

4.16 TRANSPORTATION

This section evaluates the transportation impacts of the proposed Plan.

4.16.1 EXISTING CONDITIONS

The San Diego regional transportation system is a complex and expansive multimodal network that supports the demand for personal travel and is the backbone of the region's economic base. The transportation network connects residents and visitors to places of employment, education, shopping, recreation, and residences. The transportation network is also essential for the movement of goods and continued economic development.

The transportation system includes interstates and state highways, arterial roadways, local roadways, public transportation systems, nonmotorized transportation facilities, maritime and aviation facilities, and land ports of entry (POEs). The regional roadway system is an interconnected network of freeways, state highways, toll roads, arterial roadways, and local roadways. The roadway network allows for the movement of personal vehicles, micromobility transports, bicycles, buses, commercial vehicles, ride-share services, and heavy trucks. The regional public transit system includes local and regional bus operations, regional and interregional commuter rail services, and light rail service. The freight railroad network includes two freight rail corridors distributing cargo and goods services. Nonmotorized transportation facilities generally include walkways and bikeways. Often bikeway facilities such as bike routes, bike lanes, and cycle tracks are located within the roadway right-of-way. Shared facilities such as multi-use paths are generally not associated with a roadway facility. The airport system consists of commercial, general, and military aviation facilities serving passenger, freight, business, recreational, and military needs. Individual components of the regional transportation network are described in the following sections.

Both the current (Year 2021)¹ and Baseline Year (Year 2016) conditions of the region's transportation network are discussed in the following sections. The SANDAG updated second generation Activity Based Model² (ABM2+) was calibrated to Year 2016 conditions under its base year scenario. The ABM2+ is the most up-to-date transportation forecast within the San Diego region and is the best tool in which the metrics used to evaluate effects of land use growth and transportation network improvements can be measured at a regional level, including activity and tour (trip) generation, mode split, average trip length, and vehicles miles traveled (VMT). As such, the majority of the transportation impact analysis presented in Section 4.16.4 was conducted using the ABM2+ and utilizes Year 2016 as the base year scenario. It should be noted that transportation conditions evolve slowly over time and only minor changes in the network usually occur over a 5-year period. Therefore, as shown in the following sections, the differences between the Baseline Year 2016 and current

¹ In some cases Year 2021 data was not yet available, under these circumstance data from the year that is most current is provided.

² The SANDAG Series 14 Regional Growth Forecast is the long-range forecast of population, housing, and employment that was inputted into ABM2+ for the proposed Plan. The Sustainable Communities Strategy (SCS) land use pattern is a subregional allocation of forecasted growth and development (population, housing, and jobs) based on the Series 14 Regional Growth Forecast. Data used to develop the SCS land use pattern are based on the most recent planning assumptions, considering local general plans and other factors, per California Senate Bill 375 (Steinberg, 2008) (SB 375) (Government Code Section 65080[b][2][B]). Additional information regarding the background, data sources and methodologies used within the ABM2+ can be found through the following resource:

<https://www.sandag.org/index.asp?subclassid=120&fuseaction=home.subclasshome>.

conditions are minor (less than 8% for any facility type) and would not affect the overall findings of the transportation impact analysis.

ROADWAY NETWORK

The primary purpose of the roadway network (Figure 4.16-1) is to facilitate the movement of people and goods. The roadway network within the region serves many purposes and can accommodate several modes of travel, such as buses, personal automobiles, commercial automobiles, the movement of freight, and bicycles and micromobility vehicles. Local streets and arterials traverse communities and are typically used for shorter trips, while the region's freeways and state highways provide access to major job centers, education, recreation, and travel to destinations outside the region. The regional roadway network is a complex and expansive system that is planned, designed, built, operated, and maintained by numerous agencies, such as the region's local jurisdictions, the California Department of Transportation (Caltrans), tribal governments, and SANDAG.

Table 4.16-1 summarizes the existing roadway network within the San Diego region.

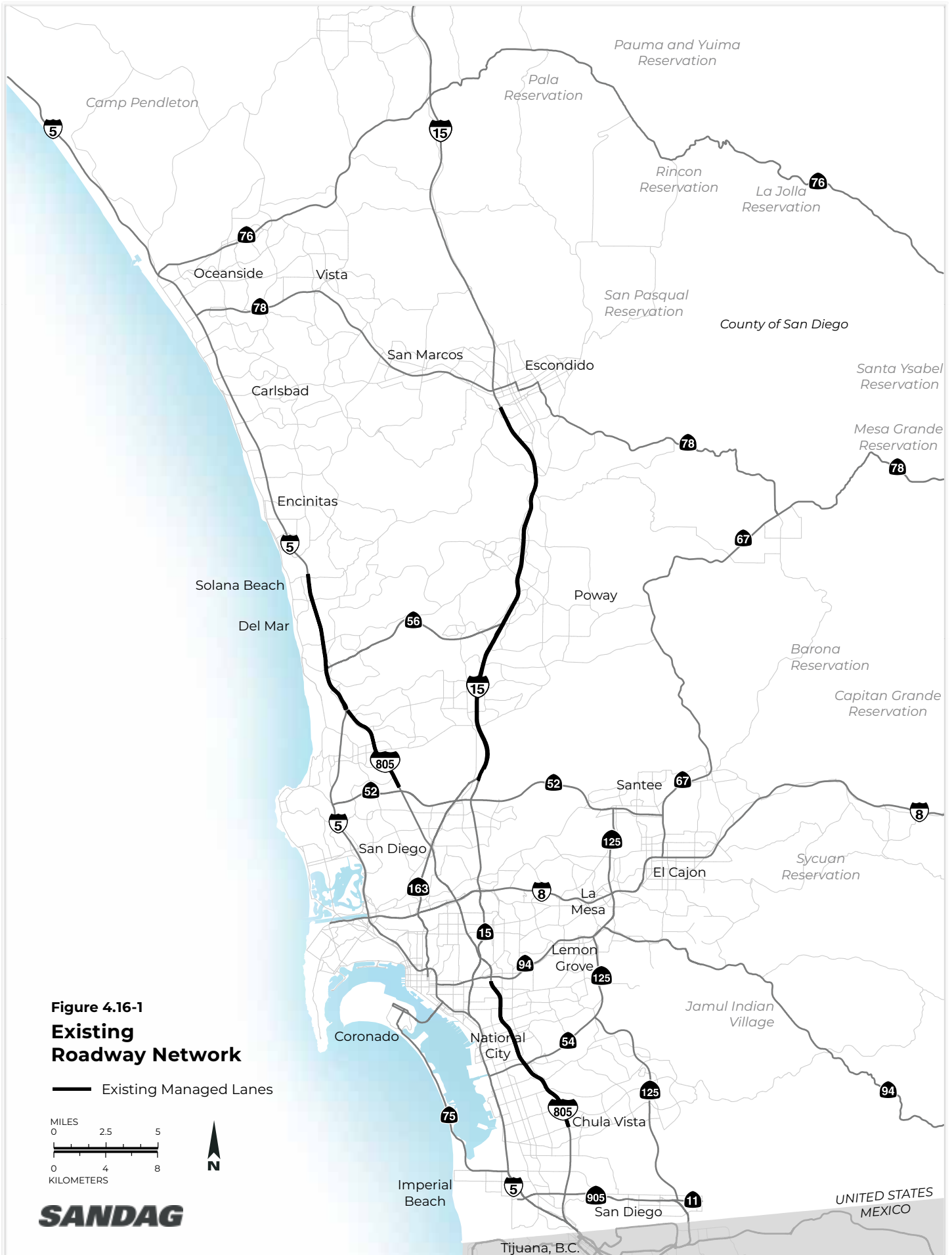
**Table 4.16-1
Existing Roadway Facilities in the Region**

Facility Type	Year 2016		Year 2020	
	Centerline Miles	Lane Miles	Centerline Miles	Lane Miles
Freeway – General Purpose Freeway – General Purpose	335	2,415	335	2,417
Freeway – Managed Lanes Freeway – Managed Lanes	39	116	39	116
Tollway State Highways	10	46	11	48
State Highways Regional Arterial Network	275	628	275	656
Regional Arterial Network Local Roadways	1,052	3,718	1,055	3,793

Source: ABM2+ Base Year and Year 2020 Transportation Network

Note: Centerline Miles = total miles of roadway type, regardless of the number of lanes provided; Lane Miles = total miles of roadway multiplied by the number of lanes along each segment.

As shown in Table 4.16-1, the total freeway centerline miles ~~and lane miles~~ did not increase between Year 2016 and Year 2020, while the total number of lane miles only increased by 2 miles. State highways, regional arterials, and local roadways saw only a nominal increase in both centerline miles (less than 1 percent) and lane miles (2 percent) over the same period.



PUBLIC TRANSIT

The primary forms of public transportation throughout the San Diego region are commuter rail, light rail, Bus Rapid Transit (Rapid),³ and local and express bus services. Additionally, on-water transit services, such as ferries and water taxis, are operated within San Diego Bay, connecting between Downtown San Diego and Coronado. The existing transit network is depicted on Figure 4.16-2. Generally, these forms of public transit are centered in the western portion of the region, near the more densely populated coastal communities and commuter corridors. Many of the less dense and rural communities in the eastern portion of the region have limited access to regional public transportation. The commuter rail, light-rail, Rapid, and bus services within the region are primarily provided by Metropolitan Transit System (MTS) and North County Transit District (NCTD). It should be noted that the transit scheduling and headway information presented below represent conditions prior to the State's COVID-19 Stay-at-Home Order. As of mid-2021, transit service in the region is at near pre-pandemic levels.

Light Rail

Throughout the San Diego region, light rail service is provided by NCTD and MTS. The NCTD SPRINTER is a diesel-powered, light rail system that travels a 22-mile east-west route serving 15 stations connecting Oceanside, Vista, San Marcos, and Escondido generally along the State Route (SR) 78 corridor. The SPRINTER operates every 30 minutes in each direction, Monday through Friday, from approximately 4 a.m. until 9 p.m. Trains on Fridays and Saturdays run later, and trains on Saturdays, Sundays, and holidays operate every 30 minutes from 10 a.m. until 6 p.m. and hourly before and after those hours (NCTD 2018c).

The San Diego Trolley is a light rail passenger service operated by San Diego Trolley, Inc., which is owned by MTS. The San Diego Trolley system consists of four lines, including the UC San Diego Blue Line, Orange Line, Sycuan Green Line, and SDG&E Silver Line. There are 53 trolley stations within the region, connected by 54.3 miles of rail (MTS 2016b). Each of these four lines is described below:

- The UC San Diego Blue Line currently covers 15.4 miles and includes 18 stations, extending between Santa Fe Depot in Downtown San Diego and the San Ysidro transit station at the international border with Mexico, via National City and Chula Vista. Construction is currently under way to extend the Blue Line north to the University City community, also referred to as the Mid-Coast Corridor, and will serve major activity centers such as the University of California San Diego (UCSD) and Westfield University Town Center (UTC). Service is anticipated to begin in November 2021. The Blue Line currently runs at 7- to 8-minute headways during peak periods and 15-minute headways in off-peak periods Monday through Sunday. Late night service (after 11 p.m.) on this line runs every 30 minutes.
- The Orange Line currently covers 18 miles and includes 19 stations, extending from Santa Fe Depot in Downtown San Diego to the El Cajon Transit Center via southeastern San Diego, Lemon Grove, and La Mesa. The Orange Line currently runs at 7- to 8-minute headways during peak periods (between the Spring Street Station and City College station) and 15-minute headways in off-peak times until 8:15 p.m. when headways increase to 30 minutes Monday through Friday. On Saturdays and Sundays the Orange Line currently runs at 15-minute headways during midday, and 30-minute headways during mornings and evenings.

³ MTS brands bus services that fully or partially operate in an exclusive right-of-way or managed lanes, similar to bus rapid transit services, as "Rapid."

- The Sycuan Green Line services 23.6 miles and includes 27 stations, operating from the 12th and Imperial Station in Downtown San Diego to the Old Town Transit Center via the bayside alignment, then east to Santee Town Center via Mission Valley and San Diego State University (SDSU). The Green Line operates a 15-minute service during peak times Monday through Friday and midday Saturdays, and a 30-minute service during other times of the day.
- The SDG&E Silver Line is a 2.7-mile loop through Downtown San Diego that is traveled by a restored 1946 Presidents' Conference Committee (PCC) streetcar, also referred to as the Vintage Trolley, operated by MTS. The Silver Line Vintage Trolley departs from the 12th and Imperial Station along the Green Line to America Plaza and then along the Blue/Orange Line back to the 12th and Imperial Station. The Silver Line Vintage Trolley operates on a limited schedule and currently departs every 30 minutes during select hours on Friday through Sunday.

Rapid

MTS currently operates eight Rapid bus routes within the southern portions of the County while NCTD operates one Rapid bus route in the north. It should be noted that the current Rapid bus routes partially operate within an exclusive right-of-way, as is more typical with Bus Rapid Transit services. The current Rapid bus services provide high-frequency, limited-stop bus service from various transit centers within the region to Downtown or one of the major universities within the region (UCSD, SDSU, and the University of San Diego).

Bus

MTS operates approximately 87 fixed-bus routes and Americans with Disabilities Act (ADA) complementary paratransit service throughout its service area. MTS's service area primarily covers the central and southern portions of the San Diego region. Fixed route bus service includes local, urban, express, premium express, and rural routes (MTS 2016). Bus services are provided by the San Diego Transit Corporation, which is owned by MTS. MTS bus service extends from the international border to as far north as Escondido. All MTS buses are equipped with a lift or a ramp for boarding mobility impaired riders.

The NCTD bus system, known as the BREEZE, serves the northern San Diego region. BREEZE operates approximately 37 bus routes from Oceanside south to La Jolla/UTC, southeast to Escondido, northeast to Pala, and north to Fallbrook (NCTD 2018a). NCTD also provides an on-demand FLEX bus service, which includes routes to Ramona and Marine Corps Base (MCB) Camp Pendleton. The NCTD service area also includes four Native American reservations governed by the Rincon Band of Luiseño Indians, Pala Band of Mission Indians, Pauma Band of Luiseño Indians, and San Pasqual Band of Diegueno Mission Indians. NCTD's BREEZE buses are all accessible to persons with disabilities. All buses are equipped with a lift or ramp for boarding mobility impaired riders. Additionally, NCTD services include the LIFT paratransit service, which provides origin-to-destination service for people with disabilities unable to use BREEZE buses or rail services.

Passenger and Regional Commuter Rail

Throughout the San Diego region, passenger and commuter rail services are provided by Amtrak, NCTD, and Metrolink, all of which travel along different segments of the Los Angeles–San Diego–San Luis Obispo (LOSSAN) rail corridor. The LOSSAN rail corridor is the second busiest intercity passenger rail corridor in the United States and the busiest state-supported Amtrak route. The LOSSAN rail corridor service includes 41 stations and more than 150 daily passenger trains, with an annual ridership of nearly 3 million on Amtrak Pacific Surfliner intercity trains and 5 million on Metrolink and COASTER commuter trains.

The Pacific Surfliner provides intercity connections between downtown San Diego, Orange County, Los Angeles, Santa Barbara, and San Luis Obispo. It also connects to the nationwide rail system via Union Station in Los Angeles. The Pacific Surfliner offers 11 daily round trips from San Diego to Los Angeles Union Station (12 on weekends), and 5 round trips from Los Angeles to Goleta (just north of Santa Barbara), with 2 daily trips extending to San Luis Obispo.

The COASTER is operated by NCTD and also travels along the LOSSAN rail corridor. The COASTER provides passenger commuter rail service with eight stops along 41 miles of track between downtown San Diego and Oceanside. The COASTER primarily serves commuters on weekdays, with more than 20 trains scheduled during typical commute hours. The COASTER operates 7 locomotives and 28 bi-level coaches (NCTD 2018e).

Metrolink is a regional passenger commuter rail service that operates within the LOSSAN rail corridor. Metrolink was formed by the Southern California Regional Rail Authority. The Metrolink system consists of seven routes with 62 stations along 538 route miles (includes shared miles). Metrolink operates an average of 173 trains on weekdays with 38,436 average weekday riders. On weekends, Metrolink operates an average of 48 trains on Saturdays and 42 trains on Sundays. The only Metrolink station within the San Diego region is located in Oceanside, and it runs along the Orange County Line. The Orange County Line (which runs from Oceanside to Los Angeles) has 15 stations and 87.2 route miles, with an average of 29 weekday trains in operation (Metrolink 2018).

Micro-Transit

Micro-transit is a service that offers flexible routing and/or flexible scheduling of minibus vehicles, which are typically electric powered. Possible pick-up/drop-off stops are restricted (usually within a geofenced area), and transit can be provided either as scheduled stop-to-stop service or on-demand curb-to-curb service. Free Ride Everywhere Downtown (FRED), which is operated by Circuit, is a local example of on-demand (via cell phone app) curb-to-curb service anywhere within Downtown San Diego. The Hillcrest Lunch Loop is an example of an as-scheduled stop-to-stop service. The Hillcrest Lunch Loop is funded through the Uptown Community Parking District and is also operated by Circuit. The loop operates Monday through Friday from 11:30 a.m. to 1:30 p.m., and has five stops, all within the Hillcrest Neighborhood.

Tables 4.16-2 and 4.16-3, summarize the Year 2016 and current transit services provided within the San Diego region, respectively. Year 2019 data is presented in Table 4.16-2b in-lieu of 2021 data, as it better reflects current and typical transit ridership conditions when the county is not under a Stay-at-Home Order.

