

2.0 PROJECT DESCRIPTION

Consistent with the provisions of Section 15124 of the State California Environmental Quality Act (CEQA) Guidelines, this section provides information regarding the Program Environmental Impact Report (PEIR) for the 2020- 2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), the Connect SoCal Plan (“Connect SoCal” or “Plan”), including the Plan’s location, objectives and characteristics. Connect SoCal has been prepared to comply with metropolitan planning laws, 23 U.S.C.A. Section 134 et seq. and California Government Code 65080 et seq., which require the preparation of a regional transportation plan that offers policy guidance for projects within SCAG’s jurisdiction.

2.1 INTRODUCTION

Connect SoCal is a long-range comprehensive plan for the region’s multi-modal transportation system. Preparing the Plan is one of SCAG’s primary statutory responsibilities under federal and state law. A regional transportation plan (RTP) is the mechanism used in California by both Metropolitan Planning Organizations (MPOs) and Regional Transportation Planning Agencies (RTPA) to conduct long-range (at least 20-year) planning in their regions. SCAG must adopt an RTP and update it every four years, or more frequently, if the region is to receive federal and state transportation dollars for public transit, streets/roads, and bicycle and pedestrian improvements.

In 2008, California enacted the Sustainable Communities and Climate Protection Act, also known as Senate Bill 375 (Stats. 2012, Ch. 728) (SB 375), which requires MPOs to include a Sustainable Communities Strategy (SCS) element as part of their RTP updates, with the purpose of identifying policies and strategies to reduce per capita passenger vehicle-generated GHG emissions. The SCS is required to identify the general location of land uses, residential densities, and building intensities within the region; identify areas within the region sufficient to house all the population of the region; identify areas within the region sufficient to house an eight-year projection of the regional housing need; identify a transportation network to service the regional transportation needs; gather and consider the best practically available scientific information regarding resources areas and farmland in the region; consider the state housing goals; set forth a forecasted development pattern for the region; and allow the regional transportation plan to comply with the federal Clean Air Act (CAA) of 1970 (42 USC. § 7401 *et seq.*) (Gov. Code, § 65080, subd. (b)(F)(2)(B)), of which, when integrated with the transportation network, and other transportation measures and policies will reduce the GHG from automobiles and light duty trucks to achieve, if there is a reasonable way to do so, the GHG emission reduction targets approved by the California Air Resources Board (ARB). If the SCS does not achieve the GHG emission targets set by ARB,

an Alternative Planning Strategy (APS) must be developed to demonstrate how the targets could be achieved.

In 2012, SCAG adopted its first combined Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), a long-range plan for transportation in the region that links air quality, land use, and transportation needs. The RTP/SCS was last updated in 2016. The proposed Plan updates the growth forecast, land use assumptions, and transportation investments that served as the foundation of both the 2012 and 2016 plans.

The Plan includes a growth forecast with population, household and employment growth anticipated to occur in the SCAG region by 2045; a transportation network including a list of transportation projects in the region; and a forecasted development pattern with land use and transportation strategies that the region could pursue over the Plan horizon. The Plan was developed to achieve targets for greenhouse (GHG) emissions reductions, consistent with SB 375 and other regional goals.

The Plan further identifies the purpose and goals, tracks trends and evaluates project performance, details financial assumptions and expenditures, and profiles key transportation investments. Please see the Draft Connect SoCal Plan and supplementary technical reports for full details, or visit SCAG's Connect SoCal Website located at: <https://www.connectsocial.org/Pages/default.aspx>

This section describes the regional setting, growth forecasts and regulatory framework that provide the context for the Plan. The background information is followed by a description of the Plan, including the Plan's purpose, objectives and key components.

2.2 REGIONAL LOCATION AND GENERAL SETTING

2.2.1 Regional Location

The SCAG region consists of six counties that includes Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura, and 191 cities (**Figure 2.0-1, SCAG Region**). The total area of the SCAG region is approximately 38,000 square miles. Additionally, the SCAG region consists of 15 sub-regional entities that have been recognized by the Regional Council, SCAG's governing body, as partners in the regional policy planning process (**Figure 2.0-2, SCAG Subregions**). The SCAG region is home to approximately 19 million people. This represents 5.8 percent of the 328 million people in the United States and 48 percent of California's population.¹ To the north of the SCAG region are the counties of Kern and Inyo; to the east is State of Nevada and State of Arizona; to the south is the U.S.-Mexico border; to the west and south is the

¹ Connect SoCal Demographics & Growth Report, 2019

county of San Diego; and to the northwest is the Pacific Ocean. The region includes the county with the largest land area in the nation, San Bernardino County; as well as the county with the highest population in the nation, Los Angeles County.

Imperial County. Imperial County covers an area of 4,482 square miles. El Centro is the city with the highest population level in the county, with approximately 46,248 people. Overall, the county has 190,266 residents.²

Los Angeles County. Los Angeles County covers an area of 4,751 square miles. Los Angeles is the city with the highest population level in the county, with approximately 4,040,079 people. Overall, the county has 10,253,716 residents.³

Orange County. Orange County covers an area of 948 square miles. Anaheim is the city with the highest population level in the county, with approximately 359,339 people. Overall, the county has 3,222,498 residents.⁴

Riverside County. Riverside County covers an area of 7,303 square miles. Riverside is the city with the highest population level in the county, with approximately 328,101 people. Overall, the county has 2,440,124 residents.⁵

San Bernardino County. San Bernardino County covers an area of 20,105 square miles. San Bernardino is the city with the highest population level in the county, with approximately 219,233 people. Overall, the county has 2,192,203 residents.⁶

Ventura County. Ventura County covers an area of 2,208 square miles. Oxnard is the city with the highest population level in the county, with approximately 209,879 people. Overall, the county has 856,598 residents.⁷

² SCAG 2019, Local Profile Imperial County <https://www.scag.ca.gov/Documents/ImperialCountyLP.pdf>

³ SCAG 2019 Local Profile Los Angeles County <https://www.scag.ca.gov/Documents/LosAngelesCountyLP.pdf>

⁴ SCAG 2019 Local Profile Orange County <https://www.scag.ca.gov/Documents/OrangeCountyLP.pdf>

⁵ SCAG 2019 Local Profile Riverside County <https://www.scag.ca.gov/Documents/RiversideCountyLP.pdf>

⁶ SCAG 2019 Local Profile San Bernardino County <https://www.scag.ca.gov/Documents/SanBernardino.pdf>

⁷ SCAG 2019 Local Profile Ventura County <https://www.scag.ca.gov/Documents/VenturaCountyLP.pdf>

2.2.2 General Setting

Transportation Network

The region's transportation network comprises more than 9,000 miles of public transit, 5,000 miles of bikeways, 135,578 lane miles of roadways, and 94 miles of express lanes (see **Figure 2.0-3, Existing Transit Network, 2018**; **Figure 2.0-4, Existing Arterial System, 2016**; **Figure 2.0-5, Existing Regional Goods Movement System**; and **Figure 2.0-6, Major Airports in SCAG Region**). The Port of Los Angeles and Port of Long Beach are the largest container importers in the Western Hemisphere that contribute to our expansive goods movement system. The region's aviation system is one of the busiest in the world in terms of air passenger and cargo demand, with more than 110.2 million annual passengers and 3.14 million tons of cargo in 2017. Southern California features:

- 105 miles of heavy and light rail
- 534 miles of commuter rail (Metrolink)
- 9,000 miles of bus routes
- 5,075 miles of bikeways
- 135,578 total lane miles of roadways
- 94 miles of high occupancy toll (HOT) roads

Open Space and Natural Lands

The six counties within the SCAG region contain nearly 23 million acres of "open space" combined. These lands include the region's national forests, state parks, military installations, other public lands, and various private holdings. Much of the open space in the region has been left in its natural state, however many non-native species have transformed what was once native habitat. As of 2018, about half of California has been mapped and classified according to this standard; much of southern California has not yet been classified. Barriers to wildlife movement exist throughout the SCAG region, including large areas of urban development and multilane freeways that cut off regional movement for migratory and resident species alike. These barriers can affect all species from large mammals to small insects and can lead to significant degradation of ecosystem function and plant community composition.

A Habitat Conservation Plan (HCP) is a planning document required as part of an application for an incidental take permit. HCPs describe the anticipated effects of the proposed taking, how the impacts will be minimized and mitigated, and how the HCP is to be funded. A Natural Community Conservation Plan (NCCP) is defined by CDFW as a plan for the conservation of natural communities that identifies

and provides for the regional or area-wide protection and perpetuation of plants, animals, and their habitats. More than 20 million acres of open space within the SCAG region is currently protected under an HCP or NCCP, or will be protected by a future HCP or NCCP that is currently in its planning stages. Data from CDFW and USFWS show 27 plans with durations of 16–80 years providing conservation efforts nearly three million acres in the SCAG region. As a group, these plans provide protection for multiple species by conserving habitats, identifying locations for future mitigation efforts, providing conservation guidance and practices, and preserving important wildlife linkages.⁸

Housing

As of 2018, California ranks 49th of 50 states in the number of housing units per resident. With many strong indications, high demand for housing and short supply drives up rental and home prices throughout the state. Indeed, seven of the 10 most expensive housing markets in the United States are in California.

There are many contributors to the overall housing shortfall, such as zoning, costs and fees that prevent projects from being feasible, time delays, environmental litigation, community resistance to medium and high-density projects, and lack of local funding mechanisms. **Figure 2.0-7, Existing Land Use**, highlights SCAG's existing land use as of 2016. Additionally, population and employment growth in metropolitan areas in California has slowed in recent years because wages cannot compensate for the high cost of housing.

2.3 PROJECT BACKGROUND

The Plan was developed in accordance with applicable metropolitan planning requirements. The following discussion provides an overview of SCAG (responsible and lead agency) as well as the federal and state requirements associated with the preparation of an RTP and SCS.

Founded in 1965, SCAG is a federally designated Metropolitan Planning Organization (MPO) under Title 23, United States Code (USC) 134(d)(1),⁹ for the six-county region. SCAG is designated under California state law as a Council of Governments (COG) and a Regional Transportation Planning Agency (RTPA) for the six-county region. SCAG is a Joint Powers Authority, established as a voluntary association of local governments and agencies.

⁸ SWCA Environmental Consultants, Biological Resources Report for the 2020-2045 RTP/SCS. October 2019

⁹ Federal Highway Administration. 2012. *Title 23, United States Code*. Available online at: <https://www.fhwa.dot.gov/map21/docs/title23usc.pdf>, accessed August 21, 2019.

As stated previously, SCAG develops long-range regional transportation plans including sustainable communities strategy and growth forecast components, regional transportation improvement programs, regional housing needs allocations (RHNA) and assists in the development of the South Coast Air Quality Management Plans. In 1992, SCAG expanded its governing body, the Executive Committee, to a 70-member Regional Council to help accommodate new responsibilities mandated by the federal and state governments, as well as to provide more broad-based representation of Southern California's cities and counties. With its expanded membership structure, SCAG created regional districts to provide for more diverse representation. The districts were formed with the intent to serve equal populations and communities of interest. Currently, the Regional Council consists of 86 members.

In addition to the six counties and 191 cities that make up SCAG's region, there are six County Transportation Commissions that hold the primary responsibility for programming and implementing transportation projects, programs and services in their respective counties. Additionally, SCAG Bylaws provide for representation of Native American tribes and Air Districts in the region on the Regional Council and Policy Committees.

2.3.1 Federal and State Requirements

Fixing America's Surface Transportation (FAST) and Moving Ahead for Progress in the 21st Century Act

Under the FAST (Fixing America's Surface Transportation [Public Law 114-94]) Act and MAP-21 (Moving Ahead for Progress in the 21st Century Act [Public Law 112-141]), the U.S. Department of Transportation (USDOT) requires that metropolitan planning organizations, such as SCAG, prepare long-range RTPs and update them every four years if they are in areas designated as "nonattainment" or "maintenance" for federal air quality standards. Prior to enactment of MAP-21, the primary federal requirements regarding RTPs were included in the metropolitan transportation planning rules—Title 23 CFR Part 450 and 49 CFR Part 613. The FAST Act and MAP-21 make a number of changes to the statutes that underpin these regulations. Key federal requirements for long-range plans include the following:

- RTPs must be developed through an open and inclusive process that ensures public input; seeks out and considers the needs of those traditionally under served by existing transportation systems; and consults with resource agencies to ensure potential problems are discovered early in the RTP planning process;
- RTPs must be developed for a period of not less than 20 years into the future; RTPs must reflect the most recent assumptions for population, travel, land use, congestion, employment, and economic activity;

- RTPs must have a financially constrained element, transportation revenue assumptions must be reasonable, and the long-range financial estimate must take into account construction-related inflation costs;
- RTPs must include a description of the performance measures and performance targets used in assessing the performance of the transportation system;
- RTPs must include a system performance report evaluating the condition and performance of the system with respect to performance targets adopted by the state that detail progress over time;
- RTPs may include multiple scenarios for consideration and evaluation relative to the state performance targets as well as locally developed measures;
- RTPs must conform to the applicable federal air quality plan, called the State Implementation Plan (SIP) for ozone and other pollutants for which an area is not in attainment; and
- RTPs must consider planning factors and strategies in the local context.

Regional Transportation Plan Requirements

An RTP outlines the region's goals and strategies for meeting current and future mobility needs, providing a foundation for transportation planning and funding decisions by local, regional, and state officials that are ultimately aimed at achieving a coordinated and balanced transportation system. In addition, an RTP identifies the region's transportation needs, sets forth actions, programs, and a plan of projects to address the needs consistent with adopted regional strategies and goals, and documents the financial resources needed to implement the RTP. The process for development of the RTP takes into account all modes of transportation, accompanied by a continuing, cooperative, and comprehensive planning approach that is performance driven and outcome-based, consistent with the provisions of MAP-21 and the FAST Act.

The RTP must also comply with Section 65080 of the California Government Code. The state requirements largely mirror the federal requirements and require each transportation-planning agency in urban areas to adopt and submit an updated RTP to the California Transportation Commission (CTC) and the California Department of Transportation (Caltrans) every four years. To ensure a degree of statewide consistency in the development of RTPs, the CTC, pursuant to Government Code Section 14522, adopted RTP Guidelines. The RTP Guidelines include a requirement for program-level performance measures, which include objective criteria that reflect the goals and objectives of the RTP. The RTP Guidelines are intended to assist MPOs with development of their RTPs to be consistent with

federal and state planning requirements. An RTP is used to guide the development of the Federal Transportation Improvement Program (FTIP), a federally mandated four-year program of all regionally important surface transportation projects and all projects that will receive federal funding, as well as other transportation programming documents and plans. Connect SoCal follows the 2017 RTP Guidelines, which were adopted on January 18, 2017.

Sustainable Communities Strategy Requirements

Pursuant to the Sustainable Communities and Climate Protection Act of 2008 (Senate Bill (SB) 375), the SCS is a required component of the RTP. SB 375 directs the California Air Resources Board to set regional targets for reducing GHG emissions. The law establishes a “bottom up” approach to ensure that cities and counties are involved in the development of regional plans to achieve those targets. SB 375 requires that an MPO prepare and adopt an SCS that sets forth a forecasted regional development pattern that reduces GHG emissions associated with the land use and transportation network, measures, and policies. SB 375 is part of California’s overall strategy to reach GHG emissions reduction goals as set forth by Assembly Bill (AB) 32, Senate Bill (SB) 32, and Executive Orders S-03-05 and B-30-15. According to Section 65080(b)(2)(B) of the California Government Code (CGC), the SCS must:

- Identify existing land uses;
- Identify areas to house long-term population growth;
- Identify areas to accommodate an eight-year projection of regional housing needs;
- Identify transportation needs and the planned transportation network;
- Consider resource areas and farmland;
- Consider state housing goals and objectives;
- Set forth an integrated forecasted development pattern and transportation network that will reduce GHG emissions; and
- Comply with the federal Clean Air Act requirements for developing an RTP.

2.4 PURPOSE AND NEED FOR ACTION

Transportation projects for which federal approval is required must be listed in the RTP/SCS and FTIP. Such projects must comply with National Environmental Policy Act (NEPA), which requires the preparation of a statement of purpose and need in conjunction with environmental documents.¹⁰

¹⁰ Electronic Code of Federal Regulations. 2019. §1502.13 *Purpose and need*.

Although adoption of the Plan is not subject to NEPA, SCAG has included this statement of purpose and need to enable project proponents to discuss the purpose and need for their individual projects relative to the Plan.

The SCAG Regional Council has the responsibility for consideration of the Plan with substantial input from its member jurisdictions, agencies, and stakeholders. Since the Plan includes transportation improvements that may involve a federal action (such as the use of federal funds, right-of-way, permits and or leases), the requirement for environmental review under NEPA as set forth in 40 CFR Section 1502.13 may be triggered at the time that project-level design is initiated. Therefore, where determined appropriate by a Lead Agency undertaking a site or project-specific federal action evaluated in this PEIR at the programmatic-level of detail, this statement of purpose and need may be incorporated by reference in site- or project-specific NEPA documents as provided in 40 CFR § 1502.21.¹¹

The purpose of the Plan is to provide a clear, long-term vision of the regional transportation goals, policies, objectives, strategies, and investments along with the land use strategies for the SCAG region while at the same time providing strategies to meet greenhouse gas emissions reduction and air quality conformity requirements. The necessity for the Plan is driven by the need to plan for the region's changing socioeconomic, transportation, financial, technological, and environmental conditions. The Plan is also necessary to plan for improvements to the aging regional transportation system and to preserve its long-term viability in light of projected demographic growth.

2.5 PROJECT DESCRIPTION

The Connect SoCal Plan is an update to SCAG's 2016 RTP/SCS, which had been adopted by SCAG's Regional Council on April 7, 2016, and last amended in September 2018. Building upon the progress made since the 2016 RTP/SCS, Connect SoCal is a long-range visioning plan for the six-county SCAG region, taking into account its transportation needs, existing and projected land use patterns, and job growth. It highlights the existing land use and transportation conditions throughout the SCAG region, and forecasts how it will meet the region's transportation needs between 2020 and 2045. The Plan identifies and prioritizes expenditures of this anticipated funding for transportation projects of all transportation modes: highways, streets and roads, transit, rail, bicycle and pedestrian, as well as aviation ground access. It also includes a set of visions, goals, objectives, policies and performance measures developed through public and stakeholder outreach sessions across SCAG's region.

More specifically, Connect SoCal includes strategies for accommodating projected population, household and employment growth in the SCAG region by 2045 as well as a transportation investment strategy for

¹¹ Electronic Code of Federal Regulations. 2019. §1502.21 *Incorporation by reference*.

the region. The Plan details how the SCAG region can achieve several outcomes essential to the success of the region's long-range transportation and land use goals. The Plan:

- Describes where and how the region can accommodate a 23 percent increase in projected households and 16 percent increase in jobs between 2020 and 2045;
- Details a regional transportation investment given \$633.9 billion in expected revenues from federal, state, regional and local sources over the next 25 years; and
- Complies with SB 375, the state's SCS law, which integrates land use and transportation planning and mandates both a reduction in greenhouse gas emissions from passenger vehicles (19% reduction for the SCAG region) and the provision of adequate housing for the region's 25-year projected population growth.

