These factors include technology and associated privacy issues, cost of implementation and administrative methods for fee collection/revenue allocation and potential equity concerns. Equity concerns can be addressed through enhanced transportation alternatives for transit-dependent populations and discounts for impacted low-income populations. Connect SoCal assumes the establishment of a Mobility Equity Fund to cover the cost of rebates, credits or discounts for general mobility expenses, including user fees/tolls, parking charges, transit fares and new mobility options.



LET'S GET TECHNICAL

Additional documentation of funding sources included in the financial plan is provided in the Transportation Finance Technical Report.

TABLE 4.3 New Reasonably Available Revenue Sources (in Nominal Dollars, Billions)

REVENUE SOURCE	DESCRIPTION	AMOUNT	ACTIONS TO ENSURE AVAILABILITY	RESPONSIBLE PARTY(IES)
Federal Gas Excise Tax Adjustment to Maintain Historical Purchasing Power	Additional \$0.185 per gallon gasoline tax imposed at the federal level starting in 2029 to 2034 (indexed to inflation)—to maintain purchasing power.	\$7.6	Requires action of Congress. Strategy is consistent with recommendations from two national commissions to move immediately with augmenting fuel tax resources through conventional Highway Trust Fund mechanisms.	Congress
Mileage-Based User Fee (Replacement)	Mileage-based user fees would be implemented to replace gas taxes—estimated at about \$0.025 (in 2019 dollars) per mile starting in 2035 and indexed to maintain purchasing power. (Note: Total at right is estimated for increment only.)	\$48.0	Requires state enabling legislation and action of Congress. In 2017, California successfully conducted a legislatively mandated pilot program to study the feasibility of a road charge as a replacement to the gas tax, and is currently pursuing next-step studies. The FAST Act establishes the Surface Transportation System Funding Alternatives program, which provides grants to states to demonstrate alternative user-based revenue mechanisms that could maintain the long-term solvency of the Trust Fund. The IIJA directed the establishment of a national per-mile road usage fee pilot program while continuing to support state-level pilots.	State Legislature, Congress
Federal Credit Assistance; Other Bond Proceeds	TIFIA/RRIF credit assistance and other bond financing, pledging new local funding (e.g., mileage-based road charge program funding) to help finance specific initiatives including SCORE.	\$2.2	Issuance of debt and TIFIA/RRIF credit agreement terms subject to County Transportation Commissions' respective board policies, and potentially the Southern California Regional Rail Authority (SCRRRA).	County Transportation Commissions and U.S. DOT Build America Bureau; other potential parties include SCRRRA.

TABLE 4.3 Continued New Reasonably Available Revenue Sources (in Nominal Dollars, Billions)

REVENUE SOURCE	DESCRIPTION	AMOUNT	ACTIONS TO ENSURE AVAILABILITY	RESPONSIBLE PARTY(IES)
Private Equity Participation	Virgin Trains USA, formerly XpressWest, to construct and operate high speed rail service from Victorville to Las Vegas along the I-15 corridor. Revenue estimate would cover construction costs for the San Bernardino County portion only. This category of funding also assumes private funding for various freight-related initiatives.	\$9.3	Contingent upon financing efforts by Virgin Train USA and necessary approvals. For freight investments, contingent upon private entities in the region, including freight railroads.	Virgin Train USA; private partners; freight railroads as may be applicable.
Local Road Charge Program	Local road charge program assumes a \$0.020 (in 2019 dollars) per mile charge throughout the region that can be implemented on a county basis. This can be adjusted by time-of-day and location with congestion pricing and/or parking pricing at major activity centers. For analysis, also assumed congestion pricing (peak period charges) in parts of Los Angeles County, increases in parking pricing at major job centers and additional toll revenue from planned express lane segments.	\$92.2	Requires state enabling legislation for at least two components: mileage-based user fees and congestion pricing. Parking pricing would be subject to local policies.	MPO, CTCs, Caltrans and FHWA as may be applicable; local jurisdictions.
Value Capture Strategies	Assumed the use of EIFDs and tax increment financing (TIF) to support investment in transit supportive housing infrastructure needs.	\$3.0	Pursue necessary approvals for district formation and TIF.	Local jurisdictions

Assumptions by Revenue Source

TABLE 4.4 (4.4.1–4.4.4) describes the specific revenue assumptions used for the financially constrained Connect SoCal

TABLE 4.4.1 Core and New Reasonably Available Revenue Projections: Local Core Revenue Sources (in Nominal Dollars, Billions)

REVENUE SOURCE	REVENUE PROJECTION ASSUMPTIONS	REVENUE ESTIMATE
LOCAL CORE REVENUE SOURCES		
Local Option Sales Tax Measures	<p>Description: Locally imposed 0.5 percent sales tax in four counties (Imperial, Orange, Riverside, and San Bernardino). Permanent 2 percent (combination of two permanent 0.5 percent sales taxes, Measure R through 2039, and Measure M, which will increase from 0.5 percent to 1 percent upon the expiration of Measure R) in Los Angeles County. Measure D in Imperial County expires in 2050; Measure M in Orange County expires in 2041; Measure A in Riverside County expires in 2039; and Measure D in San Bernardino County expires in 2040.</p> <p>Assumptions: Sales taxes grow consistent with county transportation commission forecasts and historical trends.</p>	\$206.6
Transportation Development Act (TDA)—Local Transportation Fund	<p>Description: The Local Transportation Fund (LTF) is derived from a ¼ cent sales tax on retail sales statewide. Funds are returned to the county of generation and used mostly for transit operations and transit capital expenses.</p> <p>Assumptions: Same sales tax growth rate as used for local option sales tax measures.</p>	\$48.5
Transit Farebox Revenue	<p>Description: Transit fares collected by transit operators in the SCAG region.</p> <p>Assumptions: Farebox revenues increase consistent with historic trends, planned system expansions and operator forecasts.</p>	\$29.7



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A more detailed discussion of revenue sources is included in the Transportation Finance Technical Report.

TABLE 4.4.1 Continued Core and New Reasonably Available Revenue Projections: Local Core Revenue Sources (in Nominal Dollars, Billions)

REVENUE SOURCE	REVENUE PROJECTION ASSUMPTIONS	REVENUE ESTIMATE
LOCAL CORE REVENUE SOURCES		
Highway Tolls (in core revenue forecast)	<p>Description: Revenues generated from toll roads operated by the Transportation Corridor Agencies (TCA), from the SR-91 Express Lanes operated by the Orange County Transportation Authority (OCTA) and Riverside County Transportation Commission (RCTC), and from the MetroExpress Lanes along I-10 and I-110 in Los Angeles County.</p> <p>Assumptions: Toll revenues grow consistent with County Transportation Commission forecasts and historical trends.</p>	\$27.3
Mitigation Fees	<p>Description: Revenues generated from development impact fees. The revenue forecast includes fees from the Transportation Corridor Agency (TCA) development impact fee program, San Bernardino County's development impact fee program and Riverside County's Transportation Uniform Mitigation Fee (TUMF) for both the Coachella Valley and Western Riverside County.</p> <p>Assumptions: The financial forecast is consistent with revenue forecasts from the San Bernardino County Transportation Commission (SBCTA).</p>	\$5.7
Other Local Sources	<p>Description: Includes local revenue sources such as general funds, transit advertising and auxiliary revenues, lease revenues, and interest and investment earnings from reserve funds. For Los Angeles County, interest income from Propositions A and C and Measure R are included under this source. Income from financing is also included, while principal and interest payments are included as part of debt service.</p> <p>Assumptions: Revenues are based on financial data from transit operators and local County Transportation Commissions.</p>	\$38.4
LOCAL SUBTOTAL		\$356.3

Note: Numbers may not sum to total due to rounding
Source: SCAG Financial Model 2023

TABLE 4.4.2 Core and New Reasonably Available Revenue Projections: State Core Revenue Sources
(in Nominal Dollars, Billions)

REVENUE SOURCE	REVENUE PROJECTION ASSUMPTIONS	REVENUE ESTIMATE
STATE CORE REVENUE SOURCES		
State Transportation Improvement Program (STIP)	<p>Description: The STIP is a five-year capital improvement program that provides funding from the State Highway Account (SHA) for projects that increase the capacity of the transportation system. The SHA is funded through a combination of state gas excise tax, the Federal Highway Trust Fund and truck weight fees. The STIP may include projects on state highways, local roads, intercity rail or public transit systems. The Regional Transportation Planning Agencies (RTPAs) propose 75 percent of STIP funding for regional transportation projects in Regional Transportation Improvement Programs (RTIPs). Caltrans proposes 25 percent of STIP funding for interregional transportation projects in the Interregional Transportation Improvement Program (ITIP).</p> <p>Assumptions: Funds are based upon the 2022 STIP Fund Estimate. Forecasted fuel consumption declines in real terms by 3.6 percent annually, due to increasing fuel efficiency and the increased adoption of alternative fuel vehicles. However, this decline is partially offset for State Core Revenue sources by Road Improvement Fee (RIF) revenues, resulting in an effective annual decline of 0.07 percent that is used to forecast state revenue programs funded by state fuel tax revenues.</p>	\$6.9
State Highway Operation and Protection Plan (SHOPP)	<p>Description: Funds state highway maintenance and operations projects.</p> <p>Assumptions: Short-term revenues are based on overlapping 2020 and 2022 SHOPP programs. Long-term forecasts are consistent with STIP forecasts and assume decline in fuel consumption. As with the HUTA and STA, a portion of SHOPP revenues are indexed due to passage of SB 1, which offsets the effect of the increase in fuel efficiency.</p>	\$70.4
Highway Users Tax Account (HUTA)	<p>Description: Gas tax revenue apportionments distributed via the HUTA to counties and cities in the region.</p> <p>Assumptions: The forecast is based on current funding levels reported by the State Controller. Future funding declines with fuel consumption using assumptions consistent with other state sources.</p>	\$42.2
Road Maintenance and Rehabilitation Account (RMRA)	<p>Description: The RMRA was established by SB 1 and is funded by new diesel and gas excise taxes, a transportation improvement fee and electric vehicle fee. Although the RMRA also provides SHOPP funding, for purposes of the 2020 RTP/SCS financial plan, it only reflects the portion directed to counties and cities.</p> <p>Assumptions: SB 1 indexes the sources for RMRA, offsetting the decline due to increasing fuel efficiency.</p>	\$33.8

TABLE 4.4.2 Continued Core and New Reasonably Available Revenue Projections: State Core Revenue Sources (in Nominal Dollars, Billions)

REVENUE SOURCE	REVENUE PROJECTION ASSUMPTIONS	REVENUE ESTIMATE
STATE CORE REVENUE SOURCES		
State Transit Assistance Fund (STA)	<p>Description: The STA is funded by diesel sales taxes and the transportation improvement fee established under SB 1. SB 1 also created a State of Good Repair Program associated with the STA, which for purposes of this financial plan are included in the STA figures.</p> <p>Assumptions: The forecast is based on current funding levels reported by the State Controller. Future funding declines with fuel consumption, using assumptions consistent with other state sources, but is offset by SB 1 indexing using assumptions consistent with other sources.</p>	\$18.8
Cap-and-Trade Auction Proceeds	<p>Description: The Global Warming Solutions Act of 2006 (AB 32) established the goal of reducing greenhouse gas (GHG) emissions statewide to 1990 levels by 2020. To help achieve this goal, the California Air Resources Board (CARB) adopted a regulation to establish a cap-and-trade program that places a “cap” on the aggregate GHG emissions from entities responsible for roughly 85 percent of the state’s GHG emissions. As part of the cap-and-trade program, ARB conducts quarterly auctions where it sells emission allowances. Revenues from the sale of these allowances fund projects that support the goals of AB 32, including transit and rail investments. Funds associated with non-transportation and high-speed rail are not included in this amount.</p> <p>Assumptions: The forecast is based on current funding levels reported by the State Controller for the Low Carbon Transit Operations Program and award lists as reported by Caltrans. Given the uncertainty about future allowance prices, annual growth is assumed to be flat and is assumed to end after 2030.</p>	\$1.8
Other State Sources	<p>Description: Other state sources include remaining SB 1 competitive program awards; the Active Transportation Program (ATP); and other miscellaneous state grant apportionments for the SCAG region.</p> <p>Assumptions: Short-term revenues are based on actual apportionments. Future Active Transportation Program funding increases over the Plan period as the fuel consumption decline is offset by anticipated fuel price increases.</p>	\$15.3
STATE SUBTOTAL		\$189.0

Note: Numbers may not sum to total due to rounding
Source: SCAG Financial Model 2023

TABLE 4.4.3 Core and New Reasonably Available Revenue Projections: Federal Core Revenue Sources (in Nominal Dollars, Billions)

REVENUE SOURCE	REVENUE PROJECTION ASSUMPTIONS	REVENUE ESTIMATE
FEDERAL CORE REVENUE SOURCES		
FHWA Non-Discretionary Congestion Mitigation and Air Quality (CMAQ) Program	<p>Description: Program to reduce traffic congestion and improve air quality in non-attainment areas.</p> <p>Assumptions: Short-term revenues are based upon the Caltrans apportionment estimates. Long-term revenues assume that fuel consumption declines by 3.6 percent (in real terms) annually. CMAQ funding is assumed to be reduced by 25 percent in 2032, an additional 25 percent in 2037 and an additional 25 percent in 2042 due to improved air quality.</p>	\$5.1
FHWA Non-Discretionary Surface Transportation Block Grant (STBG)	<p>Description: Projects eligible for STBG funds include rehabilitation and new construction on any highways included in the National Highway System (NHS) and Interstate Highways (including bridges). Transit capital projects, as well as intracity and intercity bus terminals and facilities, are also eligible.</p> <p>Assumptions: Short-term revenues are based upon the Caltrans apportionment estimates. Future funding declines with fuel consumption, using assumptions consistent with other federal sources.</p>	\$6.6
FTA Formula Programs 5307 Urbanized Area Formula, 5310 Enhanced Mobility of Seniors and Individuals with Disabilities Formula, 5311 Rural Formula, 5337 State of Good Repair Formula, 5339 Bus and Bus Facilities Formula, and 5340 Growing States and High-Density States Formula	<p>Description: This includes a number of FTA programs distributed by formula. 5307 is distributed to state urbanized areas with a formula based upon population, population density, number of low-income individuals, transit revenue and passenger miles of service. Program funds capital projects, planning, job access, reverse commute projects and operations costs under certain circumstances. 5310 funds are allocated by formula to states for projects providing enhanced mobility to seniors and persons with disabilities. 5311 provides capital, planning and operating assistance to states to support public transportation in rural areas with populations less than 50,000. 5337 is distributed based on revenue and route miles, and provides funds for repairing and upgrading rail transit systems and high-intensity bus systems that use High-Occupancy Vehicle (HOV) lanes, including bus rapid transit (BRT). 5339 provides capital funding to replace, rehabilitate and purchase buses and related equipment and construct bus-related facilities. 5340 was established by SAFETEA-LU to apportion additional funds to the Urbanized Area Formula and Rural Area Formula programs—recipients of funds are existing Urbanized Area (Section 5307) and Rural Area (Section 5311) formula fund recipients.</p> <p>Assumptions: Formula funds are assumed to decline in proportion with the Federal Highway Trust Fund. Future funding declines with fuel consumption using assumptions consistent with other federal sources.</p>	\$16.7

TABLE 4.4.3 Continued Core and New Reasonably Available Revenue Projections: Federal Core Revenue Sources (in Nominal Dollars, Billions)

REVENUE SOURCE	REVENUE PROJECTION ASSUMPTIONS	REVENUE ESTIMATE
FEDERAL CORE REVENUE SOURCES		
FTA Non-Formula Program 5309 Fixed Guideway Capital Investment Grants (“New Starts”)	<p>Description: Provides grants for new, fixed guideways or extensions to fixed guideways (projects that operate on a separate right-of-way exclusively for public transportation or that include a rail or a catenary system), bus rapid transit projects operating in mixed traffic that represent a substantial investment in the corridor, and projects that improve capacity on an existing fixed-guideway system.</p> <p>Assumptions: Operators are assumed to receive FTA discretionary funds in rough proportion to what they have received historically. Future funding declines with fuel consumption using assumptions consistent with other federal sources.</p>	\$8.2
Other Federal Sources	<p>Description: Includes other federal programs, such as the BUILD and INFRA competitive grant programs, Highway Safety Improvement Program, Federal Safe Routes to School, Highway Bridge Program and earmarks—as well as other new federal transportation programs created under the Infrastructure Investment and Jobs Act (IIJA).</p> <p>Assumptions: Short-term revenues are based on actual apportionments. Future funding declines with fuel consumption using assumptions consistent with other federal sources.</p>	\$5.9
FEDERAL SUBTOTAL		\$42.5

Note: Numbers may not sum to total due to rounding
Source: SCAG Financial Model 2023


TABLE 4.4.4 Core and New Reasonably Available Revenue Projections: New Reasonably Available Revenue Sources (in Nominal Dollars, Billions)

REVENUE SOURCE	REVENUE PROJECTION ASSUMPTIONS	REVENUE ESTIMATE
NEW REASONABLY AVAILABLE REVENUE SOURCES		
Federal Gas Excise Tax Adjustment	<p>Description: Additional 18.5-cents-per-gallon gasoline tax imposed by the federal government starting in 2029 through 2034.</p> <p>Assumptions: Forecast consistent with historical tax rate adjustments for federal gas taxes.</p>	\$7.6
Mileage-Based User Fee (Replacement)	<p>Description: Mileage-based user fees would be implemented to replace existing gas taxes (state and federal) by 2035.</p> <p>Assumptions: It is assumed that a national mileage-based user fee system would be established during the latter years of the RTP/SCS. An estimated \$0.025 per mile (in 2019 dollars) is assumed starting in 2035 to replace existing gas tax revenues.</p>	\$48.0
Federal Credit Assistance; Other Bond Proceeds	<p>Description: Credit assistance/debt financing is assumed to facilitate construction of regional initiatives, pledging new regional/local funding via road charge program.</p> <p>Assumptions: It is assumed that some credit assistance in the form of TIFIA/RRIF will be needed to facilitate implementation of key regional initiatives. Assumed aggregate level debt service using an interest rate of 2.3 percent over 35 years.</p>	\$2.2

TABLE 4.4.4 Continued Core and New Reasonably Available Revenue Projections: New Reasonably Available Revenue Sources (in Nominal Dollars, Billions)

REVENUE SOURCE	REVENUE PROJECTION ASSUMPTIONS	REVENUE ESTIMATE
NEW REASONABLY AVAILABLE REVENUE SOURCES		
Private Equity Participation	<p>Description: Virgin Trains USA, formerly XpressWest, to construct and operate high-speed rail service from Victorville to Las Vegas along the I-15 corridor.</p> <p>Assumptions: Revenue estimate reflects only the San Bernardino County segment costs.</p>	\$9.3
Local Road Charge Program	<p>Description: Local road charge program assumes a per-mile charge across the region that can be implemented on a county basis. This can be adjusted by time-of-day and location with congestion pricing and/or parking pricing at major activity centers. For analysis, also assumed congestion pricing in parts of Los Angeles County, increases in parking pricing at major job centers and additional toll revenue from planned express lane segments.</p> <p>Assumptions: Assumes a charge of \$0.020 per mile (in 2019 dollars) starting in 2035; peak period congestion charges in parts of Los Angeles County; some increases in parking costs at major job centers assumed starting in 2029 and additional toll revenue from planned express lane segments beginning in 2025.</p>	\$92.2
Value Capture Strategies	<p>Description: Formation of EIFDs and use of tax increment financing for transit-supportive housing-related infrastructure.</p> <p>Assumptions: Based on recent EIFD/tax increment financing studies to fund improved infrastructure in Transit Priority Areas.</p>	\$3.0
NEW REVENUE SOURCE SUBTOTAL		\$162.2

Note: Numbers may not sum to total due to rounding
Source: SCAG Financial Model 2023



Finding new ways to make transportation funding more sustainable in the long term is vital. Efforts are underway to explore transition from our current fuel tax-based system based to a more direct system of road user fees. User fees are linked directly to how people travel and can support infrastructure needs for a balanced transportation system that encourages people to consider effects of their travel choices on the larger transportation ecosystem.