Table 4.16-2
Year 2016 Transit Services in the Region

Agency	Type	Total Number of Routes	Total Route Miles	Total Number of Stops	Total Number of Major Stops	Average Daily Passengers ¹	Annual Passengers ²	Daily Hours of Service ¹
MTS	Light Rail	3	57	53	53	120,630	39,614,897	502
	Rapid	8	140	63	63	23,795	6,601,784	622
	Bus	87	863	2,306	147	164,316	45,588,514	5,361
	Total	97	1,060	2,422	263	308,741	91,805,195	6,485
NCTD	Commuter Rail	1	41	8	8	5,196	1,556,056	57
	Light Rail	1	22	15	15	10,282	2,677,929	68
	Rapid	1	6	13	13	2,047	529,425	68
	Bus	35	456	903	--	27,176	7,028,651	1,404
	Lift	--	--	--	--	795	213,603	--
	Total	39	525	939	36	44,701	12,005,664	1,597

Source: ABM2+ Transit Network

¹ National Transit Database Fiscal Year (FY) 16

² Passenger Count Program (PCP) FY16 and FY19

Table 4.16-3
Year 2019 Transit Services in the Region

Agency	Type	Total Number of Routes	Total Route Miles	Total Number of Stops	Total Number of Major Stops	Average Daily Passengers ¹	Annual Passengers ²	Daily Hours of Service ¹
MTS	Light Rail	3	57	54	54	114,740	37,293,757	501
	Rapid	9	156	71	71	24,382	6,702,576	664
	Bus	89	815	2,194	144	148,362	40,784,499	5,530
	Total	101	1,028	2,319	269	287,484	84,780,832	6,695
NCTD	Commuter Rail	1	41	8	8	4,920	1,408,677	57
	Light Rail	1	22	15	15	8,226	2,408,962	77
	Rapid	1	6	13	13	1,735	448,649	68
	Bus	32	436	886	--	23,030	5,956,274	1,332
	Lift	--	--	--	--	629	169,053	--
	Total	35	505	922	36	38,691	10,391,615	1,534

Source: ABM2+ Transit Network

¹ National Transit Database FY16

² Passenger Count Program (PCP) FY16 and FY19

As shown in the tables, the total route miles of transit service slightly decreased between 2016 and 2019, with both MTS and NCTD reducing their route miles by approximately 3 percent.

ACTIVE TRANSPORTATION

Active transportation facilities within the region include bicycle facilities such as bike routes, bike lanes, cycle tracks, and multi-use paths, as well as pedestrian facilities such as sidewalks, pedestrian bridges, and pathways. Active transportation also includes micromobility transports such as electric scooters, e-bikes, bikeshare, and Neighborhood Electric Vehicles (NEVs).

Bicycle Facilities

The San Diego regional bicycle network is composed of the following five main facility types:

- **Class I Multi-Use Path:** Also referred to as a *bike paths* or *multi-use paths*, Class I facilities provide a completely separated right-of-way designed for the exclusive use of bicycles and pedestrians with crossflows by motorists minimized. Multi-use paths can provide connections where roadways are non-existent or unable to support bicycle travel. The minimum paved width for a two-way, multi-use path is considered to be an 8-foot paved pathway with a 2-foot-wide graded area adjacent to either side of the pavement (12 feet total width).
- **Class II Bike Lane:** This facility provides a striped lane designated for the exclusive or semi-exclusive use of bicycles, with through travel by motor vehicles or pedestrians prohibited. Bike lanes are one-way facilities located on either side of a roadway. Pedestrian and motorist crossflows are permitted across bike lanes at intersections and driveways. Additional enhancements such as painted buffers and signage may be applied. The minimum bike lane width is considered to be 5 feet.
- **Class III Bike Route:** This facility provides shared use of traffic lanes with cyclists and motor vehicles, identified by signage and/or street markings such as “sharrows.” Bike routes are best suited for low-speed, low-volume roadways with an outside lane of 14 feet or greater. Bike routes provide network continuity or designate preferred routes through corridors with high demand.
- **Class IV Cycle Track:** Also referred to as *separated* or *protected bikeways*, cycle tracks provide a right-of-way designated exclusively for bicycle travel within the roadway. Cycle tracks are physically protected from vehicular traffic both horizontally, through a buffered area, as well as vertically, utilizing treatments such as grade separation, flexible posts, bollards, railings, art pieces, or on-street parking. Cycle tracks can provide for one-way or two-way travel. A one-way cycle track has a minimum 5-foot-wide travel lane with a 3-foot buffer (8 feet in total), while a two-way cycle track has a minimum 8-foot-wide travel way with a 3-foot buffer (11 feet in total).
- **Bike Boulevard:** Bicycle Boulevards are streets with low motorized traffic volumes and speeds, designated and designed to give bicycle travel priority. Bicycle Boulevards use signs, pavement markings, and speed and volume management measures to discourage through trips by motor vehicles and create safe, convenient bicycle crossings of busy arterial streets. It should be noted that Bicycle Boulevards are not separately distinguished in the Caltrans *Highway Design Manual* from Class III Bicycle Routes. However, the National Association of City Transportation Officials (NACTO) *Urban Bikeway Design Guide* does recognize Bicycle Boulevards as a separate form of classification.

There are approximately 1,710 miles of existing bikeway facilities in the region, as detailed in Table 4.16-4. Class II facilities are the predominant type of bikeway at roughly 67 percent of the total, followed by Class III facilities at 21 percent. Class I facilities compose about 11 percent of the regional total and Class IV Cycle Tracks

compose one percent. While there are currently no Bicycle Boulevards within the San Diego region, two projects are currently under construction by SANDAG in the North Park Mid-City areas: the Georgia-Meade and Landis Bikeways. Figure 4.16-3 shows the existing off-street bicycle network throughout the San Diego region.

**Table 4.16-4
Existing Bicycle Facilities in the Region**

Facility Type	Year 2016		Existing (2020) Conditions	
	Total Lane Miles ¹	Percentage of Total	Total Lane Miles ¹	Percentage of Total
Class I Multi-Use Path	359.5166	11.6%11%	378.9189	11.3%11%
Class II Bike Lane	2,101.01,039	67.5%66%	2,257.31,145	67.2%67%
Class III Bike Route	642.3349	20.6%22%	702.2363	20.9%21%
Class IV Cycle Track	9.320	0.3%1%	20.913	0.6%1%
Bike Boulevard	0.0	0.0%	0.0	0.0%
Total	4,5743,112.2	100.0%	4,7103,359.3	100.0%

Source: ABM2+

¹The reporting of bicycle facilities was converted from total centerline miles (provided in the Draft EIR) to total lane miles, based on public comments.

As shown in the table, the ratio of facility types stayed rather consistent between 2016 and 2021; however, there was an 8 percent increase in the total miles of facilities over this same time period.

Micromobility

Micromobility refers to small, lightweight travel devices that generally travel short distances at low speeds. In the San Diego region popular micromobility devices include dockless bikeshare, e-bike share, electric scooters (e-scooters), and NEVs. Dockless bikeshare, e-bike share, and e-scooters are located and rented via smartphone apps that allow users to pick-up and return bicycles, electric bicycles, or e-scooters anywhere within a designated area, generally designated via a geofence.⁴ Similar to bicycles, e-scooters are not allowed to be ridden on the sidewalk and are required to either be within a bike facility, such as a bike lane, or in the outside travel lane of the roadway.

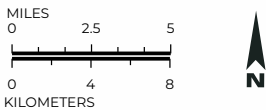
A NEV is a small electric vehicle that typically operates within a defined service area and fulfills trips that cover a short-distance, typically less than 2 miles. NEVs help to facilitate connections to and from transit stations and provide users with an alternative to driving for short trips. NEVs are generally available to rent through public sharing programs, or through personal ownership. There are currently no NEV sharing programs operating within the San Diego region. NEVs are allowed to be driven within the travel lane of roadways with speed limits that do not exceed 35 miles per hour (mph) (California Vehicle Code Sections 385.5 and 21260); however, they generally have a maximum speed of 25 mph. Along higher speed roadways, NEVs are permitted to drive within the bike lane, if adequate width is provided, or within designated facilities.

⁴ A geofence is a virtual geographic boundary, defined by global positioning system (GPS) or radio-frequency identification (RFID) technology, that enables software to trigger a response when a mobile device enters or leaves a particular area.



**Figure 4.16-3
Existing
Bicycle Network**

— Off-Street



SANDAG

UNITED STATES
MEXICO

Pedestrian Facilities

Walking is also a part of an active transportation network. Pedestrian facilities primarily include sidewalks and crosswalks associated with arterials and roadways, as well as bridge and other connections across highways and rail facilities.

In September 2010, SANDAG began engaging key stakeholders and the region's residents in the development of the Draft Regional Safe Routes to School Strategic Plan; the final Strategic Plan was accepted by the SANDAG Transportation Committee on March 2, 2012. The Regional Safe Routes to School Strategic Plan aims to make walking and bicycling to school safer and to provide more attractive travel choices for families throughout the region. The plan identifies a regional strategy to support local communities in establishing new Safe Routes to School programs as well as sustaining and enhancing existing efforts (SANDAG 2018c).

Improving safety conditions is a central goal of Safe Routes to School programs, which can be accomplished by improving the built environment, educating students, engaging community members, enforcing traffic laws, and instituting programs designed to address personal security concerns. Safe Routes to School programs support more sustainable, compact, well-designed communities interconnected by a transportation system that expands travel choices and reduces greenhouse gas (GHG) emissions. Safe Routes to School programs also help achieve this vision by reducing peak period vehicle trips and providing active transportation to school with more viable and attractive options. Addressing school safety and accessibility improves the overall walkability of affected neighborhoods (SANDAG 2012).

It should be noted that trail facilities are also considered part of the pedestrian network.⁵ The trail facilities within the San Diego region are further described and analyzed in Section 4.15, *Public Services and Utilities*, of this EIR, along with other recreational facilities.

PARKING

On- and off-street parking within the San Diego region is generally regulated within each local jurisdiction's municipal code. Caltrans also provides Park-N-Ride locations at strategic points along the region's freeway network, as well as joint locations, with transit agencies (MTS and NCTD), at major transit stations. While SANDAG does not regulate public or private parking within the region, they do provide support and resources for the local jurisdictions to optimize their parking management practices and regulations. SANDAG developed a *Parking Strategies for Smart Growth* guide as part of their *Planning Tools for the San Diego Region* (SANDAG 2010a). This guide provides a benchmark and compares the various parking regulations within the region, as well as how those regulations compare to national standards. Additionally, the guide provides example policies on how jurisdictions can implement smart growth parking policies and programs. SANDAG also developed a regional parking management toolbox that provides jurisdictions within the San Diego region with a framework for evaluating, implementing, and managing parking management strategies that support their economic development, sustainability, and mobility goals (SANDAG 2014).

⁵ The United States Access Board has identified four Conditional Exceptions for when ADA standards do not need to be applied to trail facilities, as identified in the *Accessibility Standards for Federal Outdoor Developed Areas* (May 2014). Further detail is provided through the following link: <https://www.access-board.gov/files/aba/guides/outdoor-guide.pdf>.

SANDAG's iCommute program, which focuses on Transportation Demand Management (TDM) strategies, also contains parking management programs and opportunities that employers and jurisdictions can use to better manage their parking demand. The iCommute program currently offers vanpool/carpool assistance, ride matching programs, and telework programs to assist employers with transportation and parking demand management.

AIRPORTS

The San Diego region is home to 16 public-use and military airports, as shown on Figure 4.9-2 in Section 4.9, *Hazards and Hazardous Materials*. Located adjacent to Downtown San Diego, the San Diego International Airport (SDIA) is the busiest single-runway commercial service airport in the nation. The airport served approximately 25 million passengers in 2019 and hosted 22 passenger carriers and five cargo carriers.

Other regional airports include Oceanside Municipal Airport, McClellan-Palomar Airport, Montgomery Field, Gillespie Field Airport, and Brown Field Municipal Airport. Rural airfields, generally located in the eastern portion of the San Diego region, include Fallbrook Community Airpark, Ramona Airport, Borrego Valley Airport, Ocotillo Airport, Agua Caliente Airport, and Jacumba Airport. Military airfields in the region include Marine Corps Air Station Camp Pendleton, Marine Corps Air Station Miramar, Naval Air Station North Island, and Naval Outlying Field Imperial Beach (SDIA 2019).

GOODS MOVEMENT AND FREIGHT

The movement of goods and freight throughout the San Diego region is an important component to the region's transportation operations. The San Diego region's location is critical in the international transport of goods through multiple international POEs, with Mexico to the south and the Ports of Los Angeles and Long Beach to the north, which combined make up the San Pedro Bay Port Complex, the ninth busiest container port complex in the world (Port of Los Angeles 2018). The San Diego region is also home to two international marine terminals, the National City Marine Terminal (NCMT) and the Tenth Avenue Marine Terminal (TAMT).

Truck

The predominant mode in San Diego's diverse and expansive goods movement network is commercial trucking. Trucking has played a pivotal role in enabling the region to harness the economic benefits of growing international trade. In 2019, Mexico became the United States' top overall trade partner. Currently, more than 90 percent of California-Mexico trade is moved by truck. In 2019, the Otay Mesa and Tecate POEs processed a combined \$48.3 billion in total bilateral trade, and that number is expected to grow over the coming years (SANDAG 2021b). The most common commodities that cross the California-Mexico border by truck are high-value items such as electronics, medical devices, and automobiles. These commodities are expected to continue to dominate cross-border trade, especially with the passage of the United States-Mexico-Canada (USMCA) Trade Agreement. International trade, however, accounts for only a portion of the goods that trucks carry through San Diego County. Freight traveling within the county or to/from other domestic locations accounts for more than 85 percent of the truck tonnage on the region's interstate freeways, highways, and local roads, approximately 50 million tons per year (SANDAG 2016).

Rail

In addition to commercial truck crossings, San Diego also has a rail freight crossing at its San Ysidro Port of Entry, where the Main Line—owned by the MTS subsidiary San Diego and Arizona Eastern Railway Company (SD&AE)—terminates. Freight on this short line is operated by the San Diego and Imperial Valley Railroad

(SDIV). A defunct rail crossing, which would connect the SD&AE Main Line through the Tijuana, Tecate short line to the currently non-operational Desert Line, also exists about 5 miles east of the Tecate POE. While accounting for only a small portion of total cross-border trade, approximately \$88 million of goods pass through San Diego's rail crossings. These rail imports consist primarily of agricultural goods and raw materials like stone, iron, and steel.

San Diego's rail infrastructure also carries a significant amount of domestic freight. Of the approximately 3,200 rail carloads carried by SDIV in 2019, about half are transported between locations other than the international border. The region is also served by the LOSSAN Rail Corridor, which carries approximately \$1 billion of freight annually by its Class I freight operator, the Burlington Northern Santa Fe (BNSF) Railway Company (NCTD 2020).

Maritime

While the majority of imports that pass through the San Diego goods movement network complete a portion of their journey on trucks or trains, many international goods first arrive in the region by ship. Between the TAMT and the NCMT, more than 1.5 million metric tons of waterborne cargo is processed by San Diego's seaports annually (USACE 2019). In addition to standard shipping containers, San Diego's maritime ports are equipped to process breakbulk and refrigerated cargo. NCMT primarily handles lumber and automobiles, while TAMT receives a wider variety of goods, including fruit, sand/cement, and petroleum products. Both TAMT and NCMT have onsite rail connections and are minutes away from major freeways.

By providing the region with valuable goods and high-quality employment, the Port of San Diego is an important economic driver. A 2017 economic impact analysis found that industrial and maritime commerce at the port directly contributed 13,348 jobs and \$2.65 billion in economic output to the county. With tourism activity and indirect economic benefits included, the Port of San Diego's total economic impact on the region is estimated to be over \$9.4 billion (Port of San Diego 2019).

Air Cargo

Another way goods enter and leave San Diego County is through its airports. In addition to being the nation's busiest single-runway commercial airport, SDIA handled more than 150 thousand tons of cargo in 2019 (SDIA 2019). Mail makes up a significant portion of the cargo that arrives at the airport. Upon arrival, mail is trucked to offsite sorting facilities before being sent to its final destination. Unlike the region's maritime ports, which almost exclusively processes international goods, SDIA primarily handles domestic cargo.

Pipeline

Finally, San Diego's goods movement network also includes two privately owned pipelines that bring in about 700,000 tons of aviation fuel and gasoline per year.

FREIGHT RAIL

LOSSAN Rail Corridor: Freight rail services in the San Diego region are predominantly operated within the LOSSAN rail corridor by the BNSF Railway (LOSSAN 2007). The LOSSAN rail corridor covers a six-county coastal region spanning 351 miles along the Southern California coast, with over 60 miles located in the San Diego region. In 2008, the Pacific Sun Railroad began serving freight in the region, particularly freight customers of the Escondido subdivision and the Miramar industrial spur (Watco 2018). As noted above under *Public Transit*, passenger and commuter rail services also operate within the LOSSAN rail corridor.

SD&AE Rail Corridor: This corridor straddles the international border with Mexico, connecting San Diego, Tijuana, Tecate, and the Imperial Valley. The U.S. section of the railroad is owned by MTS, and the 44.3 miles in Mexico are owned by the Mexican national railway, Ferrocarril Sonora-Baja California Railroad. The SD&AE runs on four lines totaling 108 miles, each of which are described below (MTS 2013).

- *Main Line* – Extends from Center City San Diego south to San Ysidro/International Border at Tijuana with a total length of 15.5 miles. This line extends through Mexico (44.3 miles) and connects with the Desert Line (see below).
- *La Mesa Branch* – Extends from downtown San Diego east to the city of El Cajon (though the City of La Mesa) with a total length of 16.1 miles.
- *Coronado Branch* – Extends from National City south to Imperial Beach with a total length of 7.2 miles. The Coronado Branch is currently not in use.
- *Desert Line* – Extends north and east from the International Border (junction called Division) to Plaster City with a total length of 69.9 miles, where it joins the Union Pacific Line from El Centro. The Desert Line is currently not in use; however, efforts are currently being made to rehabilitate degraded portions of this line and start rail services again.