The Plan is constrained by expected transportation revenues, and identifies transportation and land use strategies to accommodate projected population, household and employment growth and improve the quality of life for existing and future residents.

2.5.1 Local Input and Public Outreach

Local Input Process: The most recent RTP/SCS for the SCAG region was adopted by SCAG in April 2016. State law requires that it is updated every four years. Connect SoCal is an update that builds upon the growth patterns and strategies developed in the 2016 RTP/SCS but with updated planning assumptions that incorporate key economic, demographic and financial trends from the last four years.

SCAG developed a "Bottom-Up Local Input and Envisioning Process," which assisted the agency in understanding as to what is happening at the local level – and formed the basis for projections and strategies in Connect SoCal. The local input process was approved and adopted by the SCAG Regional Council in October 2017.

SCAG held one-on-one meetings with all 197 local jurisdictions. In addition to seeking feedback on regional forecasts of population, household and employment growth, SCAG gathered data on land use, protected natural lands, farmland, flood areas and coastal inundation, regional bikeways, regional truck routes, planned major transit stops, high quality transit corridors, future transit priority areas, and other local data. In addition to the jurisdictions themselves, the data came from county assessors' offices, county transportation commissions, and state and federal partners.

Approximately 90 percent of local jurisdictions provided feedback on one or more data elements requested for local review. Collectively, these towns, cities and counties represent an estimated 94 percent

of the region's residents. SCAG staff also regularly convened a series of technical advisory groups that engaged local, state, and federal agencies in the transportation and sustainable communities planning process.

Coordination with County Transportation Commissions: SCAG worked closely with each of the six county transportation commissions (CTCs) throughout 2018 to update the list of major local transportation projects that were listed in the 2016 RTP/SCS. Each CTC in turn worked with their partner transportation agencies (including transit providers, rail operators, marine port and airport authorities and Caltrans District offices) to finalize a list of county-priority projects to submit to SCAG. This effort culminated in a comprehensive update to the capital list of projects, which numbers in the thousands. SCAG worked collaboratively with key stakeholders to identify additional regional projects that are intended to address challenges that are regional in nature.

Topic Specific Working Groups: SCAG has regularly convened topic-specific working groups, which bring together regional stakeholders to discuss the Plan's development and provide technical expertise. There were seven formal Regional Planning Working Groups, including Active Transportation, Environmental Justice, New Mobility, Natural Lands Conservation, Public Health, Sustainable Communities, and Transportation Safety. Additionally, SCAG convened an Emerging Technologies Committee (ETC). The ETC was formed to identify technological and societal trends (e.g. mobility as a service; zero emissions, automated and connected vehicles; smart cities and ITS; and the future of work) that may fundamentally alter the use of the region's transportation system and land use patterns. Emerging technology is a topic of intense speculation and interest at the regional planning level. Numerous popular press and academic articles have advanced the argument that the transportation sector is currently experiencing a period of changing transportation that has not been seen since the first decades of the previous century. Like that period, changes are now predominantly driven by private sector companies. In addition, the companies driving these changes are doing so through disruptive business models.

Outreach to Community Based Organizations: SCAG conducted a grassroots outreach initiative to engage diverse constituencies across Southern California. SCAG collaborated with 18 community-based organizations (CBOs) from across the region. These organizations assisted with workshop and survey outreach as well as hosting local gatherings for community members to provide input on Connect SoCal.

Survey Input: SCAG used an online platform, Neighborland, to host a survey to solicit input from Southern California residents about perspectives and priorities for various land use and transportation strategies. The survey included both multiple choice and open-ended questions. In total, more than 4,000

responses were collected from a broad sample of residents. The survey was made accessible via SCAG's Connect SoCal Website, at workshops, through CBOs and outreach.

Public Workshops: SCAG sought feedback from residents throughout the region through public engagement initiatives that featured 28 public workshops, an extensive advertisement campaign, a telephone town hall meeting and a widely distributed online survey. Public workshop attendees were asked to review four potential growth scenarios, each with a unique set of strategies. These included enhancing job centers, prioritizing connecting people to more transportation options, protecting natural lands and farmland areas, and planning for our region's future resiliency from natural disasters. More than 600 participants attended the 28 open-house workshops that took place between June and July 2019.

Public Meetings: Connect SoCal was developed through a four-year planning process involving policy discussions with local elected leaders who serve on SCAG's governing body, the Regional Council, and Policy Committees, which include the Energy and Environment Committee (EEC), Transportation Committee (TC) and the Community, Economic and Human Development Committee. Elected officials serving on these committees consist of representatives from county transportation commissions, tribal governments, as well as towns, cities and counties throughout the six-county region. The various components of Connect SoCal were reviewed by SCAG's Regional Council and policy committees in a series of public meetings.

Business Stakeholders: SCAG consulted with its business advisory group, the Global Land Use & Economic (GLUE) Council which formed in April 2009, to advise SCAG staff on the economic implications of the agency's planning activities and to better engage key public and private stakeholders. Membership of the GLUE Council consists of key business and organizational leaders from both the private and public sectors and serves as a resource for SCAG in reviewing regional plans and policy proposals. Over the past year, SCAG staff presented to the GLUE Council key components of Connect SoCal, and they have provided insight on the business, economic and job creation impact of the Plan.

Native American Consultation: In addition to board and committee representation, SCAG reached out to tribal governments during the Connect SoCal development process and conducted a workshop dedicated to Tribal Governments on May 28, 2019.

Pursuant to the *State CEQA Guidelines* and Assembly Bill 52 (Public Resources Code Sections 21080.3.1 and 21080.3.2), SCAG initiated consultation by letter on January 23, 2019 with tribal parties with respect to the PEIR for Connect SoCal to solicit input on how the plan may affect tribal cultural resources and to explore opportunities to avoid or mitigate significant adverse effects.

In summary, as a result of robust outreach, SCAG received 12,000 unique comments during the pre-draft phase of Connect SoCal.

2.5.2 Scenario Planning

To develop Connect SoCal, SCAG developed five unique scenarios (including Trend/Baseline) to illustrate alternative representations of the region in 2045. More specifically, each scenario was designed to explore and convey the impact of where the region would grow; to what extent the growth be focused within existing cities and towns, and how it would grow – the shape and style of the neighborhoods and transportation systems that would shape growth over the period. Descriptions of the five scenarios are as follows:

1. **Trend/Baseline:** This scenario reflects current land use trends carried forward into the future
2. **Existing Plan – Local Input:** This scenario reflects the land use and growth patterns as submitted to SCAG to envision the region in 2045. For transportation, projects planned by each CTC would occur throughout the region.
3. **Networked Destinations:** This scenario assumes that growth occurs near transit stops and new jobs locate in areas with easy access to frequent bus or rail service. Growth was prioritized in Transit Priority Areas (TPA), Livable Corridors, High Quality Transit Areas, (HQTAs) and Neighborhood Mobility Areas (NMA).
4. **Dynamic Centers:** This scenario assumes that growth occurs near existing job centers, transit stations and in walkable neighborhoods, where homes, jobs, shops and services are accessible without a car. Growth was prioritized in Job Centers, TPAs, NMAs, Livable Corridors and HQTAs.
5. **Accelerated Tomorrow (Unconstrained):** This scenario assumes that funding is available to invest in expanded bus and rail networks, and there is additional revenue to make existing transit service faster and more reliable. Additionally, new investments would occur in public infrastructure, which focus on active transportation and facilitate connections between transit, jobs, homes and local destinations. Growth was prioritized in TPAs, Livable Corridors, Job Centers, HQTAs and NMAs.

Planning Assumptions

Planning assumptions related to the development of the Plan include, demographic, economic, and financial considerations. A description of these assumptions is as follows:

Demographic Assumptions

On a national level, population growth has slowed, with the US Census Bureau projecting a decrease in national annual growth rate from about 0.75 percent in 2016 to approximately 0.40 percent by the 2040s. In the SCAG region, growth is similarly slowing down, from about 0.85 percent in 2020 to about 0.45 percent by 2045.

While growth rates are at a historic low; a gradual increase to the total population is expected. In the SCAG region, a 0.6 annual growth rate corresponds to about 114,000 new residents annually, or 3.2 million new residents between 2019 and 2045. At the county level, the region anticipates population increases of 9.1% to 35.4% for its six-county area (**Table 2.0-1, 2019-2045 Population, Households and Employment Projections in the SCAG Region**)

**Table 2.0-1
2019-2045 Population, Households, and Employment Projections in the SCAG Region**

County Name	Population 2019	Population 2045	Percentage Increase	Households 2019	Households 2045	Percentage Increase	Employment 2019	Employment 2045	Percentage Increase
Imperial	207,700	281,200	35%	58,000	92,500	59%	77,300	130,200	68%
Los Angeles	10,333,600	11,677,200	13%	3,409,500	4,124,500	21%	4,826,600	5,382,200	12%
Orange	3,250,100	3,534,600	9%	1,053,500	1,153,500	10%	1,765,600	1,980,400	12%
Riverside	2,462,600	3,251,700	32%	758,300	1,086,100	43%	812,800	1,102,700	36%
San Bernardino	2,217,100	2,815,500	27%	656,500	874,800	33%	828,300	1,063,800	28%
Ventura	868,600	947,500	9%	276,100	306,400	11%	346,400	389,400	12%
SCAG Region	19,339,700	22,507,200		6,211,900	7,638,600		8,657,138	10,048,500	

Source: SCAG 2019

As growth rates are declining, the population is also aging. From 2000 to 2016, the region's median age increased from 32.3 to 35.8. By 2045, this number is expected to reach 39.7.

From 2010 to 2019, an additional 1,288,228 people moved to Southern California. Los Angeles County had the largest share of population growth among the six counties in the SCAG region during this period, adding an additional 514,935 new residents (approximately 42 percent of the region's increase in population). Riverside County followed with the next largest share and experienced an increase of 272,951 new residents (nearly 22 percent of the region's increase in population).

Economic Assumptions

The distribution of income and wealth in Southern California has been changing gradually. Median incomes have increased in the SCAG region since the depths of economic recession of 2007 to 2009, but when adjusted for inflation, the median household income in the SCAG region is below what it was in 1989.

The region has experienced job growth since 2010, gaining 1.3 million jobs and cresting the pre-recession high of 8.1 million jobs reached in 2007. Meanwhile unemployment has dropped from a high of 12.4 percent in 2010 to 4.3 percent in 2018. However, an estimate of potential impacts of automation on regional employment by 2045 suggests that construction, repair, transportation, food preparation, sales, social services and office support occupations have the highest likelihood of automation/displacement. Today these industries together employ more than 3 million workers region wide.

Planning for more housing and jobs near transit was a strategy incorporated in SCAG's first SCS in 2012 and carried forward in the 2016 RTP/SCS with a focus on areas well served by transit. Between 2008 and 2016, nearly 50 percent of household growth and 44 percent of employment growth occurred within high-quality transit areas (i.e., the half mile surround rail transit stops or bus stops/corridors that have peak headways of 15 minutes or less) (**Table 2.0-2, Recent Growth Trends in SCAG Growth Priority Areas**). **Figure 2.0-8, SCAG Growth Priority Areas**, shows the location of these areas in the region. Between 2008 and 2016, less than six percent of household growth and less than five percent of employment growth occurred in open space areas.

Table 2.0-2
Recent Growth Trends in SCAG Growth Priority Areas

	Land Area		Share of Total Growth (2008-2016)		
	Acres	Percent	Population	Households	Employment
SCAG Region Total	24,717,287				
Growth Priority Areas Total	1,320,772	5.3%	64.4%	68.0%	77.3%
High-Quality Transit Areas (HQTA) ¹	616,668	2.5%	44.3%	49.9%	44.2%
Transit Priority Areas (TPA) ¹	208,252	0.8%	19.8%	28.0%	19.1%
Specific Plans	592,819	2.4%	20.9%	21.8%	26.6%
Specific Plan / TPA ²	56,212	0.2%	7.1%	7.7%	8.9%
Job Centers	202,186	0.8%	13.8%	20.8%	28.1%
Neighborhood Mobility Areas	248,916	1.0%	23.6%	31.6%	24.0%
Livable Corridors ³	552,023	2.2%	38.0%	43.9%	49.9%
Constraint Areas Total⁴	18,840,937	76.2%	4.6%	5.9%	4.8%
Open Space ⁵	15,078,003	61.0%	2.7%	3.7%	1.1%
Farmland ⁶	2,593,038	10.5%	4.9%	5.6%	1.9%
Flood Hazard Areas ⁷	1,313,531	5.3%	18.0%	13.5%	17.2%
High Risk of Wildfire ⁸	4,401,328	17.8%	11.0%	11.2%	14.8%

Source: SCAG

¹ Extracted from draft 2045 plan year data of the Connect SoCal, 2020-2045 RTP/SCS

² Overlaps between specific plan boundaries and the 2045 Transit Priority Areas (TPA)

³ Using 0.5 mile buffers from the Livable Corridors

⁴ Including open space, military installations, and tribal lands

⁵ Including the California Protected Areas Database (CPAD) and the California Conservation Easement Database (CCED). Please note CPAD does not include: military lands used primarily for military purposes, tribal lands, private golf courses, and public lands not intended for open space.

⁶ Including Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance and Grazing lands

⁷ Including the 100-year (1% annual chance of occurring) and 500-year (0.2% annual chance of occurring) flood zones

⁸ Including 'High' and 'Very High' wildfire hazard classifications

Financial Assumptions

In accordance with federal fiscal constraint requirements, Connect SoCal is a financially constrained Plan. Connect SoCal identifies the amount of funding that is reasonably expected to be available to build, operate, and maintain the region's surface transportation system through the forecast horizon year of 2045.

The financially constrained Connect SoCal includes both a "traditional" core revenue forecast comprised of existing local, state, and federal sources, and more innovative but reasonably available sources of revenue to implement a program of improvements.

The financial plan's forecast of core revenue totals approximately \$638.6 billion from both core and reasonably available resources. Local sources comprise 61 percent of the funding and the largest share of core revenues, followed by state sources which comprise 31 percent of revenue, federal sources comprise 8 percent of revenue.

As shown in **Table 2.0-3**, capital projects total \$287 billion in nominal dollars. Operating and maintenance (O&M) costs total \$316 billion, while debt service obligations total \$35.6 billion. Transit-related costs comprise the largest share of O&M costs for the region, totaling \$173.9 billion.

**Table 2.0-3
Connect SoCal Expenditure (in Billions)**

Capital Projects and Other Programs	\$287.0
Arterials	\$20.8
Goods Movement (including Grade Separations)	\$65.7
High-Occupancy Vehicle/Express Lanes	\$13.6
Mixed-Flow and Interchange Improvements	\$10.3
Transportation System Management (Including ITS)	\$13.7
Transit	\$66.8
Passenger Rail	\$53.2
Active Transportation	\$17.7
Transportation Demand Management	\$7.3
Other	\$18.1
Operations and Maintenance	\$316.0
State Highways	\$68.0
Transit	\$173.9
Passenger Rail	\$26.6
Regionally Significant Local Streets and Roads	\$47.5
Debt Service	\$35.6
Cost Total	\$638.6

Source: SCAG

Note: due to rounding, the total will not exactly match.

*Includes \$4.8 billion for active transportation in addition to capital project investment level of \$17.7 billion for a total of \$22.5 billion for active transportation improvements

**Includes Safety, Pooled Incentives, Mobility Equity Fund, Regional PEV Charger Program, and Others

**Table 2.0-4
Connect SoCal Revenue Sources**

Local	Sales Tax	\$210.1
	– Local Option Sales Tax Measures	\$172.6
	– Transportation Development Act (TDA)—Local Transportation Fund	\$37.6
	Transit Farebox Revenue	\$27.3
	Highway Tolls (in core revenue forecast)	\$32.7
	Mitigation Fees	\$2.5
	Other Local Sources	\$30.2
	Local Total	\$302.8
State	State Transportation Improvement Program (STIP)	\$5.6
	– Regional Transportation Improvement Program (RTIP)	\$4.2
	– Interregional Transportation Improvement Program (ITIP)	\$1.4
	State Highway Operation and Protection Plan (SHOPP)	\$63.0
	Highway Users Tax Account (HUTA)	\$36.7
	Road Maintenance and Rehabilitation Account (RMRA)	\$24.3
	State Transit Assistance Fund (STA)	\$14.2
	Cap-and-Trade Auction Proceeds	\$2.2
	Other State Sources	\$9.2
	State Total	\$155.4
Federal	Federal Transit	\$25.0
	– Federal Transit Formula	\$19.0
	– Federal Transit Non-Formula	\$6.0
	Federal Highway & Other	\$16.1
	– Congestion Mitigation and Air Quality (CMAQ)	\$5.3
	– Surface Transportation Block Grant (STBG)	\$7.5
	– Other Federal Sources	\$3.3
	Federal Total	\$41.1
New	Federal Gas Excise Tax Adjustment	\$2.7
	Mileage-Based User Fee (Replacement)	\$42.7
	TIFIA/RRIF Credit Assistance; Bond Proceeds	\$2.2
	Private Equity	\$6.3
	Local Road Charge Program	\$77.8
	Enhanced Infrastructure Financing District	\$3.0
	TNC Fee	\$4.7
New Revenue Total	\$139.4	
Revenue Total	\$638.6	

Source: SCAG Connect SoCal, 2019

Modeling

The CTC 2017 RTP Guidelines recommend that the largest metropolitan areas should build formal microeconomic land use models to analyze and evaluate proposed changes in land use, economic, and transportation system. SCAG uses Regional Travel Demand Model/Activity Based Model (ABM) and Scenario Planning Model (SPM) as an integrated model framework to evaluate the relationship of transportation and land use. This allows for analysis of how transportation projects affect the surrounding land use pattern, as well as how changes to household and employment locations affect transportation demand, and ultimately affect GHG emissions.

Regional Travel Demand Model / Activity Based Model (ABM)

SCAG is the primary agency responsible for the development and maintenance of travel demand forecasting models for the SCAG region. SCAG has been developing and improving these travel demand forecasting models since 1967. SCAG's Modeling Task Force, consisting of modeling technical peers from the various county and state agencies and private firms, meets every other month at SCAG to discuss regionally significant modeling projects and modeling issues, including the development, maintenance, and application of SCAG's Regional Travel Demand Model as well as the travel demand models used by other stakeholder agencies.

SCAG's Regional Travel Demand Model is an activity-based model that meets or exceeds the state of the practice. The Model meets all the requirements of the Transportation Conformity Rule, specifically 40 CFR 93.122(b)). The results from the Regional Travel Demand Model are input to the ARB's Emission Factors (EMFAC 2014) model for calculating regional emissions.