Summary of Revenue Sources and Expenditures

TABLE 4.5.1 presents the SCAG region's revenue forecast by source in five-year increments, from FY2024–25 through FY2049–50. This is followed by TABLE 4.5.2, which provides details of the region's expenditures by category in five-year increments.

TABLE 4.5.1 FY2025–FY2050 RTP/SCS Revenues (in Nominal Dollars, Billions)

REVENUE SOURCE	FY2025– FY2029	FY2030– FY2034	FY2035– FY2039	FY2040– FY2044	FY2045– FY2050	TOTAL
LOCAL SOURCES	\$51.4	\$60.2	\$70.0	\$74.0	\$100.6	\$356.3
Sales Tax	\$38.0	\$44.4	\$51.5	\$52.2	\$69.1	\$255.2
– Local Option Sales Tax Measures	\$31.7	\$37.0	\$42.5	\$41.6	\$53.8	\$206.6
– Transportation Development Act (TDA)—Local Transportation Fund	\$6.2	\$7.5	\$8.9	\$10.6	\$15.3	\$48.5
Transit Farebox Revenue	\$3.8	\$4.6	\$5.4	\$6.5	\$9.4	\$29.7
Highway Tolls (in core revenue forecast)	\$3.1	\$3.9	\$4.9	\$6.1	\$9.4	\$27.3
Mitigation Fees	\$0.8	\$0.9	\$1.1	\$1.2	\$1.7	\$5.7
Other Local Sources	\$5.7	\$6.4	\$7.2	\$8.1	\$11.0	\$38.4
STATE SOURCES	\$23.9	\$26.8	\$33.1	\$41.5	\$63.8	\$189.0
State Transportation Improvement Program (STIP)	\$0.7	\$1.0	\$1.2	\$1.5	\$2.4	\$6.9
– Regional Transportation Improvement Program (RTIP)	\$0.7	\$0.8	\$1.0	\$1.3	\$2.0	\$5.7
– Interregional Transportation Improvement Program (ITIP)	\$0.1	\$0.2	\$0.2	\$0.3	\$0.4	\$1.1
State Highway Operation and Protection Plan (SHOPP)	\$7.8	\$9.9	\$12.5	\$15.8	\$24.4	\$70.4
Highway Users Tax Account (HUTA)	\$4.7	\$5.9	\$7.5	\$9.4	\$14.6	\$42.2
Road Maintenance and Rehabilitation Account (RMRA)	\$3.7	\$4.7	\$6.0	\$7.6	\$11.7	\$33.8
State Transit Assistance Fund (STA)	\$2.1	\$2.7	\$3.3	\$4.2	\$6.4	\$18.8
Cap-and-Trade Auction Proceeds	\$1.4	\$0.3	\$0.0	\$0.0	\$0.0	\$1.8
Other State Sources	\$3.3	\$2.3	\$2.6	\$3.0	\$4.2	\$15.3

TABLE 4.5.1 Continued FY2025–FY2050 RTP/SCS Revenues (in Nominal Dollars, Billions)

REVENUE SOURCE	FY2025– FY2029	FY2030– FY2034	FY2035– FY2039	FY2040– FY2044	FY2045– FY2050	TOTAL
FEDERAL SOURCES	\$12.2	\$8.4	\$7.5	\$6.8	\$7.5	\$42.5
Federal Transit	\$5.6	\$5.1	\$4.8	\$4.5	\$5.0	\$24.9
– Federal Transit Formula	\$3.9	\$3.4	\$3.2	\$3.0	\$3.3	\$16.7
– Federal Transit Non-Formula	\$1.7	\$1.7	\$1.6	\$1.5	\$1.7	\$8.2
Federal Highway & Other	\$6.6	\$3.3	\$2.8	\$2.4	\$2.6	\$17.6
– Congestion Mitigation and Air Quality (CMAQ)	\$1.6	\$1.3	\$0.9	\$0.6	\$0.6	\$5.1
– Surface Transportation Block Grant (STBG)	\$1.5	\$1.3	\$1.3	\$1.2	\$1.3	\$6.6
– Other Federal Sources	\$3.5	\$0.6	\$0.6	\$0.6	\$0.6	\$5.9
NEW REASONABLY AVAILABLE REVENUE SOURCES	\$8.9	\$12.0	\$37.0	\$43.1	\$61.1	\$162.2
Federal Gas Excise Tax Adjustment	\$1.1	\$6.4	\$0.0	\$0.0	\$0.0	\$7.6
Mileage-Based User Fee (Replacement)	\$0.0	\$0.0	\$10.6	\$15.1	\$22.3	\$48.0
Federal Credit Assistance; Other Bond Proceeds	\$0.4	\$0.4	\$0.4	\$0.4	\$0.5	\$2.2
Private Equity Participation	\$5.8	\$1.5	\$1.3	\$0.0	\$0.7	\$9.3
Local Road Charge Program	\$1.0	\$3.1	\$24.1	\$27.1	\$36.9	\$92.2
Value Capture Strategies	\$0.6	\$0.6	\$0.6	\$0.6	\$0.7	\$3.0
REVENUE TOTAL	\$96.4	\$107.4	\$147.7	\$165.5	\$233.1	\$750.1

Note: Numbers may not sum to total due to rounding
Source: SCAG Financial Model 2023

TABLE 4.5.2 FY2025–FY2050 RTP/SCS Expenditures (in Nominal Dollars, Billions)

RTP COSTS	FY2025– FY2029	FY2030– FY2034	FY2035– FY2039	FY2040– FY2044	FY2045– FY2050	TOTAL
CAPITAL PROJECTS AND OTHER PROGRAMS	\$46.7	\$47.2	\$52.9	\$57.3	\$76.2	\$280.2
Arterials	\$7.1	\$5.4	\$5.7	\$3.2	\$3.8	\$25.2
Goods Movement (including Grade Separations)	\$8.2	\$6.7	\$9.7	\$18.0	\$22.9	\$65.4
High-Occupancy Vehicle/Express Lanes	\$3.1	\$2.5	\$3.7	\$1.0	\$1.1	\$11.4
Mixed-Flow and Interchange Improvements	\$3.0	\$2.9	\$1.1	\$2.5	\$2.4	\$11.9
Transportation System Management (including ITS)	\$1.1	\$1.3	\$2.0	\$2.7	\$4.9	\$11.9
Transit	\$9.4	\$13.9	\$8.2	\$7.0	\$14.0	\$52.5
Passenger Rail	\$10.6	\$10.3	\$8.9	\$7.4	\$7.8	\$45.0
Active Transportation*	\$0.8	\$1.4	\$7.3	\$8.9	\$10.8	\$29.2
Transportation Demand Management	\$1.5	\$1.5	\$3.8	\$4.4	\$5.7	\$16.9
Other**	\$1.9	\$1.3	\$2.5	\$2.3	\$2.8	\$10.9
OPERATIONS AND MAINTENANCE	\$44.8	\$55.6	\$90.4	\$105.1	\$154.1	\$450.1
State Highways	\$7.8	\$9.9	\$14.0	\$17.3	\$26.3	\$75.4
Transit	\$26.3	\$32.5	\$48.0	\$55.8	\$81.8	\$244.5
Passenger Rail	\$3.2	\$3.9	\$7.4	\$10.2	\$17.9	\$42.6
Regionally Significant Local Streets and Roads	\$7.5	\$9.3	\$21.0	\$21.7	\$28.2	\$87.7
DEBT SERVICE	\$4.9	\$4.6	\$4.3	\$3.0	\$2.7	\$19.7
COST TOTAL	\$96.4	\$107.4	\$147.7	\$165.5	\$233.1	\$750.1

* Includes \$8.8 billion for active transportation in addition to capital project investment of \$29.2 billion for a total of \$38 billion for active transportation improvements

**Includes Mobility Equity Fund, Regional Advance Mitigation and Others; Source: SCAG Financial Model 2023

Note: Numbers may not sum to total due to rounding

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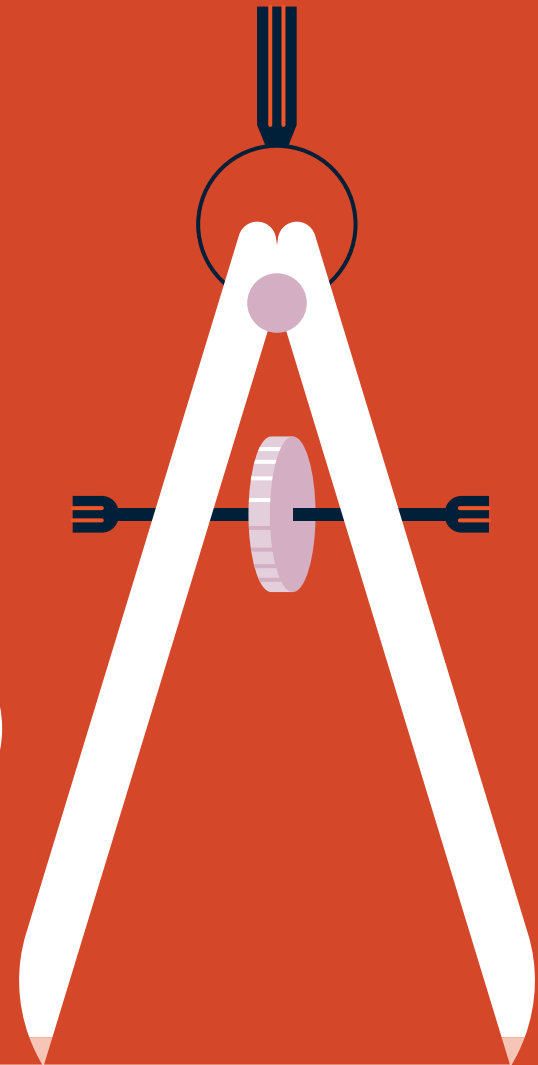
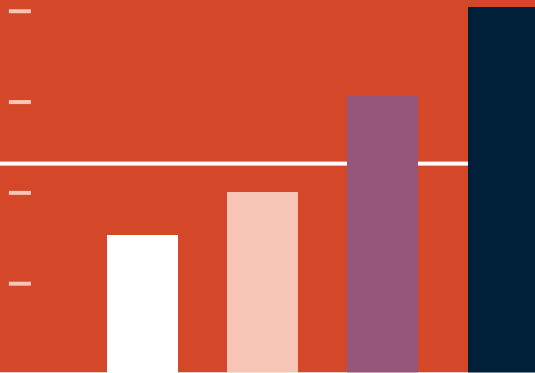
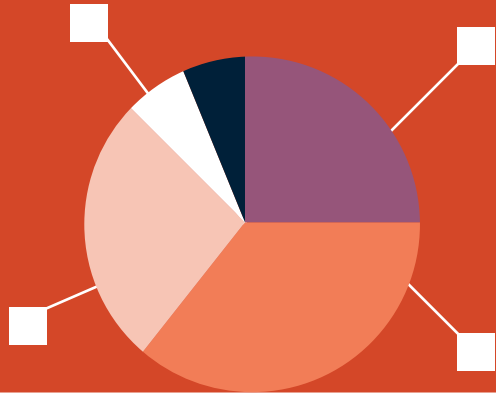
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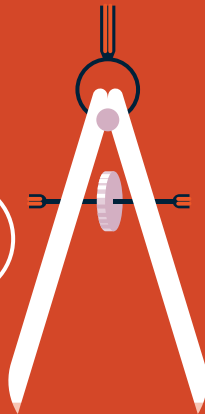
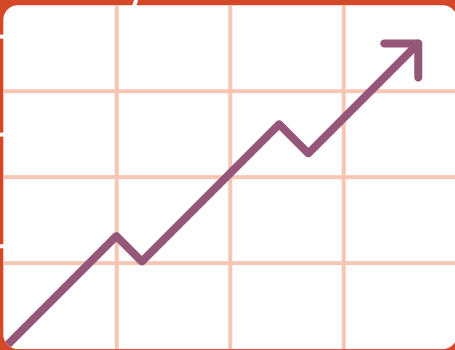


In order for the Plan to help us reach our goals, we must collectively make progress toward implementation and understand our impact over time. But how do we measure that progress? We use different measurements to monitor performance over time—and into the future.



5.1

Performance Outcomes



The Connect SoCal performance measurement and monitoring process will objectively assess how well this comprehensive program of regional investments, strategies and policies perform relative to the overall goals for the SCAG region. The mobility, community, environmental and economic goals in the Plan are accompanied by corresponding performance measures.

The Connect SoCal 2024 performance monitoring program integrates federal transportation system performance management and Equity/ Environmental Justice measures and metrics specific to a set of federal transportation conformity planning, reporting requirements for designated criteria air pollutants and to support the achievement of regional greenhouse gas emissions reduction targets established by the California Air Resources Board.

PLAN MEASUREMENT

Federal Requirements

The federal transportation performance management program, introduced by MAP-21 in 2012, requires states and metropolitan planning organizations to establish performance targets focused on outcomes that align with seven key national transportation goals. These national performance goals are related to transportation investment efficiency:

- Transportation system safety
- Transportation infrastructure condition
- Congestion reduction
- System reliability
- Freight movement and economic vitality
- Environmental sustainability
- Reduced project delivery delay

The Federal Highway Administration (FHWA) established rules for implementing transportation system performance management planning at a national level. Rulemaking in support of the federal performance management program established specific transportation system performance measures and provided target-setting and reporting guidance through three performance management (PM) packages:

- Transportation System Safety (PM 1)
- National Highway System Pavement and Bridge Condition (PM 2)
- National Highway System, Freight Movement and Congestion Mitigation and Air Quality (CMAQ) Program Performance (PM 3)

In addition to these packages, federal performance measures and reporting requirements were established for Transit Asset Management (TAM) and Transit System Safety. Performance metrics for TAM focus on maintaining our regional transit system in a state of good repair. Transit assets to be monitored under this provision include non-revenue support equipment and maintenance vehicles; transit vehicles (rolling stock); rail infrastructure, including tracks, signals and guidance systems; and transit facilities, including stations, parking structures and administrative offices. Transit system safety performance monitoring is focused on assessment of the number of transit incidents that result in fatalities or serious injuries and on transit system reliability.

Each of the performance management packages feature a corresponding set of specific performance measures for which statewide and regional performance targets must be set, monitored and reported. A comprehensive federal System Performance Report is included in the Performance Monitoring Technical Report providing details regarding the federal transportation performance management program, the specific measures established for each program element, and the associated statewide and regional targets.

The federal transportation performance management program includes the requirement that each update of the RTP must include a System Performance Report describing the federal program, the applicable performance measures, and specific targets established for the state and for the region.

Federal performance reporting requirements also include the assessment of disproportionate impacts on environmental justice communities and the completion of a comprehensive transportation air quality conformity process to ensure that the Plan does not exacerbate regional air pollution. Statewide performance assessment requirements include the monitoring of regional GHG emissions to ensure that the Plan facilitates achievement of GHG reduction targets.

Overall, these requirements guide SCAG’s planning process and the early stages of Plan development by guiding the key project attributes collected during the Federal Transportation Improvement Program (FTIP) process, helping to understand whether or not the region is on track to meet its goals and indicating what Regional Strategic Investments are needed to fill the gap.

Performance Monitoring

The monitoring of local and regional progress is key to understanding which projects, programs and strategies are proving successful in meeting the regional goals established by Connect SoCal—and which ones may require modification or reconsideration. Progress toward regional objectives is made through implementation at the local level. SCAG tracks this progress as projects are programmed into the FTIP by collecting key project attributes, with a focus on how they impact achievement of Connect SoCal goals and federal performance measures. The ongoing monitoring of regional performance serves to guide future planning efforts and support local and regional transportation system investment decision-making. The assessment of regional performance over time allows us to set meaningful performance targets and milestones so that progress and setbacks may be effectively evaluated and addressed in a timely manner. Ongoing performance monitoring also helps identify emerging trends in the region that might need to be accounted for in interim planning activities as well as to inform development of the next Connect SoCal.



LET’S GET TECHNICAL

The Connect SoCal 2024 System Performance Report is included in the Performance Monitoring Technical Report.

Plan Performance

SCAG relies on a suite of tools, including the Activity Based Model (ABM), the Scenario Planning Model (SPM) and REMI (economic model) to evaluate how well the projects and policies included in Connect SoCal perform relative to SCAG’s regional goals and targets.

The specific performance measures are aligned with each of the four defined Connect SoCal 2024 goal areas of Mobility, Communities, Environment and Economy. Each metric helps us better understand how well we are integrating our transportation network and land use pattern to achieve the regional vision established by Connect SoCal.

Mobility: Will our region become more connected and accessible?

Communities: Will we grow in ways that promote livability, resilience and equity?

Environment: Will people and our environment become healthier?


Economy: Will our economy function well for all?

To evaluate performance of the Plan, SCAG conducts a “Plan” vs “No Plan” (or “Baseline”) analysis, which compares how the region would perform in the future with and without implementation of Connect SoCal. Plan performance is modeled using sets of planning assumptions specific to each of the two scenarios to generate projected values for each of the Plan performance measures for the year 2050. This process allows SCAG to quantify the impact of Connect SoCal relative to the achievement of the regional goals versus not implementing the Plan. Both scenarios are assessed relative to existing (base year) regional conditions. Each of the Connect SoCal planning scenarios provide the foundation of the Plan assessment process and help ensure that the comprehensive set of investments and strategies included in Connect SoCal effectively facilitate achievement of the regional goals and performance objectives defined in the Plan.

Base Year: The base year represents the existing conditions of the regional transportation system and is used as the comparative basis for future projected performance. The base year for Connect SoCal is 2019.¹

Baseline: The baseline scenario represents the projected future (2050) regional transportation system that will result from the continuation of current programs, including projects currently under construction or undergoing right-of-way acquisition, transportation plans and projects programmed and committed to in the 2023 Federal Transportation Improvement Program (FTIP), and/or transportation projects that have already received environmental clearance.

Plan: The Plan scenario represents future regional transportation system conditions projected in 2050 when the Plan is fully implemented.



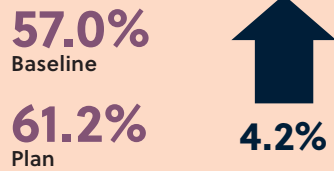
Specific performance measures in the Plan are aligned with each of the four defined Connect SoCal 2024 goal areas: Mobility, Communities, Environment and Economy. Each metric helps us better understand how well we are integrating our transportation network and land use pattern to achieve the regional vision established by Connect SoCal.

¹ Typically, the base year for a plan is the year that data collection begins or the prior plan adoption year. However, given the transportation behavior anomalies experienced during the COVID-19 pandemic, it was not tenable to compare the 20+ year horizon of an RTP/SCS to such an outlier of a base year. Therefore, the plan performance is measured against the more typical performance of 2019.