The SDIV Railroad currently provides freight services on the Main Line and La Mesa Branch (MTS 2013). Pacific Imperial Railroad, Inc. (PIR) previously operated the Desert Line beginning in 2012. However, on June 2, 2016, PIR and Baja California Railroad entered into a binational sublease agreement to pay for the reconstruction and operation of the Desert Line. Under the sublease agreement, Baja California Railroad was responsible for the railroad repair, maintenance, and operational obligations for the first 60 miles of the Desert Line (MTS 2016a). Since that time, however, PIR filed for bankruptcy, and MTS approved a new amended and restated 99-year lease agreement with Baja California Railroad in September 2017, and all of PIR's assets, including the Desert Line lease, were assigned to Baja California Railroad (MTS 2017).

The freight rail corridors within the region are displayed on Figure 4.16-4.

TRANSPORTATION PROGRAMS

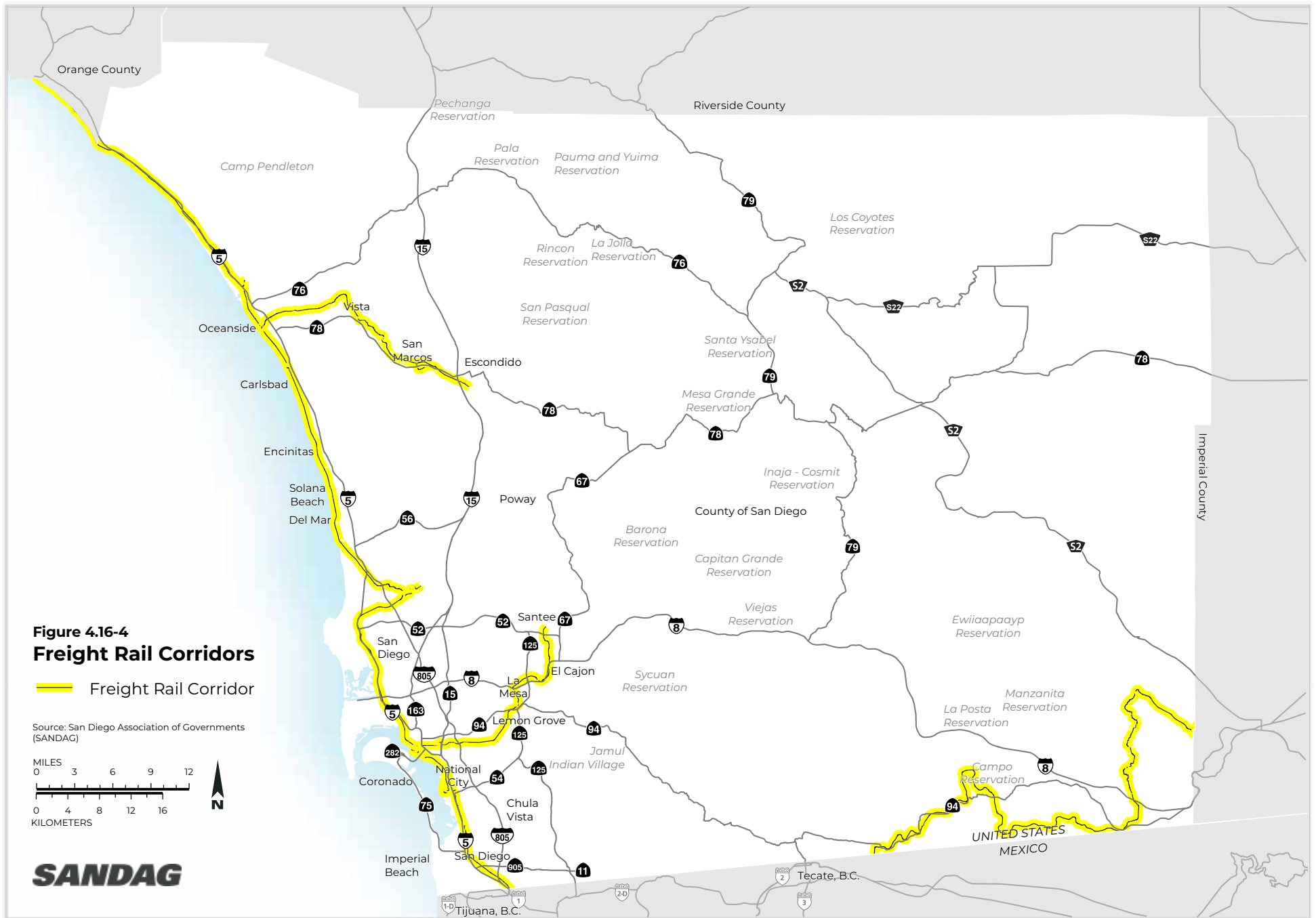
Transportation programs generally combine physical and digital infrastructure to better manage the operations of the region's transportation network.

Transportation Demand Management


TDM refers to programs and strategies that manage and reduce traffic congestion during peak travel times. Typical TDM programs include carpooling and vanpooling; promoting alternative work schedules; teleworking; and increasing bicycle, pedestrian, and transit use. These programs are designed to reduce congestion and the overall VMT generated within the region. The main goal of TDM programs is generally to make more efficient use of the existing transportation network within the region and to better maximize the movement of people and goods.

The comprehensive TDM program for the San Diego region is the iCommute program, which is operated by SANDAG in cooperation with the region's 511 transportation information services. The goal of iCommute is to reduce traffic congestion during peak times, as well as decrease GHG emissions and other environmental pollutants, by reducing the number of commuters driving to work or school alone each day. The iCommute program pulls together trip-reduction strategies and state-of-the-art web tools to provide access to convenient transportation choices that reduce auto dependency, vehicle energy consumption, and emissions. Specific

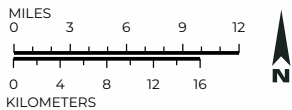
programs and services provided by iCommute include a vanpool subsidy program, transit solutions, regional support for biking, a Guaranteed Ride Home program, information about teleworking, and bike and pedestrian safety program support for schools (SANDAG 2018b). TDM programs are discussed in additional detail in Chapter 2, *Project Description*, of this EIR.



**Figure 4.16-4
Freight Rail Corridors**

 Freight Rail Corridor

Source: San Diego Association of Governments (SANDAG)



SANDAG

Transportation System Management/Intelligent Transportation Systems

Transportation System Management (TSM) and Intelligent Transportation Systems (ITS) provide the means to effectively manage the overall transportation system, including the demands on the system. TSM/ITS use innovative technologies that maximize the efficiency of the transportation network and promote greater multimodal system efficiencies that support mode changes over time, which can ultimately lower GHG emissions. TSM/ITS components are discussed in additional detail in Chapter 2 of this EIR.

Active Transportation and Demand Management/Smart Intersection Systems Active Transportation

SANDAG is currently developing and implementing Active Transportation and Demand Management (ATDM) and Smart Intersection Systems (SIS). ATDM enables transportation operators to change how infrastructure and services are used as traffic conditions change. This technology also provides people with real-time travel information to help them decide how, where, and when to travel. SIS uses sensors, connected vehicle technology, and mobility applications to facilitate communication among users, which improves traffic flow, situational awareness, signal operations, and intersection safety.

Integrated Corridor Management

In 2010, SANDAG and its partners developed and implemented the Integrated Corridor Management (ICM) system. ICM connects the transportation operations systems for multiple jurisdictions along the northern section of the Interstate (I-) 15 corridor and has resulted in substantial improvements to its performance. ICM enables multiple systems to “talk” to each other and coordinate their operations to maximize efficiency regardless of which jurisdiction owns or operates the individual system. The ICM system also monitors changing roadway conditions and congestion based on real-time information, then generates automated response plans to address the situation. The system reevaluates and generates new response plans as traffic conditions change further. An ICM multimodal response plan can include several key features:

- Coordination of the I-15 Express Lanes system with Caltrans’ changeable message signs, 511 traveler information, ramp meters, and arterial signal systems to bypass major incidents or manage daily congestion.
- System automation to monitor congestion and select action plans.
- Real-time action control changes to traffic signal and ramp meter timing to better manage traffic entering or exiting the freeway system and manage traffic signals across agencies.

As part of the ongoing ICM project, a coordinated detour messaging system was activated in April 2016 with 40 alternate route signs installed on surface streets along the I-15 corridor in the cities of Escondido, Poway, and San Diego. Should a major freeway incident occur, Caltrans overhead changeable message signs on I-15 will direct motorists off the freeway to avoid delays, and alternate route signs will guide motorists through surface streets and back onto the freeway as soon as possible.

Shared Mobility

Shared mobility options for carpooling and on-demand rideshare have increased in usage over the past decade. On-demand rideshare services are made possible by smartphone applications that allow users to request a ride in real time. The application-based services connect riders with drivers or other riders and facilitate the most efficient trips to their destinations.

- **Dynamic Carpooling:** Application-based service that matches drivers with empty seats to passengers seeking rides to similar destinations. This ridesharing service creates efficiency and reduces congestion but does not allow the users to make a profit. Examples of dynamic carpooling services in the region are Scoop and Waze Carpool (SANDAG 2018b).
- **Ridehailing Services:** Application-based services that allow users to request a ride from paid drivers, who generally utilize their personal vehicles. Ridehailing services are presented in a variety of ways, including “pooling” services that connect multiple riders to shared rides, or individual rides, which pick up and drop off riders at designated destinations. Uber and Lyft are the main ridehailing services operating in the San Diego region.
- **Carshare:** Application-based service that allows for the short-term rental of a fleet vehicle or a personal vehicle via a smartphone app. Round-trip carshares allow users to pick-up and return a vehicle to the same parking spot, while free-floating carshare services allow users to pick-up and drop-off vehicles anywhere within a designated service area. These types of services allow rentals by the hour or day. Peer-to-peer carshare services allow private vehicle owners to rent their car to users within their community. Zipcar and Getaround are the only publicly available carshare services currently operating in the San Diego region.

ANTICIPATED EFFECTS FROM CLIMATE CHANGE

The San Diego region is likely to experience sea-level rise of up to 1.2 feet by 2050 and up to 4.6 feet by 2100, wetter winters and more intense precipitation that can lead to increased flooding, intense heat waves and annual average temperature increases of up to 4.8°F by 2050, and a longer and less predictable fire season (CEP and SDF 2015, Kalansky et al. 2018, OPC 2018). More details on future climate projections are available in Appendix F.

Climate change could impact transportation infrastructure and operations, as well as transportation use behavior. For example, sea-level rise may cause erosion and increase the frequency or duration of flooding on roads, which disrupts functionality and damages infrastructure (County of San Diego 2018, Biging et al. 2012). An assessment of damage costs on city transportation infrastructure in Carlsbad found that bluff erosion could result in losses of \$5.8 million by 2050 (Nexus Planning & Research 2017). Flooding and inundation on roads, railways, and in subway tunnels may cut off access to local transportation facilities and damage components exposed to more frequent inundation (ICLEI 2012, Biging et al. 2012). More frequent and intense rainfall may cause bridge scour due to erosion of sediment and increase streamflow, which could exacerbate bridge damage (Biging et al. 2012, Reidmiller et al. 2018). Also, saturated soils may destabilize the substructure of transportation infrastructure and cause pavement degradation (ICLEI 2012). Extreme events and higher sea levels could lead to longer driving times because some corridors might be cut off (Moser et al. 2012). Flooding could cause damage and delays at ports and airports, negatively affecting commerce and flight plans, and higher tides at ports could contribute to erosion and cause periodic traffic disruptions (Biging et al. 2012).

In addition to flooding, higher temperatures can damage pavements, railroad tracks, and other infrastructure, as well as present safety and health concerns for passengers and employees. Under extreme high temperatures, joints on bridges and highways may expand/contract and pavement may deteriorate more rapidly, and pavement binders may not remain intact (Reidmiller et al. 2018, WSP 2018). Rail tracks can buckle under high temperatures and airplanes may face challenges due to hot weather (Reidmiller et al. 2018). The impacts of climate change on transportation are complex. Although these impacts have been explored to some degree within the San Diego region, their extent is unknown.

These projected increases in climate impacts may increase maintenance requirements to repair damage to transit infrastructure and roadways. Extreme heat and precipitation events may also necessitate changes in maintenance schedules to work around heavy rainfall and protect outdoor workers from extreme heat (WSP 2018).

Additionally, higher temperatures and changes in precipitation may change patterns of transit ridership, bicycling, and walking (Melillo et al. 2014). The literature does not make conclusions about whether the impacts of climate change could increase or decrease VMT. If changes in climate cause people to drive rather than walk or take alternative forms of transit, it is possible that VMT would increase. However, if people adapt by moving closer to work or working from home, VMT may not increase.

Increasing wildfire frequency and intensity may pose threats to driver safety, operations, and infrastructure. Wildfires could cause additional traffic, block roads, and require detours, in addition to reducing visibility due to smoke (WSP 2018). Additionally, wildfires may contribute to landslide exposure, which can damage transportation infrastructure (WSP 2018).

4.16.2 REGULATORY SETTING

FEDERAL LAWS, REGULATIONS, PLANS, AND POLICIES

Moving Ahead for Progress in the 21st Century Act

The Moving Ahead for Progress in the 21st Century Act (MAP-21) was signed into law by President Obama in 2012. MAP-21 was the first long-term highway authorization enacted since the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) was passed in 2005. This act provided needed funds and transformed the policy and programmatic framework for investments to guide the growth and development of the nation's transportation infrastructure and included many important provisions intended to help the Federal Motor Carrier Safety Administration (FMCSA) in its important mission to reduce crashes, injuries, and fatalities involving large trucks and buses (FMCSA 2015). MAP-21 created a performance-based multimodal program to address challenges of the U.S. transportation system, including improving safety, maintaining infrastructure condition, reducing traffic congestion, improving efficiency of the transportation system and freight movement, protecting the environment, and reducing delays in project delivery. It built on the policies and programs established by the Intermodal Surface Transportation Efficiency Act of 1991.

Fixing America's Surface Transportation Act of 2015

The Fixing America's Surface Transportation (FAST) Act of 2015 was signed into law by President Obama on December 4, 2015. The FAST Act provides long-term funding certainty for surface transportation infrastructure planning and investment. Under the FAST Act, \$305 billion was authorized over fiscal years 2016 through 2020 for highway; highway and motor vehicle safety; public transportation; motor carrier safety; hazardous materials safety; rail; and research, technology, and statistics programs. Additionally, the FAST Act incorporates changes to ensure the timely delivery of transportation projects by improving innovation and efficiency in project development, through the planning and environmental review process, to project delivery.

On September 30, 2020, the United States Senate approved H.R. 8337, the Continuing Appropriations Act, 2021 and Other Extensions Act, which provides fiscal-year 2021 appropriations to federal agencies for continuing projects and activities of the federal government. Included in this act is a 1-year, \$13.6 billion extension of the FAST Act. As such, the Fast Act is now scheduled to expire on September 30, 2021.

U.S. Department of Transportation Regional Transportation Plan Requirements

Under federal transportation law, the U.S. Department of Transportation (DOT) requires that Metropolitan Planning Organizations (MPOs), such as SANDAG, prepare long-range regional transportation plans (23 United States Code [USC] 134). In federally designated air quality nonattainment or maintenance areas, the long-range transportation plan is to be updated at least every 4 years. The proposed Plan would be the latest update of the San Diego region's long-range transportation plan.

Federal requirements for long-range transportation plans include the following (23 USC 134(i)(2)):

- **Identification of Transportation Facilities:** An identification of transportation facilities (including major roadways, public transportation facilities, intercity bus facilities, multimodal and intermodal facilities, nonmotorized transportation facilities, and intermodal connectors) that should function as an integrated metropolitan transportation system, giving emphasis to those facilities that serve important national and regional transportation functions.
- **Performance Measures and Targets:** A description of the performance measures and performance targets used in assessing the performance of the transportation system.
- **System Performance Report:** A system performance report and subsequent updates evaluating the condition and performance of the transportation system with respect to the performance targets, including progress achieved by the MPO in meeting the performance targets in comparison with system performance recorded in previous reports.
- **Mitigation Activities:** A discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the plan. The discussion must be developed in consultation with federal, state, and tribal wildlife, land management, and regulatory agencies.
- **Financial Plan:** A financial plan that demonstrates how the adopted transportation plan can be implemented, indicates resources from public and private sources that are reasonably expected to be made available to carry out the plan, and recommends any additional financing strategies for needed projects and programs. For the purpose of developing the transportation plan, the MPO, transit operator, and state must cooperatively develop estimates of funds that will be available to support plan implementation.
- **Operational and Management Strategies:** Operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods.
- **Capital Investment and Other Strategies:** Capital investment and other strategies to preserve the existing and projected future metropolitan transportation infrastructure, provide for multimodal capacity increases based on regional priorities and needs, and reduce vulnerability of the existing transportation infrastructure to natural disasters.
- **Transportation and Transit Enhancement Activities:** Proposed transportation and transit enhancement activities including consideration of the role that intercity buses may play in reducing congestion, pollution, and energy consumption in a cost-effective manner and strategies and investments that preserve and enhance intercity bus systems, including systems that are privately owned and operated.

Also, Regional Transportation Plans (RTPs) must be financially realistic (i.e., account for revenue constraints), balancing capital and operating costs with reasonable revenue expectations, as agreed upon by MPOs and their transportation agency partners in the planning process (23 Code of Federal Regulations 450.324).