SCAG's regional transportation modeling area covers the entire SCAG region, including the Counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. This modeling area is divided into 11,267 Transportation Analysis Zones (TAZs) with an additional 40 external cordon stations, 12 airport nodes, and 31 port nodes for the Ports of Los Angeles and Long Beach. A comprehensive model validation was also performed to ensure the model properly replicates base-year (2016) travel conditions, which is the base year for Connect SoCal.

Scenario Planning Model (SPM)

SCAG's Scenario Planning Model (SPM) is a data management, land use planning and modeling tool built on the open source version of UrbanFootprint platform (UF 1.5), which was originally developed by Calthorpe Analytics in partnership with SCAG and other California Public Agencies. UF1.5 is available and free for public use, downloadable from California Strategic Growth Council's website. SPM enables

the creation and organization of local and regional data, plan and policies, facilitates scenario creation and editing and estimates a wide range of potential benefits resulting from alternative transportation and land use strategies.

SPM has been deployed as two separate web services: Data Management (DM) tool and Scenario Development and Analysis (SD) tool. SPM-DM provides a common data framework within which local planning efforts can be easily integrated and synched with regional plans. Using a variety of data management and review options, the user (local jurisdictions) can explore data, export attributes and edit configured layers. SPM-DM was released in November 2018 to all 197 local jurisdictions in the SCAG region in support of SCAG's local input and envisioning process for the Connect SoCal. To assist cities and counties in using the tool, a total of 21 hands-on training sessions in a classroom setting have been provided throughout the region. SPM-SD includes a suite of tools and analytic engines that facilitate scenario creation and editing with advanced analytic capabilities and allow meaningful comparison across different land use and transportation options. Starting with the 2016 RTP/SCS, SPM-SD has been used in providing directional and order-of-magnitude impacts of local land use and policy decisions that would assist in the development of regional plans and associated scenario analysis.

2.5.3 Goals and Guiding Principles

SCAG developed goals for Connect SoCal, which fall into four core categories: economy, mobility, environment and healthy/complete communities. The Plan lays out goals related to housing, transportation technologies, equity and resilience in order to adequately reflect the increasing importance of these topics in the region, and where possible the goals have been developed to link to potential performance measures and targets (see **Table 2.0-5**). The Plan's guiding policies magnify these goals, creating a specific direction for Plan investments (see **Table 2.0-6**).

**Table 2.0-5
Connect SoCal Goals**

Connect SoCal Goals	
1	Encourage regional economic prosperity and global competitiveness.
2	Improve mobility, accessibility, reliability, and travel safety for people and goods.
3	Enhance the preservation, security, and resilience of the regional transportation system.
4	Increase person and goods movement and travel choices within the transportation system.
5	Reduce greenhouse gas emissions and improve air quality.
6	Support healthy and equitable communities.
7	Adapt to a changing climate and support an integrated regional development pattern and transportation network.
8	Leverage new transportation technologies and data-driven solutions that result in more efficient travel.
9	Encourage development of diverse housing types in areas that are supported by multiple transportation options.
10	Promote conservation of natural and agricultural lands and restoration of critical habitats.

Source: SCAG

**Table 2.0-6
Connect SoCal Guiding Principles**

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

Source: SCAG

2.5.4 Performance Measures

Federal policy also requires that SCAG set performance measures and targets in Connect SoCal. As required under MAP-21, in 2016 and 2017 the FHWA issued national performance measures and guidelines for use in the setting of statewide and regional performance targets. The FHWA rule-making process established a four-year performance target setting and reporting cycle, with a two-year mid-term

progress evaluation point. SCAG coordinated closely with Caltrans in the establishment of specific performance targets for the state and for our region in the various transportation performance areas established under MAP-21. These targets provide quantifiable objectives to achieve each measure during the performance period.

The Plan has a number of performance measures that are closely tied to its vision, goals and guiding policies. These ensure that the implementation of the Plan moves the SCAG region closer to achieving these vision, goals and policies. Plan performance is measured under eight categories as shown in **Table 2.0-7, Connect SoCal Performance Measures**. These performance measures are built upon but updated from those developed for the 2016 RTP/SCS to ensure that there is consistency when tracking and assessing the region's performance and whether this is meeting and exceeding federal and state requirements. It is also intended to help quantify regional goals, estimate potential impacts of proposed investments, and evaluate progress over time. Recognizing that the proposed land use and transportation strategies are expected to have impacts beyond those that are exclusively transportation-related, the health outcome was first introduced in the 2012 RTP/SCS and was also addressed in the 2016 RTP/SCS. These health-related measures are tied with the proposed transportation investments in transit, and transportation, more walkable communities, and land use strategies, which focus new housing and employment in the region's High-Quality Transit Areas (HQTAs), livable corridors and neighborhood mobility areas.

As stated previously, the Plan is constrained by expected transportation revenues, household and employment growth. The Plan creates a list of transportation projects that are eligible for future funding but does not program funds to specific transportation projects (**See Appendix 2.0, Plan Project List**). While the Plan identifies transportation and land use strategies that accommodate expected growth and improve the quality of life for existing and future residents, it does not change local land use policies. Individual jurisdictions retain all local land use authority.

**Table 2.0-7
Connect SoCal Performance Measures**

Outcome	Performance Measures	Connect SoCal Goals
Location Efficiency	Share of regional household growth occurring in HQTAs	7, 9
	Share of regional employment growth occurring in HQTAs	1, 7
	Land consumption	7, 10
	VMT per capita	2, 5
	Average distance traveled for work and non-work trips	2, 5
	Percent of trips less than 3 miles	2, 5
	Work trip length distribution	2, 5
Mobility and Accessibility	Person delay per capita	2, 4
	Person hours of delay by facility type (mixed flow/ HOV/arterials)	2, 4
	Truck delay by facility type (highways/arterials)	1, 4
	Travel time distribution by mode	2, 8
	Transit mode share	4, 7
	Mean commute time	2, 8
Safety and Health	Collision fatality rate	2, 6
	Collision serious injury rate	2, 6
	Air pollution-related health measures	5, 6
	Physical activity-related health measures	6, 7
	Mode share for walking and biking	6, 7
Environmental Quality	Greenhouse gas (GHG) emissions reduction	5, 6
	Criteria pollutant emissions	5, 6
	Non-SOV mode share	2, 4
Economic Opportunity	New jobs supported by improved economic competitiveness	1, 4
	New jobs supported by transportation system investments	1, 3
Investment Effectiveness	Transportation system investment benefit/cost ratio	1, 3
Transportation System Sustainability	Cost per capita to preserve multimodal transportation system in current state of good repair	1, 3
	Interstate highway pavement condition	1, 3
	Non-interstate National Highway System pavement condition	1, 3
	National Highway System bridge condition	1, 3
Environmental Justice	Environmental Justice Performance Measures	6, 9

Source: SCAG 2019

2.5.5 Connect SoCal Document Framework

The Plan discusses how the SCAG region could grow over the next 25 years (to year 2045) and identifies transportation and land use strategies to enable a more sustainable, equitable, and economically vibrant future. The document updates the region's previous RTP/SCS, adopted in 2016. The document is organized into seven chapters as follows:

0. Making Connections – an introduction to the Plan.
1. About the Plan – a description of the Plan including goals and guiding principles and description of how the Plan was developed as well as identification of the laws that guide the Plan.
2. SoCal Today – identification of major trends, population and demographic changes, regional growth, a description of the transportation system (and mode choices), identification of farmland lost and at-risk, discussion of transportation safety, discussion of public health, discussion of access and mobility, funding, planning for disruption and moving towards solutions.
3. A Path to Greater Access, Mobility and Sustainability – a description of the proposed transportation strategies and sustainable communities strategies
4. Paying Our Way Forward – a description of how the transportation projects are anticipated to be financed.
5. Measuring Our Progress – identification of how the performance of the Plan is measured.
6. Looking Ahead – a summary of the challenges that lie ahead.

The Plan also includes the following supplemental technical reports:

- Active Transportation
- Aviation and Airport Ground Access
- Congestion Management (including a TDM Toolbox of Strategies)
- Demographics and Growth Forecast
- Economic and Job Creation Analysis
- Emerging Technologies
- Environmental Justice

- Goods Movement
- Highways and Arterials
- Natural and Farm Lands Conservation
- Passenger Rail
- Performance Measures
- Project List
- Public Health
- Public Participation and Consultation
- Sustainable Communities Strategy
- Transit
- Transportation Conformity Analysis
- Transportation Finance
- Transportation, Safety and Security

2.5.6 Land Use and Transportation Strategies

Since the Plan foresees regional growth along with transportation system improvements, it identifies land use and transportation strategies aimed at increasing transportation choices with a reduced dependence on automobiles and an increase growth in walkable, mixed-use communities and HQTAs. Increased choices in mobility, enhanced quality of life, and increasing sustainability practices could also lead to improved air quality in the region.

Land Use Strategies

The land use strategies included in the Connect SoCal Plan are built upon strategies listed in the 2016 RTP/SCS and are intended to increase travel mode choices, guide future land development, and improve air quality. It also attempts to balance the region's land use choices with its transportation investments.

The Plan includes land use strategies with the committed and projected transportation investments such that they emphasize system preservation and enhancement, active transportation, and land use integration. These strategies identify how the SCAG region can implement Connect SoCal and achieve related GHG reductions. It is important to note that SCAG does not have a direct role in implementing

the Sustainable Communities Strategy – neither through decisions about what type of development goes where, nor what transportation projects are ultimately built. Connect SoCal’s land use strategies are as follows:

1. Focus Growth Near Destinations and Mobility Options

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

2. Promote Diverse Housing Choices

- Preserve and rehabilitate affordable housing and prevent displacement
- Identify opportunities for new workforce and affordable housing development
- Create incentives and reduce regulatory barriers for building context-sensitive accessory dwelling units to increase housing supply
- Provide support to local jurisdictions to streamline and lessen barriers to housing development that supports reduction of greenhouse gas emissions

3. Leverage Technology Innovations

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

4. Support Implementation of Sustainability Policies

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

5. Promote a Green Region

- Support development of local climate adaptation and hazard mitigation plans, as well as project implementation that improves community resiliency to climate change and natural hazards

- Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration
- Integrate local food production into the regional landscape
- Promote more resource efficient development focused on conservation, recycling and reclamation
- Preserve, enhance and restore regional wildlife connectivity
- Reduce consumption of resource areas, including agricultural land
- Identify ways to improve access to public park space

Priority Growth Areas

Consideration of the Plan requires an understanding of several more localized geographies. Priority Growth Areas (PGAs) follow the principles of center-focused placemaking. Connect SoCal's PGAs – Job Centers, Transit Priority Areas (TPA), HQTAs, NMAs, and Livable Corridors – account for only five percent of region's total land area, but implementation of SCAG's recommended growth strategies will help these areas accommodate 76 percent of forecasted household growth and 86 percent of forecasted employment growth by 2045. 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.

Job Centers: Job centers are where regional strategies that support economic prosperity are identified. Job centers represent areas that have a significantly higher employment density than surrounding areas. Employment growth and residential growth are prioritized in job centers to leverage existing density and infrastructure. SCAG has identified 70+ job centers in the region (see **Figure 2.0-9, SCAG Region Proposed Job Centers**).

Transit Priority Areas: TPAs are PGAs that are within one half mile of existing or planned 'major' transit stops in the region (See **Figure 2.0-10, Transit Priority Areas**). A 'major' transit stop is defined as a site containing an existing or planned rail transit station, a ferry terminal served by either a 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. Although TPAs comprise less than one percent of Southern California's land area, around 35 percent of new households are projected to occur within these transit rich areas.

High Quality Transit Areas: HQTAs are corridor-focused PGAs within one half mile of an existing or

planned fixed guideway transit stop or a bus transit corridor where buses pick up passengers at a frequency of every 15 minutes (or less) during peak commuting hours. HQTAs represent less than three percent of the region's acreage but are projected to accommodate nearly 55 percent of new households between 2016 and 2045. (See **Figure 2.0-11, High-Quality Transit Areas throughout the SCAG Region in 2045**) Infrastructure investments that support walkable, compact communities that integrate land use and transportation planning for a better-functioning built environment are essential within HQTAs. Active transportation and new developments should respond to the existing physical conditions of the surrounding area. Sensitively designed TODs can preserve existing development patterns and neighborhood character while providing a balance of modal and housing choices.

Neighborhood Mobility Areas: NMAs focus on creating, improving, restoring and enhancing safe and convenient connections to schools, shopping, services, places of worship, parks, greenways and other destinations (See **Figure 2.0-12, Neighborhood Mobility Areas**). NMAs are PGAs with robust residential to non-residential land use connections, high roadway intersection densities and low-to-moderate traffic speeds. NMAs can encourage safer, multimodal, short trips in existing and planned neighborhoods and reduce reliance on single occupancy vehicles. NMAs support the principles of center focused placemaking. Fundamental to neighborhood scale mobility in urban, suburban and rural settings is encouraging "walkability," active transportation and short, shared vehicular trips on a connected network through increased density, mixed land uses, neighborhood design, enhanced destination accessibility and reduced distance to transit. From 2016 to 2045, nearly 33 percent of new households are projected to be in NMAs. Although 38 percent of all trips made in the SCAG region are three miles or less, more than 78 percent of these short trips are made by driving.

Livable Corridors. Livable corridors are arterial roadways where jurisdictions may plan for a combination of the following elements: high-quality bus frequency; higher density residential and employment at key intersections; and increased active transportation through dedicated bikeways. Most Livable Corridors would be located within HQTAs (See **Figure 2.0-13, Livable Corridors**).

Transportation Strategies

Connect SoCal recognizes that the region can no longer afford to rely solely on expanding the transportation system to address the region's many changes and challenges. There is a need to use a comprehensive planning approach for a transportation system that focuses on preservation, sustainability, and productivity, as well as strategic expansion. Anticipated land use patterns as part of Connect SoCal provide a strategic opportunity to build a smart transportation system that is responsive to the region's changes and challenges. Connect SoCal includes proposed strategies for transportation

investments, totaling approximately \$638.6 billion (See **Table 2.0-3, Connect SoCal Expenditure [in billions]**). Proposed transportation strategies are as follows:

System Preservation. A top priority is to maintain and preserve the transportation infrastructure through a “Fix it First” principle. Anticipated funding provided by Senate Bill 1 offers an opportunity to strategically reinvest in the transportation network to realize an improvement in the conditions of the existing system. A key strategy for system preservation is to include preventative maintenance of roadways as part of project costs and work plans. The timeframe to perform preventative maintenance can be days, while construction of a new roadway can take years, causing more increased inconvenience and congestion on the network as residents use alternate routes not built for such demand. Connect SoCal allocates approximately \$68 billion over the plan period to ensure a well maintained and resilient system for generations to come.

Manage Congestion. Connect SoCal also seeks to optimize the existing transportation system to meet increased demand levels through the use of innovative strategies that leverage the existing transportation infrastructure. Physical solutions can include reversible lanes and policy solutions can include congestion pricing concept along with other solutions. Congestion strategies may include but are not limited to the following:

- **Congestion Management Process.** The Congestion Management Process (CMP) aims to provide effective management of the regional transportation system through monitoring and maintenance, demand reduction, analysis of local land use decisions, operational management strategies and strategic capacity enhancements. Federal regulations require the development, establishment and implementation of a CMP. Consistent with federal requirements, SCAG implements, monitors and evaluates these actions as part of Connect SoCal. These eight actions are as follows:
 - Develop Regional Objectives for Congestion Management
 - Define CMP Network
 - Develop Multimodal Performance
 - Collect Data/Monitor System Performance
 - Analyze Congestion Problems and Needs
 - Identify and Assess Strategies
 - Program and Implement Strategies
 - Evaluate Strategy Effectiveness

- **Congestion Pricing.** Connect SoCal identified three congestion pricing strategies, two of which were incorporated into the 2012 and 2016 RTP/SCS:
 - Develop a network of express lanes, that connects to existing express lanes in order to accommodate growing inter-county travel
 - Establish a mileage-based user fee to generate a funding source for aging infrastructure and construction of other travel options
 - Develop Cordon/Area Pricing which involves charging a variable or fixed fee to drive into or within a highly congested area.
- **Transportation Demand Management.** Transportation Demand Management (TDM) is a set of strategies that aims to reduce the demand for roadway travel, particularly from single-occupancy Vehicles (SOVs). TDM investments can reduce congestion and shift trips from SOVs to other modes in ways that often cost significantly less than roadway or transit capital expansion projects. TDM strategies add transportation choices that improve sustainability, public health and the quality of life by reducing congestion, air pollution and greenhouse gas emissions. When transit ridership, carpooling, biking and walking increase, the efficiency of the entire transportation system improves, bringing many benefits to the region. These benefits can justify relatively modest public expenditures on effectively implemented TDM programs. Connect SoCal commits \$7.3 billion through 2045 to implement TDM strategies throughout the region. There are three primary goals of this program:
 - Reduce the number of SOV trips and per capita VMT through ridesourcing (which includes carpooling and vanpooling) and providing first/last mile services to and from transit
 - Redistribute or eliminate vehicle trips during peak demand periods by supporting telecommuting and alternative work schedules
 - Reduce the number of SOV trips through use of other modes such as transit, rail, bicycling, and walking, or other micro-mobility modes

Automated Vehicle Technology and Car to Car Communication Systems. Automated/Connected Vehicle technologies cover a range of advancements that allow vehicles to operate without drivers and coordinate with other vehicles. This includes on-board sensing capabilities, data integration and vehicle to vehicle communication.

Transit. Since 1991, the region has spent more than \$77 billion on transit (in 2016 dollars). This trend is expected to continue, as the combined costs for transit capital projects and operations and maintenance

(O&M) total nearly half of the investments in Connect SoCal. The Plan includes significant investment across all transit modes, with \$66.8 billion toward transit capital projects and \$173.9 billion for transit O&M. **Table 2.0-8, Selected Transit Capital Projects**, displays selected major transit capital projects included in Connect SoCal, while the map in **Figure 2.0-14, 2045 Plan Transit Network** and **Figure 2.0-15 Major Rail Projects**, display the 2045 Plan transit and rail network.