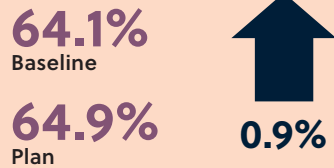
CONNECT SOCIAL PERFORMANCE PROFILE

Location Efficiency

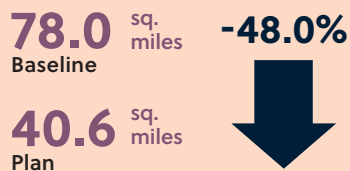
Share of Regional Housing in Priority Development Areas



Share of Regional Employment in Priority Development Areas



Rural Land Consumption



Less Time Spent Driving

Daily Miles Driven *per capita*



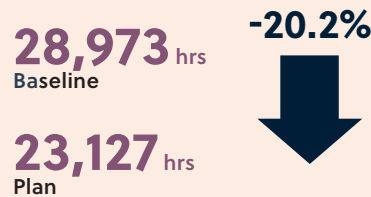
Daily Traffic Delay *per capita*



Heavy Duty Truck Delay *Highway*

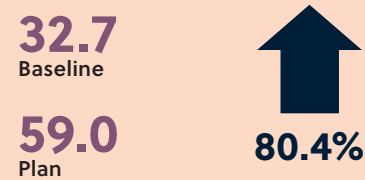


Heavy Duty Truck Delay *Arterial*



Improved Accessibility

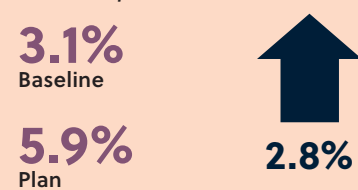
Annual Transit Boardings *per capita*



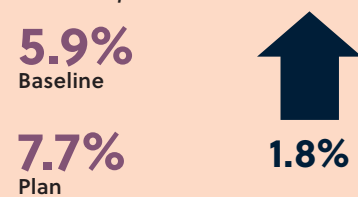
Average Commute Travel Time



Transit Mode Share *Work Trips*



Active Transportation Mode Share *Work Trips*



Economic Opportunity

Benefit/Cost Ratio



\$754

Annual Transportation Cost Savings per Household

277,800

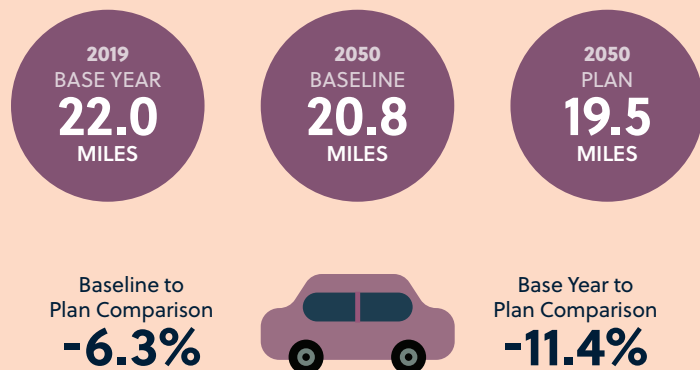
Annual New Jobs from Transportation Investments

480,100

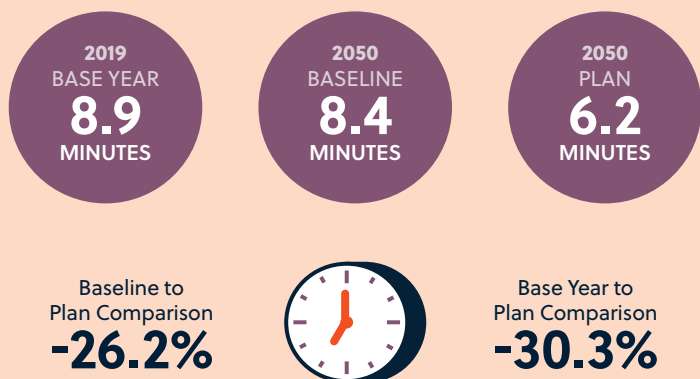
Annual New Jobs from Transportation Investments and Increased Competitiveness

CONNECT SOCAL PERFORMANCE RESULTS

Daily Vehicle Miles Traveled (VMT)*
per capita



Daily Minutes of Person Delay
per capita



*VMT per capita refers to automobiles and light trucks only
 Note: Base Year: 2019 Existing Conditions; Baseline: Continuation of current trends without Plan; Plan: Full implementation of Connect SoCal

		2019 BASE YEAR	2050 BASELINE	2050 PLAN
Imperial County	DAILY VMT per capita	33.0 MILES	35.6 MILES	34.3 MILES
	DAILY DELAY per capita	3.2 MINUTES	6.6 MINUTES	4.1 MINUTES
Los Angeles County	DAILY VMT per capita	20.6 MILES	19.3 MILES	17.6 MILES
	DAILY DELAY per capita	11.4 MINUTES	10.0 MINUTES	8.3 MINUTES
Orange County	DAILY VMT per capita	22.6 MILES	21.2 MILES	20.3 MILES
	DAILY DELAY per capita	8.0 MINUTES	6.9 MINUTES	4.6 MINUTES
Riverside County	DAILY VMT per capita	22.7 MILES	21.6 MILES	21.0 MILES
	DAILY DELAY per capita	4.4 MINUTES	5.6 MINUTES	3.7 MINUTES
San Bernardino County	DAILY VMT per capita	26.3 MILES	25.2 MILES	23.5 MILES
	DAILY DELAY per capita	5.6 MINUTES	7.8 MINUTES	3.7 MINUTES
Ventura County	DAILY VMT per capita	20.6 MILES	19.4 MILES	18.4 MILES
	DAILY DELAY per capita	5.6 MINUTES	4.6 MINUTES	2.7 MINUTES

TABLE 5.1 Connect SoCal 2024 Performance Measures

PERFORMANCE MEASURE	CONNECT SOCIAL GOAL AREA	DESCRIPTION	2050 PERFORMANCE RESULTS		
			BASELINE	CONNECT SOCIAL	TREND
Average Trip Distance (all modes)	Mobility	Average distance traveled for work trips (miles)	16.2	15.9	-1.9%
		Average distance traveled for non-work trips (miles)	6.1	6.1	0.0%
		Share of all trips 10 miles or less	46.8%	47.3%	+0.5
		Share of all trips 25 miles or less	80.1%	80.5%	+0.4
Travel Mode Share (SOV)	Mobility	Share of work trips by single occupancy vehicle (SOV)	67.1%	62.3%	-5.2
		Share of all trips by single occupancy vehicle (SOV)	37.6%	34.6%	-3.0
Travel Mode Share (HOV)	Mobility	Share of work trips by high occupancy vehicle (HOV)	23.9%	24.0%	+0.1
		Share of all trips by high occupancy vehicle (HOV)	48.8%	48.6%	-0.2
Travel Mode Share (Transit)	Mobility	Share of work trips by transit	3.1%	5.9%	+2.8
		Share of all trips by transit	3.2%	4.5%	+1.3
Travel Mode Share (Walk)	Mobility	Work trips	3.4%	4.1%	+0.7
		All trips	8.3%	9.4%	+1.1
Travel Mode Share (Bike)	Mobility	Work trips	2.5%	3.6%	+1.1
		All trips	2.0%	2.9%	+0.9
Person Hours of Delay by Facility Type	Mobility	Highways	1,268,475	980,882	-22.7%
		High Occupancy Vehicle (HOV)	88,821	17,135	-80.7%
		Arterials	1,284,609	966,808	-24.7%
		All facilities	2,908,568	2,151,874	-26.0%
Person Delay Per Capita	Mobility	Daily minutes of delay experienced per capita	8.4	6.2	-26.2%
Truck Delay by Facility Type (Hours)	Mobility	Highways	137,404	113,037	-17.7%
		Arterials	28,973	23,127	-20.2%
		All facilities	170,705	138,748	-18.7%
Average Commute Travel Time (Minutes)	Mobility	Average travel time to work (all modes)	27.6	27.1	-1.8%

TABLE 5.1 Continued Connect SoCal 2024 Performance Measures

PERFORMANCE MEASURE	CONNECT SOCAL GOAL AREA	DESCRIPTION	2050 PERFORMANCE RESULTS		
			BASELINE	CONNECT SOCAL	TREND
Transit Boardings Per Capita	Mobility	Annual number of transit boardings per capita (all trips)	32.7	59.0	+80.4%
Access to Jobs	Mobility	Share of jobs accessible within 30 mins by auto	11.8%	12.4%	+0.6
		Share of jobs accessible within 45 mins by transit	1.8%	2.4%	+0.6
Major Destination Accessibility	Mobility	Share of shopping destinations accessible within 15 mins by auto	4.1%	4.4%	+0.3
		Share of shopping destinations accessible within 30 mins by transit	0.4%	0.6%	+0.2
		Share of educational destinations accessible within 30 mins by auto	11.7%	12.4%	+0.7
		Share of educational destinations accessible within 30 mins by transit	0.2%	0.3%	+0.1
		Share of healthcare destinations accessible within 30 mins by auto	16.4%	17.7%	+1.3
		Share of healthcare destinations accessible within 30 mins by transit	0.3%	0.5%	+0.2
Percent of Trips Less than Three Miles	Communities	Work trips	16.4%	16.7%	+0.3
		Non-work trips	41.9%	42.6%	+0.7
Share of Regional Housing in PDAs	Communities	Percent of regional housing units located within designated Priority Development Areas (PDAs)	57.0%	61.2%	+4.2
Park Accessibility	Communities	Share of population able to reach a park within 30 mins by auto	99.7%	99.6%	-0.1
		Share of population able to reach a park within 30 mins by transit	57.8%	62.4%	+4.6
VMT Per Capita	Environment	Daily vehicle miles traveled (VMT) per capita	20.8	19.5	-6.4%
Land Conversion to Urban Purposes	Environment	Total square miles of greenfield and rural lands converted to urban use	78.0	40.6	-48.0%
Energy Consumption	Environment	Energy (electricity, natural gas, vehicle fuel) consumption per household (million BTUs)	45.9	44.6	-2.7%
Water Consumption	Environment	Urban water consumption per household (thousand gallons)	75.2	74.7	-0.6%
Share of Regional Employment in PDAs	Economy	Percent of total regional jobs located within designated Priority Development Areas (PDAs)	64.1%	64.9%	+0.8

5.2

Regional Benefits



Connect SoCal can enable the region to become more healthy, prosperous, accessible and connected to improve equity and resilience.

While the Plan and its measurement primarily focus on the core areas of mobility, communities, environment and economy—SCAG also looks at co-benefits of Plan implementation. Improving the region’s mobility and enabling more sustainable development can provide a myriad of co-benefits, including reduced energy and water use.

MAKING PROGRESS

Connected and Accessible

Will our region become more connected and accessible?

Implementation of the Plan would result in a regional transportation system that provides improved travel conditions and better air quality, while also ensuring an equitable distribution of benefits among the various communities that comprise the SCAG region. With Connect SoCal, trips to work, schools and other key destinations would be faster and more efficient. Connect SoCal improves the integration of multiple transportation modes, leading to an increase in carpooling, demand for transit and use of active transportation modes (bicycle and pedestrian) for work trips and for other trips made throughout the day.

Resilient and Equitable

Will we grow in ways that promote livability, resilience and equity?

Connect SoCal provides substantial regional benefits and cost savings that extend beyond the performance variables used to evaluate the Plan. Most of these benefits are a result of more compact future development that would serve to reduce municipal expenditures on infrastructure operations and maintenance, reduce residential energy and water use and reduce dependency on single occupancy vehicle travel.

The cost for maintaining existing transportation infrastructure is significantly lower than for constructing new urban facilities. Focusing new growth in designated Priority Development Areas will reduce the costs associated with developing and operating new infrastructure. Residential water use is a function of both indoor and outdoor water needs, with outdoor use (landscape irrigation) accounting for much

of the difference among housing types. Because homes with larger yards require more water for landscape irrigation, lot size is correlated to a household's overall water consumption. The development of more compact and well-connected communities will promote the conservation and efficient use of water and energy resources. A livable community is defined by a cohesive, active and engaged population. The availability of a wide range of mobility options as alternatives to driving alone in an automobile for reaching daily destinations is essential to promoting community livability. These options provide more opportunities for social interaction, engagement in physical activity, and enjoyment of the benefits of cleaner air and less time stuck in traffic.

Plan implementation would result in a regional transportation system with improved travel conditions and better air quality, and an equitable distribution of benefits among communities in the SCAG region.

TABLE 5.2 Connect SoCal 2024 Co-Benefits

BENEFIT CATEGORY	COMPARATIVE BENEFIT PERFORMANCE			
	2050 BASELINE	CONNECT SOCAL	SAVINGS	% SAVINGS
Local Infrastructure and Services Costs: Capital, operations and maintenance costs to support new growth: 2019–2050	\$37.7 billion	\$34.9 billion	\$2.8 billion	7.5%
Household Costs: Annual transportation and home energy/water use: 2050	\$13,401	\$12,617	\$784	5.8%
Land Consumption: New (greenfield) land consumed to accommodate new growth: 2019–2050	78 square miles	41 square miles	37 square miles	48.0%
Building Energy Use: Residential and commercial buildings: 2019–2050 (BTU)	25,858 trillion	25,609 trillion	248 trillion	1.0%
Building Energy Costs: Residential and commercial buildings: 2019–2050	\$764.4 billion	\$757.9 billion	\$6.4 billion	0.8%
Building Water Use: Residential and commercial buildings: 2019–2050 (acre feet)	90.1 million	89.8 million	0.4 million	0.4%
Building Water Costs: Residential and commercial buildings: 2019–2050	\$97.8 billion	\$97.3 billion	\$379.9 million	0.4%
Annual Vehicle Miles Traveled (VMT): 2050 (Autos and light-duty trucks)	435.2 million	407.1 million	28.1 million	6.5%

Healthy

Will people and our environments become healthier? Cleaner fuels and emergent vehicle technologies will significantly reduce many of the pollutants that contribute to smog and other airborne contaminants that impact public health in the SCAG region.

Connect SoCal prioritizes the attainment of all applicable federal requirements. As documented in the Transportation Conformity Analysis Technical Report, Connect SoCal meets all federal regulatory requirements for transportation conformity as defined under the federal Clean Air Act (CAA). Pursuant to the CAA, the U.S. EPA establishes and regularly updates the National Ambient Air Quality Standards (NAAQS), along with a set of planning and reporting requirements for designated criteria air pollutants. The primary purpose of NAAQS is to protect people's health.

Transportation conformity regulations apply to areas designated by the U.S. EPA as being in non-attainment or maintenance for the transportation-related criteria air pollutants, which are carbon monoxide (CO), nitrogen dioxide (NO₂), ozone and particulate matter (PM_{2.5} and PM₁₀). Under the U.S. Department of Transportation's Metropolitan Planning Regulations and the U.S. EPA's Transportation Conformity Regulations, Connect SoCal is required to pass the following four conformity tests to demonstrate transportation conformity:

1. Regional Emissions Analysis
2. Financial Constraint
3. Timely Implementation of Transportation Control Measures
4. Interagency Consultation and Public Involvement

Connect SoCal has passed the required tests for transportation conformity and therefore demonstrates positive transportation conformity. The Regional Council will adopt the initial Connect SoCal transportation conformity determination as part of the Final Connect SoCal, while the FHWA and the Federal Transit Administration (FTA) will approve the final transportation conformity determination.

Achieving SCAG's GHG Emission Reduction Target

Under Senate Bill (SB) 375, SCAG is responsible for developing a Plan that reduces GHG emissions in the region by eight percent from 2005 levels by 2020 and by 2035. SCAG relies on a broad range of strategies to achieve this reduction. Some GHG emission reductions come from factors outside of SCAG's control, such as increases in auto operating costs or demographic changes. The most significant and impactful strategies that are within the decision-making influence of the region include land use, user fees/pricing, transit/shared mobility and active transportation.

Although transportation conformity is a federal requirement and the reduction of GHG emissions is a state mandate, both requirements are highly interrelated. First, the same policies, strategies, programs and projects that support achievement of state GHG emissions reduction targets also contribute to meeting federal transportation conformity requirements. In addition, transportation conformity addresses emissions of federally designated criteria pollutants and their precursors, which originate from the same source as GHG emissions: the combustion of fossil fuels in motor vehicles. The reduction or elimination of fossil-fuel use in motor vehicles will help the region meet both federal transportation conformity requirements and state GHG emission reduction targets.



LET'S GET TECHNICAL

The transportation conformity analysis and findings are described in detail in the Connect SoCal Transportation Conformity Analysis Technical Report.

Overall, achievement of SCAG's GHG emissions reduction target will be more dependent on policies and programs than on capital projects. This reinforces the Plan priority to manage our current system and support communities to evolve in ways that enable integration with the existing transportation network.

As part of complying with Sustainable Community Strategy (SCS) requirements, SCAG evaluated whether it achieved the 2020 target achievement of 8 percent emission reduction from 2005 levels by 2020. Based on analysis of observed data, SCAG did achieve this target. However, decreased travel during the COVID-19 pandemic most likely helped the achievement of the 2020 target, so continued effort will be necessary to sustain progress and Plan implementation to reach the 2035 target.



LET'S GET TECHNICAL

The GHG emission reduction strategies and 2020 target achievement is discussed in detail in the Connect SoCal Performance Measures Technical Report.

Some GHG emission reductions come from factors outside of our control, such as increases in auto operating costs or demographic changes. The most significant and impactful strategies within the decision-making influence of the region include land use, pricing/user fees and transit/shared mobility.

TAKE A CLOSER LOOK

Achieving the Target

SCAG is required to reduce greenhouse gas (GHG) emissions from passenger vehicles. This can be done through strategies like transitioning to cleaner vehicles or reducing driving by making it easier to take alternative modes of travel. There are other factors that influence how much people in the region drive that are often outside of our control, like demographics changes and our increasingly aging population. With a suite of strategies to support reduced GHG emissions combined with other factors, Connect SoCal meets its GHG emission reduction target of 19 percent by the year 2035.



2035 GHG Emission Reductions



How did we get here?

Land Use:

Local land use plans enable development in places where people can take shorter trips and access alternative modes of transportation.

Pricing/User Fees:

User fees like road user charges, cordon pricing and parking generate revenues but must be designed with policies to address fairness and equity concerns.

Transit and Shared Mobility:

Expansion and enhancement of the regional transit system as well as shared mobility options allow for more convenient and accessible travel options throughout the region.

Active Transportation:

New bike lanes and improvements to pedestrian infrastructure within communities across the region provide more options for short trips.

Other:

Other strategies that contribute to lesser, but important, reductions in GHG emissions include electric vehicle incentives, parking deregulation and car share.

This Plan relies on many strategies to reduce GHGs. Many strategies, like land use and transit enhancements, also work to improve the region's accessibility.

Prosperous

Will our economy function well for all? Expenditures on Connect SoCal transportation projects create jobs and output in the region from direct investment in the design, construction, maintenance and operation of the region’s transportation infrastructure. This investment increases transportation network efficiency, making our region a more attractive place to live and do business. Moreover, these investments lead to additional economic benefits from improved environmental quality and public health outcomes.

Over this FY2025–FY2050 planning period and across the six-county SCAG region, the \$750.1 billion in Plan investments will generate an annual average of 277,800 new jobs and increase regional Gross Domestic Product (GDP) by an annual average of \$19.4 billion (2023 constant dollars). The increased competitiveness and improved economic performance induced by these expenditures will generate an additional 202,300 jobs per year due to enhanced network efficiency.