Additionally, in metropolitan areas that are in nonattainment for ozone (O₃) or carbon monoxide (CO) under the federal Clean Air Act (CAA), the MPO must coordinate the development of a transportation plan with the process for development of the transportation control measures of the State Implementation Plan required by the CAA. In each metropolitan area, the MPO must consult, as appropriate, with state and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation concerning the development of a long-range transportation plan. Each MPO must provide individuals, affected public agencies, representatives of public transportation employees, public ports, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with a reasonable opportunity to comment on the transportation plan. A transportation plan involving federal participation must be published or otherwise made readily available by the MPO for public review.

STATE LAWS, REGULATIONS, PLANS, AND POLICIES

Road Repair and Accountability Act of 2017

Senate Bill (SB) 1, also referred to as the Road Repair and Accountability Act of 2017, was signed into law on April 28, 2017, increasing transportation funding and instituting reforms. SB 1 includes an annual investment of \$5.4 billion to repair roads, freeways, and bridges in communities throughout the state. SB 1 is intended to address a backlog of repairs and upgrades to the state's transportation facilities, while simultaneously ensuring a sustainable travel network for the future. Funds from SB 1 are split equally between State and local investments.

Active Transportation Program

Pursuant to SB 99 (Chapter 359, Statutes of 2013) and Assembly Bill (AB) 101 (Chapter 354, Statutes of 2013), the Active Transportation Program (ATP) was created to encourage increased use of active modes of transportation, such as biking and walking. The ATP consolidates various federal and State transportation programs, including the Transportation Alternatives Program, Bicycle Transportation Account, and State Safe Routes to School, into a single program with a focus to make California a national leader in active transportation (Caltrans 2018). The ATP is administered jointly by the California Transportation Commission (CTC) and Caltrans and combines many federal and State funding streams previously used for bicycle, pedestrian, safety, and other related purposes into one funding stream. In 2017, the Road Repair and Accountability Act (SB 1) added approximately \$100 million per year in additional funds for the program (SANDAG 2018d). The purpose of the ATP includes the following:

- Increase the proportion of biking and walking trips.
- Increase safety for non-motorized users.
- Increase mobility for non-motorized users.
- Advance the efforts of regional agencies to achieve greenhouse gas reduction goals.
- Enhance public health, including the reduction of childhood obesity through the use of projects eligible for Safe Routes to Schools Program funding.
- Ensure disadvantaged communities fully share in program benefits (25 percent of program).
- Provide a broad spectrum of projects to benefit many types of active transportation users.

California RTP Requirements

In addition to federal requirements, MPOs are required to prepare RTPs that also meet State requirements. California Government Code Sections 65080 et seq. state that each MPO must prepare and adopt an RTP directed at achieving a coordinated and balanced regional transportation system, including, but not limited to, mass transportation, highway, railroad, maritime, bicycle, pedestrian, goods movement, and aviation facilities and services. The plan must be action-oriented and pragmatic, considering both the short- and long-term future, and must present clear, concise policy guidance to local and State officials. The RTP must consider factors specified in Section 134 of Title 23 of the United States Code, and each transportation planning agency must consider and incorporate, as appropriate, the transportation plans of cities, counties, districts, private organizations, and State and federal agencies.

Pursuant to California Government Code Section 14522, the CTC first adopted the RTP Guidelines in 1978 to help MPOs develop their RTPs consistent with federal and State transportation planning requirements. The guidelines are updated periodically on an as-needed basis. The 2010 update to the guidelines reflected revisions to address the planning requirements of SB 375 and other planning practices. In addition to addressing SB 375, the 2010 guidelines update set forth a uniform transportation planning framework throughout the state that identifies State and federal requirements for the development of RTPs. The updated guidelines recognize that the reduction of GHGs is a key priority in the transportation planning process. Since the 2010 update, two federal surface transportation reauthorization bills have been signed into law: MAP-21 (2012) and the FAST Act (2015). Consequently, CTC updated the RTP guidelines, and adopted the 2017 Regional Transportation Plan Guidelines for MPOs and Regional Transportation Planning Agencies on January 18, 2017. The 2017 guidelines were specifically updated to address the passage of AB 441 and changes to federal regulations as a result of MAP-21 and the FAST Act of 2015.

Additionally, the guidelines describe the RTP process, including State and federal requirements and consistency and coordination with other planning documents and processes. The guidelines also describe the transportation modeling process and projecting of future demand for supporting RTP analysis, determining federal air quality conformity, and SB 375 Sustainable Communities Strategy (SCS) development, as well as the key assumptions typical of transportation demand models. Additionally, the guidelines describe the consultation and coordination process, which is designed to foster involvement by all interested parties and key stakeholders, discuss the environmental considerations of an RTP, list the general contents of an RTP document, and provide an overview of federal and State requirements and recommendations for performance management applications in the RTP (Caltrans 2017).

Senate Bill 375

SB 375 (Chapter 728, Statutes of 2008) requires California's MPOs to prepare an SCS that demonstrates how the region will meet regional GHG reduction targets through integrated land use, housing, and transportation planning. In 2010, the California Air Resources Board (CARB) established per capita regional GHG reduction targets for passenger vehicles to be met by 2020 and 2035. These targets were updated in 2018. For the San Diego region the updated targets are 15 percent below 2005 levels in 2020 and 19 percent below 2005 levels in 2035.

The SCS is incorporated into the MPO's RTP. CARB must review the SCS to determine if it would enable the MPO to meet regional GHG reduction targets once implemented.

Assembly Bill 441

AB 441 (Government Code Section 14522.3), signed by Governor Brown on September 19, 2012, requires the CTC to attach a summary of the policies, practices, or projects promoting health and health equity employed by MPOs in their RTPs into the commission's next update to its RTP guidelines. AB 441 is intended to allow sharing of innovative transportation plans, strategies, and goals that can serve as models for cities, counties, and the State in transportation planning and development to promote the health and well-being of all residents.

Assembly Bill 1358 – California Complete Streets Act

AB 1358, the Complete Streets Act (Government Code Sections 65040.2 and 65302), was signed into law in September 2008. As of January 1, 2011, the law required cities and counties, when updating the part of a local general plan that addresses roadways and traffic flows, to ensure that those plans account for the needs of all roadway users. Specifically, the legislation requires cities and counties to ensure that local roads and streets adequately accommodate the needs of bicyclists, pedestrians, and transit riders, as well as motorists.

California Bicycle Transportation Act

The California Bicycle Transportation Act was enacted in 1994 to establish a bicycle transportation system that is designed and developed to achieve the functional commuting needs of employees, students, businesspersons, and shoppers. The bicycle transportation system should take into consideration route selection, the physical safety of the bicyclist and their property as a major planning component, and the capacity to accommodate bicyclists of all ages and skills. As defined in the California Bicycle Transportation Act, bikeways are categorized as Class I, Class II, Class III, or Class IV facilities. Additionally, the California Bicycle Transportation Act requires Caltrans, in cooperation with county and city governments, to establish minimum safety design criteria for each bikeway classification and roadways where bicycle travel is permitted, and also requires Caltrans to establish uniform specifications and symbols for signs, markers, and traffic control devices to designate bikeways, regulate traffic, improve safety and convenience for bicyclists, and alert pedestrians and motorists of the presence of bicyclists. Furthermore, the Act requires all cities and counties to have an adopted bicycle master plan to apply for Bicycle Transportation Account funding.

Senate Bill 743

SB 743 (Steinberg) was signed into law by Governor Jerry Brown on September 27, 2013, and encourages development of mixed-use, transit-oriented infill projects by: (1) establishing new CEQA exemptions for transit-oriented developments located in Transit Priority Areas (TPAs) that are consistent with an adopted Specific Plan; (2) eliminating the requirement to evaluate aesthetic and parking impacts in those targeted development areas; and (3) directing the California Office of Planning and Research (OPR) to develop an alternative metric to evaluate transportation-related impacts under CEQA.

SB 743 exempts from CEQA, a residential, employment center, or mixed-use development project, including any subdivision, or any zoning, change that meets all of the following criteria:

1. The project is proposed within a TPA.⁶
2. The project is undertaken to implement and is consistent with a specific plan for which an environmental impact report has been certified.
3. The project is consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy accepted by CARB.

Furthermore, “[a]esthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment.” However, the exemption for aesthetic impacts does not include impacts on historic or cultural resources. Local governments retain their ability to regulate a project’s transportation, aesthetics, and parking impacts outside of the CEQA process pursuant to local design review ordinances or other discretionary powers.

For infill development, including transit-oriented development, SB 743 provides a rationale for the development of a new metric to evaluate CEQA transportation impacts. Prior to SB 743, CEQA transportation impacts were primarily assessed (at least at the project level) through Level of Service (LOS) and other congestion or delay-based analyses, which focused exclusively on motor vehicle delay. This often penalizes infill and active transportation projects. SB 743 establishes that the new transportation impact analysis methodology should appropriately balance the needs of congestion management with statewide goals related to transit-oriented mixed-use infill development, promotion of public health through active transportation, and reduction of GHG emissions.

SB 743 also directed OPR to identify appropriate criteria for the evaluation of transportation impacts in CEQA Guidelines amendments, and provided that once these amendments are adopted, automobile delay, as measured by “level of service” and other similar metrics, no longer constitutes a significant environmental effect under CEQA. OPR selected VMT as the preferred transportation impact metric and applied its discretion to require its use statewide for land use projects and to recommend its use for transportation projects. The revised CEQA Guidelines that implement SB 743 became effective on December 28, 2018, and indicate in CEQA Guidelines Section 15064.3 that VMT is the basis for evaluation of transportation impacts for land use projects. The revised guidelines state that, except as provided in Section 15064.3(b)(2) for roadway capacity projects, a project’s “effect on automobile delay shall not constitute a significant environmental impact,” although automobile delay may still be appropriate for evaluation of projects as part of the planning process. For roadway capacity projects, the CEQA Guidelines specify that agencies have discretion to determine the appropriate measure of transportation impacts consistent with CEQA and other applicable requirements.

In December 2018 OPR issued a Technical Advisory on implementing SB 743 requirements, including recommendations for VMT thresholds of significance for certain types of land use projects (OPR 2018). Also,

⁶ A TPA is an area that is located within one-half mile of an existing or planned major transit stop. A “major transit stop” refers to a site containing an existing rail or bus rapid 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. To qualify as a TPA, a planned major transit stop needs to be scheduled for completion within the planning horizon included in the adopted Regional Transportation Improvement Program (RTIP).

Caltrans has issued guidance on how to evaluate VMT impacts of land use projects affecting the state highway system and state highway system transportation projects (Caltrans 2020a).

Public Resources Code Section 30253

Public Resources Code Section 30253, Part 4, establishes a policy that development within the Coastal Zone must minimize energy consumption and VMT.

Assembly Bill 1730 of 2019

AB 1730 of 2019 requires the updated RTP, SCS, and EIR adopted by SANDAG on October 9, 2015, to remain in effect for State compliance, funding eligibility, and other purposes until December 31, 2021, when SANDAG must adopt its next update to its regional transportation plan. The bill provides that an interim update to the 2015 RTP adopted by SANDAG for purposes of compliance with certain federal laws (i.e., the 2019 Federal RTP) shall not constitute a project for the purposes of CEQA, thereby exempting it from CEQA. The bill also requires SANDAG to submit an implementation report to CARB when it submits an SCS for review.

Assembly Bill 2731

AB 2731 of 2020 authorizes SANDAG to obtain site control to support the redevelopment of the Old Town Center site, including a transit and transportation facilities project, in the City of San Diego before completing the environmental review for those actions. Requirements of CEQA for transit-oriented development projects occurring at the Old Town Center site that meet certain requirements are satisfied by a specific environmental impact statement prepared by the United States Department of the Navy. Further environmental review for transit-oriented development projects is to be conducted only if certain events occur.

California Highway Design Manual

The *California Highway Design Manual* (HDM) is published by Caltrans and establishes uniform policies, procedures, and standards to carry out the freeway and state highway design functions within the state (Caltrans 2020b). The HDM also provides guidance, policies, and standards for the design of bicycle facilities.

California Manual on Uniform Traffic Control Devices

The *California Manual on Uniform Traffic Control Devices* (California MUTCD) is published by the State of California/Caltrans and is issued to adopt uniform standards and specifications for all official traffic control devices in California, in accordance with Section 21400 of the California Vehicle Code (Caltrans 2020c). The California MUTCD incorporates the U.S. Federal Highway Administration's *Manual on Uniform Traffic Control Devices* and incorporates all policies on traffic control devices issued by Caltrans.

REGIONAL AND LOCAL LAWS, REGULATIONS, PLANS, AND POLICIES

TransNet Extension Ordinance and Expenditure Plan

In 2008, 67 percent of San Diego County voters approved the TransNet Extension Ordinance and Expenditure Plan (Commission Ordinance 04-01) to extend to 2048 the half-cent sales tax for regionwide transportation improvements originally approved in 1987 (Commission Ordinance 87-1). The revenues must be used solely for the improvements identified in the Expenditure Plan for the extension ordinance. SANDAG allocates the revenues in its capacity as the San Diego County Regional Transportation Commission.

The Expenditure Plan identifies capital improvements for highways (managed lane/high-occupancy vehicle [HOV] lanes and general purpose lanes), capital improvements and operations and maintenance support for rail transit and bus rapid transit, local bus and senior and disabled transportation services, local streets and roads, bicycle and pedestrian facilities, transportation-related community infrastructure to support smart growth development, environmental mitigation and enhancement projects, and administrative expenses including an Independent Taxpayer Oversight Committee. When allocating revenues, the extension ordinance requires that SANDAG “shall make every effort to maximize State and federal transportation funding to the region” (Section 5(C)). Projects receiving TransNet funds are required to accommodate travel by pedestrians and bicyclists in accordance with the best available standards and guidelines (Section 4(E)(3)).

Section 16 of the extension ordinance describes the process for amending the Expenditure Plan. Amendments to the Environmental Mitigation Program (Section 2(D)) and projects included in the Expenditure Plan for the original ordinance in 1987 that remain uncompleted (e.g., State Route 76 East Segment and the Mid-Coast Corridor Transit Project) require approval by the voters of San Diego County. Other provisions requiring voter approval to be amended relate to imposition of the half-cent sales tax (Section 3), maintenance of effort requirements for local revenues (Section 8), the regional transportation congestion improvement program (Section 9), and the Independent Taxpayer Oversight Committee (Section 11). Other provisions may be amended by a two-thirds vote of the SANDAG Board of Directors. Section 5 of the extension ordinance provides that the Expenditure Plan must be amended as necessary to maintain consistency with the RTP.

Designing for Transit

The Design for Transit – A Manual for Integrating Public Transportation and Land Development in the San Diego Metropolitan Area is published by MTS (2018). The manual is designed to help planners, developers, architects, and engineers understand the physical requirements of public transportation. The manual provides specific design standards for public transportation facilities including bus and light rail transit within the San Diego region. The manual also recommends measures that can improve transit service and enhance safe access to transit on local streets through Complete Streets design strategies.

General Plan Circulation Elements

As mandated by State law, general plans must have a circulation element (sometimes referred to as a transportation or mobility element) that is consistent with all other elements of the general plan (Government Code Section 65302). Circulation elements describe the individual jurisdictions’ transportation system, including roadways as well as public transit, pedestrian, and bicycle facilities, and outline goals and policies. Circulation elements and their compatibility with land use plans are an important part of overall regional transportation planning, as each general plan works to harmonize local land uses and development patterns with transportation goals and needs. The planning horizon for local general plans is often between 15 and 20 years. In the San Diego region, there are 19 general plans prepared by individual jurisdictions.

San Diego Forward

San Diego Forward is the long-range transportation plan for the San Diego region. On October 9, 2015, SANDAG adopted *San Diego Forward: The Regional Plan* (2015 Regional Plan), which integrated both the 2004 Regional Comprehensive Plan and the 2050 RTP/SCS adopted in 2011 into one unified plan. In 2019, AB 1730 provided a 2-year extension for updating the 2015 Regional Plan to comply with State requirements; while work progressed on the proposed Plan, SANDAG adopted the 2019 Federal Regional Transportation Plan (2019 Federal RTP) on October 25, 2019, to comply with federal requirements for the development of regional

transportation plans, retain air quality conformity approval from the U.S. Department of Transportation, and preserve funding for the region's transportation investments. The 2019 Federal RTP updated project costs and revenues and the regional growth forecasted from the 2015 Regional Plan. The 2019 Federal RTP provides a roadmap for the San Diego region to grow and evolve. Additionally, it prioritizes \$208 billion in regional transportation projects over 30 years to create a framework for much of the region's transportation infrastructure (SANDAG 2019). The 2019 Federal RTP addresses many important issues, including: using land more wisely, building an efficient and more accessible transportation system, protecting the environment, improving public health, promoting a strong regional economy, better managing access to energy, incorporating equity into our transportation investments, addressing pressing needs on tribal lands, and supporting a vibrant international border.

As the long-range transportation plan for the region, *San Diego Forward* plans and identifies funding for the transit, freeway/state highway, and regional arterial system networks within the San Diego region. Additionally, while planning pedestrian and bicycle networks is generally done by the individual jurisdictions, *San Diego Forward* provides an overall framework for these networks, establishes regional networks that cross multiple jurisdictions, and sets aside grant funding to assist with the implementation of bicycle and pedestrian facilities within the local jurisdictions.

The following key policies that address the circulation system are included in both the 2015 Regional Plan and the 2019 Federal RTP:

- Invest in transportation projects that provide access for all communities to a variety of jobs with competitive wages.
- Make transportation investments that result in cleaner air, environmental protection, conservation, efficiency, and sustainable living.
- Provide safe, secure, healthy, affordable, and convenient travel choices between the places where people, live and play.
- Take advantage of new technologies to make the transportation system more efficient and accessible.
- Connect communities through a variety of transportation choices that promote healthy lifestyles, including walking and biking.