**Table 2.0-8
Selected Transit Capital Projects**

County	Project
Los Angeles	Airport Metro Connector
Los Angeles	BRT Connector – Orange/Red Line to Gold Line
Los Angeles	Crenshaw/LAX Transit Corridor
Los Angeles	Historic Los Angeles Streetcar
Los Angeles	East San Fernando Valley Transit Corridor
Los Angeles	Gold Line Extension Phase 2 to South El Monte
Los Angeles	Gold Line Foothill Extension – Azusa to Claremont
Los Angeles	Green Line Extension to Torrance
Los Angeles	LAX Automated People Mover
Los Angeles	North San Fernando Valley Transit Corridor
Los Angeles	Orange Line BRT Improvements
Los Angeles	Purple Line Westside Subway Extension to La Cienga, Century City, Westwood
Los Angeles	Regional Connector
Los Angeles	Sepulveda Pass Transit Corridor (Phase 2)
Los Angeles	Vermont Transit Corridor
Los Angeles	West Santa Ana Branch Transit Corridor
Los Angeles	Green Line Extension to Norwalk/Santa Fe Springs Metrolink Station
Los Angeles	Red Line Extension to Hollywood Burbank Airport
Los Angeles	Slauson Light Rail – Crenshaw/LAX Transit Corridor to Blue Line
Orange	OC Streetcar
Orange	OC Transit Vision
Riverside	Rapid Commuter Corridor From Parris To San Jacinto
Riverside	RapidLink Service – Riverside, Moreno Valley, Perris
Riverside	Coachella Valley BRT
San Bernardino	Foothill/San Bernardino BRT
San Bernardino	Gold Line Extension to Montclair
San Bernardino	Passenger Rail Service from San Bernardino Metrolink to Ontario Airport
San Bernardino	Redlands Passenger Rail
San Bernardino	West Valley Connector Phase I

Source: SCAG Connect SoCal 2019

Micro-Transit. Micro-transit is more flexible than traditional bus service in that it either uses dynamic routing, smaller vehicles or on-demand service that allows greater efficiency and convenience. Some micro-transit services exist in Southern California. The vast majority of transit riders could benefit from micro-transit.

Passenger Rail. Connect SoCal strategies for passenger rail in the SCAG region consists of four main elements:

- **Grow Ridership:** Although ridership on commuter and intercity rail services has steadily grown over the last two decades, there is still tremendous potential to significantly increase ridership in the region.
- **Provide More Frequent and New Services:** Providing more frequent rail service will attract new riders to passenger rail. Currently, commuter rail service in Southern California is much less frequent than commuter rail services elsewhere in the nation. There are also several unserved passenger rail markets that would greatly benefit from the establishment of new rail service.
- **Improve Connectivity:** While progress has been made in connecting passenger rail services to other existing transit in our region, more needs to be done to coordinate schedules and connections. Also, more progress must be made in first/last mile connections to rail stations, and station area planning and transit-oriented development (TOD).
- **Secure Funding:** New funding opportunities have been created since the 2016 RTP/SCS, such as the first dedicated source for rail operations at the state level. However, passenger rail funding in the region is still incremental in nature and to grow ridership via increased service levels, more long-term state and federal financing needs to be identified.

Active Transportation. Increasing the number of people walking and bicycling and decreasing the number of people driving will improve health outcomes and reduce greenhouse gas emissions in the region. Connect SoCal is expected to increase the number of people making active transportation trips by more than two million, increasing the mode share from 8.3 percent in 2016 to 10.4 percent in 2045. In order to achieve these outcomes, investments will be required to implement a variety of strategies.

Strategies to achieve Connect SoCal goals related to active transportation address planning, policy making and implementation for both short and regional trips. Additionally, they are designed to improve environmental justice outcomes and enhance the safety and comfort of people walking and bicycling. Many of these strategies should be implemented concurrently, as improvements to short trips, for example, do not preclude strategies to improve safety or address environmental justice, and vice versa.

Active Transportation strategies are grouped into eight categories that address trip type as well as a range of regional priorities. Specific details on the Active Transportation Strategies highlighted below can be found in the Active Transportation Technical Report.

- Environmental Justice
- Short Trips
- Regional Trips
- Planning, Data Collection and Technology
- Micro-mobility
- Complete Streets
- Engagement
- Safety

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

- Reduce aggressive driving and speeding
- Improve safety for aging populations
- Improve bicyclist safety
- Improve commercial vehicles safety
- Ensure drivers are licensed
- Improve emergency response services
- Improve research and data collection
- Reduce impaired driving fatalities
- Reduce distracted driving

- Improve safety at intersections
- Reduce the occurrence of lane departure fatalities
- Improve motorcycle safety
- Improve occupant protection by increased use of seat belts and child safety seats
- Improve pedestrian safety
- Improve work zone safety
- Improve safety for young drivers

Highway and Arterial Network. Connect SoCal emphasizes working with partner implementing agencies to prioritize projects that preserve and optimize the existing highway and arterial network. A sample of major committed projects included in Connect SoCal are highlighted in **Figure 2.0-16, Major Highway Projects, Figure 2.0-17, Major HOV Projects,** and **Table 2.0-9, Sample Major Highway Projects Committed by the Counties.** Projects include interchange improvements, auxiliary lanes, general purpose lanes, carpool lanes, toll lanes and Express/HOT lanes. The complete list of projects can be found in the **Appendix 2.0, Plan Project List.** The Highway and Arterial improvements in Connect SoCal are guided by the following framework and guiding principles:

- Protect and preserve what we have first, supporting ‘Fix it First’ principle, including the consideration of life cycle costs beyond construction
- Support continued system preservation funding and augment as necessary
- Focus on achieving maximum productivity through strategic investments in system management and demand management
- Focus on adding capacity primarily (but not exclusively) to:
 - Close gaps in the system
 - Improve access where needed
- Support policies and system improvements that will encourage the seamless operation of our roadway network from a user perspective
- Assure that any new roadway capacity project is developed with consideration and incorporation of congestion management strategies, including demand management measures, operational improvements, transit and ITS, where feasible

- Focus on addressing non-recurring congestion with new technology
- Support ‘complete street’ opportunities where feasible and practical

**Table 2.0-9
Sample Major Highway Projects Committed by the Counties**

	County	Route	Description	Completion Year	Project Cost (\$1,000's)
Mixed-Flow Lanes	Imperial	SR-111	Widen and improve to six-lane freeway with interchanges at Heber, McCabe, and Jasper and overpass at Chick Rd.	2030	\$999,136
	Los Angeles	SR-57/SR-60	Improve the SR-57/SR-60 interchange.	2028	\$300,000
	Orange	SR-55	Add one mixed-flow lane in each direction and fix chokepoints from I-405 to I-5 and add one auxiliary lane in each direction between select on/off ramps and operational improvements through project limits.	2023	\$327,363
	Orange	SR-91	Add eastbound mixed-flow lane from SR-57 to SR-55, add one westbound mixed-flow lane from Kraemer to State College, improve interchanges and merging from Lakeview to Raymond, and auxiliary lanes in certain segments.	2030	\$456,190
	Orange	I-405	Add one mixed-flow lane in each direction from I-5 to SR-55.	2034	\$190,000
	Orange	I-405	Add one mixed-flow lane in each direction, convert existing HOV lane to HOT lane, add one additional HOT lane in each direction from SR-73 to I-605.	2026	\$1,900,000
	Ventura	SR-118	Add one lane each direction from RT-23 to Tapo Canyon Rd.	2031	\$216,463
Express Lanes	Los Angeles	I-405	Add I-405 Express Lanes from I-105 to I-110.	2028	\$71,560
	Los Angeles	I-405	Add -405 Express Lanes from I-110 to LA/Orange Country Line.	2028	\$110,390
	Los Angeles	I-405	Add I-105 Express Lane from I-405 to I-605	2029	\$228,500
	Los Angeles	I-405	Sepulveda Pass Transit Corridor (Ph 1) with Express Lanes.	2026	\$310,500
	Los Angeles	I-10	Add I-10 Express Lanes from I-605 to LA/San Bernardino County Line.	2028	\$196,840
	Los Angeles	I-405	Add I-405 Express Lanes from I-10 to I-105.	2028	\$70,880
	Los Angeles	I-605	I-605 Express Lanes from I-105 to Orange County Line.	2031	\$100,850
	Riverside	I-15	Add two Express Lanes in each direction from Cajalco Rd to SR-74. Also add one southbound auxiliary lane from Cajalco Rd to Weirick Rd.	2028	\$544,000
	San Bernardino	I-15	Add two Express Lanes in each direction from I-215 to US-395	2040	\$687,994
	San Bernardino	I-15	Add one Express Lane in each direction from US-395 to High Desert Corridor (Segment 5)	2045	\$194,662

	County	Route	Description	Completion Year	Project Cost (\$1,000's)
HOV Lanes	Los Angeles	SR-14	Add 1 HOV lane each direction from Ave. P-8 to Ave. L	2027	\$120,000
	Los Angeles	RT-71	Add one HOV lane and one mixed-flow lane from Rt-10 to SB County Line.	2028	\$326,392
	Riverside	I-15	Add one HOV lane in each direction from SR-74 to I-15/I-215 interchange.	2039	\$375,664
	San Bernardino	I-210	Add one HOV lane in each direction from I-215 to I-10.	2045	\$178,780
	San Bernardino	I-215	Add one HOV lane in each direction from SR-210 to I-15.	2035	\$249,151
	Ventura	US-101	Add one HOV lane in each direction from LA/VEN County Line to SR-33.	2040	\$700,000

Source: SCAG Arterials Report, 2019

Regional Express Lane Network. The regional express lane network included in Connect SoCal builds on the success of the I-10 and I-110 Express Lanes in Los Angeles County and the recent extension of the SR-91 Express Lanes between Orange and Riverside Counties. Additional efforts underway include planned express lanes on the I-105 in Los Angeles County, the I-15 in Riverside County, the I-15 and the I-10 in San Bernardino County and the I-405 in Orange County and Los Angeles County. **Figure 2.0-18, Planned Regional Express Lane Network**, display the segments in the proposed regional express lane network.

Goods Movement. SCAG has developed key strategies to realize a regional vision that maintains regional economic competitiveness, promotes job creation and retention, increased freight mobility and safety, and mitigating environmental impacts. Specific details of goods movement challenges and strategies can be found in the Goods Movement Technical Report. Key strategies include:

- **Infrastructure Investments to Improve Freight Mobility.** Capturing the benefits that accompany goods movement means ensuring that regional businesses have access to and increased mobility on key goods movement corridors and networks. Improving efficiency on the transportation system will help contain rising costs of goods and services that often pass on to consumers. Connect SoCal identifies a significant number of infrastructure investments to assure that the region continues to be the leading trade gateway in the U.S. It does this by supporting physical improvements in marine terminals, highways, intermodal terminals, railroad mainlines, access routes, airports and international land border crossings that make up the goods movement network.
- **Last-Mile Freight.** Last-mile delivery represents the final leg for goods to customers. These deliveries happen in complex environments, including high-density regional locations, and they involve sophisticated interactions among physical infrastructure, and often compete for limited public space

with other modes. Ensuring that freight is properly included in policy considerations and street design necessitates tailored and nuanced strategies involving multidisciplinary approaches as identified in Connect SoCal.

- **Workforce Development.** Changing supply chains, automation and new technologies, and increasingly competitive wages from other sectors, will place growing pressure on goods movement related businesses to find qualified workers without raising costs and reduce the availability of jobs that have traditionally provided well-paying jobs to lower-skilled workers. Connect SoCal supports regional programs that raise awareness of the issue, reposition the image of goods movement jobs to reflect career mobility, promote increased participation by younger workers, and improve access for workers.
- **Truck Bottleneck Relief Strategy.** Connect SoCal identifies 48 truck bottlenecks in the region and allocates an estimated \$5 billion toward strategies that relieve them, such as:
 - Ramp metering
 - Extending merging lanes
 - Improving ramps and interchanges
 - Adding auxiliary lanes
- **Industrial Warehouse & Distribution Centers.** SCAG will continue efforts to provide the most updated data on industrial warehouse building square footage and conduct further analyses to better reflect changes in industrial land uses, truck industry service types, and equipment usage for truck terminals due to e-commerce. This includes consideration of new area sub-category classifications such as seaport and air cargo terminals, and rail intermodal and classification yards. By further understanding industrial facilities, SCAG will be more equipped to explore strategies that support the effective integration between goods movement needs and regional land use patterns.
- **Goods Movement Environmental Strategy.** Connect SoCal proposes an environmental strategy to address the air quality impacts of goods movement, while also allowing for the efficient and safe movement of goods throughout the region. A critical component of this strategy is the integration of advanced technologies that have benefits such as air quality improvements, energy security, and economic growth opportunities. Connect SoCal articulates a process to accelerate the development and deployment of effective technologies, along with key action steps, to help the region reduce dangerous pollutants as much as possible. While this plan focuses on getting cleaner vehicles on the road quickly, this must be done with full life-cycle consideration of production, use and disposal

impacts. This plan reaffirms zero and near-zero emission technologies as a priority, describes progress to date, and outlines a framework and key action steps to reach that goal.

Aviation. SCAG, by definition, is primarily a regional surface transportation planning agency. Therefore, SCAG is focused on air passenger and cargo activity from the perspective of how the traffic coming and going from the airports affects the region's roads, highways, and transit systems, and how to improve ground transportation access to the airports. On a basic level, SCAG maintains an updated list of airport ground access improvements. However, SCAG has and will continue to play a role in terms of aviation systems research, planning, and analysis, as well as encouraging collaboration and communication amongst the region's aviation stakeholders. SCAG's aviation strategies include but are not limited to:

- Work with airports and transportation agencies on airport ground access projects
- Effective analysis and planning
- Ongoing communication and collaboration between airports, transportation agencies and other government agencies.

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

2.5.7 Public Health

The role of transportation and land use decisions on public health outcomes has been increasingly recognized by health advocates, planners, and transportation providers. Improving air quality has a direct impact on public health outcomes. Public health in the SCAG region is influenced by the Plan's impact on the area's air emissions levels and the exposure of the population to those emissions, as well as the opportunities for physical activities and recreation uses. The transportation and land use strategies included in the Plan are expected to improve public health outcomes across the region and to improve the quality of life for SCAG area residents. Thus, the Plan highlights many of the benefits for improving health outcomes and present opportunities to ensure that future projects equitably benefit all population groups in the region. Proposed transportation and land use strategies such as first mile/last mile improvements, regional bikeways and Safe Routes to School programs, are anticipated to increase the number of short trips and result in increased physical activity benefits. Including health-related measures

as part of the Plan therefore helps build an ongoing monitoring of the Plan's performance on public health.

Public health analysis under the Plan focuses on providing up to date public health data to support this analysis. Thus, the Plan has developed a framework to promote health and prolong life among the region's population by enhancing the social determinants or the circumstances in which people are born, grow up, live, work, play, and age. Economic opportunity, government policies, and the built environment play a role influencing public health outcomes, so are social determinants of health, including social and community environment, health and health care, neighborhood and built environment, education, and economic stability. The Plan, therefore, proposes seven focus areas that align with its goals to improving public health. These include access to essential destinations, air quality, climate resiliency, economic wellbeing, physical activity, housing, and transportation safety.

2.6 INTENDED USES OF THE PEIR

In compliance with the CEQA (Pub. Resources Code, Section 21000 et seq.), this PEIR describes the potential environmental impacts of the Plan. This PEIR is designed to fully inform SCAG's Regional Council, as well as responsible agencies, trustee agencies, interested agencies/organizations and persons, and the general public of the potential environmental effects of the proposed project and identified alternatives. SCAG is the Lead Agency for environmental review of this PEIR and intends to use this PEIR as part of its review and approval of the Plan.

While individual transportation projects are included in the Plan, this PEIR is programmatic in nature and the analysis considers impacts that would reasonably be expected in conjunction with the transportation investments and land use development patterns envisioned as part of the Plan; the potential for significant and unavoidable impacts after the consideration of feasible mitigation measures; and a range of feasible alternatives. Project-level analysis will be prepared by implementing agencies, serving as a lead agency under CEQA, with the authority and principal responsibility for approving or carrying out the individual projects. These agencies include the six counties and 191 cities in the region. Other project implementing agencies may include public transit providers, other public agencies such as air districts, Native American tribes, colleges and university transportation providers, and Caltrans among others.

It is the intent of SCAG that lead agencies and others use the information contained within the PEIR in order to "tier" subsequent environmental documentation of projects in the region. Such projects may include:

- transportation projects consistent with the SCS;

- planning projects consistent with the SCS (e.g., General Plans, Specific Plans, etc.); and
- development projects including residential, mixed-use, employment center and transit priority projects consistent with the SCS.

As described in more detail in **Chapter 1.0, Introduction**, for projects that may be eligible for CEQA streamlining, applicable mitigation measures from this PEIR can and should be incorporated into those projects as feasible and appropriate.

List of Permits or Other Approvals Required to Implement the Project

In order to implement the Plan, after certification of the PEIR, it must be approved by SCAG's Regional Council. Then, Connect SoCal requires a conformity determination under the CAA section 176(c). The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) make the final determination of conformity on the Regional Transportation Plan elements. A FHWA/FTA air quality conformity determination for transportation (Conformity) is required for the Plan pursuant to the Environmental Protection Agency's (EPA) Transportation Conformity Rule, 40 CFR Parts 51 and 93, and the United States Department of Transportation's Final Rule on Statewide and Metropolitan Planning, 23 CFR Part 450. The conformity analysis that is submitted must indicate that all air quality conformity requirements have been met. Based on review by FHWA and FTA, and after consultation with the EPA Region 9 office, FHWA/FTA will make a finding that the Plan conforms to the applicable State Implementation Plan in accordance with the provisions of 40 CFR Parts 51 and 93.