LET'S GET TECHNICAL

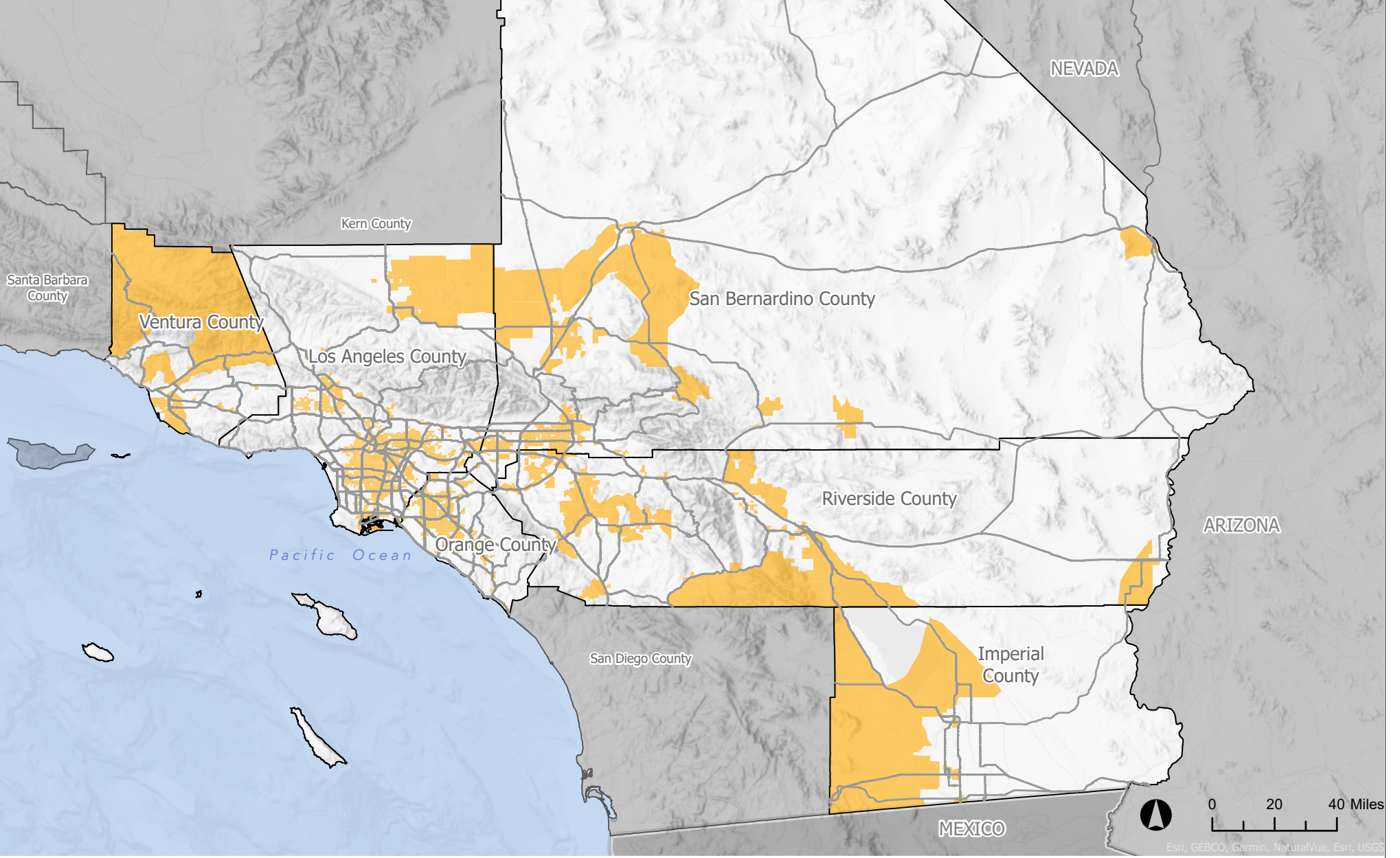
Review the Economic Impact Analysis Technical Report for more details.

Equity and Environmental Justice




Will the future be more equitable? As one of SCAG’s most impactful planning efforts, Connect SoCal 2024 must follow through on the established vision for a more equitable future. The purpose of the Equity Analysis is to evaluate the potential impacts of the implementation of the Plan on communities, including both protected populations, as defined by federal regulation, and priority communities, as identified by SCAG and regional stakeholders. The preparation of the report relied heavily on the input gathered through public workshops, events, surveys and meetings, along with extensive research. Feedback from residents and staff of community-based organizations and local agencies provided a robust and complex picture of our region’s outlook and an understanding of what an equitable future looks like and how we get there.

Priority Equity Communities

One method SCAG used to determine if the Plan caused disproportionate and adverse impacts to historically marginalized and disadvantaged communities is through the identification and assessment of Priority Equity Communities. SCAG defines Priority Equity Communities as census tracts in the SCAG region that have a greater concentration of populations that have been historically marginalized and are susceptible to inequitable outcomes based on several socioeconomic factors. A number of equity performance measures compare outcomes between Priority Equity Communities and the region to determine if the pattern of disparate outcomes is expected to be upheld by the policies and projects included within the Plan. Priority Equity Communities replace the need for multiple equity area definitions, including SB 535 Disadvantaged Communities, Environmental Justice Areas and Communities of Concern. For more detail on the methodology used to develop Priority Equity Communities, see the Equity Analysis.



MAP 5.1 SCAG Priority Equity Communities

-  Freeway
-  SCAG Region
-  Priority Equity Communities

Source: SCAG 2023

Environmental Justice

Prior to 2020, SCAG's equity efforts were concentrated in its environmental justice (EJ) program, which has long focused on public outreach, engagement, early and meaningful participation of EJ communities in the decision-making process, and equal and fair access to a healthy environment. SCAG has prepared an EJ Technical Report for each RTP/SCS since 1998 to ensure that its programs and plans do not create disproportionate adverse impacts for low-income communities and people of color in the region. Because past EJ Technical Reports continued to widen the scope of analysis and the direct connection between planning and the environment, there was a natural shift into a more comprehensive regional equity analysis, inclusive of EJ and extending beyond federal EJ and Title VI reporting requirements.

Environmental justice (EJ) is a federal and state mandate designed to help ensure social equity in the transportation planning and decision-making process—with the goal of protecting people of color and low-income communities from incurring a disproportionate share of adverse impacts produced by regional transportation projects and plans. SCAG adheres to all federal and state EJ directives. All public agencies that use federal funding must make EJ part of their mission and adhere to three fundamental EJ principles:

- To avoid, minimize or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on people of color and low-income populations
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process
- To prevent the denial of, reduction in or significant delay in the receipt of benefits by people of color and low-income populations

Building on previous EJ Technical Reports, SCAG identified equity performance measures and assessed the impacts of the Plan on priority populations in the region and, specifically, in Priority Equity Communities. In response to these questions, performance measures are organized under Connect SoCal 2024's four main goals: mobility, communities, environment and economy. This report includes:

- Plan evaluation measures that use modeling data to forecast regional performance with and without the implementation of the Plan
- Ongoing regional performance monitoring measures that assess progress being made over time
- Existing conditions measures that provide the latest available data on indicators from SCAG's Racial Equity Baseline Conditions reports

Table 5.3 summarizes the results of the equity performance measures included in this analysis.



LET'S GET TECHNICAL

Review the Equity Analysis Technical Report for more details.

TABLE 5.3 Summary of Equity Performance Measures

PERFORMANCE MEASURE	DESCRIPTION	SUMMARY OF ANALYSIS
Mobility		
Share of Transportation System Usage	Comparison of transportation system usage by mode for low-income households and people of color relative to each group's regional population share	This analysis confirmed typical patterns of higher income transit riders tend to ride the train, while lower income transit riders tend to ride the bus. Black travelers had the lowest automobile mode share, while Hispanic/Latino and Asian travelers had the highest. Multiracial travelers reported the highest walking and biking mode shares.
Travel Time and Travel Distance Savings	Change in distance traveled by all transit, local transit and auto modes by race and ethnicity and income quintiles	Results anticipate increases in miles traveled on transit and decreases in miles traveled by auto in accordance with the integrated transportation and land use strategies proposed in Connect SoCal. There are slightly greater decreases in person miles traveled for lower income quintiles and for Black and Asian travelers.
	Change in hours traveled by all transit, local transit and auto modes by race and ethnicity and income quintiles	Results anticipate increases in time spent on transit and decreases in time spent traveling by auto in accordance with the integrated transportation and land use strategies proposed in Connect SoCal. There are slightly greater decreases in person hours traveled for higher income quintiles and for Hispanic/Latino and White travelers.
Access to Everyday Destinations	Number of employments reachable within 15/30 minutes by automobile and 15/45 minutes by transit during morning peak period (6 a.m.–9 a.m.), plus 0.5- 0.75-, and 1-mile walksheds and 1-, 3- and 5-mile bikesheds	Access to jobs is expected to improve for the overall population in the region and in Priority Equity Communities, however, there are several decreases in auto access to jobs for specific populations in Priority Equity Communities, including Black, Hispanic/Latino, the two lowest income quintiles and households below the Federal Poverty Level, limited-English proficiency population and zero-vehicle households.
	Number of retail establishments reachable within 15/30 minutes by automobile and 15/30 minutes by transit during the midday period (9 a.m.–3 p.m.), plus 0.5- 0.75-, and 1-mile walksheds and 1-, 3- and 5-mile bikesheds	Access to shopping is expected to improve for the overall population in the region and in Priority Equity Communities, however, there are slight decreases in auto access for the Black population and in bicycle access for the Hispanic/Latino population in Priority Equity Communities.

TABLE 5.3 Continued Summary of Equity Performance Measures

PERFORMANCE MEASURE	DESCRIPTION	SUMMARY OF ANALYSIS
Access to Everyday Destinations (continued)	Percent of population that can reach a park location within 15/30 minutes by automobile and 15/30 minutes by transit during the midday period (9 a.m.–3 p.m.), plus 0.5- 0.75-, and 1-mile walksheds and 1-, 3- and 5-mile bikesheds	Access to parks is expected to improve for the overall population in Priority Equity Communities, even though there is a slight decrease at the regional level. Transit access to parks is expected to improve for all populations, however, several decreases are seen for other modes. The largest decreases are for Hawaiian-Pacific Islander and Native American populations where the decrease in auto access in Priority Equity Communities exceeds the regional change; and for the Native American population where the decrease in bicycle access in the region exceeds the decrease in Priority Equity Communities.
	Number of schools within 15/30 minutes by automobile and 15/30 minutes by transit during morning peak period (6 a.m.–9 a.m.), plus 0.5- 0.75-, and 1-mile walksheds and 1-, 3- and 5-mile bikesheds	Access to schools is expected to improve for the overall population in the region and in Priority Equity Communities, however, access with walking and biking modes decreases (less than 0.01 percent) for several populations in both Priority Equity Communities and the region, while transit access decreases for Black people and zero-vehicle households in the region but increases for the same populations in Priority Equity Communities.
	Number of health care facilities within 15/30 minutes by automobile and 15/30 minutes by transit during the midday period (9 a.m.–3 p.m.), plus 0.5- 0.75-, and 1-mile walksheds and 1-, 3- and 5-mile bikesheds	Access to healthcare is expected to improve for the overall population in the region and in Priority Equity Communities except for auto decreases for Black and Hispanic/Latino populations, all but the highest income quintile, and all other priority populations analyzed in Priority Equity Communities, despite increases at the regional level.
Bicycle and Pedestrian Collisions	Percent of Bicycle/Pedestrian High Injury Networks (HIN) located within Priority Equity Communities	Approximately 72 percent of the Bicycle HIN and 80 percent of the Pedestrian HIN are within or adjacent to Priority Equity Communities.
	Safety projects on bicycle and pedestrian HIN	While only 13 percent of bicycle and pedestrian modal networks of the Regional High Injury Network may experience improvement from planned safety projects included in the Plan, over 75 percent of those projects are located in Priority Equity Communities.

TABLE 5.3 Continued Summary of Equity Performance Measures

PERFORMANCE MEASURE	DESCRIPTION	SUMMARY OF ANALYSIS
Communities		
Jobs-Housing Imbalance	Comparison of median earnings for intra-county vs intercounty commuters for each county; analysis of relative housing affordability and jobs throughout the region	This analysis found that jobs-housing fit increased between 2010 and 2019, while low wage jobs-housing fit decreased during the same period. Additionally, coastal counties have a substantial concentration of low-wage jobs, but lack an adequate number of affordable rental units, while inland counties have a substantial concentration of affordable rental units and workers, relative to the number of low-wage jobs that match their skills.
Neighborhood Change and Displacement	Examination of demographic changes within gentrifying neighborhoods	Gentrification is more pronounced in neighborhoods with a higher concentration of immigrants and renters as well as communities of color. While gentrifying neighborhoods did not experience a pronounced change in income, they did become more culturally and racially diverse.
	Examination of eviction filings and households threatened with eviction within gentrifying neighborhoods	Gentrifying neighborhoods and those with high eviction filings had higher percentages of Black and Hispanic/Latino people and a lower share of non-Hispanic White people compared to the region, but despite sharing such demographic similarities, most gentrifying neighborhoods were not identified as places with high eviction filings.
Rail-Related Impacts	Demographic analysis for areas in close proximity to rail corridors, including intermodal facilities	In the base year, there is a higher concentration of low-income and some people of color in areas adjacent to railroads and railyards, and it is expected that this concentration could grow in the Baseline and Plan scenarios. SCAG anticipates nominal Plan impact, and that population changes would generally follow that of the SCAG region.
	Demographic analysis for areas in close proximity to planned grade separations	Hispanic/Latino people, people with limited-English proficiency, foreign born populations, vulnerable ages, people with disabilities, and households with incomes in the lower three income quintiles are expected to experience an increase in concentration with implementation of the Plan.

TABLE 5.3 Continued Summary of Equity Performance Measures

PERFORMANCE MEASURE	DESCRIPTION	SUMMARY OF ANALYSIS
Environment		
Resilience and Climate Vulnerabilities	Assessment of overlay between Priority Equity Communities and Climate Risk Areas, including flood hazard zones, sea level rise, wildfire risk, substandard housing, extreme heat, drought and earthquake hazard zones	The forecasted growth patterns included in the Plan reduced risks for Asian households in earthquake zones, nominal changes to existing exposures to sea level rise, wildfires, extreme heat, drought and earthquake hazards. Although impacts from climate-related hazards are not always geographically isolated, overall White populations reside disproportionately in climate hazard zones.
Emissions Impacts Analysis	Examination of change in air pollutant emissions regionwide as a result of the Plan in region and Priority Equity Communities	SCAG expects improvements in CO2 and PM2.5 emissions in the region and Priority Equity Communities as a result of the implementation of the Plan. However, people of color and lower income households are slightly underrepresented in areas of improving emissions and slightly overrepresented in areas of worsening emission, though the pattern is less pronounced or non-existent in Priority Equity Communities.
	Examination of change in air pollutant emissions, focusing on demographics of areas in close proximity to freeways and highly traveled corridors, as a result of the Plan in region and Priority Equity Communities	In 2019, most priority population groups show higher concentrations in freeway-adjacent areas compared to the greater region. In 2050, Asian and foreign-born populations are expected to grow in freeway-adjacent areas, though there are no significant differences with the Plan. Emissions reductions in freeway-adjacent areas are significant compared to the share of the region's total land area, but the Plan impact is still expected to be more pronounced in the region, compared to the freeway-adjacent areas, including areas that overlap with Priority Development Areas. Black and Hispanic/Latino people, youth and households in the higher income quintiles are expected to be overrepresented in areas with worsening emissions, while higher income quintiles are underrepresented in areas where emissions improve.

TABLE 5.3 Continued Summary of Equity Performance Measures

PERFORMANCE MEASURE	DESCRIPTION	SUMMARY OF ANALYSIS
Noise Impacts	Qualitative assessment of the disproportionate impacts of aviation noise impacts and the policies, programs and plans to address project-level impacts	Increased air passenger demand itself has not resulted in increased aviation noise exposure, as increased air passenger activity but reduced aircraft operations have resulted in reduced aircraft noise. Additionally, newer planes and technology, aided by policy, have improved noise emissions significantly.
	Qualitative assessment of the disproportionate impacts of roadway noise impacts and the policies, programs and plans to address project-level impacts	As found in the Emissions Impact Analysis, there are no significant differences in the share of population groups living near freeways and highly traveled roads that may experience higher noise impacts between the Baseline and the Plan. Several state and local strategies, like soundwalls and land use planning, can help reduce existing disparities in relation to roadway noise.
Economy		
Geographic Distribution of Transportation Investments	Evaluation of Connect SoCal transit, roadway and active transportation infrastructure investments in various communities throughout the region	The Plan is expected to invest 34 percent of all highway projects, 50 percent of all transit projects and 62 percent of new bike lane miles in Priority Equity Communities; compared to the percent of the population in Priority Equity Communities, the investment is lower for highway projects, and slightly higher for transit and bikeway projects. Specifically, there are fewer investments in mixed-flow lanes and more bus and commuter rail revenue miles in Priority Equity Communities.
Investments vs. Benefits	Analysis of Connect SoCal investments by income quintile and race/ethnicity	The Plan is expected to invest a greater proportion into projects that benefit the lowest income quintile, and White, Black and people who identify as another race (i.e., Native American, Native Hawaiian/Pacific Islander, some other race alone, and two or more races) compared to other income quintiles and Hispanic/Latino and Asian populations.

TABLE 5.3 Continued Summary of Equity Performance Measures

PERFORMANCE MEASURE	DESCRIPTION	SUMMARY OF ANALYSIS
Revenue Sources in Terms of Tax Burdens	Proportion of Connect SoCal revenue sources (taxable sales, income and gasoline taxes) generated from low-income households and people of color	Understanding the "regressive" nature of sales and gasoline excise taxes, gasoline and transportation sales tax burden is greater for lower income quintiles, though the share of taxes paid increases as income increases. Taxes that help fund projects in the Plan are expected to fall more heavily on White and Asian households.
Impacts from Mileage-Based User Fees	Examination of potential impacts from implementation of a mileage-based user fee on low-income households and people of color in the region	Although mileage-based user fees are the less regressive option compared to the current gas tax approach, with the shift more likely to impact higher earners, it is crucial to ensure user fee programs are designed to be equitable to ensure that vulnerable communities experience the benefits of road user fees without regressive financial impacts.

Equity Analysis

The Connect SoCal 2024 equity analysis concludes that, although racial inequities currently exist within the region, implementation of the Plan will not cause disproportionate or adverse impacts on low-income communities or people of color in most performance areas. Specifically, conditions will improve regionally for Priority Equity Communities relative to the region in most performance areas, including travel time and distance savings, some measures of accessibility to parks and schools, planned safety projects for bicycle and pedestrian safety improvements, expected shifts in overlapping climate hazard zones and emissions impacts along freeways and high-traffic roads. Investments of the Plan, especially transit improvements, are expected to benefit Priority Equity Communities, both in the geographic location and because they are expected to benefit the modes most used by people in the lowest income quintile. Connect SoCal 2024 investments by race and ethnicity are more complicated; the Plan is expected to spend more on projects that White and Black people are more likely to use compared to Hispanic/Latino and Asian travelers. Findings on the revenue sources in terms of tax burdens and impacts from mileage-based user fees conclude that although low-income individuals and people of color could benefit from the Plan's investments and strategies, alternative financing structures should be explored to revisit the regressive nature of some streams of transportation funding.

Current condition analyses on jobs-housing imbalance indicate that Connect SoCal implementation could improve the jobs-housing balance. Current conditions analyses on neighborhood change and displacement indicate communities of color may experience adverse impacts from gentrification. Several strategies can be implemented to secure affordable housing, particularly for immigrants and renters. With new technologies and neighborhood improvements, jurisdictions can coordinate to reduce roadway and aviation noise and rail-related impacts on communities in close proximity to sources, as they have in recent years. These three analyses all demonstrate existing disparities, showing that people of color and low-income communities are more likely to be impacted by noise and other impacts from proximity to transportation-related sources, though the Plan is not anticipated to worsen or exaggerate those disparities.