Regional Transportation Improvement Program

The Regional Transportation Improvement Program (RTIP) is a 5-year program of major transportation projects funded by federal, State, *TransNet* local sales tax, and other local and private funding and also includes proposed local streets and roads projects. The 2021 RTIP, adopted by the SANDAG Board of Directors on February 26, 2021, covers fiscal years 2021 through 2025, and incrementally implements the 2019 Federal RTP. In developing the 2021 RTIP, SANDAG consulted with local jurisdictions through public meetings of the various SANDAG committees and working groups that are responsible for the development and oversight of the projects. These committees include the Transportation Committee, the Cities/County Transportation Advisory Committee, the Social Equity Working Group, the Interagency Technical Working Group on Tribal Transportation Issues, the Independent Taxpayer Oversight Committee, and the San Diego Region Conformity Working Group (SANDAG 2021c).

Riding to 2050 – San Diego Regional Bike Plan

Riding to 2050 – San Diego Regional Bicycle Plan (Riding to 2050) establishes the plan for the regional bicycle system within the San Diego region and was adopted by the SANDAG Board or Directors in April 2010. The plan is intended to guide the development of the regional bicycle system through the year 2050. Riding to 2050 outlines a range of recommendations to facilitate accomplishing the following regional goals:

- Increase the number of people who bike and frequency of bicycle trips for all purposes.
- Encourage the development of Complete Streets.
- Improve safety for bicyclists.
- Increase public awareness and support for bicycling in the San Diego region.

Riding to 2050 includes recommendations for bicycle infrastructure improvements, bicycle related programs, implementation strategies, and policy and design guidelines (SANDAG 2010b).

Riding to 2050 presents an interconnected network of bicycle corridors that would enable residents to bicycle with greater safety, directness, and convenience within and between major regional destinations and activity centers. While bicycle planning and policy-making is primarily focused on the local level, Riding to 2050 provided an opportunity to improve regional coordination and connectivity of bicycle facilities between jurisdictions. The network selection and classification process included on-going consultation with the SANDAG Bicycle-Pedestrian Working Group, which was composed of staff from each of the 19 local jurisdictions. (SANDAG 2010b.)

On September 27, 2013, the SANDAG Board of Directors approved the Regional Bike Plan Early Action Program (Bike Plan EAP) – a \$200 million initiative to expand the Regional Bike Network regionwide and finish high-priority projects within a decade. The adopted Bike Plan EAP comprises 38 projects, totaling roughly 77 miles of new bikeways that will make it much easier for people to ride their bikes to school, work, transit stations, and other major destinations. The Bike Plan EAP is funded by TransNet, the regional half-cent sales tax for transportation approved by San Diego County voters. TransNet funding will be leveraged to bring in State and federal dollars so that the region can complete more bike projects and reap even greater economic, health, and mobility benefits.

Both Riding to 2050 and the Bike Plan EAP were incorporated in the 2015 Regional Plan and the 2019 Federal RTP.

4.16.3 SIGNIFICANCE CRITERIA

Appendix G of the CEQA Guidelines provides criteria for determining the significance of a project's environmental impacts in the form of Initial Study checklist questions. Unless otherwise noted, the significance criteria specifically developed for this EIR are based on the CEQA Guidelines Appendix G checklist questions. Checklist questions for transportation are provided in Section XVII of CEQA Guidelines Appendix G. In some cases, SANDAG has combined checklist questions, edited their wording, or changed their location in the document to develop significance criteria that reflect the programmatic level of analysis in this EIR, and the unique characteristics of the proposed Plan. Notably, Appendix G, Section XVII, question (d) regarding whether the proposed Plan would result in inadequate emergency access is addressed under HAZ-4 in Section 4.9.

For purposes of this EIR, implementation of the proposed Plan would have a significant transportation impact if it would:

- TRA-1** Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- TRA-2** Conflict or be inconsistent with CEQA Guidelines Section 15064.3 by not achieving the substantial VMT reductions needed to help achieve statewide GHG reduction goals.
- TRA-3** Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses.
- TRA-4** Lead to a lack of parking supply that would cause significant secondary environmental impacts not already analyzed in other resource chapters of this EIR.

4.16.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

- TRA-1 CONFLICT WITH A PROGRAM, PLAN, ORDINANCE, OR POLICY ADDRESSING THE CIRCULATION SYSTEM, INCLUDING TRANSIT, ROADWAY, BICYCLE, AND PEDESTRIAN FACILITIES**

ANALYSIS METHODOLOGY

The emphasis of the analysis is on plan inconsistency and conflicts between the proposed Plan's transportation network improvements and programs, and existing applicable regional programs, plans, ordinances, or policies addressing the circulation system and on whether any inconsistencies would result in significant environmental effects compared to existing conditions. The proposed Plan is considered consistent with the provisions of the identified regional plans if it meets the general intent of the applicable plans. The regulatory setting provides a brief overview of the relevant regional planning documents and their primary goals. However, the proposed Plan consistency conclusions are based upon the planning documents as a whole.

Because the proposed Plan identifies and proposes transportation network improvements at a regional level, plan consistency was reviewed against other regional plans and policies. Because of the close relationship among forecasted regional growth and land use change and planned transportation network improvements and programs on travel behavior, this section analyzes their combined effect, instead of separate analyses for regional growth and land use change and transportation network improvements and programs.

SB 375 requires RTPs to use "the most recent planning assumptions considering local general plans and other factors." Therefore, it can be assumed the proposed Plan would generally be consistent with transportation programs, plans, ordinances, and policies of the individual jurisdictions in the region.

This analysis reviews the proposed Plan against the 2019 Federal RTP and Riding to 2050 plans, presented in additional detail in Section 4.16.2, *Regulatory Setting*, to determine if there are any conflicts. Both plans were developed with and reflect extensive local jurisdiction planning input. Rather than the 2015 Regional Plan, this analysis used the 2019 Federal RTP because it contains more recent planning assumptions for project costs, revenue, and forecasted regional growth.

To determine if the proposed Plan is consistent with the programs, plans, policies, and ordinances contained in the current regional planning documents, the infrastructure and demand for each mode (transit, vehicular, pedestrian, and bicycle) were compared to Baseline Year 2016 conditions. If the proposed Plan is shown to be

consistent with the policies contained in the 2019 Federal RTP and Riding to 2050, it is assumed to be consistent with the current planning documents and have a less-than-significant impact.

The impact analysis considers consistency of the proposed Plan's transportation network improvements and programs, but not the proposed Plan's regional growth and land use change, with the transportation content of the 2019 Federal RTP and Riding to 2050. This approach is taken because the Impact TRA-1 significance criterion is limited to "circulation system "(i.e., transportation) issues.

Please note that the information presented in Tables 4.16-5 through 4.16-16 has been updated in the Final EIR. These updates are primarily due to minor modifications in the transportation network improvements included within the proposed Plan, as noted in Appendix B. Additionally, minor corrections to the ABM2+ were also made, which are detailed in Appendix S of the proposed Plan (page S-104).

IMPACT ANALYSIS

2025

Transportation Network Improvements and Programs

Tables 4.16-5 through 4.16-8 outline the transportation network improvements and demand, by mode, under the proposed Plan in Year 2025 compared to Baseline Year 2016 conditions. A list of the specific transportation network improvements included within the proposed Plan under 2025 conditions is provided in Appendix B of this EIR.

Transit

**Table 4.16-5
Transit System Analysis – Year 2025**

Category	Baseline Year 2016	Year 2025 Proposed Plan	Change from Baseline Year 2016
Miles of Transit Service ¹	94,434 94,410	133,638 146,926	39,204 52,516
Commuter Rail	930	1,717	787
Light Rail Transit	10,344	13,335	2,991
Rapid	9,908	29,776 29,889	19,868 19,981
Bus	73,228 52	102,097 102,243	28,869 28,991
Average Daily Transit Trips	254,526 257,891	415,643 416,061	161,117 158,170
Transit Mode Share ¹ Share ²	1.7%	2.6% 2.7%	0.9% 1.0%
Average Length of Transit Trip (miles)	9.01 9.08	9.57 9.53	0.56 0.45

Source: ABM2+

¹SANDAG maintains existing and future planned transit routes in coverage using geographic information system software ArcInfo. Daily Miles of Transit Service is the sum of all transit routes' length multiplied by the daily number of trips each route makes.

²Mode share includes all trip types for San Diego residents.

Note: the revised numbers in this table reflect the minor modifications to the transportation network improvements included in the proposed Plan as well as minor corrections made to the ABM2+.

As shown in Table 4.16-5, the proposed Plan would increase the miles of transit service within the region by more than ~~25~~55 percent compared to Baseline Year 2016 conditions. The additional transit services included

in the proposed Plan would increase transit ridership by more than a ~~third~~ 60 percent and increase the average transit trip length by ~~0.56~~ 0.45 mile, as projected by the ABM2+. As such, the transit infrastructure and programs included in the proposed Plan, under Year 2025 conditions, would expand the multi-modal network within the region and provide more convenient travel choices between where people live, work, and play. The transit improvements in the proposed Plan would further the policy goals of the 2019 Federal RTP and therefore would not conflict with them:

- *Invest in transportation projects that provide access for all communities to a variety of jobs with competitive wages.* The proposed expansion of the region's transit network would provide more connections to a variety of job centers around the region.
- *Make transportation investments that result in cleaner air, environmental protection, conservation, efficiency, and sustainable living.* The proposed expansion of the region's transit network would also provide more viable multi-modal options for travelers, resulting in reductions in both VMT per capita and VMT per employee within the region, thus reducing GHG emissions, creating a cleaner and more sustainable environment.
- *Provide safe, secure, healthy, affordable, and convenient travel choices between the places where people, live, and play.* Both the population and employment within a half mile of a major transit stop would increase substantially with the implementation of the proposed Plan (see Table 4.16-17 under Impact TRA-2). As such, the proposed Plan would improve the number of safe, secure, healthy, affordable, and convenient travel choices between the places where people, live, and play.
- *Take advantage of new technologies to make the transportation system more efficient and accessible.* The proposed Plan includes the implementation of several state-of-the-art transit facilities and programs that are designed to further expand the region's transit system with minimal impact on the public right-of-way. Additionally, the proposed Plan looks to leverage technology to deploy and manage transit services within the region, to both reduce costs and improve service for all users.

Roadway

**Table 4.16-6
Roadway Network Analysis – Year 2025**

Category	Baseline Year 2016	Year 2025 Proposed Plan	Change from Baseline Year 2016
Lane Miles of Roadway	6,922	<u>7,168</u> <u>7,115</u>	<u>245</u> <u>233</u>
Total Freeways (includes auxiliary lanes)	2,576	<u>2,643</u> <u>2,648</u>	<u>72</u> <u>67</u>
General Purpose Lanes	2,415	2,438	23
HOV/Managed Lanes	116	<u>150</u> <u>155</u>	<u>39</u> <u>34</u>
Tollway	45	55	10
State Highways	628	<u>643</u> <u>655</u>	<u>27</u> <u>15</u>
Arterials	3,718	<u>3,869</u> <u>3,864</u>	<u>146</u> <u>150</u>
Average Daily Vehicular Trips	<u>13,107,396</u> <u>12,938,524</u>	<u>13,074,829</u> <u>13,229,674</u>	<u>122,278</u> <u>136,305</u>
HOV Trips	<u>6,726,856</u> <u>6,647,247</u>	<u>6,861,984</u> <u>6,937,455</u>	<u>210,599</u> <u>214,737</u>

Category	Baseline Year 2016	Year 2025 Proposed Plan	Change from Baseline Year 2016
Vehicular Mode Share ¹	87.4% 87.3%	83.9% 84.1%	-3.4% -3.3%
Average Length of Vehicular Trip (miles)	6.97 6.87	6.71 6.79	-0.18 -0.16

Source: ABM2+

Auxiliary lane = extra lane constructed between on- and off-ramps that allows drivers a safe way to merge into traffic while also preventing bottlenecks caused by drivers attempting to enter or exit the freeway.

¹Mode share includes all vehicle classifications and all trip types for San Diego residents.

Note: the revised numbers in this table reflect the minor modifications to the transportation network improvements included in the proposed Plan as well as minor corrections made to the ABM2+.

As shown in Table 4.16-6, the proposed Plan would slightly increase the total number of roadway lane miles within the region (3.4 percent) under Year 2025 conditions compared to Baseline Year 2016 conditions. However, the largest share of proposed transportation network improvement investments are managed lanes, which offer priority access to people using transit, carpooling, or vanpooling along with emergency vehicles and low-emission vehicles with appropriate decals. When combined with proposed transportation network improvements across all modes of travel, the vehicular mode share within the region would decrease by ~~3.334~~ percentage points, and the average trip length would decrease by ~~0.180~~0.16 mile, as projected by ABM2+. The roadway improvements in the proposed Plan would further the policy goals of the 2019 Federal RTP:

- *Make transportation investments that result in cleaner air, environmental protection, conservation, efficiency, and sustainable living.* The associated decreases in average vehicular trip length noted above would result in a lower average VMT per capita and VMT per employee within the region (see Table 4.16-17). These decreases in vehicular traffic would result in lower GHG emissions, creating a cleaner and more sustainable environment.
- *Take advantage of new technologies to make the transportation system more efficient and accessible.* The proposed Plan includes the implementation of several state-of-the-art traffic control and response systems (ATDM/SIS) that are designed to improve traffic flow, integrate and connect multiple modes of travel, as well as better manage congestion and incidents within the region's roadway network.

Therefore, these improvements are consistent with the policies outlined in the 2019 Federal RTP and would not conflict with them.

Bicycle

Table 4.16-7
Bicycle Network Analysis – Year 2025

Category	Baseline Year 2016	Year 2025 Proposed Plan	Change from Baseline Year 2016
Lane Miles of Bicycle Facilities ¹	3,112.11 3,574	3,345.41 3,672	233.29 8
Class I	359.51 466	380.51 490	21.02 4
Class II	2,101.01 1,039	2,151.11 1,076	50.13 7
Class III	642.33 449	712.33 56	70.07
Class IV	9.32 0	74.63 7	65.31 7
Bike Boulevard	0.00	26.91 3	26.91 3

Category	Baseline Year 2016	Year 2025 Proposed Plan	Change from Baseline Year 2016
Average Daily Bicycle Trips	109,623 113,171	174,335	64,712 58,865
Bicycle Mode Share ¹	0.8% 0.7%	1.1%	0.4% 0.3%
Average Length of Bicycle Trip (miles)	2.76 2.85	3.03 3.39	0.27 0.54

Source: ABM2+

¹Reporting of bicycle facilities was converted from total centerline miles (provided in the Draft EIR) to total lane miles, based on public comments.

²Mode share includes all trip types for San Diego residents.

Note: the revised numbers in this table reflect the minor modifications to the transportation network improvements included in the proposed Plan as well as minor corrections made to the ABM2+.

As shown in Table 4.16-7, the 2021 Regional Plan would implement ~~98,233.2 lane~~ miles of new bicycle facilities under Year 2025 conditions, and would also increase the average number of daily bicycle trips by ~~nearly 60~~ over 50 percent over base year conditions, as projected by ABM2+. The bicycle improvements in the proposed Plan would further the policy goals of the 2019 Federal RTP. As such, the proposed Plan is consistent with the following policies outlined in the 2019 Federal RTP:

- *Invest in transportation projects that provide access for all communities to a variety of jobs with competitive wages.* Expanding the region's bike network would create new safe and reliable bicycle connections between residential neighborhoods and job centers within the region, providing additional travel options for residents.
- *Make transportation investments that result in cleaner air, environmental protection, conservation, efficiency, and sustainable living.* The proposed increase in bicycle facilities within the region would incentivize more travelers to ride a bike, as reflected in the increase in bicycle mode share with the implementation of the proposed Plan. The increase in bicycle mode share would help (in association with the other proposed improvements) to lower the average VMT per capita and VMT per employee within the region (see Table 4.16-17). These decreases in vehicular traffic would result in lower GHG emissions, creating a cleaner and more sustainable environment.
- *Provide safe, secure, healthy, affordable, and convenient travel choices between the places where people, live, and play.* Cycling is one of the most healthy and affordable modes of transportation; thus, expanding the region's bicycle network would create more convenient, safe, and reliable connections between residential neighborhoods, job centers, and places of recreation.
- *Connect communities through a variety of transportation choices that promote healthy lifestyles, including walking and biking.* As noted previously, cycling is one of the healthiest modes of transportation; thus, expanding the region's bicycle network would create more convenient, safe, and reliable connections between residential neighborhoods, job centers, and places of recreation. These new connections would promote and incentivize more travelers to choose to ride a bike to their destination over the other modes of travel, as indicated by the projected increase in bicycle mode share.

The proposed Plan is also consistent with the following goals from Riding to 2050:

- *Increase the number of people who bike and frequency of bicycle trips for all purposes.* As shown in Table 4.16-7, implementation of the proposed Plan would increase bicycle ridership within the region by ~~64,712~~58,865 daily trips, under Year 2025 conditions.
- *Improve safety for bicyclists.* As shown in Table 4.16-7, the proposed Plan would increase the total number of protected and separated bicycle facilities within the region (Class I, Class II, and Class IV facilities). These

facilities provide cyclists their own right-of-way within the roadway and reduce the number of conflicts with vehicular traffic, resulting in safer conditions.

Therefore, the proposed Plan bicycle improvements do not conflict with the policies outlined in the 2019 Federal RTP and Riding to 2050.

Pedestrian

**Table 4.16-8
Pedestrian Analysis – Year 2025**

Category	Baseline Year 2016	Year 2025 Proposed Plan	Change from Baseline Year 2016
Average Daily Walking Trips	<u>1,171,853</u> <u>1,175,429</u>	<u>1,494,939</u> <u>1,472,294</u>	<u>300,441</u> <u>319,510</u>
Walking Mode Share ¹	<u>7.8%</u> <u>7.9%</u>	<u>9.6%</u> <u>9.4%</u>	<u>1.6%</u> <u>1.7%</u>
Average Length of Walking Trip (miles)	<u>0.82</u> <u>0.81</u>	<u>0.80</u> <u>0.81</u>	-0.01

Source: ABM2+

¹Mode share includes all trip types for San Diego residents.