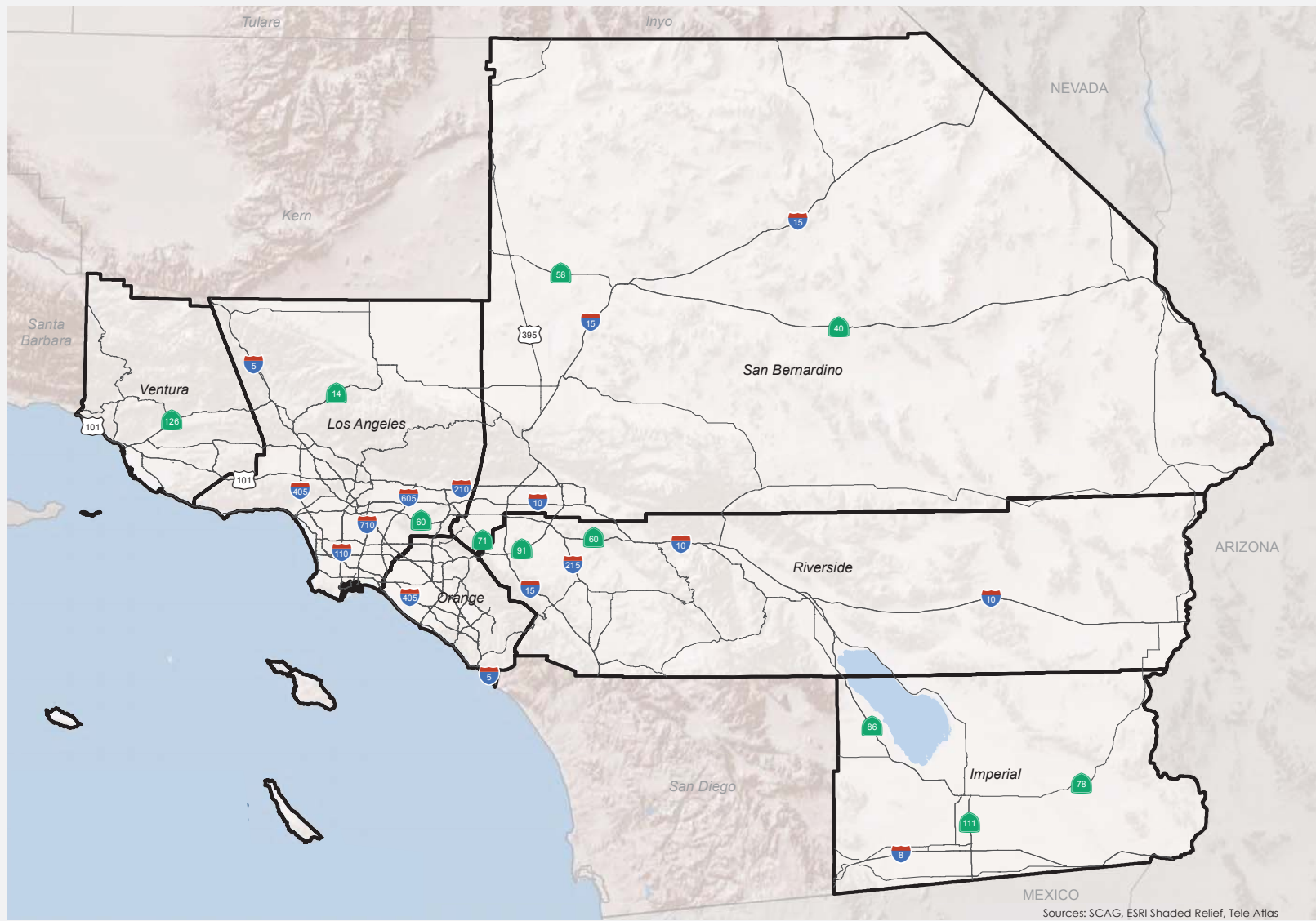
Furthermore, under SB 375, the Plan is subject to review and approval by the California Air Resources Board (CARB). Specifically, the SCS component will be reviewed by CARB to determine whether the adopted SCS, if implemented, would meet the region's 2035 19 percent per capita greenhouse gas reduction target.

List of Environmental Review and Consultation Requirements

Federal consultation requirements include: 1) a process involving the MPO, state and local air quality planning agencies, state and local transportation agencies, the U.S. EPA, and the U.S. Department of Transportation; and 2) a proactive public involvement process that provides opportunity for public review and comment by, at a minimum, providing reasonable public access to technical and policy information considered by the agency.

SB 375 requires consultation with stakeholders, including affordable housing advocates, transportation advocates, neighborhood and community groups, environmental advocates, homebuilder

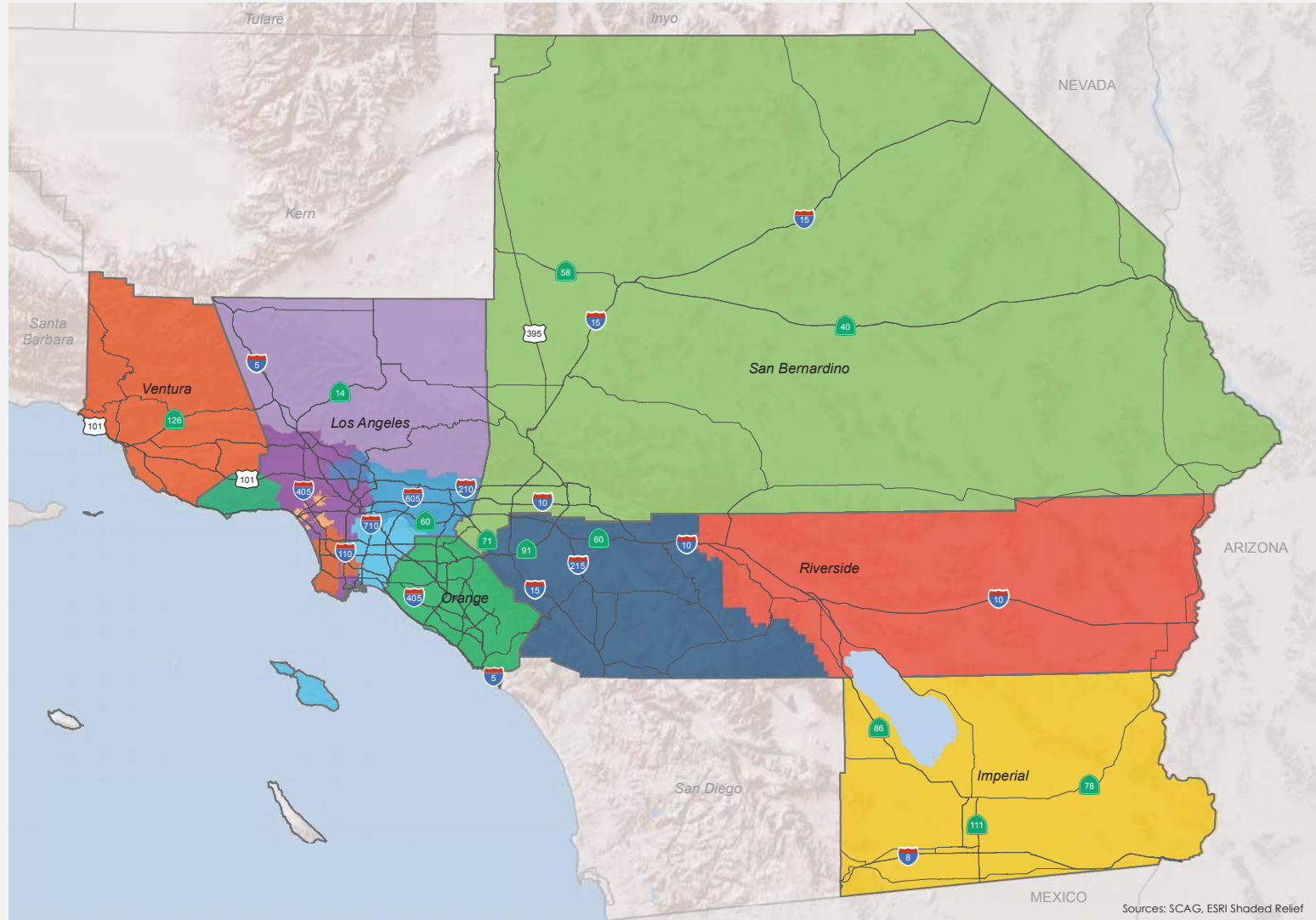
representatives, broad-based business organization, landowners, commercial property interests, homeowners associations, congestion management agencies, transportation agencies, local agency formation commission, and members of city councils and boards of supervisors.



SOURCE: SCAG, 2019

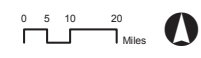
FIGURE 2.0-1

SCAG Region



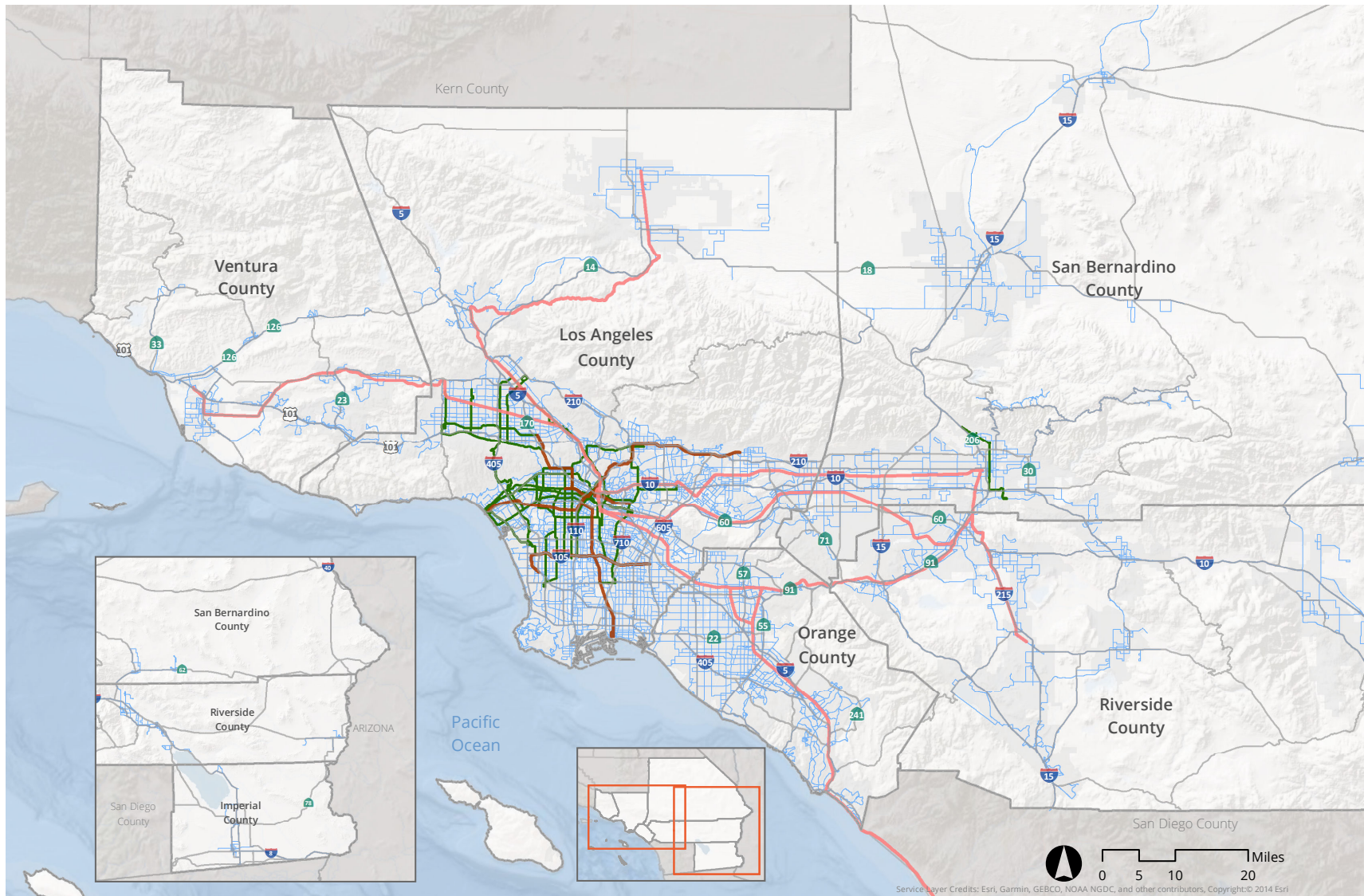
- | | | |
|--|--|--|
| ■ Arroyo Verdugo | ■ Las Virgenes | ■ South Bay Cities Association |
| ■ Coachella Valley Association of Governments (CVAG) | ■ North Los Angeles County | ■ Ventura Council of Governments (VCOG) |
| ■ City of Los Angeles | ■ Orange County | ■ Western Riverside Council of Governments (WRCOG) |
| ■ Gateway Cities | ■ San Bernardino Associated Governments (SANBAG) | ■ Westside Cities |
| ■ Imperial Valley Association of Governments (IVAG) | ■ San Gabriel Valley Association of Cities | |

Sources: SCAG, ESRI Shaded Relief



SOURCE: SCAG, 2019

FIGURE 2.0-2

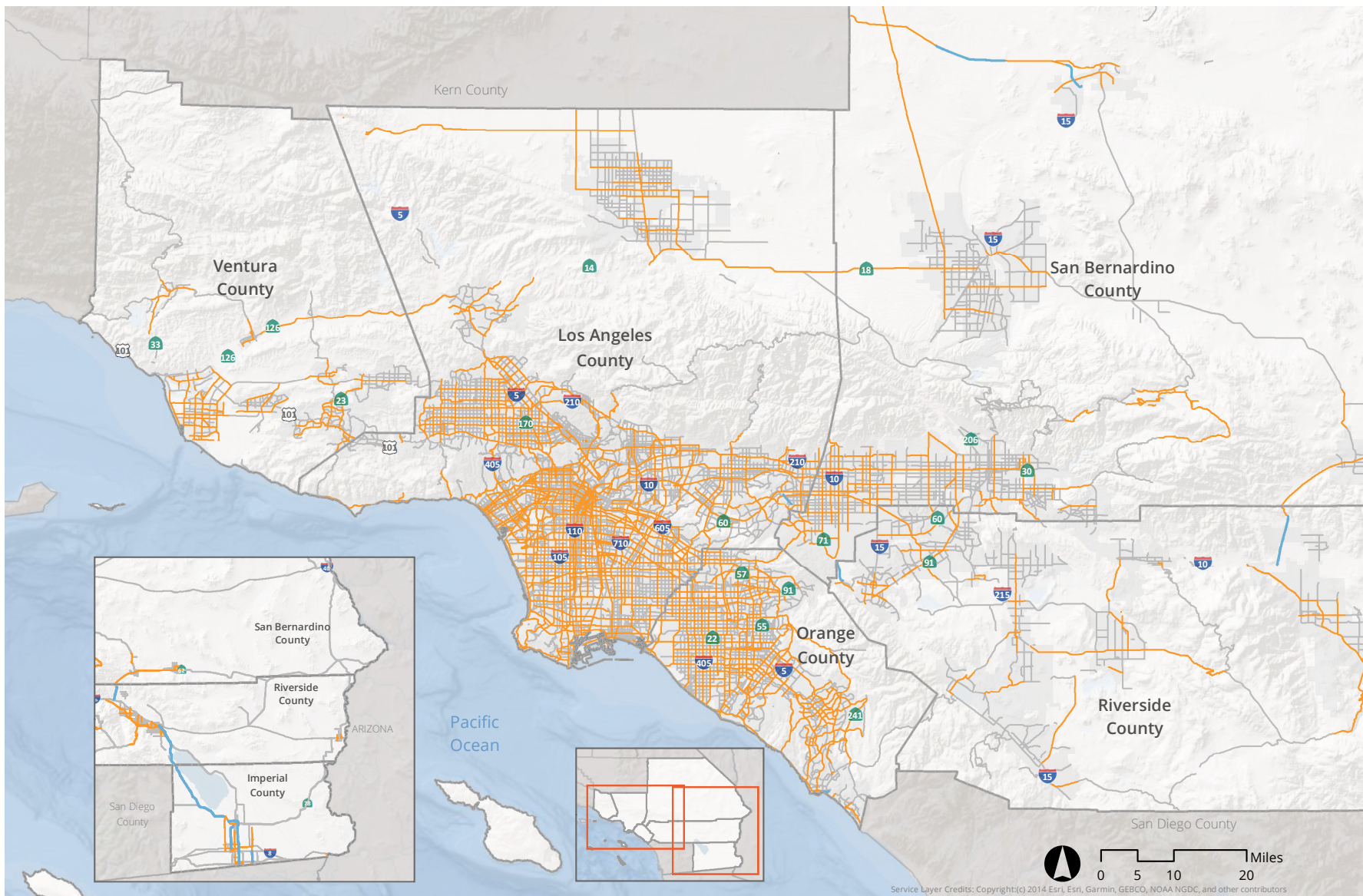


- County Boundaries
- ▬ Freeway
- Metrolink (2016)
- Rapid Bus and Bus Rapid Transit (2016)
- ▬ City Boundaries
- Urban Rail (2016)
- Bus Routes (2016)

SOURCE: SCAG, 2019

FIGURE 2.0-3

Existing Transit Network (2018)

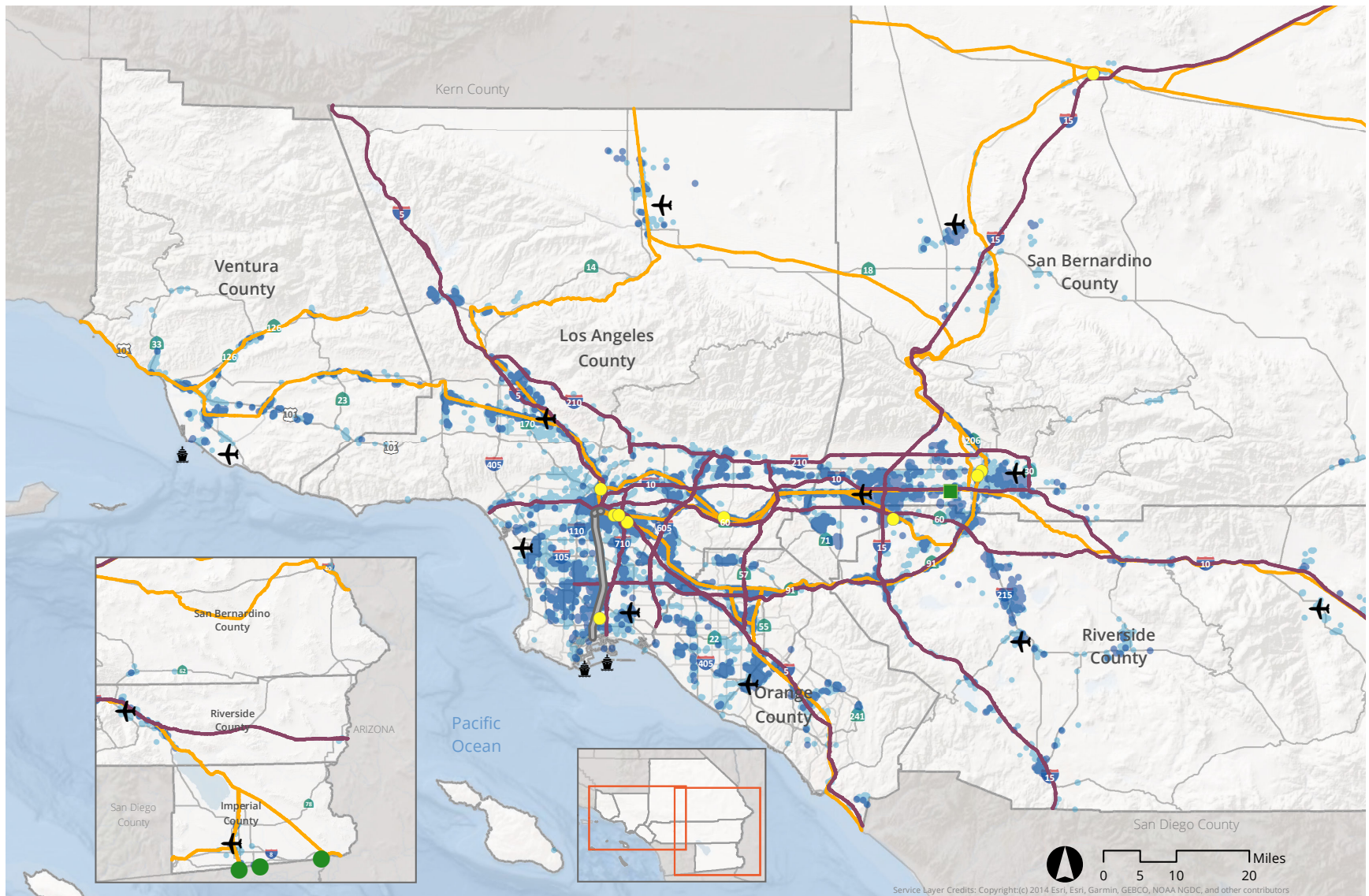


↗ Expressway / Parkway
 ↗ Principal Arterial
 ↗ Minor Arterial

SOURCE: SCAG, 2019

FIGURE 2.0-4

Existing Arterial System (2016)