Without a region-wide movement toward more equitable planning practices and policies, the region will not see the equitable future we project and are aiming to achieve in the Plan. Keeping the status quo in our approach to transportation and land use will not be enough to create an equitable future for our region. One critical component to a more equitable future is to follow the lead of our community in implementing Connect SoCal. Empowering community members, particularly those who have been historically marginalized, to lead in decision-making processes will result in more equitable outcomes. Recommendations like this and other subject-specific topics are available in the updated Equity Resources for Action Toolbox (previously the Environmental Justice Toolbox).



LET'S GET TECHNICAL

See the *Equity Analysis Technical Report* to access the updated *Equity Resources for Action Toolbox*.

Supplementals

GLOSSARY

A

AASHTO – American Association of State Highway and Transportation Officials – A nonprofit, non-partisan association representing highway and transportation departments in the 50 states, the District of Columbia and Puerto Rico.

AB 32 – Assembly Bill 32 – Signed into law on September 26, 2006, it requires the state’s global warming emissions be reduced to 1990 levels by 2020. This reduction will be accomplished through an enforceable, statewide cap on global-warming emissions that will be phased-in starting in 2012, in addition to other measures. To effectively implement the cap, AB 32 directs the California Air Resources Board (CARB) to develop appropriate regulations and establish a mandatory reporting system to track and monitor global warming–emissions levels. Please also see “CARB – California Air Resource Board.”

AB 617 – Assembly Bill 617 – In 2017, California Governor Jerry Brown signed Assembly Bill 617 (C. Garcia, Chapter 136, Statutes of 2017) to develop a new, community-focused program that could more effectively reduce exposure to air pollution and preserve public health. AB 617 is a companion bill to AB 398, which extends California’s Cap-and-Trade program for greenhouse gas emissions. The most significant criteria and toxic air-quality legislation passed in California in the last three decades, AB 617 directs the California Air Resources Board (CARB) and all local air districts throughout California to take measures to protect communities disproportionately impacted by air pollution.

There are five central components to the AB 617 mandate:

- Community-level air monitoring
- A state strategy and community-specific emission-reduction plans

- Accelerated review of retrofit pollution control technologies on industrial facilities subject to cap-and-trade
- Enhanced emission-reporting requirements
- Increased penalty provisions for polluters

CARB may also direct additional grant funding to communities determined to have the highest air-pollution burden.

AB 617 Communities – In response to AB 617, the California Air Resources Board (CARB) established the Community Air Protection Program. The program reduces exposure in communities most impacted by air pollution. CARB, community members, local air districts and other stakeholders are working together to identify community concerns and air-quality priorities—and develop actions to measure and reduce air pollution and health impacts. AB 617 communities are those affected by a high cumulative-exposure burden around the state and annually selected by CARB since 2018 to develop and implement community air-monitoring plans, community emission-reduction programs, or both, in order to improve air quality in their communities. As of 2022, 17 communities have been selected as the designated AB 617 communities, for which air-pollution-reduction actions are underway.

ABM – Activity-Based Model – Based on the principle that travel demand is derived from people’s daily activity patterns. ABMs predict when and where activities are conducted, for how long and the travel choices made to complete them.

Active Transportation – A mode of transportation that includes human-powered transportation and low-speed electronic assist devices. Examples include, but are not limited to, walking (includes any person walking, skateboarding and using a wheelchair or other personal mobility device) or use of a bicycle, electric bicycle (e-bike), tricycle, scooter, skates, push scooter, trailer or hand cart.

ADA – Americans with Disabilities Act of 1990 – Guarantees equal opportunity for individuals with disabilities in public accommodations, employment, transportation, state and local government services, and

telecommunications. It prescribes federal transportation requirements for transportation providers.

ADU – Accessory Dwelling Unit – A room or set of rooms in a single-family home (and in a single-family zone) that has been designated or configured to be used as a separate dwelling unit and has been established by a permit.

Advance Mitigation – A science-based approach to identifying mitigation opportunities early in the planning process—prior to project design and permitting phases—to support regional conservation priorities.

Agricultural Lands – Land designated for farming, specifically to the production of crops and rearing of animals to provide food and other products.

Antelope Valley AQMD – Antelope Valley Air Quality Management District (AVAQMD) – The air-pollution-control agency with the primary responsibility for the control of non-vehicular sources of air pollution throughout the Antelope Valley in the northern part of Los Angeles County. The AVAQMD boundaries start in the south, just outside of Acton, north to the Kern County line, east to the San Bernardino County line, and west to the Quail Lake area. The AVAQMD is located within the Mojave Desert air basin.

AQMP – Air Quality Management Plan – Regional plan for air-quality improvement in compliance with federal and state air-quality-planning requirements, including attaining applicable federal and state ambient air-quality standards.

ATIS – Advanced Traveler Information Systems – Technology used to provide travelers with information, both pre-trip and in-vehicle, so they can better utilize the transportation system.

ATMS – Advanced Transportation Management Systems – Technology used to improve the operations of the transportation network.

ATP – Active Transportation Program – The ATP was created by Senate Bill 99 and Assembly Bill 101, and expanded by Senate Bill 1, to encourage increased use of active modes of transportation. The ATP is a program designed for cities, counties and regional government organizations to apply for funding to further active transportation planning and implementation in the state. *Not to be confused with Active Transportation Plans.

Automated Vehicle – The U.S. Department of Transportation’s National Highway Traffic Safety Administration (NHTSA) has defined five increasing levels of vehicle automation:

- Level 0 – No-Automation: The driver is in complete and sole control and performs all driving tasks.
- Level 1 – Driver Assistance: The vehicle is controlled by the driver, but some driving assist features may be included in the vehicle design.
- Level 2 – Partial Automation: The vehicle has combined automated functions, such as acceleration and steering, but the driver must remain engaged with the driving task and monitor the operating environment at all times.
- Level 3 – Conditional Automation: The driver is a necessity but is able to cede the performance of driving tasks to the vehicle. However, the driver must be ready to take control of the vehicle at all times.
- Level 4 – High Automation: The vehicle is capable of performing all driving functions under certain conditions and within certain operating environments. The driver may or may not have the ability to control the vehicle.
- Level 5 – Full Automation: The vehicle is capable of performing all driving functions under all conditions. The driver may or may not have the ability to control the vehicle.

B

Base Year – The year that is used in the RTP/SCS performance analysis as a reference point for current conditions. For Connect SoCal 2024, the base year is 2019.

Baseline – Defined in the U.S. Environmental Protection Agency’s Transportation Conformity Regulations, the Baseline is the future transportation system that will result from current programs, including the following (except that exempt projects listed in Section 93.126 and projects exempt from regional emissions analysis as listed in Section 93.127 need not be explicitly considered):

- All in-place regionally significant highway and transit facilities, services and activities
- All ongoing travel demand management or transportation system management activities
- Completion of all regionally significant projects, regardless of funding source, which are currently under construction or are undergoing right-of-way acquisition (except for hardship acquisition and protective buying); come from the first year of the previously conforming transportation plan and/or TIP; or have completed the NEPA process

For Connect SoCal 2024, the baseline represents the projected future (2050) regional transportation system that will result from the continuation of current programs, including projects currently under construction or undergoing right-of-way acquisition, those transportation plans and projects programmed and committed to in the 2023 Federal Transportation Improvement Program (FTIP), and/or transportation projects that have already received environmental clearance.

BEV – Battery Electric Vehicle – An electric-drive vehicle powertrain that is powered by an on-board battery. A BEV is a sub-class of a Plug-in Electric Vehicle (PEV).

Bike Share – A service that provides users with on-demand access to bicycles at a variety of pick-up and drop-off locations for one-way (point-to-point) or roundtrip travel. Bike sharing fleets are commonly deployed in a network within a metropolitan region, city, neighborhood, employment center and/or university campus.

Bikeway – Common term for any designated bicycle facility, such as a bicycle path, bicycle lane, bicycle route, sharrow, bicycle boulevard or cycle track.

BRT – Bus Rapid Transit – Bus transit service that seeks to reduce travel time through measures such as traffic signal priority, automatic vehicle location, dedicated bus lanes, limited-stop service and faster fare-collection policies.

Bus – A transit mode comprised of rubber-tired passenger vehicles operating on fixed routes and schedules over roadways.

C

CAA – Federal Clean Air Act – The federal law that authorized the U.S. EPA to establish national ambient air-quality standards (NAAQS) to limit levels of pollutants in the air. The EPA has promulgated NAAQS for six criteria pollutants: sulfur dioxide (SO₂), nitrogen dioxide (NO₂), carbon monoxide (CO), ozone, lead and particulate matter (PM₁₀). All areas of the United States must maintain ambient levels of these pollutants below the ceilings established by the NAAQS. Any area that does not meet these standards is a “nonattainment” area. States must develop State Implementation Plans (SIPs) to explain how they will comply with the CAA.

The last major change in the law, the Clean Air Act Amendments of 1990, was enacted by Congress in 1990. Legislation passed since then has made several minor changes. The Clean Air Act, like other laws enacted by Congress, was incorporated into the United States Code as Title 42, Chapter 85. The House of Representatives maintains a current

version of the U.S. Code, which includes Clean Air Act changes enacted since 1990.

Cal B/C Model – California Life-Cycle Benefit/Cost Analysis Model – Developed for the California Department of Transportation (Caltrans) as a tool for benefit-cost analysis of highway and transit projects. It is an Excel (spreadsheet) application structured to analyze several types of transportation improvement projects in a corridor where there already exists a highway facility or a transit service (the base case).

Caltrans – California Department of Transportation – State agency responsible for the design, construction, maintenance and operation of the California State Highway System, as well as portions of the Interstate Highway System within the state’s boundaries.

Cap-and-Trade – A market-based regulation that is designed to reduce greenhouse gases (GHGs) from multiple sources. Cap-and-Trade sets a firm limit, or cap, on GHGs and minimizes the compliance costs of achieving California’s AB 32 goals. The cap will decline approximately 3 percent each year beginning in 2013. Trading creates incentives to reduce GHGs below allowable levels through investments in clean technologies. With a carbon market, a price on carbon is established for GHGs. Market forces spur technological innovation and investments in clean energy.

Car Share – An integrated network of passenger vehicles available for short-term rental in heavily urbanized areas. Car share can take the form of return systems in which a vehicle must be returned to the parking space from which it was rented. Alternatively, it can take the form of point-to-point systems in which the car can be returned to another space or left anywhere within a predetermined geographic zone. Peer-to-peer car sharing is an app-based system that allows people to rent out their own private vehicles.

CARB – California Air Resources Board – California state agency responsible for attaining and maintaining healthy air quality through setting and enforcing emissions standards, conducting research, monitoring air quality, providing education and outreach, and

overseeing/assisting local air-quality districts within California. The CARB is also responsible for implementing AB 32 and establishing regional greenhouse gas emission reduction targets for automobile and light trucks under SB 375. CARB is a part of the California Environmental Protection Agency, an organization that reports directly to the Governor’s Office in the executive branch of California State Government.

Carbon Sequestration – The ability for natural elements, such as forests, soils and oceans to store carbon instead of releasing it into the atmosphere, preventing GHG emissions.

CB – Commuter Bus – Fixed-route bus systems that primarily connect outlying areas with a central city through bus service that operates with at least five miles of continuous closed-door service. This service typically operates using motorcoaches (aka over-the-road buses), and usually features peak scheduling, multiple-trip tickets and multiple stops in outlying areas with limited stops in the central city.

CBO – Community Based Organization – Public or private non-profit group that works at a local level to address community needs.

CEHD – Community, Economic and Human Development Committee – A SCAG committee that studies the problems, programs and other matters that pertain to the regional issues of community, economic and human development, and growth. This committee reviews projects, plans and programs of regional significance for consistency and conformity with applicable regional plans.

CEQA – California Environmental Quality Act – State law requiring public agencies to evaluate, consider and disclose potential environmental effects of proposed discretionary or governmental actions and to prevent significant and unavoidable environmental damage.

CHSRA – California High-Speed Rail Authority – Agency responsible for planning, designing, constructing and operating a state-of-the-art high-speed train system in California.

CIP – Capital Improvement Program – Long-range strategic plan that identifies capital projects and provides a planning schedule and financing options.

Clean Transportation Technologies – These include zero- and near-zero-emission vehicles, their supporting infrastructure and other facilitating products that reduce environmental impacts over their full life cycle, including upstream production and end of life.

Climate Change Adaptation – The process of adjusting to actual or expected climate change and its effects in order to moderate or avoid harm. Adaptation addresses the impacts but not the causes of climate change.

Climate Change Mitigation – Consists of actions to limit the magnitude of climate change and its related effects. Mitigation addresses the cause of climate change.

CMAQ – Congestion Mitigation and Air Quality Improvement Program – Federal program initiated by the Intermodal Surface Transportation Efficiency Act of 1991 to provide funding for surface transportation and other related projects that contribute to air-quality improvements and reduce congestion.

CMP – Congestion Management Program – Established by Proposition 111 in 1990, each county is required to develop and adopt a CMP that includes highway and roadway system monitoring, multimodal system performance analysis, transportation demand management, land-use analysis and local conformance.

CO – Carbon Monoxide – A colorless, odorless, poisonous gas formed when carbon in fuels is not burned completely and can be harmful when inhaled in large amounts. The greatest sources of CO to outdoor air are cars, trucks and other vehicles or machinery that burn fossil fuels. A variety of items in your home, such as unvented kerosene and gas space heaters, leaking chimneys and furnaces, and gas stoves also release CO and can affect air quality indoors. CO is one of six “criteria air pollutants” for which the U.S. EPA set national standards pursuant to CAA.

COG – Council of Governments – Under state law, a single or multi-county council created by a joint powers agreement.

Complete Communities – Suburban communities that provide a mix of land uses in strategic growth areas wherein most daily needs can be met within a short distance from home. Complete communities provide residents with the opportunity to support their local area and run daily errands by walking or bicycling rather than traveling by automobile.

Complete Streets – Streets designed and operated to support the safety, comfort and mobility of all road users. They provide for people of all ages and abilities, regardless of whether they are driving, walking, bicycling, rolling or riding transit/rail. Complete Streets approaches vary based on community context, but elements often include comfortable sidewalks, bicycle lanes, transit priority lanes and signals, high-quality transit stops, frequent and safe crosswalks, median islands, accessible signals, curb extensions, modified vehicle travel lanes, and streetscape and landscape treatments.

Congestion (Cordon Area) Pricing – A system for surcharging users/drivers a fee to operate in designated areas, roads or highway corridors as part of a demand management strategy to relieve traffic congestion within that area.

Connected/Automated Vehicles – Refers to the interrelated nature of connectivity and automation in new vehicle technology. Connected vehicles may use any number of different communication technologies to communicate with the driver, other cars on the road (vehicle-to-vehicle [V2V]), roadside infrastructure (vehicle-to-infrastructure [V2I]) and the “cloud” to improve safety, user experience and collision avoidance. Please also see “automated vehicles.”

Conservation Easement – A voluntary agreement between a landowner and a land trust or government agency that permanently limits uses of the land to protect its conservation value.

Constrained Projects – Constrained projects have funding that is either committed or reasonably available.

Corridor – In planning, a broad geographical band that follows a general directional flow or connects major sources of trips. It may contain a number of streets and highways, as well as transit lines and routes.

CR – Commuter Rail – A transit mode that is an electric or diesel-propelled railway for urban passenger train service consisting of local, short-distance travel operating between a central city and adjacent suburbs. Service must be operated on a regular basis by or under contract with a transit operator for the purpose of transporting passengers within urbanized areas (UZAs), or between urbanized areas and outlying areas. Such rail service, using either locomotive-hauled or self-propelled railroad passenger cars, is generally characterized by multi-trip tickets, specific station-to-station fares, railroad employment practices, and usually only one or two stations in a central business district. Commuter rail does not include heavy-rail rapid transit, light rail/streetcar transit service or intercity rail service.

CRIA – Community Revitalization and Investment Authorities – Community Revitalization and Investment Authorities (CRIA) were enacted into law by Assembly Bill 2, which authorized the revitalization of disadvantaged communities through planning and financing infrastructure improvements and upgrades, economic development activities and affordable housing via tax-increment financing.

CSMP – Corridor System Management Plans – A comprehensive, integrated management plan for increasing transportation options, decreasing congestion and improving travel times in a transportation corridor.

CTIPS – California Transportation Improvement Program System – A project-programming database system for the efficient and effective development and management of various transportation programming documents as required under state and federal law.

CTP – California Transportation Plan – A statewide, long-range transportation policy plan that provides for the movement of people, goods, services and information. The CTP offers a blueprint to guide future transportation decisions and investments.

CVO – Commercial Vehicle Operations – Management of commercial vehicle activities through intelligent transportation systems (ITS).

D

DAC (or SB 535 DAC) – Disadvantaged Communities or SB 535 Disadvantaged Communities – Census tracts, identified by the California Environmental Protection Agency (CalEPA) as Disadvantaged Communities based on the requirements set forth in SB 535, that seek to identify communities that are disproportionately burdened by and vulnerable to multiple sources of pollution. *DACs are now included within Priority Equity Communities (PEC) as part of the Equity Analysis for Connect SoCal 2024.

Demand Response – A transit mode comprised of non-fixed route or fixed-schedule automobiles, vans or small buses that operate in response to calls from passengers or their agents to the transit operator, who then dispatches a vehicle to pick up and transport passengers to their destinations.

Development Impact Fee – A fee imposed by a local government on a new or proposed development project to pay for the costs of providing public services to the new development.

Displacement – The process that occurs when increasing property values brought about through gentrification drive out existing residents and business operators and attract a new and different demographic population to an area. Please also see Gentrification.

E

EIFD – Enhanced Infrastructure Financing District – Senate Bill 628 authorizes the creation of a governmental entity known as an EIFD. One or more of these districts may be created within a city or county

to finance the construction or rehabilitation of a wide variety of public infrastructure and private facilities using the property tax increments of consenting taxing agencies (cities, counties, special districts, but not schools).

EIR – Environmental Impact Report – An informational document, required under CEQA, that will inform public agency decision-makers and the public of the significant environmental effects of a project, possible ways to minimize significant effects and reasonable alternatives to the project.

EIS – Environmental Impact Statement (federal) – National Environmental Policy Act (NEPA) requirement for assessing the environmental impacts of federal actions that may have a significant impact on the human environment.

EJ – Environmental Justice – The just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, tribal affiliation or disability, in agency decision-making and other federal activities that affect human health and the environment so that people: (i) are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers; and (ii) have equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices.

EMFAC Model – The Emission Factors model is a computer model developed by the CARB for estimating emission rates and emissions for on-road mobile sources operating in California. Upon approval by the U.S. Environmental Protection Agency, the EMFAC model is required to be used for regional transportation conformity determination in California.

EPA or U.S. EPA – The United States Environmental Protection Agency – Federal agency established to develop and enforce regulations that

implement environmental laws enacted by Congress to protect human health and safeguard the natural environment.

Equity – Please see “racial equity.” The goal is to lead with racial equity as a focal point in addressing the pervasive and deep inequities faced by peoples of color and support the overarching goal of the creation of a just and equitable society.

E-scooter – An e-scooter is an electric-powered two-wheeled device with handlebars and a floorboard designed to be stood upon when riding that can accommodate most adults. An e-scooter can travel on level ground up to about 15 mph.

EV – Electric Vehicle – A vehicle fully or partially powered by an electric engine. In common use, it is synonymous with Plug-In Electric Vehicle (PEV), however hydrogen-fuel-cell vehicles are also electric vehicles.

EV Charging Station – A location where a vehicle can be parked and the electric storage or battery can be recharged. EV charging stations can be private or publicly accessible and can be free to the user or used for a fee.

Express Lane – A High-Occupancy Vehicle (HOV) lane that single-occupant drivers can pay to drive in, also referred to as “High Occupancy Toll Lanes.”

F

FAA – Federal Aviation Administration – Federal agency responsible for issuing and enforcing safety regulations and minimum standards, managing air space and air traffic, and building and maintaining air navigation facilities.