The proposed Plan does not include any direct or specific pedestrian facility expansions or improvements; however, the programs and policies contained within the proposed Plan would incentivize travelers to walk more as well as improve walking conditions within the region. Those programs include Vision Zero, TDM, Complete Streets in Mobility Hubs, and land use and housing programs that concentrate housing closer to destinations. As such, with the implementation of the proposed Plan, under Year 2025 conditions, the number of pedestrian trips generated within the region would increase by more than 25 percent over 2016 conditions as projected by ABM2+. This is consistent with the policies outlined in the 2019 Federal RTP as it shows that the proposed Plan would better connect communities through a variety of transportation choices that promote healthy lifestyles, including walking and biking.

2025 Conclusion

Under Year 2025 conditions, the proposed Plan would implement approximately 98,233.2 additional lane miles of bicycle facilities, and almost 40,000 over 50,000 additional miles of transit service within the region. The proposed Plan would also increase the number of bicycle, pedestrian, and transit trips generated within the region, while reducing the vehicular mode share from 87.4 to 84.187.3 to 83.9 percent, as compared to Baseline Year 2016 conditions. These characteristics of the proposed Plan further the policies outlined in the 2019 Federal RTP and Riding to 2050 and would not conflict with them. Therefore, implementation of the proposed Plan, under Year 2025 conditions, would result in a less-than-significant impact.

2035

Transportation Network Improvements and Programs

Tables 4.16-9 through 4.16-12 outline the transportation network improvements and demand, by mode, under the proposed Plan in Year 2035 compared to Baseline Year 2016 conditions. A list of the specific transportation network improvements included within the proposed Plan under 2035 conditions is provided in Appendix B of this EIR.

Transit

Table 4.16-9
Transit System Analysis – Year 2035

Category	Baseline Year 2016	Year 2035 Proposed Plan	Change from Baseline Year 2016
Miles of Transit Service ¹	<u>94,434</u> <u>94,410</u>	<u>242,746</u> <u>244,663</u>	<u>150,229</u> <u>148,336</u>
Commuter Rail	930	6,062	5,132
Light Rail Transit	10,344	25,000	14,656
Rapid	9,908	<u>93,601</u> <u>90,721</u>	<u>80,813</u> <u>83,693</u>
Bus	<u>73,252</u> <u>73,228</u>	<u>120,000</u> <u>120,963</u>	<u>47,735</u> <u>46,748</u>
Average Daily Transit Trips	<u>254,526</u> <u>257,891</u>	<u>778,888</u> <u>805,642</u>	<u>524,362</u> <u>547,751</u>
Transit Mode Share ¹ ²	1.7%	<u>5.0%</u> <u>4.8%</u>	<u>3.1%</u> <u>3.3%</u>
Average Length of Transit Trip (miles)	<u>9.01</u> <u>9.08</u>	<u>9.65</u> <u>9.74</u>	<u>0.57</u> <u>0.73</u>

Source: ABM2+

¹SANDAG maintains existing and future planned transit routes in coverage using geographic information system software ArcInfo. Daily Miles of Transit Service is the sum of all transit routes' length multiplied by the daily number of trips each route makes.

²Mode share includes all trip types for San Diego residents.

Note: the revised numbers in this table reflect the minor modifications to the transportation network improvements included in the proposed Plan as well as minor corrections made to the ABM2+.

As shown in Table 4.16-9, the proposed Plan would increase the miles of transit service within the region by more than 2.5 times the current mileage, as compared to Baseline Year 2016 conditions. The additional service would double the current transit ridership and increase the average transit trip length by 0.570.73 mile, as projected by ABM2+. As such, the transit infrastructure and programs included in the proposed Plan, under Year 2035 conditions, would expand the multi-modal network within the region and provide more convenient travel choices between where people live, work, and play. The transit improvements would further the following policies outlined in the 2019 Federal RTP and would not conflict with them.

- *Invest in transportation projects that provide access for all communities to a variety of jobs with competitive wages.* The proposed expansion of the region's transit network would provide more connections to a variety of job centers around the region.
- *Make transportation investments that result in cleaner air, environmental protection, conservation, efficiency, and sustainable living.* The proposed expansion of the region's transit network would also provide more viable multi-modal options for travelers, resulting in reductions in both VMT per capita and VMT per employee within the region, thus reducing GHG emissions, creating a cleaner and more sustainable environment.
- *Provide safe, secure, healthy, affordable, and convenient travel choices between the places where people, live, and play.* As shown in Table 4.16-18 both the population and employment within a half mile of a major transit stop would increase substantially with the implementation of the proposed Plan. As such, the proposed Plan would improve the number of safe, secure, healthy, affordable, and convenient travel choices between the places where people live, work, and play.
- *Take advantage of new technologies to make the transportation system more efficient and accessible.* The proposed Plan includes the implementation of several state-of-the-art transit facilities and programs that are designed to further expand the region's transit system while having minimal impact on the public right-

of-way. Additionally, the proposed Plan looks to leverage technology to deploy and manage transit services, within the region, to both reduce costs and improve service for all users.

Roadway

Table 4.16-10
Roadway Network Analysis – Year 2035

Category	Baseline Year 2016	Year 2035 Proposed Plan	Change from Baseline Year 2016
Lane Miles of Roadway	6,922	7,5447,539	622617
Total Freeways (includes auxiliary lanes)	2,576	2,8372,844	261268
General Purpose Lanes	2,415	2,2232,230	-192-185
HOV/Managed Lanes	116	565552	436449
Tollway	45	55	10
State Highways	628	657644	2916
Arterials	3,718	4,0514,052	333334
Average Daily Vehicular Trips	13,107,39612,938,524	13,105,09812,874,363	-2,298-64,161
HOV Trips	6,726,8566,647,247	6,760,3806,653,854	33,5246,607
Vehicular Mode Share ¹	87.4%87.3%	79.5%80.0%	-7.4%-7.7%
Average Length of Vehicular Trip (miles)	6.976.87	6.636.77	-0.20-0.24

Source: ABM2+

Auxiliary lane = extra lane constructed between on- and off-ramps that allows drivers a safe way to merge into traffic while also preventing bottlenecks caused by drivers attempting to enter or exit the freeway.

¹Mode share includes all vehicle classifications and trip types for San Diego residents.

Note: the revised numbers in this table reflect the minor modifications to the transportation network improvements included in the proposed Plan as well as minor corrections made to the ABM2+.

As shown in Table 4.16-10, the proposed Plan would slightly increase the total number of roadway lane miles within the region (9.0 percent) under Year 2035 conditions, as compared to Baseline Year 2016 conditions. However, the largest share of proposed transportation network improvement investments are managed lanes, which offer priority access to people using transit, carpooling, or vanpooling along with emergency vehicles and low-emission vehicles with appropriate decals. When combined with proposed transportation network improvements across all modes of travel, the vehicular mode share within the region would decrease by 7.47.7 percentage points, and the average trip length would decrease by 0.20.24 mile, as projected by the ABM2+. The roadway improvements in the proposed Plan would further the policy goals of the 2019 Federal RTP:

- *Make transportation investments that result in cleaner air, environmental protection, conservation, efficiency, and sustainable living.* The associated decreases in average vehicular trip length and travel times noted above would result in a lower average VMT per capita and VMT per employee within the region (see Table 4.16-18). These decreases in vehicular traffic would result in lower GHG emissions, creating a cleaner and more sustainable environment.
- *Take advantage of new technologies to make the transportation system more efficient and accessible.* The proposed Plan includes the implementation of several state-of-the art traffic control and response systems

(ATDM/SIS) that are designed to improve traffic flow, integrate and connect multiple modes of travel, and better manage congestion and incidents within the region's roadway network.

Therefore, these improvements are consistent with the policies outlined in the 2019 Federal RTP and would not conflict with them.

Bicycle

Table 4.16-11
Bicycle Network Analysis – Year 2035

Category	Baseline Year 2016	Year 2035 Proposed Plan	Change from Baseline Year 2016
Lane Miles of Bicycle Facilities ¹	3,112.21,574	3,463.71,731	351.5157
Class I	359.5166	466.3233	106.867
Class II	2,101.01,039	2,034.41,017	-66.6-22
Class III	642.3349	624.2312	-18.1-37
Class IV	9.320	200.3100	191.080
Bike Boulevards	0.00	138.569	138.569
Average Daily Bicycle Trips	109,623113,171	208,378215,216	98,755102,045
Bicycle Mode Share ¹ Share ²	0.7%0.8%	1.3%	0.6%0.5%
Average Length of Bicycle Trip (miles)	2.762.85	3.503.56	0.740.71

Source: ABM2+

¹ Reporting of bicycle facilities was converted from total centerline miles (provided in the DEIR) to total lane miles, based on public comments.

² Mode share includes all trip types for San Diego residents.

Note: the revised numbers in this table reflect the minor modifications to the transportation network improvements included in the proposed Plan as well as minor corrections made to the ABM2+.

As shown in Table 4.16-11, the proposed Plan would implement ~~1573~~351.5 lane miles of new bicycle facilities under Year 2035 conditions, as compared to Baseline Year 2016 conditions. As such, the implementation of the proposed Plan would further the following policies outlined in the 2019 Federal RTP:

- *Invest in transportation projects that provide access for all communities to a variety of jobs with competitive wages.* Expanding the region's bike network would create new safe and reliable bicycle connections between residential neighborhoods and job centers within the region, providing additional travel options for residents.
- *Make transportation investments that result in cleaner air, environmental protection, conservation, efficiency, and sustainable living.* The proposed increase in bicycle facilities within the region would incentivize more travelers to ride a bike, in-lieu of taking a vehicular trip, as reflected in the increase in bicycle mode share with the implementation of the proposed Plan. The increase in bicycle mode share would help (in association with the other proposed improvements) to lower the average VMT per capita and VMT per employee within the region (see Table 4.16-18). These decreases in vehicular traffic would result in lower GHG emissions, creating a cleaner and more sustainable environment.
- *Provide safe, secure, healthy, affordable, and convenient travel choices between the places where people, live, and play.* Cycling is one of the most healthy and affordable modes of transportation; thus, expanding the region's bicycle network would create more convenient, safe, and reliable connections between residential neighborhoods, job centers, and places of recreation.

- *Connect communities through a variety of transportation choices that promote healthy lifestyles, including walking and biking.* As noted previously, cycling is one of the healthiest modes of transportation; thus, expanding the region's bicycle network would create more convenient, safe, and reliable connections between residential neighborhoods, job centers, and places of recreation. These new connections would promote and incentivize more travelers to choose to ride a bike to their destination over the other modes of travel, as indicated by the projected increase in bicycle mode share.

The proposed Plan would also be consistent with the following goals from Riding to 2050:

- *Increase the number of people who bike and frequency of bicycle trips for all purposes.* As shown in Table 4.16-11, implementation of the proposed Plan would increase bicycle ridership within the region by ~~98,755~~102,045 daily trips, under Year 2035 conditions.
- *Improve safety for bicyclists.* As shown in Table 4.16-11, the 2021 Regional Plan would upgrade several miles of unprotected bike facilities, specifically ~~37~~18.1 lane miles of Class III Bike Routes and ~~22~~66.6 lane miles of Class II Bike lanes, to protected bicycle facilities such as Class I – Multi-Use Pathways and Class IV Cycle Tracks. Upgrading from unprotected to protected facilities would increase the safety for cyclists.

The proposed Plan would also increase the average number of daily bicycle trips by 90 percent over Baseline Year 2016 base year conditions. This is consistent with the Riding to 2050 goal to increase the number of people who bike and the frequency of bicycle trips for all purposes. Therefore, these improvements are consistent with the policies outlined in the 2019 Federal RTP and Riding to 2050 and would not conflict with them.

Pedestrian

**Table 4.16-12
Pedestrian Analysis – Year 2035**

Category	Baseline Year 2016	Year 2035 Proposed Plan	Change from Baseline Year 2016
Average Daily Walking Trips	1,171,853 <u>1,175,429</u>	1,828,393 <u>1,838,482</u>	656,540 <u>663,053</u>
Walking Mode Share ¹	7.9% <u>7.8%</u>	11.2% <u>11.4%</u>	3.40% <u>3.5%</u>
Average Length of Walking Trip (miles)	0.81 <u>0.82</u>	0.78	-0.03 <u>-0.04</u>

Source: ABM2+

¹Mode share includes all trip types for San Diego residents.

Note: the revised numbers in this table reflect the minor modifications to the transportation network improvements included in the proposed Plan as well as minor corrections made to the ABM2+.

The 2021 Regional Plan does not include any direct or specific pedestrian facility expansions or improvements; however, the programs and policies contained within the proposed Plan would incentivize travelers to walk more as well as improve walking conditions within the region. Those programs include Vision Zero, TDM, Complete Streets in Mobility Hubs, and land use and housing programs that concentrate housing closer to destinations. Additionally, the expansion of the region's transit network, as displayed in Table 4.16-9, would also increase the number of pedestrian trips, as more people would be inclined to walk to/from transit stations. As such, with the implementation of the proposed Plan, under Year 2035 conditions, the number of pedestrian trips generated within the region would increase by 56 percent over Baseline Year 2016 conditions, as projected by ABM2+. This is consistent with the policies included in the 2019 Federal RTP as it shows that the proposed Plan would better connect communities through a variety of transportation choices that promote healthy lifestyles, including walking and biking.

2035 Conclusion

Under Year 2035 conditions the proposed Plan would implement over ~~157~~ 351.5 additional lane miles of bicycle facilities, and almost 150,000 additional miles of transit service within the region. The proposed Plan would also increase the number of bicycle, pedestrian, and transit trips generated within the region, while reducing the vehicular mode share from ~~87.487.3~~ percent to ~~80.079.5~~ percent, compared to Baseline Year 2016 conditions. These characteristics of the proposed Plan are generally consistent with the policies outlined in the 2019 Federal RTP and Riding to 2050 and would not conflict with them. Therefore, implementation of the proposed Plan, under Year 2035 conditions, would result in a less-than-significant impact.

2050

Transportation Network Improvements and Programs

Tables 4.16-13 through 4.16-16 outline the transportation network improvements and demand, by mode, under the proposed Plan in Year 2050 compared to Baseline Year 2016 conditions. A list of the specific transportation network improvements included within the proposed Plan under 2050 conditions is provided in Appendix B of this EIR.

Transit

Table 4.16-13
Transit System Analysis – Year 2050

Category	Baseline Year 2016	Year 2050 Proposed Plan	Change from Baseline Year 2016
Miles of Transit Service ¹	94,434 <u>94,410</u>	263,056 <u>263,005</u>	168,622 <u>168,595</u>
Commuter Rail	930	17,956	17,026
Light Rail Transit	10,344	28,056	17,712
Rapid	9,908	95,233 <u>95,081</u>	85,325 <u>85,173</u>
Bus	73,252 <u>73,228</u>	121,810 <u>121,912</u>	48,558 <u>48,684</u>
Average Daily Transit Trips	254,526 <u>257,891</u>	917,830 <u>944,876</u>	663,304 <u>686,985</u>
Transit Mode Share ¹ <u>Share²</u>	1.7%	5.4% <u>5.6%</u>	3.7% <u>3.9%</u>
Average Length of Transit Trip (miles)	9.08 <u>9.01</u>	9.74 <u>9.85</u>	0.66 <u>0.84</u>

Source: ABM2+

¹SANDAG maintains existing and future planned transit routes in coverage using geographic information system software ArcInfo. Daily Miles of Transit Service is the sum of all transit routes' length multiplied by the daily number of trips each route makes

²Mode share includes all trip types for San Diego residents.

Note: the revised numbers in this table reflect the minor modifications to the transportation network improvements included in the proposed Plan as well as minor corrections made to the ABM2+.

As shown in Table 4.16-13, the proposed Plan would increase the miles of transit service within the region by nearly 2.8 times the current mileage, as compared to Baseline Year 2016 conditions. The additional service would also almost triple the current transit ridership and increase the average transit trip length by ~~0.66~~ 0.84 mile, as projected by ABM2+. As such, the transit infrastructure and programs included in the proposed Plan, under Year 2050 conditions, would expand the multi-modal network within the region and provide more convenient travel choices between where people live, work, and play. The transit improvements would further the following policies outlined in the 2019 Federal RTP and would not conflict with them:

- *Invest in transportation projects that provide access for all communities to a variety of jobs with competitive wages.* The proposed expansion of the region’s transit network would provide more connections to a variety of job centers around the region.
- *Make transportation investments that result in cleaner air, environmental protection, conservation, efficiency, and sustainable living.* The proposed expansion of the region’s transit network would also provide more viable multi-modal options for travelers, resulting in reductions in both VMT per capita and VMT per employee within the region, thus reducing GHG emissions, creating a cleaner and more sustainable environment.
- *Provide safe, secure, healthy, affordable, and convenient travel choices between the places where people, live, and play.* As shown in Table 4.16-19 both the population and employment within a half mile of a major transit stop would increase substantially with the implementation of the proposed Plan. As such, the proposed Plan would improve the number of safe, secure, healthy, affordable, and convenient travel choices between the places where people, live, and play.
- *Take advantage of new technologies to make the transportation system more efficient and accessible.* The proposed Plan includes the implementation of several state-of-the-art transit facilities and programs that are designed to further expand the region’s transit system while having minimal impact on the public right-of-way. Additionally, the proposed Plan looks to leverage technology to deploy and manage transit services within the region to both reduce costs and improve service for all users.