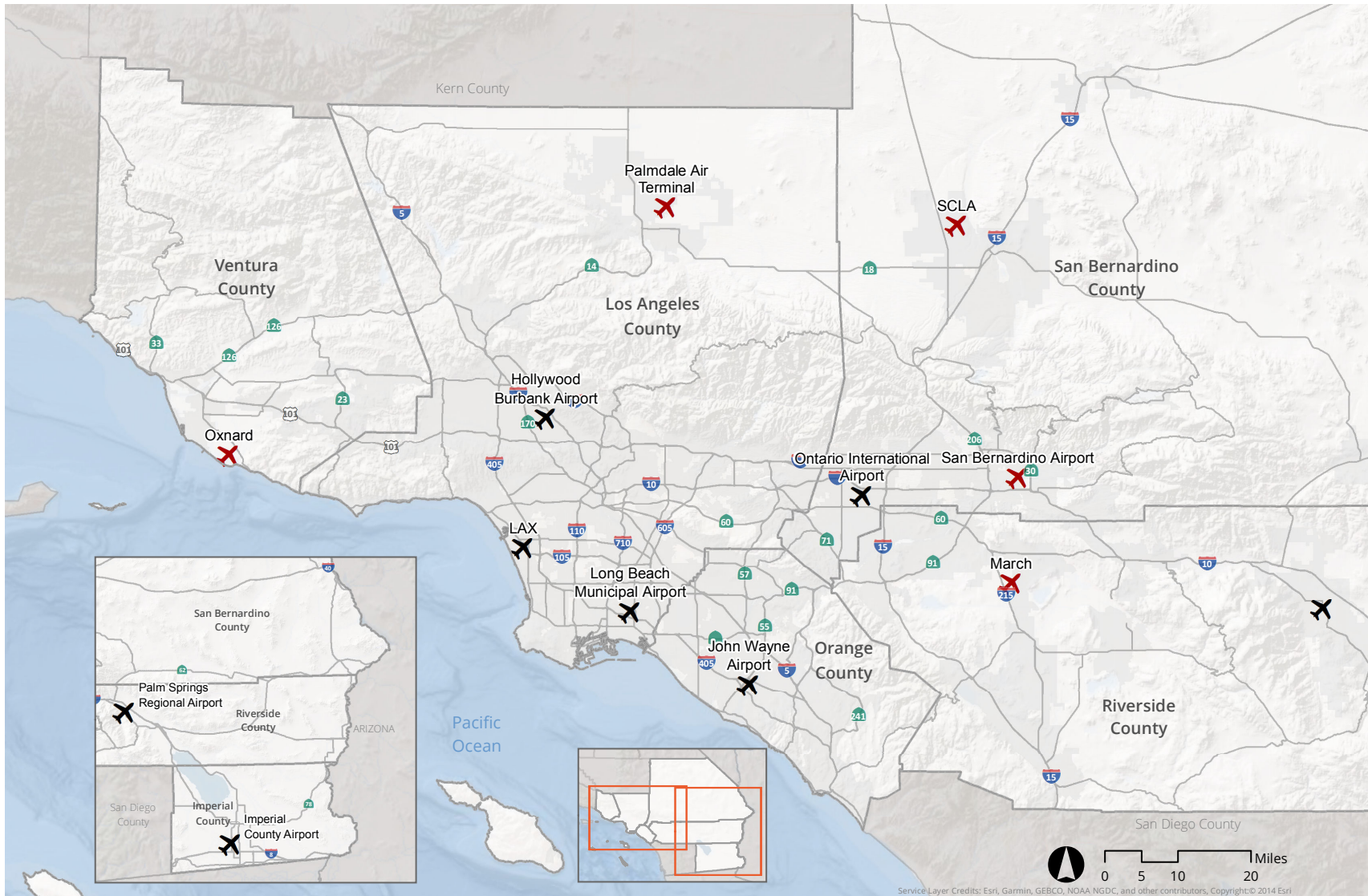


- | | | | |
|-----------|-----------------------------|-----------------------------------|------------------|
| ✈ Airport | ● Ports of Entry | — Major Freight Highway Corridors | Warehouses |
| ⚓ Ports | ● Intermodal Facilities | — Main Line Rail | ● ≥ 50,000 sq ft |
| | ■ Classification Facilities | — Alameda Corridor | ● < 50,000 sq ft |

SOURCE: SCAG, CoStar Realty Information, Inc., 2019

FIGURE 2.0-5

Existing Regional Goods Movement System



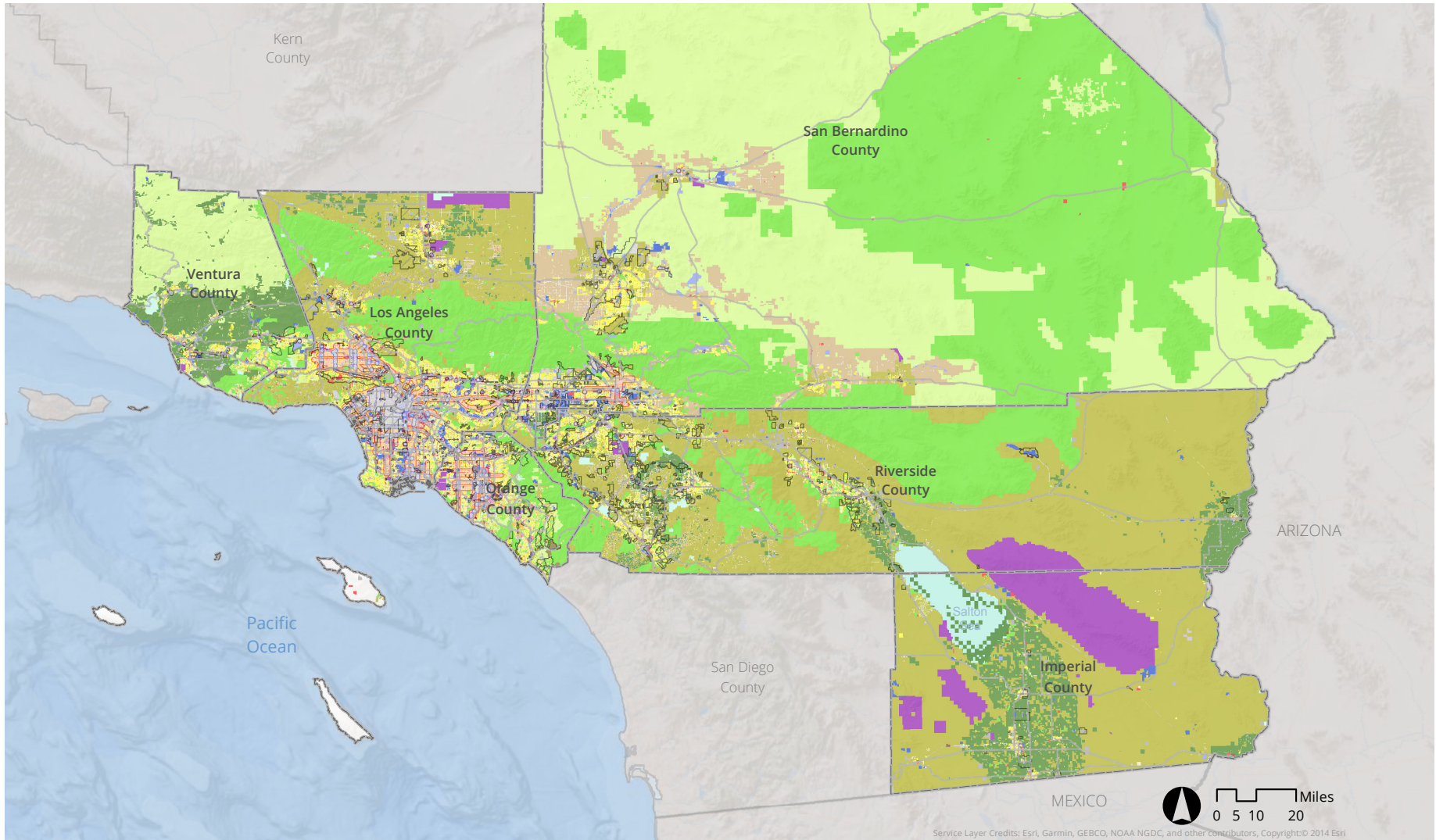
Legend

- County Boundaries
- City Boundaries
- Freeway
- ✈ Commercial Service Airport
- ✈ Reliever Airport

SOURCE: SCAG, 2019

FIGURE 2.0-6

Major Airports in SCAG Region

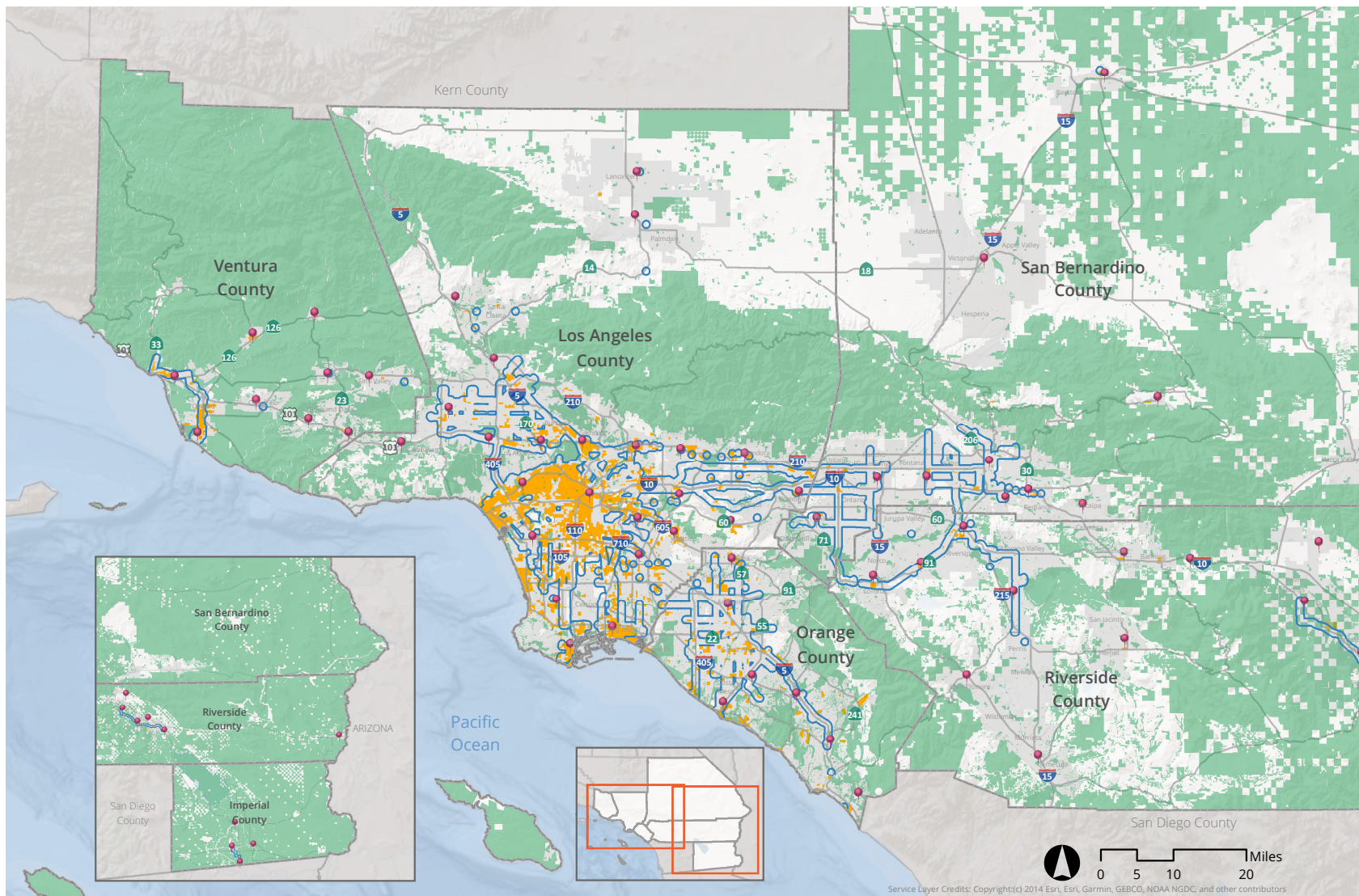


- | | | | | | |
|---------------|--------------------------------|-------------------------|---|-------------|---------------|
| Specific Plan | Single-Family Residential | General Office | Industrial | Agriculture | Undevelopable |
| TPA (2016) | Multi-Family Residential | Commercial and Services | Transportation, Communications, and Utilities | Vacant | Unknown |
| HQTA (2016) | Mobile Homes and Trailer Parks | Facilities | Mixed Commercial and Industrial | Water | |

SOURCE: SCAG, 2019

FIGURE 2.0-7

Existing Land Use



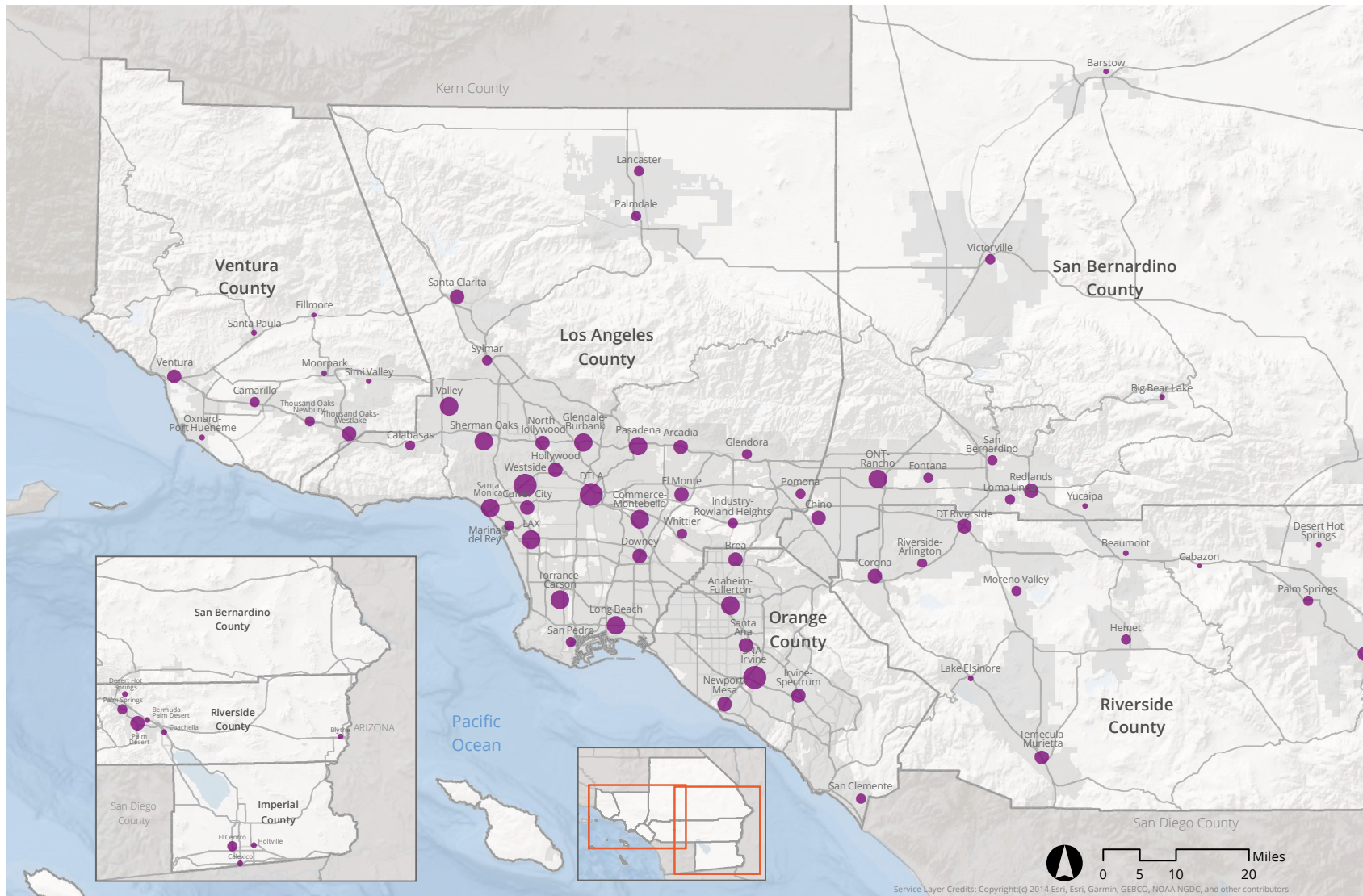
Priority Growth Areas vs. Regional Growth Constraints

- Job Center
- Neighborhood Mobility Areas
- High Quality Transit Area
- Regional Growth Constraints

Note: SCAG utilized locally informed data elements to determine areas that ought to be precluded from growth (i.e. Absolute Growth Constraints - Tribal Lands, Military, Existing Open Space, Conserved Land, 2 ft Sea Level Rise, and Agriculture in Unincorporated Counties).