FAST Act – Fixing America’s Surface Transportation Act (H.R. 22) – Signed into law by President Obama on December 4, 2016. FAST Act funded surface transportation programs at over \$305 billion for five years through 2020.

FCV – Fuel Cell Vehicle – Electric vehicles that are powered by hydrogen fuel cells.

FHWA – Federal Highway Administration – Federal agency responsible for administering the Federal-Aid Highway Program, which provides federal financial assistance to the states to construct and improve the National Highway System, urban and rural roads, and bridges.

First-Last Mile – Strategies designed to increase transit/rail usage by making it more convenient and safer to walk, bicycle or roll to and from transit/rail stations. Strategies include wayfinding, bikeways, station amenities, new crosswalks, sidewalk improvements, shared mobility services and bike share.

FRA – Federal Railroad Administration – Federal agency created to promulgate and enforce rail safety regulations, administer railroad assistance programs, conduct research and development in support of improved railroad safety and national rail transportation policy, and consolidate government support of rail transportation activities.

FTA – Federal Transit Administration – The federal agency responsible for administering federal transit funds and assisting in the planning and establishment of area-wide urban mass-transportation systems. As opposed to FHWA funding, most FTA funds are allocated directly to local agencies rather than to Caltrans.

FTIP – Federal Transportation Improvement Program – A six-year, comprehensive listing of transportation projects proposed for federal funding that require a federal action or are regionally significant and are within the planning area of an MPO. The last two years of the listing are for informational purposes only.

FY – Fiscal Year – The 12-month period on which the budget is based and planned. The state fiscal year begins July 1 and ends June 30 of the following year. The federal fiscal year begins October 1 and ends September 30 of the following year.

G

Gentrification – While holding many definitions, gentrification is commonly understood as a change process in historically low-income communities that results in rising real estate values coupled with shifts in the economic, social and cultural demographics and feel of the communities. Please also see Displacement.

GGRF – Greenhouse Gas Reduction Funds – Administered by state and local agencies for a variety of greenhouse gas (GHG) emission reductions programs, including energy efficiency, public transit, low-carbon transportation and affordable housing.

GHG – Greenhouse Gas – Components of the atmosphere that contribute to the greenhouse effect. The principal greenhouse gases that enter the atmosphere because of human activities are carbon dioxide, methane, nitrous oxide and fluorinated gases.

GIS – Geographic Information System – Mapping software that links information about where things are with information about what things are like. GIS allows users to examine relationships between features distributed unevenly over space, seeking patterns that may not be apparent without using advanced techniques of query, selection, analysis and display.

Grade Crossing – A crossing or intersection of highways, railroad tracks, pedestrian walks, other guideways or combinations of these at the same level or grade.

Greenbelt – Land surrounding or neighboring areas that is designated as largely undeveloped, wild or agricultural.

Greenfield – Also known as “raw land,” land that is privately owned, lacks urban services, has not been previously developed, and is located at the fringe of existing urban areas.

GRRRA – Green Region Resource Areas – Derived from SB 375 statute and Connect SoCal 2020 strategies, GRRAs highlight where future growth is not encouraged due to presence of open space, habitats, farmland, and/or sensitivity to natural hazards and a changing climate.

H

Habitat Connectivity – The degree to which the landscape facilitates animal movement and other ecological flows.

HCP – Habitat Conservation Plan – Established under Section 10 of the federal Endangered Species Act to allow development to proceed while protecting endangered species. A federal Habitat Conservation Plan is typically accompanied by a state Natural Communities Conservation Plan (NCCP).

HDT – Heavy-Duty Truck – Truck with a gross vehicle weight of 8,500 pounds or more.

Heavy Rail – An electric railway transit mode with the capacity for a heavy volume of traffic. It is characterized by high speed and rapid-acceleration passenger rail cars with sophisticated signaling, raised-platform loading and operating singly or in multi-car trains on fixed rails with separate rights-of-way (ROW) from which all other vehicular and foot traffic are excluded.

HIN – High Injury Network – A High Injury Network includes sections of roadways throughout the region where the highest concentrations of collisions occur on the transportation network.

Home-Based Work Trips – Trips between home and work, either directly or with an intermediate stop. Home-based work trips include telecommuting, working at home, and non-motorized transportation work trips.

HOT Lane – High-Occupancy Toll Lane – An HOV lane that single-occupant drivers can pay to drive in, also referred to as “Express Lanes.”

Household – A household consists of all the people who occupy a housing unit. A household includes the related family members and all the unrelated people, if any, such as lodgers, foster children, wards or employees who share the housing unit. A person living alone in a housing unit, or a group of unrelated people sharing a housing unit, such as partners or roomers, is also counted as a household.

HOV Lane – High-Occupancy Vehicle Lane – A lane restricted to vehicles with two (and, in some cases, three) or more occupants to encourage carpooling. Vehicles include automobiles, vans, buses and taxis.

HQTC – High Quality Transit Corridors – Per CA Public Resource Code Section 21155(b), HTQCs are corridors with fixed-route bus service with service intervals of no longer than 15 minutes during peak commute hours.

HSIP – Highway Safety Improvement Program – A core federal-aid program with the purpose of achieving a significant reduction in traffic fatalities and serious injuries on all public roads, including non-state-owned roads and roads on tribal land.

HSR – High-Speed Rail – Intercity passenger rail service that is reasonably expected to reach speeds of at least 110 mile per hour.

HTF – Highway Trust Fund – The federal HTF is a transportation fund in the United States that received money from a federal fuel tax of 18.4 cents per gallon on gasoline and 24.4 cents per gallon from diesel fuel and related excise taxes.

HUD – U.S. Department of Housing and Urban Development – Federal agency charged with increasing homeownership, supporting community development, and increasing access to affordable housing free from discrimination.

HUTA – Highway Users Tax Account – Formerly known as the California Highway Users Tax Fund, HUTA is a trust fund comprised of revenues collected from taxes imposed by California on motor vehicle fuels for use in motor vehicles driven on public streets and highways. The HUTA is dedicated to fund transportation improvements.

ICE – Internal Combustion Engine – Refers to traditional vehicle engines that are powered by the burning of fuel sources, including gasoline, diesel and natural gas.

ICTC – Imperial County Transportation Commission – Agency responsible for planning and funding countywide transportation improvements and administering the county’s transportation sales-tax revenues.

IGR – Intergovernmental Review Process – The review of documents by several governmental agencies to ensure consistency of regionally significant local plans, projects and programs with SCAG’s adopted regional plans.

Inclusionary Zoning – Municipal or county planning ordinances that require a given share of new construction to be affordable by people with low to moderate incomes.

IJA – The Infrastructure Investment and Jobs Act – Also referred to as the Bipartisan Infrastructure Law, is a federal transportation authorization package, signed into law in November 2021, that provides \$550 billion over fiscal years 2022 through 2026 in new federal investment in infrastructure, including roads, bridges, transit, water infrastructure, resilience and broadband.

Infill – New development on vacant, underutilized or undeveloped land within an existing community that is enclosed by other types of development.

Infrastructure – The basic facilities, equipment, services and installations needed for the growth and functioning of a community. This may refer to transportation infrastructure, such as rail stations or roadways, as well as other civic infrastructure, such as electrical and water systems.

In-Lieu Fee (Environment) – An in-lieu fee is one type of mitigation that can be used to compensate for unavoidable environmental impacts that would affect open space, culturally significant land, agricultural and forestry land, wetlands or other environmentally sensitive areas. Such fees are typically pooled and distributed to build off-site mitigation areas.

ITIP – Interregional Transportation Improvement Program – The portion of the State Transportation Improvement Program (STIP) that includes projects selected by Caltrans (25 percent of STIP funds).

ITS – Intelligent Transportation Systems – Systems that use modern detection, communications and computing technology to collect data on system operations and performance, communicate that information to system managers and users, and use that information to manage and adjust the transportation system to respond to changing operating conditions, congestion or accidents. ITS technology can be applied to arterials, freeways, transit, trucks and private vehicles. ITS include Advanced Traveler Information Systems (ATIS), Advanced Public Transit Systems (APTS), Advanced Traffic Management Systems (ATMS), Advanced Vehicle Control Systems (AVCS) and Commercial Vehicle Operations (CVO).

JPA – Joint Powers Authority – Two or more agencies that enter into a cooperative agreement to jointly wield powers that are common to them. JPAs are a vehicle for the cooperative use of existing governmental powers to finance and provide infrastructure and/or services in a cost-efficient manner.

Justice40 – Justice40 Initiative – Established by President Joe Biden through Executive Order 14008, the Justice40 Initiative directs 40 percent of the overall benefits of federal climate, clean energy, affordable and sustainable housing, clean water and other investments to disadvantaged communities that have been historically marginalized, underserved and overburdened by pollution.

L

LACMTA – Los Angeles County Metropolitan Transportation Authority, also referred to as “Metro” – Agency responsible for planning and funding countywide transportation improvements, administering the county’s transportation sales-tax revenues, and operating bus and rail transit service.

LAFCo – Local Agency Formation Commission – Regional service planning agencies of the State of California that exercise regulatory and planning powers. LAFCos regulatory powers are outlined in California Government Code Sections 56375 and 56133.

LAWA or LAX – Los Angeles World Airports – Aviation authority of the City of Los Angeles. LAWA owns and operates Los Angeles International (LAX), Ontario International, Van Nuys and Palmdale Airports.

LID – Low Impact Development – A land planning and engineering design approach to manage storm water runoff as part of green infrastructure. LID emphasizes conservation and use of on-site natural features to protect water quality.

LIHTC – Low Income Housing Credit – A federal program created under the Tax Reform Act of 1986 that gives incentives for the utilization of private equity in the development of affordable housing.

Livable Communities – Any location in which people choose to live may be viewed as “livable.” However, communities that contain a healthy mix of homes, shops, workplaces, schools, parks and civic

institutions coupled with a variety of transportation choices, give residents greater access to life’s daily essentials and offer higher quality of life to a wider range of residents.

Livable Corridors – Livable corridors encourage local jurisdictions to plan and zone for increased density at nodes along key corridors and to “redevelop” single-story underperforming retail with well-designed, higher-density housing and employment centers. Growth at strategic nodes along key corridors, many of which are within High Quality Transit Areas Corridors (HQTACs), will make transit a more convenient and viable option. The Livable Corridors network is developed utilizing select variables from past plans like HTQCs and input from local jurisdictions during the Local Data Exchange process.

LTF – Local Transportation Fund – A fund that receives Transportation Development Act (TDA) revenues.

M

MaaS – Mobility as a Service (MaaS) integrates transportation services into a single mobility platform that provides competitive alternatives to private vehicles as a way to promote Universal Basic Mobility, encourage mode shift and foster sustainable choices. It plays a critical role in providing trip planning and seamless-fare payment options for easy access to transit/rail, first/last mile connections and other travel options. MaaS is driven by data standardization and policies that support secured data sharing and interoperability by building on existing standards and principles.

MAP – Million Annual Passengers – Used to quantify airport activity.

MAP-21 – Moving Ahead for Progress in the 21st Century – Signed into law by President Obama on July 6, 2012. Funding surface transportation programs at over \$105 billion for fiscal years (FY) 2013 and 2014, MAP-21 was the first long-term highway authorization enacted since 2005.

Market Incentives – Measures designed to encourage certain actions or behaviors. These include inducements for the use of carpools, buses and other HOVs in place of single-occupant automobile travel. Examples include HOV lanes, preferential parking and financial incentives.

MDAB – Mojave Desert Air Basin – Area defined by state law as comprising the desert portions of Los Angeles, Kern, Riverside and San Bernardino Counties.

MDAQMD – Mojave Desert Air Quality Management District – Stretched out over almost 20,000 square miles of California’s vast desert expanse, the Mojave Desert Air Quality Management District is, geographically, the second largest of the state’s 35 air districts. As the air pollution control agency for San Bernardino County’s High Desert and Riverside County’s Palo Verde Valley, the District has primary responsibility for regulating stationary sources of air pollution located within its jurisdictional boundaries. The District implements air-quality programs required by state and federal mandates, enforces rules and regulations based on air pollution laws, and educates businesses and residents about their role in protecting air quality and the risks of air pollution.

Measure A – Revenues generated from Riverside County’s local half-cent sales tax.

Measure D – Revenues generated from Imperial County’s local half-cent sales tax.

Measure I – Revenues generated from San Bernardino County’s local half-cent sales tax.

Measure M – Revenues generated from Orange County’s local half-cent sales tax. Also refers to Los Angeles County’s local, half-cent sales tax which was authorized in 2018.

Measure R – Revenues generated from Los Angeles County’s local half-cent sales tax. Los Angeles County has three permanent local sales taxes (Proposition A, Proposition C and Measure M) and one temporary local sales tax (Measure R).

Metrolink – Regional commuter rail system connecting Los Angeles, Orange, Riverside, San Bernardino and Ventura Counties and operated by the Southern California Regional Rail Authority (SCRRA).

Micromobility – Personal vehicles that typically are designed to carry one passenger. Devices include, but are not limited to, bicycles, electronic bicycles (e-bikes) and electronic scooters (e-scooters). Micromobility is often linked to bike and scooter sharing.

Mitigation Measure – A measure designed to minimize a project’s significant adverse environmental impacts under CEQA.

Mixed Flow – Traffic movement that includes autos, trucks, buses and motorcycles sharing traffic lanes.

Mixed Use Development – A type of urban development that blends residential, commercial, cultural, institutional or industrial uses, where those functions are physically and functionally integrated and provide pedestrian connections.

Mobility Hubs – Mobility hubs are places where we can seamlessly connect with multiple modes of transportation in a safe, comfortable and accessible environment. Mobility hubs include a range of transportation options (but typically at least two) that connect and interact with one another (e.g., transit/rail, car share, bike share, etc.). They typically improve connectivity to transit/rail and are the infrastructure foundation for multimodal trip planning and promoting mode shift. They are considered essential for a safe and convenient transfer between transportation modes. SCAG’s strategy is to focus targeted investments in a set of prioritized mobility hubs distributed across the region.

Mode – A particular form of travel (e.g., walking, traveling by automobile, traveling by bus, or traveling by train).

Mode Split – The proportion of total person trips using various specified modes of transportation.

Model – A mathematical description of a real-life situation that uses data from past and present conditions to make a projection.

MPO – Metropolitan Planning Organization – A federally required planning body responsible for transportation planning and project selection in a region.

MSHCP – Multiple Species Habitat Conservation Plans – A comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) designed to preserve a network of habitat and open space—protecting biodiversity and enhancing the region’s quality of life. MSHCPs are often implemented with the assistance of federal and state wildlife agencies.

Multifamily Residential – Multifamily units are attached residences, apartments, condominiums and townhouses. Multifamily residences are usually served by all utilities, are on paved streets, and are provided with or have access to all urban facilities such as schools, parks, and police and fire stations. Senior citizen apartment buildings are included in these classes. Also included are off-campus university-owned housing and off-campus fraternity/sorority houses.

Multimodal – A mixture of several modes of transportation, such as transit, highways, non-motorized, etc.

N

NAAQS – National Ambient Air Quality Standards – The federal Clean Air Act requires the U.S. EPA set National Ambient Air Quality Standards (NAAQS) for six criteria air pollutants. These common air pollutants can harm human health and the environment and cause property damage. Please see “CAA-Federal Clean Air Act” for more information on NAAQS.

Natural Lands – Biologically diverse landscapes, such as forested and mountainous areas, shrub lands, deserts and other ecosystems, that contain habitat that supports wildlife and vegetation.

Nature-based Solutions – Actions that work with and enhance nature to help address societal challenges. This term describes a range of approaches that protect, sustainably manage and restore nature to deliver multiple outcomes, including addressing climate change, improving public health, increasing equity and protecting biodiversity.

NCCP – Natural Community Conservation Plan – A program that takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. It is broader in its orientation and objectives than the California and Federal Endangered Species Acts, as these laws are designed to identify and protect individual species that have already significantly declined in number.

NEPA – National Environmental Protection Act – Federal environmental law that applies to all projects funded with federal funds or requiring review by a federal agency.

New Mobility – The integration of various forms of transportation services into a single service accessible on demand. Please also see “Shared Mobility Services.”

NGV – Natural Gas Vehicle – Vehicles that are powered by internal-combustion engines that burn compressed or liquid natural gas.

NIMBY – Not in My Backyard – The phenomenon where people oppose the location of a development perceived as undesirable (e.g., landfill, freeway expansion) in their own neighborhood, but raise no objections of similar developments elsewhere.

NIMS – National Incident Management System – Nationwide template that enables all government, private-sector and non-governmental organizations to work together during a domestic incident.

NMAs – Neighborhood Mobility Areas – Areas with a high number of intersections, low observed travel speed, high mix of uses and high accessibility to “everyday” destinations. These are areas where Complete Streets and sustainability policies support and encourage replacing or reducing single and multi-occupant automobile use with

walking, bicycling, skateboarding and slow-speed electric vehicles (such as e-bikes, scooters, senior mobility devices and neighborhood electric vehicles). Please also see “Complete Streets.”

NMTC – New Markets Tax Credit – The New Markets Tax Credit (NMTC) Program incentivizes business and real estate investment in low-income communities via a federal tax credit.

Nominal Dollars – Actual dollars expended/received in a specific year without adjustments for inflation/deflation.

Non-Reportable TCM – Non-Reportable Transportation Control Measure – The following de minimis committed TCMs are defined in the Final 2019 FTIP Guidelines as non-reportable TCMs for the purpose of TCM timely implementation reporting:

- Bus/shuttle/paratransit fleet expansion projects with fewer than five vehicles
- Bus stop improvement projects
- Bicycle facility less than one mile and pedestrian facility less than 1/4 mile
- Intelligent transportation systems/control system computerization projects with fewer than three traffic signals
- Changeable message sign projects with fewer than 5 signs
- Bike parking facilities, new or expansion, with nine or fewer bike lockers/slots
- Expansion of bus station/shelter/transfer facilities with nine or fewer bike lockers/slots
- Rail station expansion with addition of nine or fewer bike lockers/slots

NOx – Nitrogen oxides – A group of highly reactive gases, all of which contain nitrogen and oxygen in varying amounts. NOx is a major component of ozone and smog. NOx also can be a major component of particle air pollution.

NTD – National Transit Database – The Federal Transit Administration’s (FTA) national database for transit statistics.



O&M – Operations and Maintenance – The range of activities and services provided by the transportation system for the upkeep and preservation of the existing system.

OCTA – Orange County Transportation Authority – Agency responsible for planning and funding countywide transportation improvements, administering the county’s transportation sales-tax revenues and operating bus transit service.

Open Space – Generally understood as any area of land or water which, for whatever reason, is not developed for urbanized uses and which therefore enhances residents’ quality of life. Each county and city in California must adopt an open-space element as part of its general plan. The element is a statement of local planning policies focusing on the use of unimproved land or water for the preservation or managed production of natural resources, outdoor recreation, and the promotion of public health and safety. Therefore, open space will be defined by each jurisdiction based on their own unique resources and environment.

OWP – Overall Work Program – SCAG develops an OWP annually, describing proposed transportation planning activities for the upcoming fiscal year, including those required by federal and state law.

P

PCI – Pavement Condition Index – A numerical index between 0 and 100 that is used to indicate the general condition of pavement.