Roadway

Table 4.16-14
Roadway Network Analysis – Year 2050

Category	Baseline Year 2016	Year 2050 Proposed Plan	Change from Baseline Year 2016
Lane Miles of Roadway	6,922	7,721 7,710	799 788
Total Freeways (includes auxiliary lanes)	2,576	2,950	374
General Purpose Lanes	2,415	2,122	-293
HOV/Managed Lanes	116	821	705
Tollway	45	7	-38
State Highways	628	660 648	32 20
Arterials	3,718	4,110 4,112	392 394
Average Daily Vehicular Trips	12,938,524 13,107,396	12,975,633 13,218,174	37,109 110,778
HOV Trips	6,647,247 6,726,856	6,883,015 6,989,760	235,768 262,904
Vehicular Mode Share ¹	87.3% 87.4%	77.1% 77.6%	-10.2% -9.8%
Average Length of Vehicular Trip (miles)	6.87 6.97	6.67 6.81	-0.20 -0.16

Source: ABM2+

Auxiliary lane = extra lane constructed between on- and off-ramps that allows drivers a safe way to merge into traffic while also preventing bottlenecks caused by drivers attempting to enter or exit the freeway.

¹Mode share includes all vehicle classifications and trip types for San Diego residents.

Note: the revised numbers in this table reflect the minor modifications to the transportation network improvements included in the proposed Plan as well as minor corrections made to the ABM2+.

As shown in Table 4.16-14, the proposed Plan ~~will~~ ~~would~~ ~~slightly~~ increase the total number of roadway lane miles within the region ~~by 788 miles (11.511.4 percent)~~ under Year 2050 conditions, as compared to Baseline Year 2016. However, the largest share of proposed transportation network improvement investments are managed lanes, which offer priority access to people using transit, carpooling, or vanpooling along with emergency vehicles and low-emission vehicles with appropriate decals. When combined with proposed transportation network improvements across all modes of travel, the vehicular mode share within the region would decrease by ~~9.8~~10.2 percentage points, and the average trip length would decrease by ~~0.160~~0.20 mile, as projected by ABM2+. It should be noted, the decrease in tollway milage under the Year 2050 conditions is due to the expiration of the SR 125 tollway franchise agreement, which ends in 2042. After Year 2042, SR 125, south of SR 54, will be reverted to Caltrans control and the tolls will no longer be issued to the public. The roadway improvements in the proposed Plan would further the policy goals of the 2019 Federal RTP:

- *Make transportation investments that result in cleaner air, environmental protection, conservation, efficiency, and sustainable living.* The associated decreases in average vehicular trip length and travel times noted above would result in a lower average VMT per capita and VMT per employee within the region (see Table 4.16-19). These decreases in vehicular traffic would result in lower GHG emissions, creating a cleaner and more sustainable environment.
- *Take advantage of new technologies to make the transportation system more efficient and accessible.* The proposed Plan includes the implementation of several state-of-the-art traffic control and response systems (ATDM/SIS) that are designed to improve traffic flow, integrate and connect multiple modes of travel, and better manage congestion and incidents within the region's roadway network.

Therefore, these improvements are consistent with the policies outlined in the 2019 Federal RTP and would not conflict with them.

Bicycle

Table 4.16-15
Bicycle Network Analysis – Year 2050

Category	Baseline Year 2016	Year 2050 with 2021 Regional Plan	Change from Baseline Year 2016
Lane Miles of Bicycle Facilities ¹	3,112.11,574	3,631.71,816	519.6242
Class I	359.5166	620.6310	261.1144
Class II	2,101.01,039	1,956.5978	-144.5-61
Class III	642.3349	581.5291	-60.8-58
Class IV	9.320	297.8149	288.5129
Bike Boulevard	0.00	175.388	175.388
Average Daily Bicycle Trips	113,171109,623	289,930270,512	176,759160,889
Bicycle Mode Share ²	0.8%0.7%	1.7%1.6%	0.9%0.9%
Average Length of Bicycle Trip (miles)	2.852.76	4.103.81	1.251.05

Source: ABM2+

¹ Reporting of bicycle facilities were converted from total centerline miles (provided in the DEIR) to total lane miles, based on public comments.

² Mode share includes all trip types for San Diego residents.

Note: the revised numbers in this table reflect the minor modifications to the transportation network improvements included in the proposed Plan as well as minor corrections made to the ABM2+.

As shown in Table 4.16-15, the 2021 Regional Plan would implement ~~242~~519.6 lane miles of new bicycle facilities under Year 2050 conditions. As such, the implementation of the proposed Plan would further the following policies outlined in the 2019 Federal RTP:

- *Invest in transportation projects that provide access for all communities to a variety of jobs with competitive wages.* Expanding the region's bike network would create new safe and reliable bicycle connections between residential neighborhoods and job centers within the region, providing additional travel options for residents.
- *Make transportation investments that result in cleaner air, environmental protection, conservation, efficiency, and sustainable living.* The proposed increase in bicycle facilities within the region would incentivize more travelers to ride a bike, in-lieu of taking a vehicular trip, as reflected in the increase in bicycle mode share with the implementation of the proposed Plan. The increase in bicycle mode share would help (in association with the other proposed improvements) to lower the average VMT per capita and VMT per employee within the region (see Table 4.16-19). These decreases in vehicular traffic would result in lower GHG emissions, creating a cleaner and more sustainable environment.
- *Provide safe, secure, healthy, affordable, and convenient travel choices between the places where people, live, and play.* Cycling is one of the most healthy and affordable modes of transportation; thus, expanding the region's bicycle network would create more convenient, safe, and reliable connections between residential neighborhoods, job centers, and places of recreation.
- *Connect communities through a variety of transportation choices that promote healthy lifestyles, including walking and biking.* As noted previously, cycling is one of the healthiest modes of transportation; thus, expanding the region's bicycle network would create more convenient, safe, and reliable connections between residential neighborhoods, job centers, and places of recreation. These new connections would promote and incentivize more travelers to choose to ride a bike to their destination over the other modes of travel, as indicated by the projected increase in bicycle mode share.

Implementation of the proposed Plan would also be consistent with the following goals from Riding to 2050:

- *Increase the number of people who bike and frequency of bicycle trips for all purposes.* As shown in Table 4.16-15, implementation of the proposed Plan would increase bicycle ridership within the region by ~~160,889~~176,759 daily trips, under Year 2050 conditions.
- *Improve safety for bicyclists.* As shown in Table 4.16-15, the proposed Plan would upgrade several miles of unprotected bike facilities, specifically Class III Bike Routes and Class II Bike lanes, to protected bicycle facilities such as Class I – Multi-Use Pathways and Class IV Cycle Tracks. Upgrading from unprotected to protected facilities would increase the safety for cyclists.

Therefore, these improvements are consistent with the policies outlined in the 2019 Federal RTP and Riding to 2050 and would not conflict with them.

Pedestrian

**Table 4.16-16
Pedestrian Analysis – Year 2050**

Category	Baseline Year 2016	Year 2050 Proposed Plan	Change from Baseline Year 2016
Average Daily Walking Trips	<u>1,175,429</u> 1,171,853	<u>2,117,553</u> 2,115,165	<u>942,124</u> 943,312
Walking Mode Share ¹	<u>7.9%</u> 7.8%	<u>12.6%</u> 12.4%	<u>4.7%</u> 4.60%
Average Length of Walking Trip (miles)	<u>0.82</u> 0.81	<u>0.79</u> 0.78	<u>-0.03</u> -0.03

Source: ABM2+

¹ Mode share includes all trip types for San Diego residents.

Note: the revised numbers in this table reflect the minor modifications to the transportation network improvements included in the proposed Plan as well as minor corrections made to the ABM2+.

The proposed Plan does not include any direct or specific pedestrian facility expansions or improvements; however, the programs and policies contained in the proposed Plan would incentivize travelers to walk more as well as improve walking conditions within the region. Those programs include Vision Zero, TDM, Complete Streets in Mobility Hubs, and land use and housing programs that concentrate housing closer to destinations. Additionally, the expansion of the region's transit network, as displayed in Table 4.16-13, would also increase the number of pedestrian trips, as more people would be inclined to walk to/from transit stations. As such, with implementation of the proposed Plan, under Year 2050 conditions, the number of pedestrian trips generated within the region would increase by 80 percent over Baseline Year 2016 conditions. This is consistent with the policies in the 2019 Federal RTP as it shows that the proposed Plan would better connect communities through a variety of transportation choices that promote healthy lifestyles, including walking and biking.

2050 Conclusion

By 2050 the proposed Plan would implement ~~almost 242~~approximately 519.6 additional lane miles of bicycle facilities and almost 170,000 additional miles of transit service within the region. The proposed Plan would also increase the number of bicycle, pedestrian, and transit trips generated within the region, while reducing the vehicular mode share from ~~87.4~~87.3 percent to ~~77.6~~77.1 percent, as compared to 2016. These characteristics of the proposed Plan are generally consistent with the policies outlined in the 2019 Federal RTP and Riding to 2050 and would not conflict with them. Therefore, implementation of the proposed Plan, under Year 2050 conditions, would result in a less-than-significant impact.

Exacerbation of Climate Change Effects

The proposed Plan is not expected to exacerbate climate change effects regarding conflicts with an existing program, plan, ordinance, or policy addressing the circulation system, because climate change would not directly cause such conflicts.

TRA-2 CONFLICT OR BE INCONSISTENT WITH CEQA GUIDELINES SECTION 15064.3 BY NOT ACHIEVING THE SUBSTANTIAL VMT REDUCTIONS NEEDED TO HELP ACHIEVE STATEWIDE GHG REDUCTION GOALS

ANALYSIS METHODOLOGY

Section 15064.3(B) of the CEQA Guidelines criteria for analyzing and determining transportation impacts, states:

(b) Criteria for Analyzing Transportation Impacts.

(1) Land Use Projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be considered to have a less than significant transportation impact.

(2) Transportation Projects. Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, a lead agency may tier from that analysis as provided in Section 15152.

(3) Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

(4) Methodology. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

As noted above, VMT is an appropriate measure to identify transportation-related impacts under CEQA. The specific guidelines provided by CEQA Guidelines Section 15064.3(b)(1) and (2) are intended to be applied at the project level; as such, they are not directly applicable to the program-level transportation network improvements and the regional growth from land use changes that are included in the proposed Plan. However, Section 15064.3(b)(4) does allow for lead agencies to determine the methodology for evaluating VMT, and CEQA Guidelines Section 15064(b) provides lead agencies with discretion to establish a threshold of significance.

In response to the implementation of SB 743 and CEQA Guidelines Section 15064.3(b), the State developed additional guidance on how VMT-related impacts can be evaluated as well as how to establish impact thresholds using the new VMT metric. Key guidance on transportation impacts and VMT is provided by the OPR VMT Technical Advisory (OPR 2018), and a CARB issue paper on VMT reductions to achieve State climate goals (CARB 2019). However, neither document provides guidance or thresholds in regard to assessing the significance of VMT impacts for RTPs at the regional level. The recommendations of both documents are discussed below:

OPR Technical Advisory on Evaluating Transportation Impacts in CEQA. The OPR Technical Advisory provides guidance on determining significance thresholds and assessing VMT. The guidance provided within the Technical Advisory is directed to specific projects by project type (i.e., residential, retail, office, etc.) and local plans (i.e. general plans) and includes recommendations for evaluating transportation impacts. The Technical Advisory utilizes the findings of the 2017 Climate Change Scoping Plan as substantial evidence to establish a VMT threshold for certain land use development projects, stating that:

In summary, achieving 15 percent lower per capita (residential) or per employee (office) VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the State’s emissions goals.

The OPR Technical Advisory does somewhat address VMT-related impacts associated with the development and implementation of General Plans, noting:

A general plan, area plan, or community plan may have a significant impact on transportation if proposed new residential, office, or retail land uses would in aggregate exceed the respective thresholds recommended above.

However, the Technical Advisory does not provide guidance on the VMT-related impacts that may be associated with regional plans, such as an RTP and SCS, as included in the proposed Regional Plan.

2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals. The Scoping Plan analyzes and documents the statewide VMT estimates and reductions, per capita, that would be required to achieve the State climate goals of 40 percent GHG emissions reduction from 1990 levels by 2030 and 80 percent GHG emissions reduction levels from 1990 by 2050, as established under Executive Order (EO) S-03-05. In the 2017 Climate Change Scoping Plan (CARB 2017) and in a subsequent 2019 analysis (CARB 2019), CARB concluded that MPOs meeting their regional SB 375 targets alone will not achieve the emission reductions necessary to meet State 2035 climate goals; CARB’s issue paper (CARB 2019) acknowledges that SB 375 2035 GHG reduction targets, which the proposed Plan exceeds (as discussed under Impact GHG-2 in Section 4.8, *Greenhouse Gas Emissions*), are insufficient to achieve statewide GHG reduction targets and further states that California would need to reduce VMT per capita by 25 percent to achieve necessary Scoping Plan reductions for 2030. The then-adopted SCSs would achieve, in aggregate, only an 18 percent reduction compared to 2005 by 2035. Closing this gap will depend primarily on new State-initiated VMT reduction strategies and local land use and TDM strategies. CARB’s 2019 assessment is based on a scenario that CARB developed to achieve the GHG goals through a combination of cleaner vehicles and fuels and slower VMT growth.

Similarly, the 2017 Scoping Plan states that per capita VMT reductions from land use and transportation projects are necessary to achieve the statewide GHG emissions reduction goals but will not alone achieve the goals. To achieve the 2050 statewide goal, CARB (2019) estimates that, for all vehicle types, reductions in total VMT per capita of 14.3 percent below existing levels would be needed.⁷ In terms of light-duty vehicle (i.e., passenger vehicle) per capita VMT reductions, to achieve the 2050 statewide goal, CARB (2019) estimates that reductions of 16.8 percent below existing levels would be needed by 2050.⁸

⁷ CARB notes that its total VMT is calculated differently than household-generated VMT, and the values are not directly comparable to output from a regional travel demand model.

⁸ CARB notes that its light-duty VMT is calculated differently than household-generated VMT, and the values are not directly comparable to output from a regional travel demand model.

VMT Analysis Approach

This EIR's VMT analysis was quantitative, consistent with CEQA Guidelines Section 15064.3. The ABM2+ was utilized to derive the VMT metrics analyzed under each analysis scenario. (It was also used for VMT projections in the Regional Plan.) The ABM2+ is a travel demand forecasting model that incorporates census data and travel surveys to inform the algorithms of the model's projections. It uses a simulated population based on existing and projected demographics, to match residents to employment, and forecasts the daily travel on the regional transportation network. In addition, the model tracks the daily travel of individuals in the simulated population, including origins, destinations, travel distances, and mode choices. This allows the ABM2+ to project transportation metrics such as trip generation, trip assignment, and VMT at both a regional and local level.

The ABM2+ has four forecast scenarios: Baseline Year 2016, which provides a forecast of the year the model inputs (land uses, mobility network, and socio-economic data) are based on, the two interim years 2025 and 2035, and a Horizon Year of 2050. The Year 2025, 2035 and 2050 scenarios are derived based on the planned land uses and mobility improvements within the region, as well as population and employment projections. The different components of the proposed Plan are projected to be implemented over 30 years with a buildout year projected in approximately 2050.

Because of the close relationship among forecasted regional growth and land use change and planned transportation network improvements and programs on travel behavior, this section analyzes their combined effect on per capita and total VMT, instead of separate analyses for regional growth and land use change and transportation network improvements and programs.

Significance Thresholds

VMT per Capita. As noted above, there are no State-recommended significance per capita VMT thresholds for regional plans such as an RTP/SCS. Therefore, a qualitative threshold is used: *would the proposed Plan achieve the substantial VMT reductions needed to help achieve statewide GHG reduction goals?* Also, as noted, to achieve the 2050 statewide goal, CARB (2019) estimates that reductions in total VMT per capita of 14.3 percent below existing levels would be needed by 2050. The VMT per capita reduction target of 14.3 percent under existing levels is utilized in this analysis as a guide to determine whether the proposed Plan would reach the substantial VMT reductions needed to help achieve statewide GHG reduction goals. VMT per capita is calculated based on the total residential-based VMT (Home-Based VMT) generated within the San Diego region divided by the total population of the study area. Home-Based VMT is the VMT that is directly attributed to residents within the region, where either the beginning or end of the trip tour is at a place of residence.

It should be noted that CARB (2019) stresses that the VMT developed in its estimates "is not household-generated VMT, and the values are not directly comparable to the output from a local or regional travel demand model." The ABM2+ derives VMT estimates based on household-generated VMT; as such, the results of the model may not directly align with the results of the CARB issue paper. However, the ABM2+ is currently the best tool within the San Diego region for estimating baseline and future year VMT metrics, including total VMT and VMT per capita; therefore, the ABM2+ was used in the analysis.

Total VMT. Because there are no State-recommended total VMT significance thresholds for regional plans such as an RTP/SCS, a qualitative threshold is used: *would the proposed Plan achieve the substantial VMT reductions needed to help achieve statewide GHG reduction goals?* If the Regional Plan would cause substantial increases in total VMT, then it would not achieve the substantial VMT reductions needed to help achieve statewide GHG reduction goals.

Interim VMT per Capita Targets (for Informational Purposes). As noted above, the State’s target reduction of 14.3 percent of the baseline VMT per capita was set for Year 2050 conditions. The State did not establish interim year targets. Therefore, to be conservative, the 14.3 percent target was used for all horizon years to identify VMT impacts. However, for informational purposes, and to further evaluate if the proposed Plan would be on track to meet the State’s VMT reduction target by year 2050, interim year VMT reduction targets were estimated for Year 2025 and Year 2035 conditions. The interim year targets were derived based on a straight line interpretation of the full 14.3 percent reduction in VMT per capita and the 34 years (Base Year 2016 to Horizon Year 2050) the region has to achieve that target. As such, the region would need to reduce its VMT per capita at a rate of 0.4 percent per year (14.3 percent ÷ 34 years) over the next 34 years to stay on pace to meet the Year 2050 target of 14.3 percent. The interim VMT per capita targets were not used to determine impact significance.