SOURCE: CalBRACE, California Department of Conservation, CPAD, CCED, County Transportation Commissions, SCAG, 2019

FIGURE 2.0-8



SCAG Region Proposed 2020 RTP/SCS Job Centers (Total Employment)

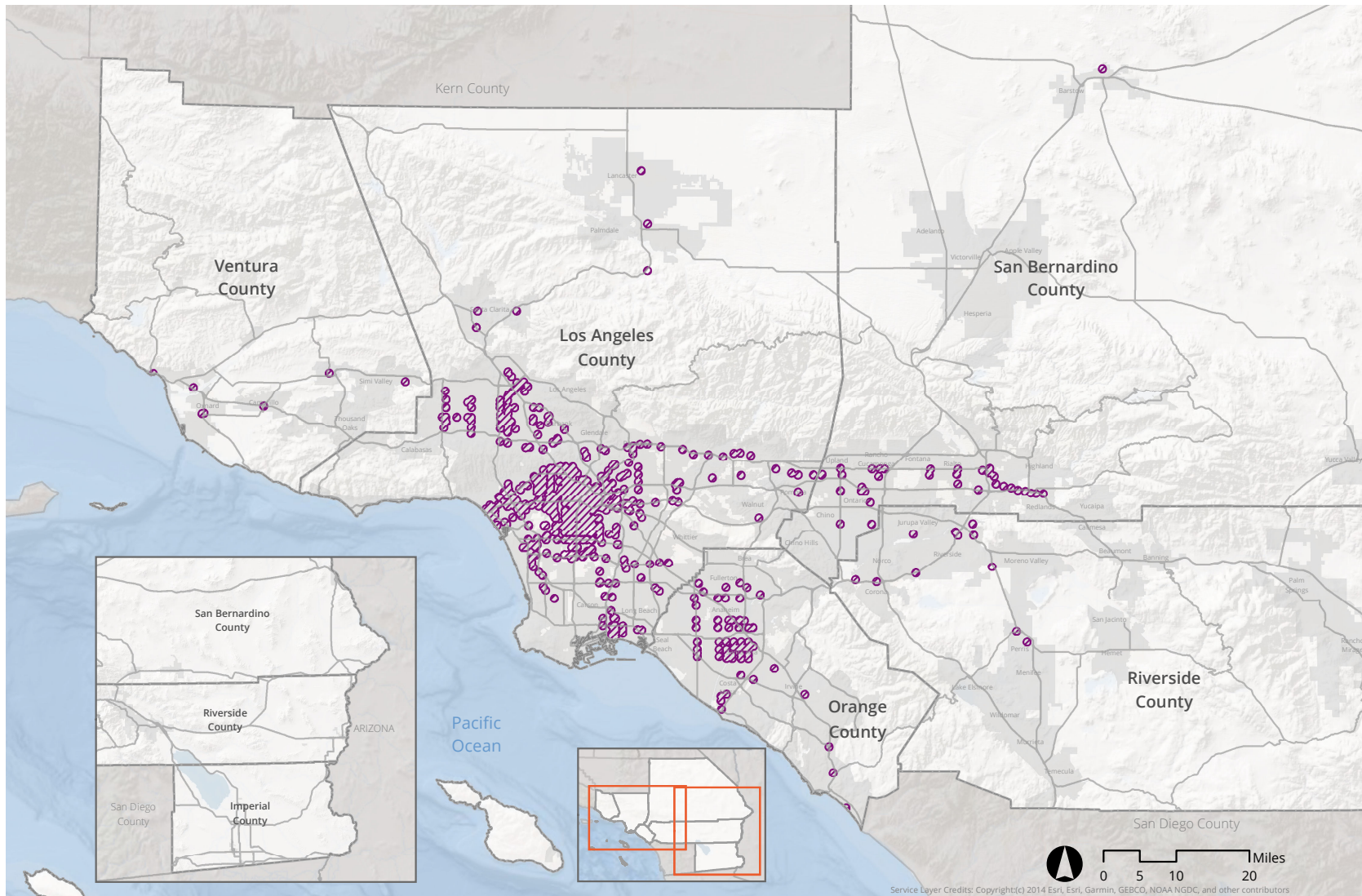
- Less than 10,001 (17)
- 10,001 - 25,000 (22)
- 25,001 - 50,000 (19)
- 50,001 - 150,000 (11)
- More than 150,000 (3)

Notes:

- (1) Centers are areas with denser employment than their surroundings.
- (2) Dots represent the total employment in each center, not center boundaries.
- (3) Names are intended to be illustrative and may not reflect all the jurisdictions in which a center fully lies.

SOURCE: SCAG, 2019

FIGURE 2.0-9



Transit Priority Areas (2045)

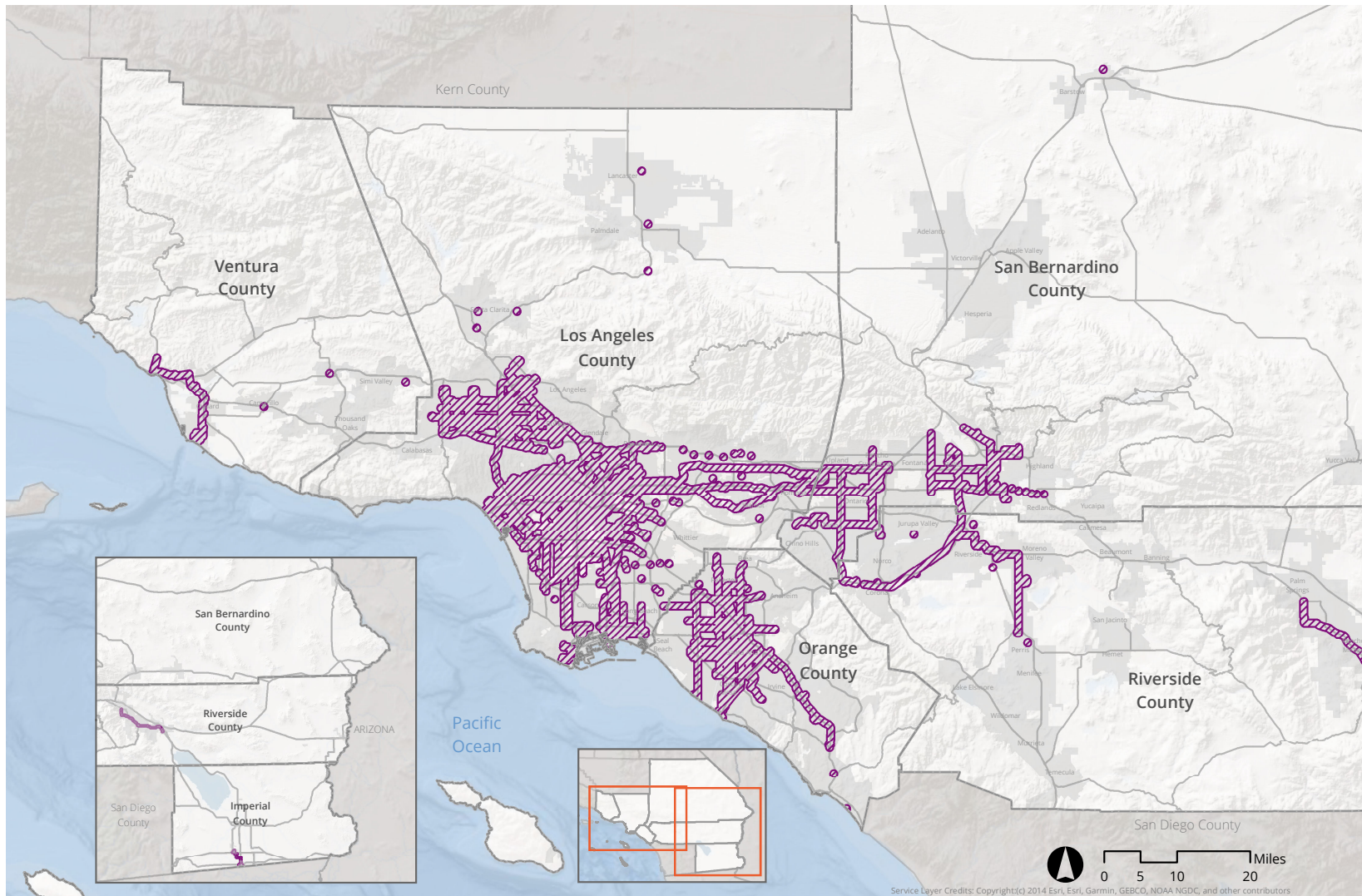
 TPA

Note: As defined in SB 743, "Transit priority area" means an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations. Major transit stops are extracted from 2045 plan year of the Draft Connect SoCal. Please note that this map may undergo changes as SCAG continues to update its transportation network as part of the Connect SoCal development process and SCAG shall not be responsible for local jurisdiction's use of this map. Updates to this information will be forthcoming as information becomes

SOURCE: County Transportation Commissions, SCAG, 2019

FIGURE 2.0-10

Transit Priority Areas



High Quality Transit Areas (2045)

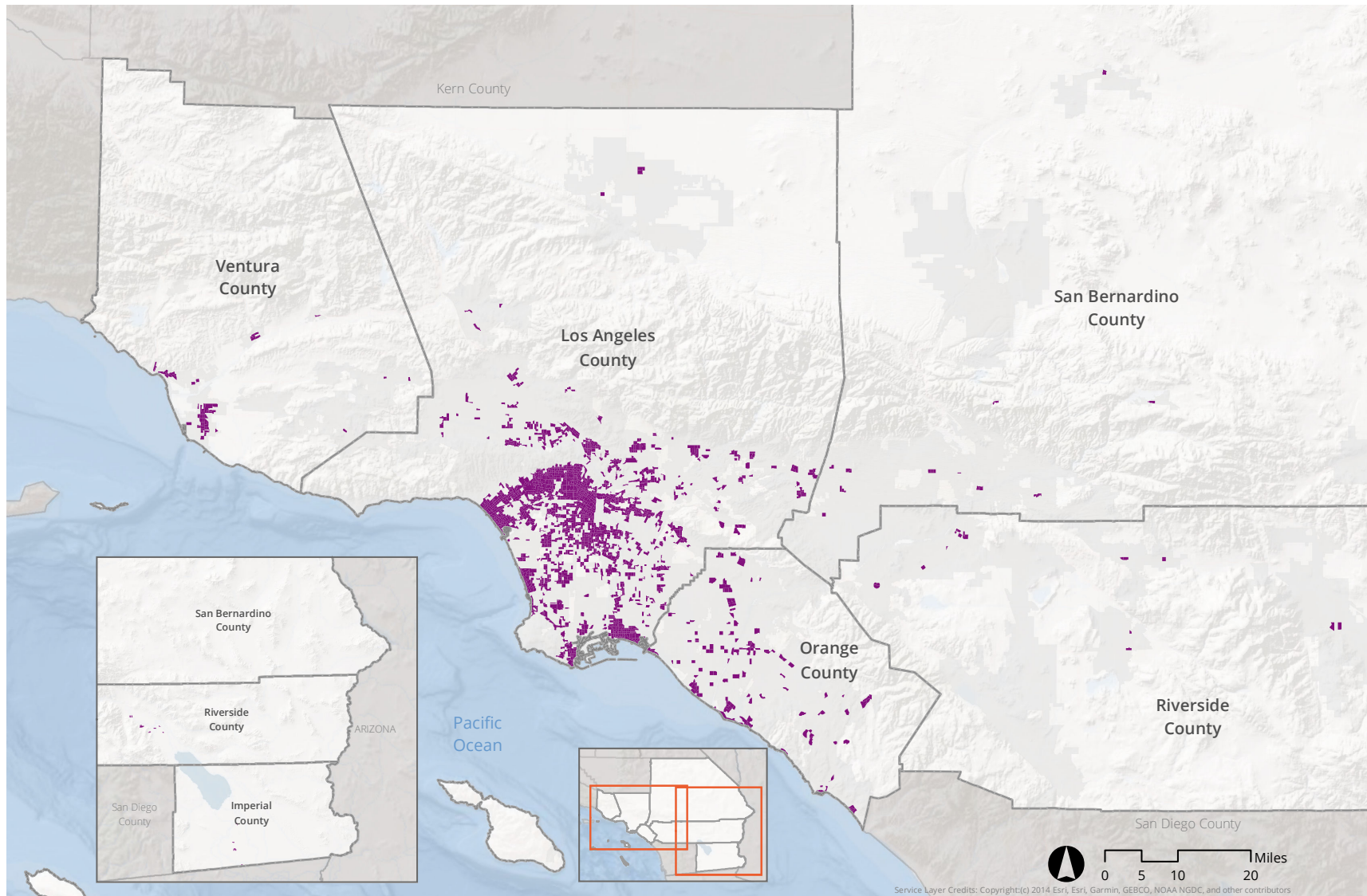
 HQTA

Note: To assist in identifying transit priority project areas, SCAG identifies Major Transit Stops and High Quality Transit Corridors (HQTAs), and their surrounding areas in one-half mile radius distance, as specified in Section 21155.(b)(3). Major transit stops and HQTAs are extracted from 2045 plan year data of the Draft Connect SoCal. SCAG's High Quality Transit Area (HQTA) is within one-half mile from Major Transit Stops and HQTAs and developed based on the language in SB375. Please note that this map may undergo changes as SCAG continues to update its transportation network as part of the Connect SoCal development process and SCAG shall not be responsible for local jurisdiction's use of this map. Updates to this information will be forthcoming as information becomes available.

SOURCE: SCAG, 2019

FIGURE 2.0-11

High-Quality Transit Areas throughout the SCAG Region in 2045



Neighborhood Mobility Areas (NMA)

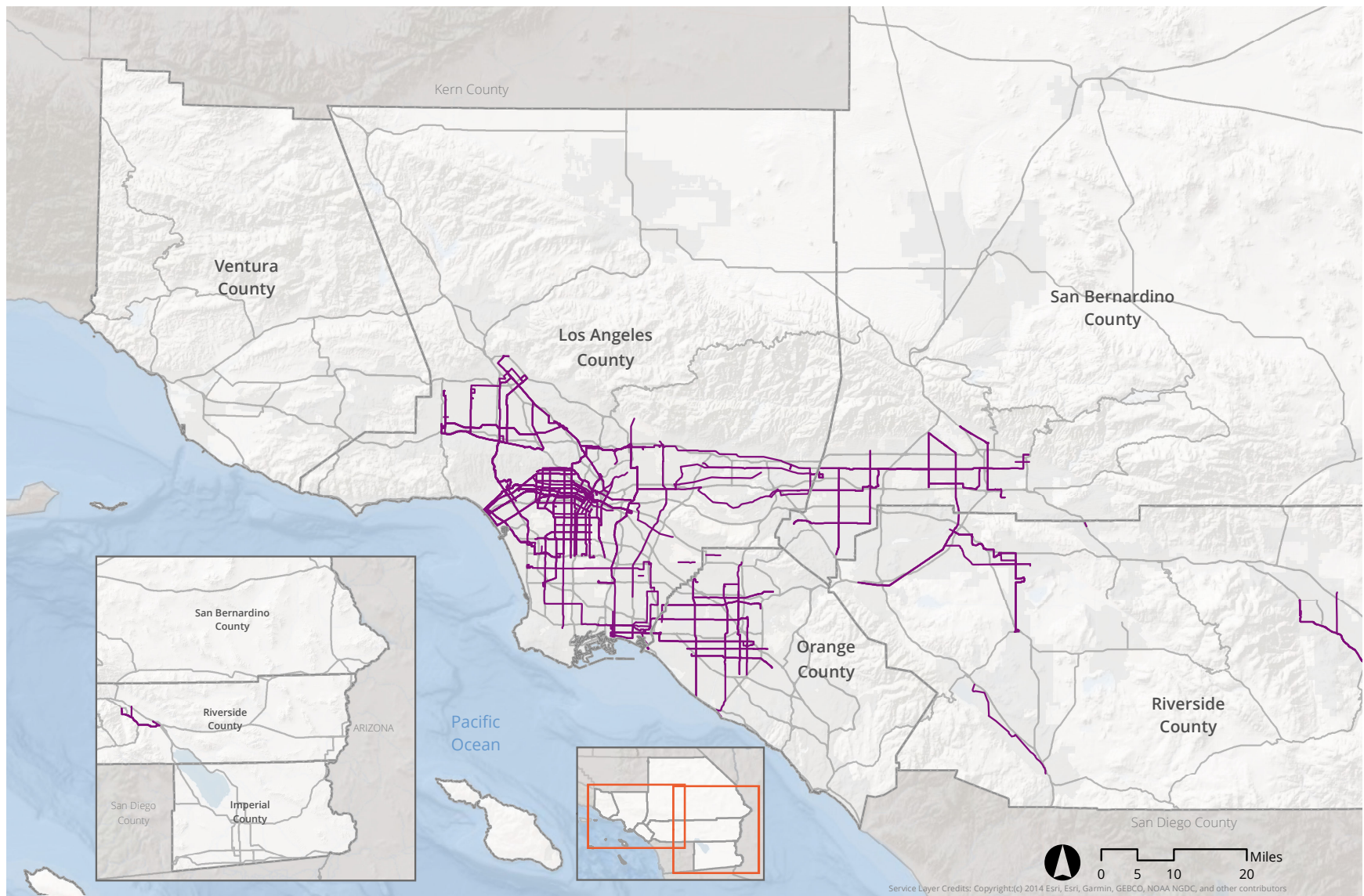
■ Top 20% of TAZs


Note: Neighborhood Mobility Areas (NMA) were identified by analyzing and assigning z-scores four measures at the Tier 2 TAZ level, and subsequently summing the z-scores. TAZs that scored at the 80th percentile or higher for the composite score were considered NMAs.