PDA – Priority Development Areas – Priority Development Areas are places within the SCAG region where future growth can be located in order to help the region reach mobility or environmental goals. Generally, this means that people in these areas have access to multiple modes of transportation or that trip origins and destinations are closer together, allowing for shorter trips. Certain kinds of PDAs are used for different purposes in the Plan, such as growth visioning, performance measurement or grant applications. However, as a general principle, being in multiple PDAs indicates a greater alignment with Plan goals. PDAs are based on both existing conditions and future infrastructure, meaning that their boundaries reflect a snapshot in time based on data available at the time of Plan development. As such, these boundaries reflect a guide and the location of PDAs used by local jurisdictions or for various programs or grants may differ. PDAs in Connect SoCal 2024 include Neighborhood Mobility Areas (NMAs), Transit Priority Areas (TPAs), Livable Corridors and Spheres of Influence (in unincorporated areas only).

PEC – Priority Equity Communities – (Formerly Environmental Justice Areas, Disadvantaged Communities and Communities of Concern) Census tracts in the SCAG region with a greater concentration of populations that have been historically marginalized and are susceptible to inequitable outcomes based on several socioeconomic factors. *For more information, see the Equity Analysis Technical Report.

PEIR – Program Environmental Impact Report – An information document that analyzes and discloses potential environmental effects of large-scale plans or programs in accordance with provisions of the California Environmental Quality Act (CEQA).

PeMS – Performance Measurement System – A service provided by the University of California, Berkeley, to collect historical and real-time freeway data from freeways in the state of California in order to compute freeway performance measures.

Person Trip – A trip made by a person, by any mode or combination of modes, for any purpose.

PEV – Plug-in Electric Vehicle – Refers to all vehicles that can be plugged into an external source of electricity in order to recharge an on-board battery that provides some or all power to an electric engine.

PGA – Priority Growth Area – Designated areas prioritized for new development based on established criteria (e.g., infrastructure, location, market). PGAs were utilized in Connect SoCal 2020; however, they are known in Connect SoCal 2024 as Priority Development Areas (PDAs). See the definition of PDAs above.

PHEV – Plug-in Hybrid Electric Vehicle – A vehicle powertrain that combines an electric engine with a traditional, internal-combustion engine. The two engines can operate in parallel with the electric engine operating at certain speeds, or the engines can operate sequentially, with all power being provided by the electric engine until the battery power is exhausted.

PM10 – Particulate matter with diameters that are generally 10 micrometers and smaller – A mixture of inhalable solid particles and liquid droplets found in the air that are 10 micrometers or less in size. (A micrometer is one-millionth of a meter. The average human hair is about 70 micrometers in diameter.) These coarse particles are generally emitted from sources such as vehicles traveling on unpaved roads, materials handling, crushing and grinding operations, and windblown dust.

PM2.5 – Particulate matter with diameters that are generally 2.5 micrometers and smaller – A mixture of fine, inhalable solid particles and liquid droplets found in the air that are 2.5 micrometers or less in size. (A micrometer is one-millionth of a meter. The average human hair is about 70 micrometers in diameter.) These fine particles result from fuel combustion in motor vehicles, power generation and industrial facilities, as well as from residential fireplaces and wood stoves.

PMD – LA/Palmdale Regional Airport – Regional airport located in Palmdale.

PMT – Passenger Miles Traveled – The cumulative sum of the distances ridden by each public transportation passenger.

POE – Port of Entry – Any designated place or port at which passengers or cargo enter the administrative or customs territory of the country. A customs officer accepts entries of merchandise, collect duties, and enforce provision of the Customs laws.

PPP – Public-Private Partnership – Contractual agreements formed between a public agency and private-sector entity that allow for greater private-sector participation in the delivery of transportation projects.

PRC – Peer Review Committee – An “informal” committee of technical experts usually organized and invited to review and comment on various technical issues and processes used in the planning process.

Proposition 1A – Passed by voters in 2006, Proposition 1A protects transportation funding for traffic congestion relief projects, safety improvements, and local streets and roads. It also prohibits the state sales tax on motor vehicle fuels from being used for any purpose other than transportation improvements and authorizes loans of these funds only in the case of severe state fiscal hardship.

Proposition 1B – Highway Safety, Traffic Reduction, Air Quality and Port Security State of California – Passed in November 2006, Proposition 1B provides \$19.9 billion to fund state and local transportation improvement projects to relieve congestion, improve movement of

goods, improve air quality and enhance safety and security of the transportation system.

Proposition A – Revenues generated from Los Angeles County’s local half-cent sales tax. Los Angeles County has three permanent local sales taxes (Propositions A and C, and Measure M) and one temporary local sales tax (Measure R).

Proposition C – Revenues generated from Los Angeles County’s local half-cent sales tax. Los Angeles County has three permanent local sales taxes (Propositions A and C, and Measure M) and one temporary local sales tax (Measure R).

PTA – Public Transportation Account – The major state transportation account for mass transportation purposes. Revenues include a portion of the sales tax on gasoline and diesel fuels.

Public Transportation – As defined in the Federal Transit Act, “Transportation by a conveyance that provides regular and continuing general or special transportation to the public, but does not include school bus, charter or intercity bus transportation or intercity passenger rail transportation provided by the entity described in chapter 243 (Amtrak or a successor to such entity).”

For the purposes of Connect SoCal 2024, the broader definition from the American Public Transportation Association (APTA) is used. This includes buses, light rail, subways, commuter trains, streetcars and trolleys, cable cars, van pool services, ferries and water taxis, paratransit services for older adults and people with disabilities, and monorails and tramways.

PUC – Public Utilities Commission – Regulates privately owned telecommunications, electric, natural gas, water, railroad, rail transit and passenger transportation companies.

R

Racial Equity – Racial Equity – As central to SCAG’s work, racial equity describes the actions, policies and practices that eliminate bias and barriers that have historically and systemically marginalized communities of color. It helps to ensure all people can be healthy, prosperous and participate fully in civic life.

RAMP – Regional Advance Mitigation Program – Advance mitigation is a science-based approach to identify mitigation opportunities that support regional conservation priorities. By considering mitigation development early in the regional planning process, and prior to the design and permitting phases, proponents can identify higher-quality mitigation opportunities.

Rapid Bus – A bus rapid transit (BRT) service operated by Metro with vehicles branded as “Rapid” and painted red, operating in mixed-traffic environments, serving fewer stops than local bus service and with transit signal priority, where available. Other transit operators, including Culver CityBus, Santa Monica’s Big Blue Bus and Torrance Transit, also operate Rapid lines.

RBN – Regional Bikeway Network – A system of regionally interconnected bikeways linking cities and counties in the SCAG region.

RC – Regional Council – Conducts the affairs of SCAG; implements the General Assembly’s policy decisions; acts upon policy recommendations from SCAG policy committees and external agencies; appoints committees to study specific problems; and amends, decreases or increases the proposed budget to be reported to the General Assembly.

RCIS – Regional Conservation Investment Strategy – A voluntary, nonregulatory and non-binding conservation assessment that includes information and analyses—and establishes biological goals and objectives that may be used as a basis to provide advance mitigation or conservation.

RCTC – Riverside County Transportation Commission – Agency responsible for planning and funding countywide transportation improvements and administering the county’s transportation sales-tax revenues.

RDP – Regional Data Platform – A system for collaborative data sharing and planning that’s designed to facilitate better planning at all levels – from cities and counties of all sizes up to the region as a whole. The RDP places data and technology in the hands of local jurisdictions to support more robust community planning, to provide resources to solve many of our common challenges and to align with Connect SoCal’s objectives. As such, the goals of this platform are:

- Provide access to data, modern tools and best practices that support stronger planning and information-based decision making at all levels
- Streamline the exchange of data with jurisdictions and partners across the region while establishing procedures and standards for geospatial data consistency
- Establish a community of planners, GIS professionals and practitioners to foster collaboration and collective learning, as well as guide the long-term growth and evolution of the RDP

REAP – Regional Early Action Plan Grant Program – Under the California 2019–20 Budget Act, Governor Newsom established REAP with a \$125 million allocation (\$47 million to the SCAG region) to provide funding to support local governments and stakeholders with housing planning activities that accelerate housing production and meet the region’s goals for producing 1.3 million new units of housing by 2029.

Building on the success of the first REAP program, AB140 REAP 2.0 provides \$600 million statewide (\$246 million to the SCAG region) to uplift programs that accelerate infill housing development, reduce Vehicle Miles Traveled, increase housing supply at all affordability levels, affirmatively further fair housing, and facilitate the implementation of adopted regional and local plans to achieve these goals.

Resilience – The capacity of the SCAG region’s built, social, economic and natural systems to anticipate and effectively respond to changing conditions, acute shocks and chronic stressors by creating multiple opportunities for a sustainable, thriving and equitable future.

RGN – Regional Greenway Network – A regional system of bikeways physically separated from traffic. It makes use of riverbeds and under-utilized utility corridors. It is part of the Regional Bikeway Network (RBN).

RHNA – Regional Housing Needs Assessment – Quantifies and allocates the determination of housing need during specified planning periods at various income categories for each city and county in the region, in accordance with state housing law. Cities and counties then address this need through the process of updating the housing elements of local General Plans.

Ride-hailing/Rideshare – A generic term to describe booking rides and paying for car service through a smartphone app with a transportation network company (TNC), such as Uber or Lyft. The term “ridesharing” has been used to describe TNCs, but it has been widely argued to be inaccurate, and hence the ride-hailing term was introduced.

RMRA – Road Maintenance and Rehabilitation Account – Funds related to the Road Maintenance and Rehabilitation Program, collected via fuel taxes and vehicle fees established by SB 1, are deposited in the RMRA. Cities and counties receiving RMRA funds must comply with relevant federal and state laws, regulations, policies and procedures. RMRA funds are also referred to as “SB 1 funds.” Please also see “SB 1.”

RTP – Regional Transportation Plan – A federally required, 20-year plan prepared by metropolitan planning organizations and updated every four years. Includes projections of population growth and travel demand, along with a specific list of proposed projects to be funded.

S

SB 1 – Senate Bill 1 – Known as the Road Repair and Accountability Act of 2017, SB 1 established fuel taxes and vehicle fees that will generate new funding for roadways, including up to \$1.5 billion per year allocated directly to counties and cities for local road maintenance, safety improvements and Complete Streets improvements (e.g., bicycle and pedestrian facilities).

SB 226 – Senate Bill 226 (Chapter 469, Simitian) – Implements changes to the California Environmental Quality Act (CEQA) by authorizing limited CEQA review for urban infill projects, creating a new statutory exemption for rooftop and parking lot solar energy projects and establishing that greenhouse gas emissions at a project or cumulative level do not disqualify the use of categorical exemptions if the project complies with certain regulations and requirements.

SB 375 – Senate Bill 375 (Chapter 728, Steinberg) – Established to implement the state’s greenhouse gas (GHG) emission-reduction goals, as set forth by AB 32, in the sector of cars and light trucks. This mandate requires the California Air Resources Board to determine per-capita, GHG emission-reduction targets for each metropolitan planning organization (MPO) in the state at two points: 2020 and 2035. In turn, each MPO must prepare a Sustainable Communities Strategy (SCS) that demonstrates how the region will meet its GHG emission-reduction target through integrated land use, housing and transportation planning.

SB 45 – Senate Bill 45 (Chapter 622, Statutes of 1997, Kopp) – Established the current State Transportation Improvement Process (STIP) and shifted control of decision-making from the state to the regional level.

SB 535 – Senate Bill 535 (Chapter 830, De León) – Established that a quarter of the proceeds from the Greenhouse Gas Reduction Fund must also go to projects that provide a benefit to disadvantaged communities. A minimum of 10 percent of the funds must be for

projects located within those communities. The legislation gives the California Environmental Protection Agency responsibility for identifying those communities.

SB 743 – Senate Bill 743 (Steinberg, 2013) – Made several changes to the California Environmental Quality Act (CEQA) to support projects located in areas served by transit. SB 743 replaces auto delay, level of service and other measures of vehicular capacity or traffic congestion as a basis for determining significant impacts with a measure based on vehicle miles traveled (VMT). It also creates a new exemption for certain projects that are consistent with a specific plan.

SBCTA – San Bernardino County Transportation Authority – The council of governments and transportation planning agency for San Bernardino County. SBCTA is responsible for cooperative regional planning and developing an efficient, countrywide multimodal transportation system.

SBD – San Bernardino International Airport – International airport located in San Bernardino.

SCAB – South Coast Air Basin – Comprises the non-Antelope Valley portion of Los Angeles County, Orange County, western Riverside County and the non-desert portion of San Bernardino County.

SCAG – Southern California Association of Governments – The metropolitan planning organization (MPO) for six counties including Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura.

SCAQMD – South Coast Air Management District – The air-pollution control agency for all of Orange County and the urbanized portions of Los Angeles, Riverside and San Bernardino Counties in Southern California. This area of 10,743 square miles is home to more than 17 million people—about half the population of the whole state of California. It is the second-most populated urban area in the United States and one of the smoggiest. South Coast AQMD is responsible for controlling emissions, primarily from stationary sources of air pollution within its jurisdiction. These can include anything from large power plants and refineries to the corner gas station.

SCCAB – South Central Coast Air Basin – Comprises San Luis Obispo, Santa Barbara and Ventura counties.

SCS – Sustainability Communities Strategy – As part of SB 375, which was established to implement the state’s greenhouse gas (GHG) emission-reduction goals as set forth by AB 32, each California metropolitan planning organization (MPO) is required to prepare a SCS as part of their regional transportation plan. The mandate requires the California Air Resources Board to determine per capita GHG emission-reduction targets for each MPO in the state at two points: 2020 and 2035. In turn, each MPO must prepare an SCS that demonstrates how the region will meet its GHG through integrated land use, housing and transportation planning.

SED – Socioeconomic Data – Population, employment and housing forecast.

SGC – Strategic Growth Council – The Strategic Growth Council is a state agency tasked with encouraging the development of sustainable communities.

SHA – State Highway Account – The major state transportation account for highway purposes. Revenues include the state excise taxes on gasoline, diesel fuel and truck-weight fees.

Shared Mobility Services – Refers to a wide variety of new mobility services and encompasses bike share, scooters, car share, app-based transit/rail services and ride-hailing. This term refers to the way in which these modes are offered as services brokered by a mobile application, and each device or vehicle is shared amongst multiple users.

Shared Parking – A tool in parking management that allows different land uses with different periods of parking demand to share a common parking facility and thereby limit the need to provide additional parking. Shared parking policies do not treat the parking supply as individual units specific to particular businesses or uses, but rather emphasize the efficient use of the parking supply by including as many spaces as possible in a common pool of shared, publicly available spaces.

SHOPP – State Highway Operation and Protection Program – A four-year, capital-improvement program for rehabilitation, safety and operational improvements on state highways.

SHSP – Strategic Highway Safety Plan – A statewide, coordinated safety plan that provides a comprehensive framework for reducing fatalities and severe injuries to motorists, pedestrians and bicyclists on all public roads. SHSP goals and objectives are data-driven and results are measured. Actions designed to achieve the objectives are developed by hundreds of safety stakeholders from the five E’s of highway safety: engineering, education, enforcement, emergency medical services and equipment. In California, Caltrans coordinates the effort to develop the plan.

Single-Family Residential – These residential areas are typically made up of detached dwellings, where each structure houses a single family, located in an urban or suburban setting. These single-family residences are usually served by all utilities, are on paved streets, and are provided with or have access to all urban facilities such as schools, parks, and police and fire stations. Single-family residential neighborhoods are normally large, contiguous areas of residential lots. Some areas have subdivisions or tracts of homes with similar size or architectural design. In these areas, the roofs may be similar in shape or color when viewed via aerial photo. Typically, single-family lots contain landscaped front and backyards, one driveway and one walkway either to the sidewalk or to the driveway. Some lots may have swimming pools in the back yards. High or low density is determined by the size of the lot on which the residence is located. If an area is under construction, and the residential lots or pads are easily identifiable, then the area can be properly mapped.

SIP – State Implementation Plan – Comprehensive state plan that describes how an area will attain national, ambient air-quality standards. The federal Clean Air Act requires that transportation activities, including regional transportation plans, programs and projects conform to, or are consistent with the purpose of the applicable SIP.

Small-Lot Development – A practice that allows for the subdivision of lots located within existing multifamily and commercial zones to develop fee-simple housing. Typically, small lot developments are not required to be part of a homeowner’s association, thus reducing the cost for home buyers.

Smart City – A designation given to a city that incorporates information and communication technologies to enhance the quality and performance of public services, consumption, waste and overall costs.

Smart Parking – Smart parking management techniques include real-time identification of open parking spaces, active wayfinding, adaptive pricing, and consumer-facing apps for information and payment of parking. These management techniques pertain to on-street as well as public off-street parking.

SOI – Sphere of Influence – A planning boundary outside of an agency’s legal boundary (e.g., city limit) that designates the agency’s probable future boundary and service area.

SOV – Single-Occupant Vehicle – Privately operated vehicle that contains only one driver or occupant.

SOx – Sulfur oxide – Any of several compounds of sulfur and oxygen formed from burning fuels, such as coal and oil.

SRTS – Safe Routes to School – Part of a nationwide/region-wide program to increase the number of students who walk or bike to school. Includes engineering, educational and enforcement activities. Funded through the State Active Transportation Program (ATP). SRTS includes programs that support improved safety for students to walk and bike to school.

SSAB – Salton Sea Air Basin – Comprises the Coachella Valley portion of Riverside County and all of Imperial County.

STA – State Transit Assistance – State funding program for mass transit operations and capital projects. Current law requires that STA receive 50 percent of PTA revenues.

STBG – Surface Transportation Block Grant – Established by California state statute utilizing federal Surface Transportation Program funds. Approximately 76 percent of the state’s STBG funds must be obligated on projects located within the 11 urbanized areas of California with populations of 200,000 or more.

STIP – State Transportation Improvement Program – A five-year capital outlay plan that includes the cost and schedule estimates for all transportation projects funded with any amount of state funds. The STIP is approved and adopted by the CTC and is the combined result of the ITIP and the RTIP.

STP – Surface Transportation Program – Provides flexible funding that may be used by states and localities for projects on any federal-aid highway, bridge projects on any public road, transit capital projects, and intracity and intercity bus terminals and facilities. A portion of funds reserved for rural areas may be spent on rural minor collectors.

Sustainability – The practice of analyzing and accounting for the impact of decisions, policies, strategies and development projects on the Economy, the Environment and Social Equity (commonly referred to as the three E’s). In the 2017 SCAG Strategic Plan, SCAG adopted the following objective: “Cultivate dynamic knowledge of the major challenges and opportunities relevant to sustainability and quality of life in the region.”

Sustainable Development – Sustainable development can support the region to thrive with essential resources that maintain quality of life and a growing economy in the present, such as water, energy and food supply, while also enabling future generations to thrive amidst both forecasted and unforeseen challenges.

SWITRS – Statewide Integrated Traffic Records System – A database that serves as a means to collect and process data gathered from a collision scene.

T

TAM – Transit Asset Management – A business model that prioritizes funding based on the actual condition of transit assets in order to achieve or maintain transit networks in a state of good repair.

TAP – Transit Access Pass – An electronic ticketing payment method used in most public transit services within Los Angeles County.

TAZ – Traffic Analysis Zone – Zone system used in travel demand forecasting.

TC – Transportation Committee – Committee used to study problems, programs and other matters that pertain to the regional issues of mobility, air quality, transportation control measures and communications.

TCM – Transportation Control Measure – Defined in the U.S. EPA’s Transportation Conformity Regulations, TCM is any measure that is specifically identified and committed to in the applicable SIP, including a substitute or additional TCM that is incorporated into the applicable SIP through the process established in CAA Section 176(c)(8), that is either one of the types listed in CAA Section 108, or any other measure for the purpose of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions. Vehicle technology-based, fuel-based and maintenance-based measures that control the emissions from vehicles under fixed traffic conditions are not TCMs.