SOURCE: SCAG, 2019

FIGURE 2.0-12

Neighborhood Mobility Areas

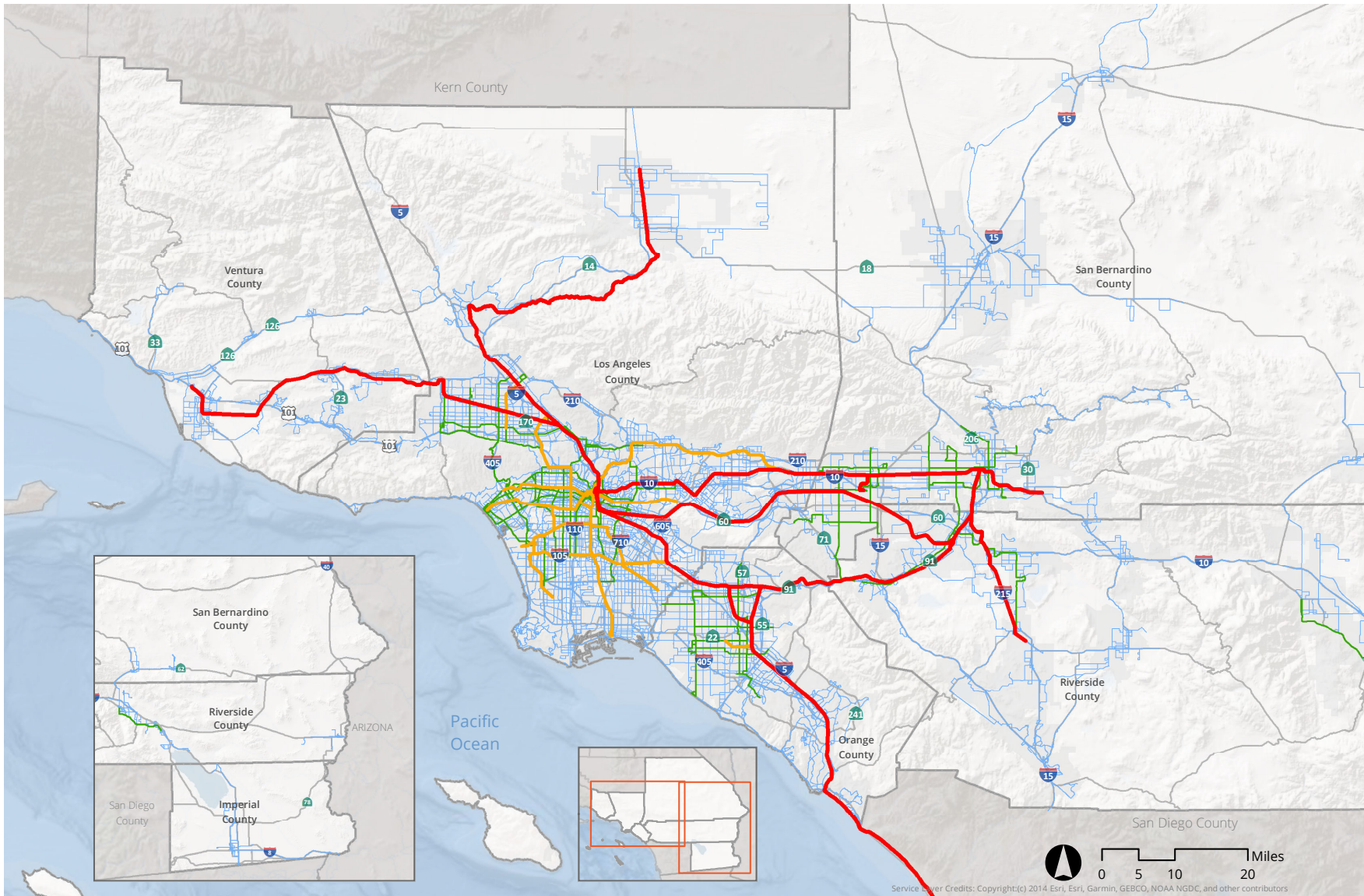


Livable Corridors
 Livable Corridors

SOURCE: SCAG, 2019

FIGURE 2.0-13

Livable Corridors

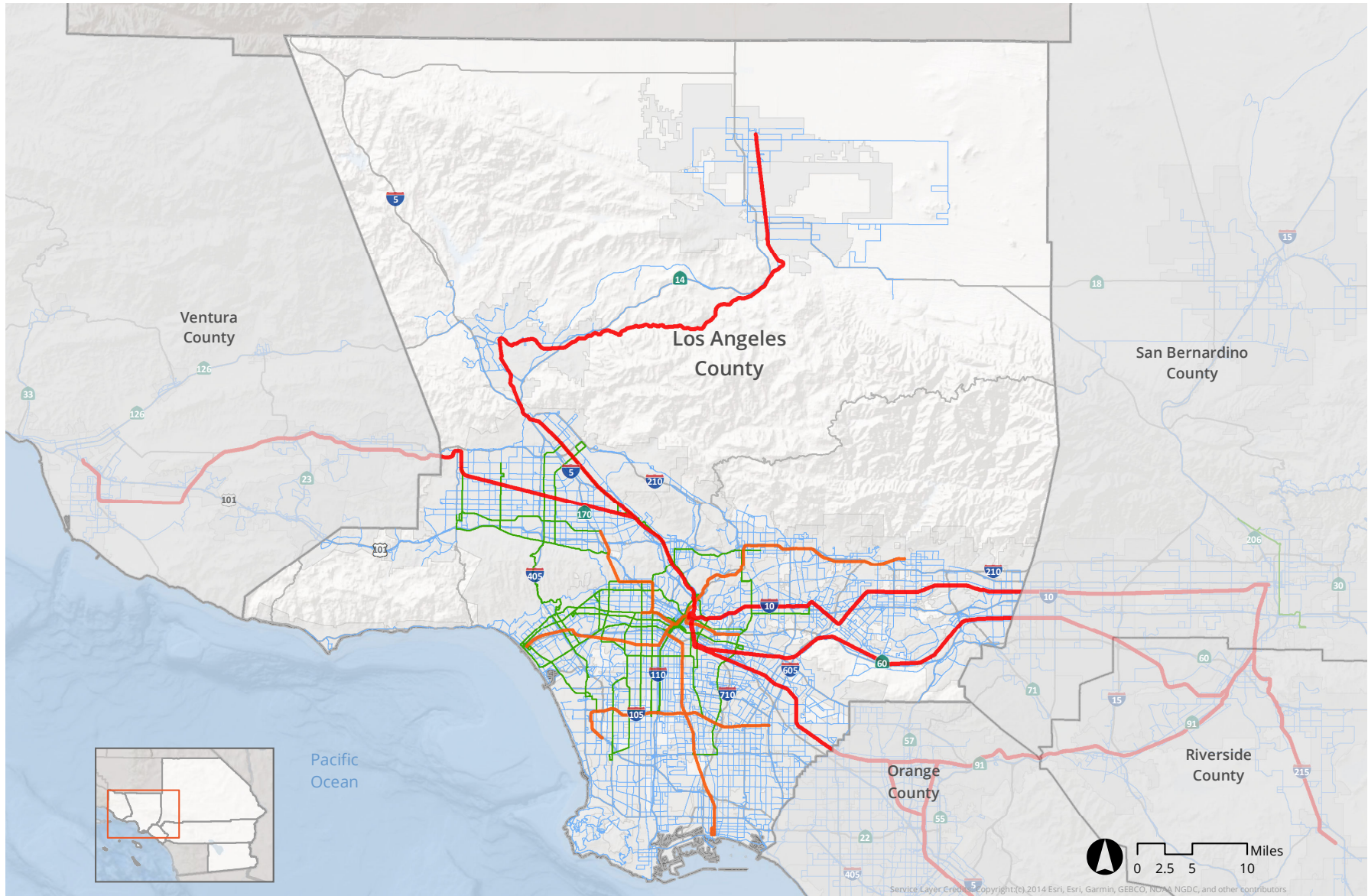


↗ Metrolink (2045)
 ↗ Urban Rail (2045)
 ↗ Rapid Bus and Bus Rapid Transit (2045)
 ↗ Bus Routes (2045)

SOURCE: SCAG, 2019

FIGURE 2.0-14

2045 Plan Transit Network

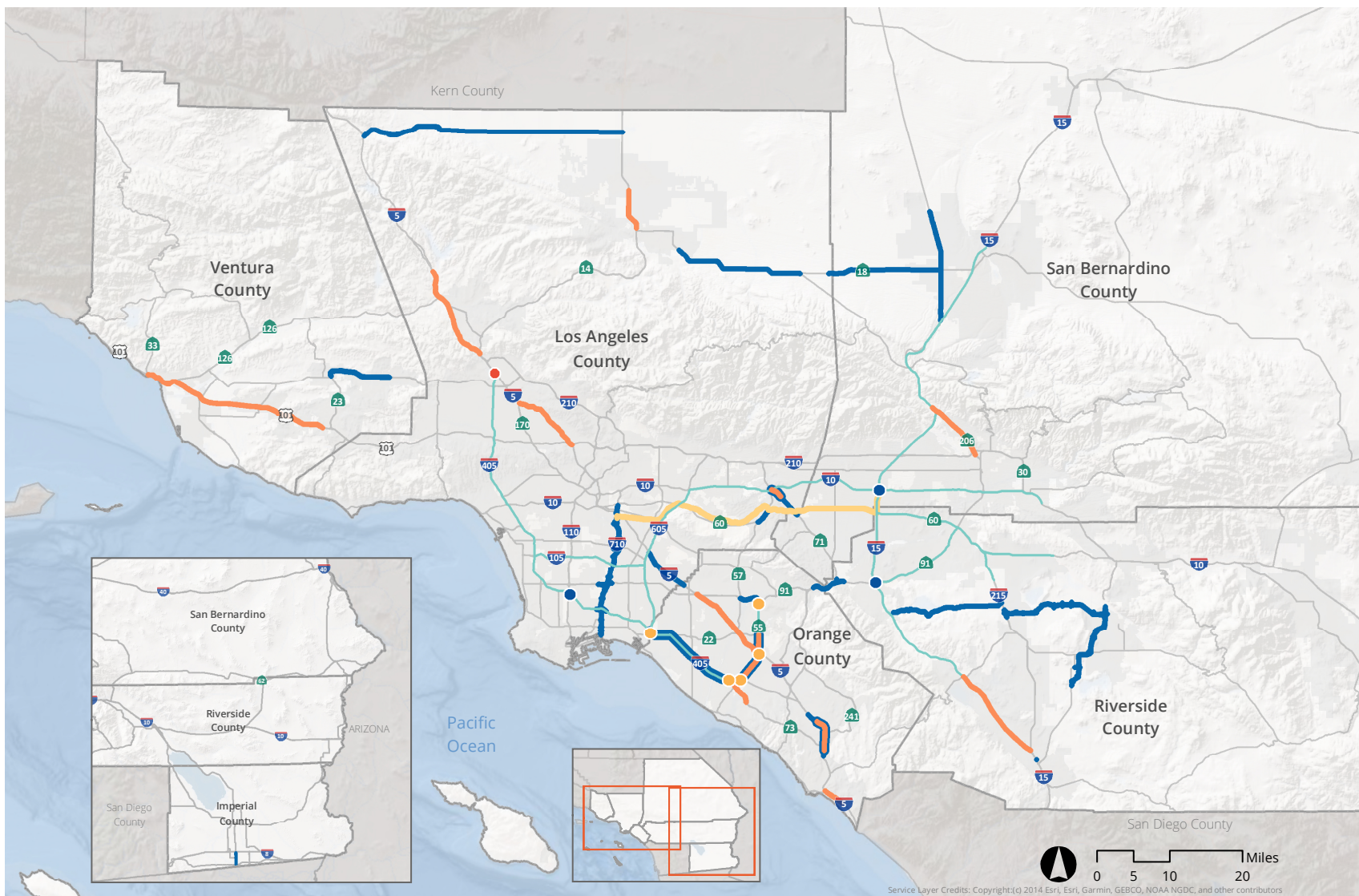


ↄ Metrolink (2016)
 ↄ Urban Rail (2016)
 ↄ Rapid Bus and Bus Rapid Transit (2016)
 ↄ Bus Routes (2016)

SOURCE: SCAG, 2019

FIGURE 2.0-15

Major Rail Projects

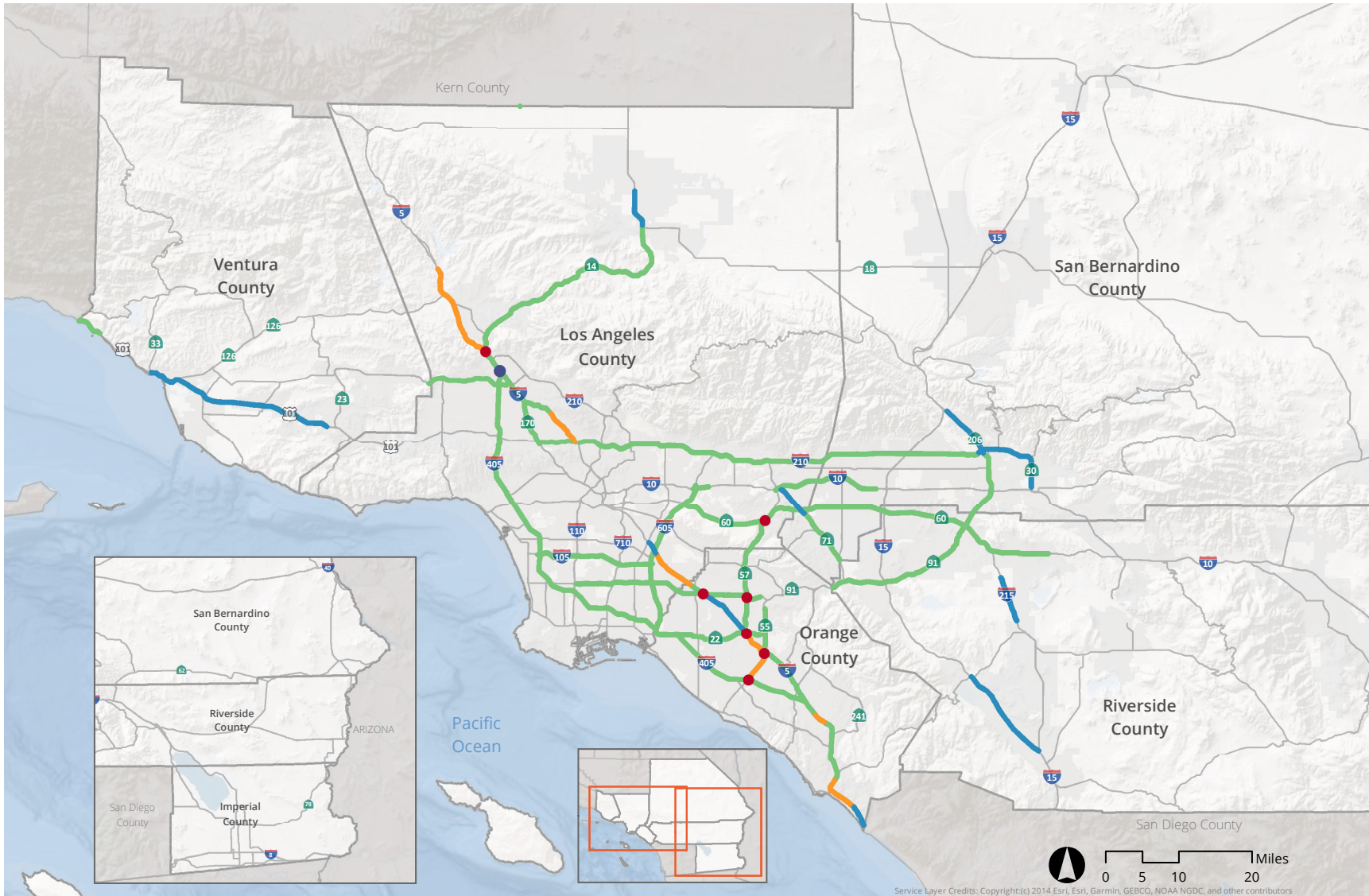


- Planned HOV Connectors
- Planned HOT Direct Connector
- Planned HOV-to-HOT Direct Connector Conversion
- ↗ Planned Mixed Flow Lanes
- ↗ Planned HOV Lanes
- ↗ Planned Express Lanes
- ↗ Planned Freight Corridor

SOURCE: SCAG, 2019

FIGURE 2.0-16

Major Highway Projects

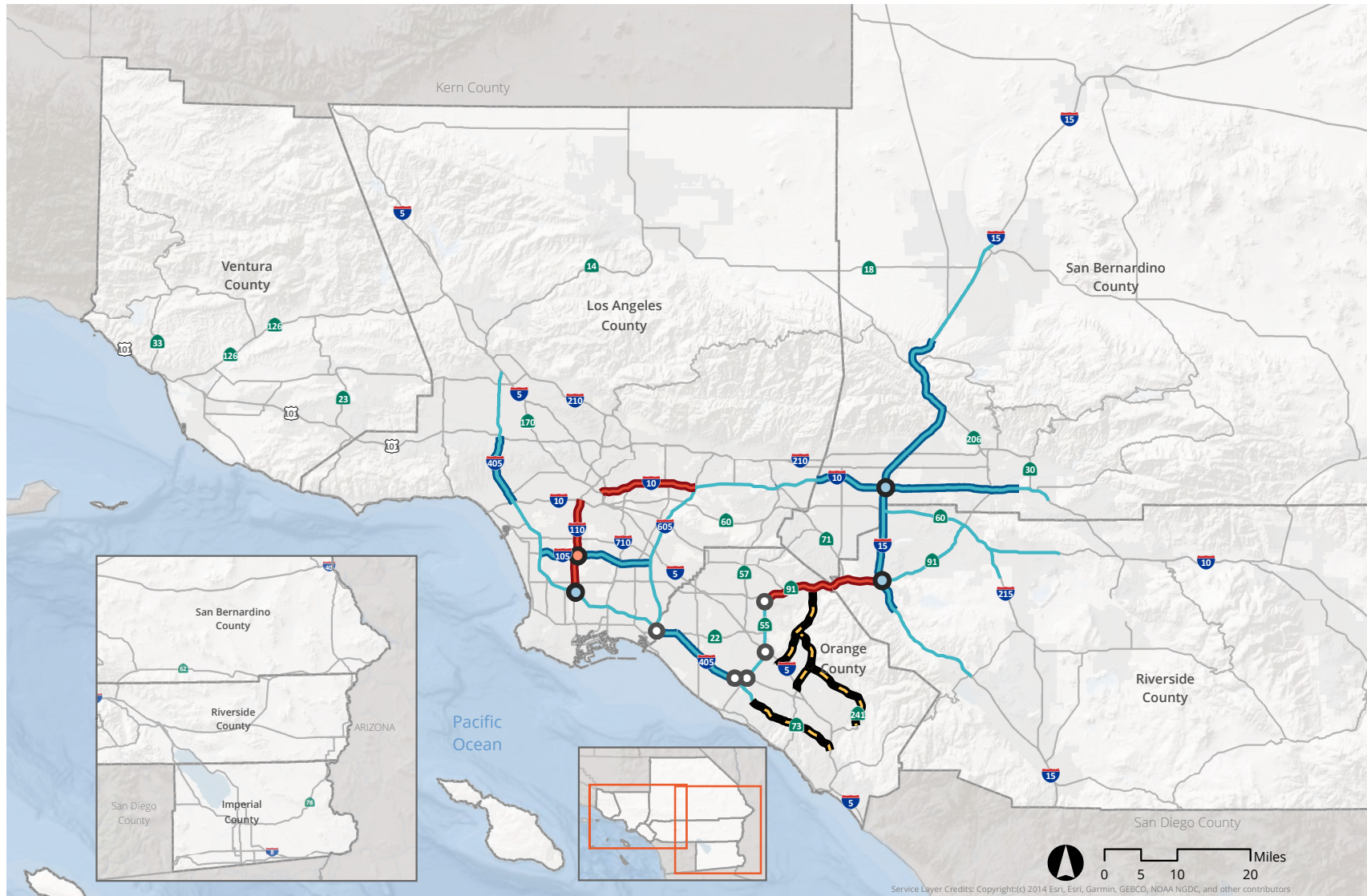


- ↗ Plan Segments (2025)
- ↗ Baseline Segments (2025)
- ↗ Base Year Segments (2016)
- Plan Connectors (2025)
- Base Year Connectors (2016)

SOURCE: SCAG, 2019

FIGURE 2.0-17

Major HOV Projects



- ▬▬ Existing Express Lanes
- ▬▬ Existing Toll Roads
- ▬▬ Planned Express Lane Network
- ▬▬ Planned Dual-Lane Segments
- Existing Express Lane Direct Connector
- Planned Express Lane Direct Connector
- Planned HOV-to-Express Lane Direct Connector Conversion

SOURCE: SCAG, 2019

FIGURE 2.0-18

Planned Regional Express Lane Network

2.7 SOURCES

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