TCWG – Transportation Conformity Working Group – A forum to support federally mandated interagency consultation to help improve air quality and maintain transportation conformity in the SCAG region. Membership of the TCWG includes federal (U.S. EPA, FHWA, FTA), state (CARB, Caltrans), regional (Air Districts, SCAG), and sub-regional (County Transportation Commissions) agencies and other stakeholders.

TDA – Transportation Development Act – State law enacted in 1971 provides a 0.25 percent sales tax on all retail sales in each county for transit, bicycle and pedestrian purposes. In non-urban areas, funds may be used for streets and roads under certain conditions.

TDM – Transportation Demand Management – Strategies that result in more efficient use of transportation resources, such as ridesharing, telecommuting, park-and-ride programs, pedestrian improvements and alternative work schedules.

Technology Neutrality – A stance that does not give preference to a particular technology, as long as it furthers the desired outcome of a zero-emission transportation system that meets or exceeds federal and state targets.

TEU – Twenty-Foot Equivalent Unit – A measure of shipping container capacity.

TIFIA – Transportation Infrastructure Finance and Innovation Act of 1998 – Established a new federal credit program under which the US DOT may provide three forms of credit assistance—secured (direct) loans, loan guarantees and standby lines of credit—for surface transportation projects of national or regional significance. The program’s fundamental goal is to leverage federal funds by attracting substantial private and other non-federal co-investment in critical improvements to the nation’s surface transportation system. Sponsors may include state departments of transportation, transit operators, special authorities, local governments and private entities.

TMA – Transportation Management Area – An area designated by the Secretary of Transportation, having an urbanized area population of over 200,000, or upon special request from the governor and the MPO designated for the area.

TNC – Transportation Network Companies – This is the technical term for ride-hailing companies used by the California Public Utilities Commission in order to create a new class of mobility provider distinguished from taxi companies and limousines.

TOD – Transit-Oriented Development – A planning strategy that explicitly links land use and transportation by focusing mixed housing, employment and commercial growth around bus and rail stations (usually within a half mile). TODs can reduce the number and length of vehicle trips by encouraging more bicycle/pedestrian and transit use and can support transit investments by creating the density around stations to boost ridership.

TP&D – Transportation Planning and Development Account – A state transit trust fund that is the funding source for the State Transit Assistance (STA) program.

TPA – Transit Priority Areas – An area within half a mile of a major existing or planned transit stop

Transportation Equity Zones – Communities across the SCAG region most impacted by transportation-related inequities

TSM – Transportation System Management – A set of techniques used to increase the capacity of a segment of transportation infrastructure without increasing its physical size. Most often, these techniques are used in the context of roadways. The techniques include coordinated traffic signals and ramp meters.

TSP – Transit Signal Priority – A set of operational improvements that use technology to facilitate the movement of transit vehicles and reduce their dwell time at traffic signals by holding green lights longer or shortening red lights. TSP may be implemented at individual intersections or across corridors or entire street systems. Objectives of TSP include improved schedule adherence and improved transit travel time efficiency while minimizing impacts to normal traffic operations.

TUMF – Transportation Uniform Mitigation Fee – Ordinance enacted by the Riverside County Board of Supervisors and cities to impose a fee on new development in order to fund related transportation improvements.

U

Union Station – Los Angeles Union Station is the main railway station in Los Angeles.

Universal Basic Mobility – Programs that provide qualified residents with subsidies for transit and other mobility services.

UPT – Unlinked Passenger Trips – The number of passengers who board public transportation vehicles. Passengers are counted each time they board vehicles, no matter how many vehicles they use to travel from their origin to their destination.

Urban Areas – Urban Areas in the SCAG region represent densely developed territory and encompass residential, commercial and other nonresidential urban land uses where population is concentrated over 2,500 people in a given locale.

Urban Greening Grant Program – A grant program that competitively distributes grants statewide to projects that reduce GHG emissions, mitigate the effects of extreme heat and provide multiple additional benefits including, but not limited to, a decrease in air and water pollution or a reduction in the consumption of natural resources and energy. The program funds projects that convert an existing built environment into green space that uses natural and green infrastructure approaches. These approaches create sustainable and vibrant communities through improving the sustainability and function of existing urban hardscapes and landscapes.

Urban Growth Boundary – A regional boundary that seeks to contain outward urban expansion by limiting development outside of the boundary while focusing new growth within the boundary. Urban growth boundaries lead to the preservation of natural and agricultural lands, redevelopment and infill in existing communities, and optimization of existing infrastructure and transportation investments.

Urban Heat Island/Heat Island Effect – The intensification of heat in urban areas due to an abundance of materials that include concrete, asphalt and glass, which absorb and retain heat. This compounds the experience of extreme heat and heat waves, which are becoming more common as a result of climate change. Heat islands are disproportionately likely to be found in disadvantaged communities due to legacies of disinvestment and marginalization, resulting in greater heat stress in communities that are already more vulnerable to the impacts of climate change.

U.S. DOT – U.S. Department of Transportation – Federal agency responsible for the development of transportation policies and programs that contribute to providing fast, safe, efficient and convenient transportation at the lowest cost consistent with those and other national objectives—including the efficient use and conservation of the resources of the United States. US DOT is comprised of 10 operating administrations, including FHWA, FTA, FAA and FRA.

V

VCAPCD – Ventura County Air Pollution Control District – The air-pollution control agency with the primary responsibility for the control of non-vehicular sources of air pollution in Ventura County. The District provides a full range of air pollution control activities, including permitting, facility inspection, air quality attainment planning, rulemaking, air quality monitoring and incentive programs. The District shares responsibility with the California Air Resources Board for ensuring that all state and federal air quality standards are achieved and maintained within Ventura County. The VCAPCD is located within the South Central Coast Air Basin.

VCTC – Ventura County Transportation Commission – Agency responsible for planning and funding countywide transportation improvements.

Vehicle Hours of Delay – Travel time spent on the highway due to congestion. Delay is estimated as the difference between vehicle hours traveled at a specified free-flow speed and vehicle hours traveled at a congested speed.

Vehicle Revenue Hours – The hours that a public transportation vehicle actually travels while in revenue service. Vehicle revenue hours include layover/recovery time, but exclude deadheading, operator training, vehicle maintenance testing, and school bus and charter services.

VHDD – Vehicle Hours of Daily Delay – Hours of delay attributed to congestion for vehicles each day.

Vision Zero Policy – A multi-national road traffic safety project that aims to achieve a highway system with no fatalities or serious injuries in road traffic. The policy was started in Sweden and was approved by their parliament in 1997. Since then, various countries (including the United States) have adopted the policy.

VMT – Vehicle Miles Traveled – On roadways, a measurement of the total miles traveled by all vehicles in the area for a specified time period. It is calculated by the number of vehicles times the miles traveled in a given area or on a given roadway during the time period. In transit, it is the number of vehicle miles operated on a given route or line or network during a specified time period.

VRM – Vehicle Revenue Miles – The miles that a public transportation vehicle actually travels while in revenue service. Vehicle revenue miles include layover/recovery time, but exclude deadheading, operator training, vehicle maintenance testing, and school bus and charter services.

Z

ZEV – Zero Emissions Vehicles – Vehicles that produce no tailpipe emissions of criteria pollutants. Generally, ZEVs feature electric powertrains. Technically, ZEVs are still responsible for some greenhouse gas emissions, as the GHG content from the electricity generation must be accounted for. ZEVs include battery electric vehicles (BEV), plug-in electric hybrids (PHEV) when powered by the electric engine and hydrogen fuel cell vehicles (FCV).

GUIDING LAWS

Connect SoCal is developed in alignment with federal and state requirements. Each Metropolitan Planning Organization (MPO) must follow laws related to transportation planning, air quality and performance management. In the State of California, MPOs must follow additional laws related to housing and sustainability planning. Key laws and requirements that drive Connect SoCal include:

Developing a Regional Transportation Plan (RTP) – SCAG is required by federal law to prepare and update a long-range RTP (23 U.S.C. Section 134 et seq.). The RTP must include, among other things: the identification of transportation facilities, such as major roadways, transit, intermodal facilities and connectors that function as an integrated metropolitan system over at least a 20-year forecast period; a financial plan demonstrating how the RTP can be implemented with “reasonably available” resources and additional financial approaches; strategies to improve existing facilities, relieve vehicular congestion, and maximize the safety and mobility of people and goods; and environmental mitigation activities. (23 U.S.C. Section 134 (i)(2)).

Keeping up with Clean Air Act Requirements – With respect to air quality, most areas within the SCAG region have been designated as nonattainment or maintenance areas for one or more transportation-related criteria pollutants. Pursuant to the federal Clean Air Act, SCAG’s 2024 RTP/SCS is required to meet all federal transportation conformity requirements, including regional emissions analysis, financial constraint, timely implementation of transportation control measures and interagency consultation and public involvement (42 U.S.C. Section 7401 et seq.).

Monitoring System Performance – With the passage of the “Moving Ahead for Progress in the 21st Century” (MAP-21) federal transportation authorization legislation in 2012, transportation system performance planning and monitoring became a federal mandate. This commitment

to a national transportation performance management and reporting system was further solidified with the passage of subsequent federal transportation authorization packages, including the “FAST Act” in 2015 and the Infrastructure Investment and Jobs Act (IIJA) in 2021. SCAG has been a pioneer in the development and use of performance metrics to evaluate progress toward achieving regional goals before MAP-21 established the national performance management program, a practice that has only gained momentum over recent years. Starting with the 1998 RTP, SCAG has been using quantitative performance measures to evaluate how well the RTP serves to facilitate achievement of the regional goals established in the Plan.

Developing a Sustainable Communities Strategy – California state law also imposes additional requirements. For example, state law specifies that, “The Plan shall be action-oriented and pragmatic, considering both the short-term and long-term future” (Government Code Section 65080(a)). California Senate Bill 375, codified in 2008 in Government Code Section 65080 (b)(2)(B), also requires that the RTP include a sustainable communities strategy, or SCS, which outlines growth strategies for land use and transportation and helps reduce the state’s greenhouse gas emissions from cars and light-duty trucks. The California Air Resources Board (CARB) has set greenhouse gas reduction targets for the SCAG region at eight percent below 2005 per capita emissions levels by 2020 and 19 percent below 2005 per capita emissions levels by 2035.

Assessing the Region’s Housing Need – The Regional Housing Needs Assessment (RHNA) is mandated by state housing law as part of the periodic process of updating local housing elements of the General Plan. RHNA quantifies the need for housing within each jurisdiction during specified planning periods. This process occurs every eight years and is tied to the RTP/SCS process through Government Code Section 65080(b)(2)(B)(ii) and (iii). SCAG is required to identify areas within the region sufficient to house all of the population and areas within the region sufficient to house this eight-year projection of regional housing need.

SCAG is committed not only to meeting statutory requirements but also to ensuring that Connect SoCal, as with the agency's prior RTP/SCSs, remains a living document that is rooted in strong analysis and evolves with the region's demographics, priorities and economy change.

Plan Alignment

One aspect of performance based long-range planning is aligning with applicable state and federal plans and processes. Two of the critical touchpoints for Connect SoCal alignment are the federal planning factors and the California Transportation Plan 2050.

The federal planning factors are meant to be addressed by the MPO during the consideration and implementation of projects, strategies and services (23 U.S.C. Section 450.306). They are as follows:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency
2. Increase the safety of the transportation system for motorized and non-motorized users
3. Increase the security of the transportation system for motorized and non-motorized users
4. Increase accessibility and mobility of people and freight
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight
7. Promote efficient system management and operation
8. Emphasize the preservation of the existing transportation system

9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation
10. Enhance travel and tourism

The California Transportation Plan (CTP 2050) is a policy framework that provides a vision for the future of the statewide transportation system. The vision for CTP 2050 is "California's safe, resilient, and universally accessible transportation system supports vibrant communities, advances racial and economic justice, and improves public and environmental health." The goals of the CTP 2050 are:

- **Safety:** Provide a safe and secure transportation system
- **Climate:** Achieve statewide GHG emission-reduction targets and increase resilience to climate change
- **Equity:** Eliminate transportation burdens for low-income communities, communities of color, people with disabilities and other disadvantaged groups
- **Accessibility:** Improve multimodal mobility and access to destinations for all users
- **Quality of Life and Public Health:** Enable vibrant, healthy communities
- **Environment:** Enhance environmental health and reduce negative transportation impacts
- **Economy:** Support a vibrant, resilient economy
- **Infrastructure:** Maintain a high-quality, resilient transportation system

Connect SoCal 2024 aligns with both the federal planning factors and the CTP 2050. There is significant overlap between the vision and goals of CTP 2050 and the Plan, with slight deviations to reflect the specific priorities for southern California. For the federal planning factors, these

factors were included in the development of goals, performance measures and guided the development of plan strategies and related analysis.

How the Plan was Developed

Connect SoCal 2024 was developed through a four-year planning process involving rigorous technical analysis, extensive stakeholder engagement and robust policy discussions with the local elected leaders who make up SCAG’s policy committees and Regional Council. This process also included formal input processes for our Project List from County Transportation Commissions and land use and growth data from local jurisdictions. In Spring 2023, SCAG engaged with thousands of people across the region to highlight the issues and policy choices in the region.

Development Timeline

The process for developing the Plan follows four main phases:

Foundations and Frameworks (2021–2022): During this phase, SCAG staff seeks direction from the Regional Council and Policy Committees on the priorities for the upcoming Plan. SCAG adopts its Subregional Sustainable Communities Strategy Framework and Guidelines. SCAG begins meets with a demographic panel of experts to prepare the regional growth forecast and begins engaging with stakeholders on updated Plan goals.

Data Collection and Policy Development (2022–2023): During this phase, SCAG staff collect data and update Plan inputs and assumptions. In June 2022, SCAG’s Regional Council adopted the Policy Development Framework for Connect SoCal 2024 that confirmed the direction for the Plan and established three Special Subcommittees to support Plan policy development. This phase also included two input processes to solicit key information on the Plan: Projects and Land Use.

Outreach and Analysis (2023): During this phase, SCAG completes its statutorily required public workshops along with additional activities to share information about and collect input on the issues and policy choices facing the region. During this time, SCAG staff analyze the input provided by County Transportation Commissions and local jurisdictions and modeling these inputs along with other policies and assumptions.

Draft Plan and Plan Adoptions (2023-2024): During this phase, SCAG releases a draft Plan for public review and comment. At the close of the public comment period, SCAG staff will assess and respond to the comments received and make any necessary updates to the Plan policies, inputs or assumptions in order to prepare a final Plan to be considered for adoption by SCAG’s Regional Council.

Project List

Connect SoCal includes \$750.1 billion of investment in our regional transportation system. SCAG collects projects submitted by County Transportation Commissions (CTCs), based on their county- or district-level needs and goals. These submissions generally align with the Regional Goals and do not undergo an additional selection process. Instead, SCAG assesses transportation performance at the system level (See Chapter 5: Measuring Our Progress for more details). The Connect SoCal project list includes both near-term and long-term investments. The Federal Transportation Improvement Program (FTIP) reflects near-term investments that form the foundation of the RTP project investment strategy and represents the first six years of already-committed funding for projects requiring federal approval or those that are regionally significant. The RTP reflects long-term investments and contains a financially constrained set of transportation projects above



LET’S GET TECHNICAL

Learn more about this regional analysis in the *Performance Monitoring Technical Report*.

and beyond the FTIP, including projects submitted from the CTCs and additional Regional Strategic Investments needed to achieve our goals and performance targets.

The projects submitted by each CTC reflect the needs and goals of each county. Many projects are the result of performance-based decisions at the county or district level, such as through the SHOPP program. Additionally, the CTCs provide performance details on projects that assist in SCAG’s performance-monitoring process. As mentioned above, when SCAG evaluates performance of the Plan, it does so at the regional, or system, level to consider the impacts of strategies and policies that support planned investments. Based on feedback from FHWA and FTA at SCAG’s 2022 Federal Recertification, SCAG will be improving its performance-based planning and programming process to better document how the region uses a regional, performance-based, uniform approach to prioritize and select projects.

Local Data Exchange

On May 23, 2022, SCAG officially launched the Local Data Exchange (LDX) process, which is a local jurisdiction’s opportunity to provide input related to land use and the future growth of employment and households to help the development of Connect SoCal 2024. The LDX process aims to gather the most up-to-date information from local jurisdictions to link and align local planning with a regional plan that can meet federal and state requirements and reflect a regional vision.

In advance of this process, SCAG produced a set of preliminary projections of household and employment growth and GIS maps for each jurisdiction to review. In addition, staff designed and provided an interactive portal and tool through the related Regional Data Platform (RDP) effort to modernize the input process and improve its connection to available technical assistance and Plan implementation.

The LDX also included a survey for local planners to help improve SCAG’s understanding of the trends, existing conditions, local planning

initiatives, opportunities and challenges to meeting growth objectives across Southern California’s jurisdictions. We also ask about the implementation of prior regional plans.

Throughout 2022, SCAG’s Local Information Services Team (LIST) formally met with 164 local jurisdictions to provide background on the data and available tools, and describe the input opportunity. Jurisdictions were asked to review total households and employment in 2019, 2035 and 2050. Input from jurisdictions became the locally reviewed forecasted regional development pattern. SCAG received data inputs from 142 jurisdictions by the December 2, 2022, deadline.

SCAG Leadership

Regional Council: SCAG’s 86-member governing board, the Regional Council, conducts the affairs of SCAG; implements the General Assembly’s policy decisions; acts upon policy recommendations from SCAG policy committees and external agencies; appoints committees to study specific problems and programs; and amends, decreases or increases the proposed budget to be reported to the General Assembly

Policy Committees: SCAG’s decision-making process is also guided by the work of the Executive/Administration Committee, Legislative/Communications and Membership Committee and three Policy Committees. Much of the discussion and debate on issues occurs in the Policy Committees, and all issues considered by the Regional Council must originate through one or more of the committees.

Special Connect SoCal 2024 Subcommittees: In June 2022, SCAG’s Regional Council approved a Policy Development Framework for Connect SoCal 2024 that established three limited-term subcommittees to dive deeper into key areas for Connect SoCal: Next Generation Infrastructure, Resilience & Conservation, and Racial Equity & Regional Planning.

Stakeholder Involvement

Technical Advisory Committees and Working Groups: SCAG's Technical Advisory Committees and Working Groups meet on a regular, recurring basis. These groups convene stakeholders, subject matter experts and representatives or staff from other local, regional and state governments. These groups provide technical or professional expertise to SCAG and advise on program including, but not limited to, Connect SoCal 2024. These groups include:

- Aviation Technical Advisory Committee
- Modeling Task Force
- Regional Planning Working Groups
 - Safe and Active Streets
 - Sustainable and Resilient Communities
 - Equity
 - Natural and Farmlands Conservation
 - Housing
- Regional Transit Technical Advisory Committee
- Technical Working Group
- Transportation Conformity Working Group

Public Engagement: In Spring 2023, SCAG conducted a number of outreach activities to solicit input on the key issues and policy choices in the region. Through the outreach activities, participants engaged with issues related to the Connect SoCal 2024 goal areas (Mobility, Economy, Community and Environment) with additional focus on the special topics of Equity and Resilience. Staff gathered input from residents primarily via a survey that provided contextual and educational information.

- Public workshops: 20 in-person and seven virtual
- Pop-up and street team engagements: 20 events
- Digital and traditional advertising: 100+ transit shelter ads, 15 billboards, ads in 10 print newspapers, radio ads, digital ads including on social media platforms.
- The Connect SoCal Community Partnership Program: 16 community-based-organization partners
- Public survey: 3,600+ responses
- Direct email outreach: 19,000+ contacts

Findings from this outreach process informed an update to the draft Plan vision, goals and strategy development.



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Review the Public Participation and Consultation Technical Report for the full details on SCAG's engagement and consultation process.

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