It should be noted that the qualitative thresholds described above are unique to the proposed Plan, due to its regional and comprehensive nature. These thresholds are not intended for application to other project types, in particular to individual land use projects for which State-recommended per capita VMT thresholds may be appropriate.

Please note that the information presented in Tables 4.16-17 through 4.16-1 has been updated in this Final EIR. These updates are primarily due to minor modifications in the transportation network improvements included within the proposed Plan, as noted in Appendix B. Additionally, minor corrections to the ABM2+ were also made, which are detailed in Appendix S of the proposed Plan (page S-104).

IMPACT ANALYSIS

2025

Regional Growth and Land Use Change and Transportation Network Improvements and Programs

Table 4.16-17 summarizes the VMT projections and analyses developed under Year 2025 conditions. Total VMT and VMT per capita results are presented and compared between Baseline Year 2016 and Year 2025 under the proposed Plan to identify VMT-related impacts. Additional metrics such as the projected population and employment, VMT per employee, and VMT per service population are also presented.

**Table 4.16-17
VMT Analysis – Year 2025**

Metric	Baseline Year 2016	Year 2025 Proposed Plan	Difference between Baseline Year 2016 and Year 2025 Proposed Plan	% Change between Baseline Year 2016 and Year 2025 Proposed Plan
Total VMT (daily) ¹	84,488,451 <u>83,641,704</u>	84,965,647 <u>84,538,406</u>	477,196 <u>932,702</u>	0.6% <u>1.1%</u>
VMT per Capita (miles) ^{1,2}	19.53 <u>18.94</u>	18.12 <u>17.66</u>	-1.41 <u>-1.28</u>	-7.2% <u>-6.8%</u>
Home-Based VMT ³	63,769,566 <u>61,848,362</u>	62,055,057 <u>60,470,401</u>	-1,714,509 <u>-1,377,961</u>	-2.7% <u>-2.2%</u>
Population	3,265,489	3,424,145	158,656	4.9%

Metric	Baseline Year 2016	Year 2025 Proposed Plan	Difference between Baseline Year 2016 and Year 2025 Proposed Plan	% Change between Baseline Year 2016 and Year 2025 Proposed Plan
Employment	1,646,419	1,762,747	116,328	7.1%
VMT per Employee (miles)	<u>19.56</u> <u>18.91</u>	<u>17.46</u> <u>16.95</u>	<u>-2.10</u> <u>-1.96</u>	<u>-10.7%</u> <u>-10.4%</u>
VMT per Service Population (miles)	<u>17.20</u> <u>17.02</u>	<u>16.38</u> <u>16.30</u>	<u>-0.82</u> <u>-0.72</u>	<u>-4.8%</u> <u>-4.3%</u>
Population within TPAs	<u>764,847</u> 764,847	<u>1,456,876</u> 1,442,054	<u>692,029</u> 677,207	<u>90.5%</u> <u>88.5%</u>
Employment within TPAs	<u>609,253</u> 609,253	<u>971,340</u> 930,780	<u>362,087</u> 321,527	<u>59.4%</u> <u>52.8%</u>
Service Population within TPAs	<u>1,374,100</u> 1,374,100	<u>2,428,216</u> 2,372,834	<u>1,054,116</u> 998,734	<u>76.7%</u> <u>72.7%</u>

Source: ABM2+

¹ The VMT calculations do not include the off-model VMT reduction in Appendix S of the 2021 Regional Plan because they were not calculated for 2025. Therefore, the VMT figures may be slightly overstated in the analysis. However, these reductions are not anticipated to reduce the impacts to less than significant.

² VMT per Capita = Home-Based VMT / Population.

Note: Highlighted rows indicate metrics that are used to evaluate VMT-related impacts.

³ Home-Based VMT is the total VMT within the region that is generated from trip tours that either start or end at home.

Notes:

- Highlighted rows indicate metrics that are used to evaluate VMT-related impacts.
- The revised numbers in this table reflect the minor modifications to the transportation network improvements included in the proposed Plan as well as minor corrections made to the ABM2+.

As shown in Table 4.16-17, implementation of the proposed Plan, under Year 2025 conditions, would result in a 7.26.8 percent decrease in the region's VMT per capita, as compared to Baseline Year 2016 conditions. This is less than the 14.3 percent reduction CARB estimates will eventually be needed to achieve 2050 State climate goals and is therefore a significant impact.

As noted in the methodology section, the region would need to reduce its VMT per capita at a rate of 0.4 percent per year (14.3 percent ÷ 34 years) over the next 34 years. Therefore, to stay on target, the region would need to achieve a reduction of 3.8 percent by Year 2025 conditions (0.4 percent annual reduction over a 9-year period). As shown above, under Year 2025 conditions, the proposed Plan would reduce the regional VMT per capita by 7.86.8 percent compared to Baseline Year 2016 conditions. This is well above the interim target of 3.8 percent for Year 2025 conditions. Therefore, while implementation of the proposed Plan under Year 2025 conditions would not meet the State's full VMT reduction target of 14.3 percent, it would remain on target to reach this target by year 2050.

Implementation of the proposed Plan, under Year 2025 conditions, would result in an increase of 677,207692,029 residents living within a TPA, as well as 321,527362,087 additional jobs that would be located within a TPA compared to Baseline Year 2016 conditions. The transportation network improvements and land use changes in the proposed Plan would almost double the number of residents in TPAs as well as increase the number of jobs in TPAs by more than 50 percent. The regional growth by 2025 would amount to 158,656 residents and 116,328 jobs, most of which would occur in a TPA as transportation network improvements increase the overall TPAs in the region. As noted in CEQA Guidelines Section 15064.3(b)(1), land use projects

located within a TPA should generally be presumed to cause a less-than-significant transportation impact. However some growth by 2025 would occur outside TPAs.

Implementation of the proposed Plan, under Year 2025 conditions, would also result in an increase in total daily VMT generated in the region of ~~477,196,923,702~~ 477,196,923,702 (~~0.61.1~~ percent) compared to Baseline Year 2016 conditions. The increase is considered substantial because it does not help achieve statewide GHG reduction goals, and is therefore significant. VMT growth in Year 2025 is predominantly due to the population and employment growth within the region, notwithstanding that the SCS land use pattern and the proposed transportation network improvements and programs in the proposed Plan would help to reduce VMT growth.

Additionally, as displayed previously in Table 4.16-6, implementation of the proposed Plan, in Year 2025, would increase the number of roadway lane miles within the region by ~~245-233~~ 245-233 miles. Some of the additional lane miles added to the network would be managed lanes (~~39-34~~ miles); however, these improvements would still increase the overall vehicular capacity of the region's roadway network, resulting in the potential for induced travel. It should be noted that the majority of transportation improvements included within the proposed Plan, including expansion of transit services, new or expanded bicycle facilities, and pedestrian improvements, would decrease VMT within the region. As noted in OPR's Technical Advisory these types of multi-modal improvements are not anticipated to induce travel (OPR 2018). A detailed discussion of induced travel demand is provided in Appendix D of the 2021 Regional Plan.

2025 Conclusion

As shown in Table 4.16-17, implementation of the proposed Plan, under Year 2025 conditions, would result in a decrease in VMT per capita of ~~7.26.8~~ percent below Baseline Year 2016 conditions. This is less than the 14.3 percent reduction CARB estimates will be needed to achieve 2050 State climate goals, and is therefore a significant impact. Implementation of the proposed Plan would also result in an increase of ~~477,196,923,702~~ 477,196,923,702 daily VMT generated within the San Diego region compared to Baseline Year 2016 conditions, which is considered a substantial increase. Therefore, this impact (TRA-2) is considered significant in the year 2025 because the proposed Plan would not achieve the substantial VMT reductions needed to help achieve statewide GHG reduction goals.

2035

Regional Growth and Land Use Change and Transportation Network Improvements and Programs

Table 4.16-18 summarizes the VMT projections and analysis developed under Year 2035 conditions. Total VMT and VMT per capita results are presented and compared between Baseline Year 2016 and the proposed Plan in Year 2035 to evaluate and identify VMT-related impacts. Additional metrics such as the projected population and employment, VMT per employee, and VMT per service population are also presented.

Table 4.16-18
VMT Analysis – Year 2035

Metric	Baseline Year 2016	Year 2035 Proposed Plan	Difference between Baseline Year 2016 and Year 2035 Proposed Plan	% Change between Base Year (2016) and Year 2035 Proposed Plan
Total VMT (daily) ¹	84,488,451 <u>83,614,704</u>	87,009,311 <u>85,412,968</u>	2,520,860 <u>1,798,264</u>	3.0% <u>2.2%</u>
VMT per Capita (miles) ^{1,2}	19.53 <u>18.94</u>	17.26 <u>16.58</u>	-2.27 <u>-2.36</u>	-11.6% <u>-12.5%</u>
Home-Based VMT ³	63,769,566 <u>61,848,362</u>	61,687,476 <u>59,251,034</u>	-2,669,597 <u>-2,597,328</u>	4.1% <u>4.2%</u>
Population	3,265,489	3,573,645	308,156	9.4%
Employment	1,646,419	1,922,475	276,056	16.8%
VMT per Employee (miles)	19.56 <u>18.91</u>	16.00 <u>15.26</u>	-3.56 <u>-3.65</u>	-18.2% <u>-19.3%</u>
VMT per Service Population (miles)	17.20 <u>17.02</u>	15.83 <u>15.54</u>	-1.37 <u>-1.48</u>	-8.0% <u>-8.7%</u>
Population within TPAs	764,847 <u>764,847</u>	1,985,967 <u>1,998,394</u>	1,221,120 <u>1,233,547</u>	159.7% <u>161.3%</u>
Employment within TPAs	609,253 <u>609,253</u>	1,323,929 <u>1,313,329</u>	714,676 <u>704,076</u>	117.3% <u>115.6%</u>
Service Population within TPAs	1,374,100 <u>1,374,100</u>	3,309,896 <u>3,311,723</u>	1,935,796 <u>1,937,623</u>	140.9% <u>141.0%</u>

Source: ABM2+

¹The VMT calculations do not include the off-model VMT reduction strategy reductions totaling 891,099 (1.05% of the Total VMT) in Appendix S of the 2021 Regional Plan. Therefore, the VMT figures may be slightly overstated in the analysis. However, these reductions are not anticipated to reduce the impacts to less than significant.

²VMT per Capita = Home-Based VMT / Population

³Home-Based VMT is the total VMT within the region that is generated from trip tours that either start or end at home.

Notes:

- Highlighted rows indicate metrics that are used to evaluate VMT-related impacts.
- The revised numbers in this table reflect the minor modifications to the transportation network improvements included in the proposed Plan as well as minor corrections made to the ABM2+.

As shown in Table 4.16-18, implementation of the proposed Plan, under Year 2035 conditions, would result in a ~~41.6~~12.5 percent decrease in the region's VMT per capita, compared to Baseline Year 2016 conditions. This is less than the 14.3 percent reduction CARB estimates eventually will be needed to achieve 2050 State climate goals and is therefore a significant impact.

As noted in the *Analysis Methodology* above, the region would need to reduce its VMT per capita at a rate of 0.4 percent per year (14.3 percent ÷ 34 year) over the next 34 years. Therefore, to stay on target, the region would need to reduction of 7.6 percent by Year 2035 conditions (0.4 percent annual reduction over a 19-year period). As shown above, under Year 2035 conditions, the proposed Plan would reduce the regional VMT per capita by ~~41.6~~12.5 percent ~~as achieve a~~ compared to Baseline Year 2016 conditions. This is well above the interim target of a 7.6 percent for Year 2035 conditions. Therefore, while implementation of the proposed Plan under Year 2035 conditions would not meet the State's full VMT reduction target of 14.3 percent, it would remain on target to reach this target by year 2050.

Implementation of the proposed Plan, under Year 2035 conditions, would result in an increase of ~~1,233,547~~1,221,120 residents in TPAs, as well as ~~704,076~~714,676 additional jobs in TPAs compared to Baseline Year 2016 conditions. The transportation network improvements and land use changes in the proposed Plan would increase the number of residents in TPAs by more than 2.5 times the current rate as well as more than double the number of jobs in TPAs. The regional growth by 2035 would be 308,156 residents and 276,056 jobs, most of which would occur in a TPA as transportation network improvements increase the overall TPAs in the region. As noted in CEQA Guidelines Section 15064.3(b)(1), land use projects located within a TPA should generally be presumed to cause a less-than-significant transportation impact. However, some growth by 2035 would occur outside of a TPA.

Implementation of the proposed Plan, under Year 2035 conditions, would also result in an increase in total daily VMT generated in the region of ~~2,520,860~~1,798,264 (~~3.22.2~~ percent) compared to Baseline Year 2016 conditions. This increase is considered substantial because it does not help achieve statewide GHG reduction goals, and is therefore significant. VMT growth in Year 2035 is predominantly due to the population and employment growth within the region, notwithstanding that the SCS land use pattern and the proposed transportation network improvements and programs in the proposed Plan would help to reduce VMT growth.

Additionally, as displayed previously in Table 4.16-10, implementation of the proposed Plan, under Year 2035 conditions, would increase the number of roadway lane miles within the region by ~~622~~617 net miles. The majority of the additional lane miles added to the network would be managed lanes (~~436~~449 miles); however, these improvements would still increase the overall vehicular capacity of the region's roadway network, resulting in the potential for induced travel. It should be noted that the majority of transportation improvements included within the proposed Plan—including expansion of transit services, new or expanded bicycle facilities, and pedestrian improvements—would decrease VMT within the region. As noted in OPR's Technical Advisory these types of multi-modal improvements are not anticipated to induce travel (OPR 2018). A detailed discussion of induced travel demand is provided in Appendix D of the 2021 Regional Plan.

2035 Conclusion

As noted in Table 4.16-18, implementation of the proposed Plan, under Year 2035 conditions, would result in a decrease in the region's VMT per capita of ~~11.6~~12.5 percent below Baseline Year 2016 conditions. Off model strategies would only reduce this by 1.05 percent by 2035 for a total reduction of ~~12.64~~13.55 percent. This is less than the 14.3 percent reduction CARB estimates will be needed to achieve 2050 State climate goals, and is therefore a significant impact. Implementation of the proposed Plan would result in an increase of ~~2,520,860~~1,798,264 daily VMT generated within the San Diego region compared to Baseline Year 2016 conditions, which is considered a substantial increase. Therefore, this impact (TRA-2) is considered significant in the year 2035 because the proposed Plan would not achieve the substantial VMT reductions needed to help achieve statewide GHG reduction goals.

Although the proposed Plan does not meet the VMT reduction thresholds outlined in the Scoping Plan, the SCS in the proposed Plan does achieve the GHG reduction targets required under SB 375.

2050

Regional Growth and Land Use Change and Transportation Network Improvements and Programs

Table 4.16-19 summarizes the VMT projections and analysis developed under Year 2050 conditions. Total VMT and VMT per capita results are presented and compared between Baseline Year 2016 and the Proposed Plan

in Year 2050 to evaluate and identify VMT-related impacts. Additional metrics, such as the projected population and employment, VMT per employee, and VMT per service population, are also presented.

Table 4.16-19
VMT Analysis – Year 2050

Metric	Baseline Year 2016	Year 2050 Proposed Plan	Difference between Baseline Year 2016 and Year 2050 Proposed Plan	% Change between Baseline Year 2016 and Year 2050 Proposed Plan
Total VMT (daily) ¹	84,488,451 <u>83,614,704</u>	90,100,203 <u>88,133,934</u>	5,611,752 <u>4,519,230</u>	6.6% <u>5.4%</u>
VMT per Capita (miles) ^{1,2}	19.53 <u>18.94</u>	16.77 <u>16.03</u>	-2.76 <u>-2.91</u>	-14.1% <u>-15.4%</u>
Home-Based VMT ³	63,769,566 <u>61,848,362</u>	62,026,728 <u>59,300,949</u>	-5,011,257 <u>-2,547,412</u>	-7.5% <u>-4.1%</u>
Population	3,265,489	3,699,373	433,884	13.3%
Employment	1,646,419	2,087,318	440,899	26.8%
VMT per Employee (miles)	19.56 <u>18.91</u>	15.12 <u>15.26</u>	-4.44 <u>-4.59</u>	-22.7% <u>-24.3%</u>
VMT per Service Population (miles)	17.20 <u>17.02</u>	15.57 <u>15.54</u>	-1.63 <u>-1.79</u>	-9.5% <u>-10.5%</u>
Population within TPAs	1,985,967 <u>764,847</u>	1,985,967 <u>2,126,134</u>	1,221,120 <u>1,361,287</u>	159.7% <u>178.0%</u>
Employment within TPAs	1,323,929 <u>609,253</u>	1,323,929 <u>1,463,359</u>	714,676 <u>854,106</u>	117.3% <u>140.2%</u>
Service Population within TPAs	3,309,896 <u>1,374,100</u>	3,309,896 <u>3,589,493</u>	1,935,796 <u>2,215,393</u>	140.9% <u>161.2%</u>

Source: ABM2+

¹ The VMT calculations do not include the off-model VMT reduction strategy reductions totaling 1,865,474 (2.20% of the Total VMT) in Appendix S of the 2021 Regional Plan. Therefore, the VMT figures may be slightly overstated in the analysis. These reductions would most likely reduce the VMT per capita to below the 14.3 percent threshold; however, the region would still have an overall increase in total VMT, thus still resulting in a significant impact.

² VMT per Capita = Home-Based VMT / Population.

³ Home-Based VMT is the total VMT within the region that is generated from trip tours that either start or end at home.

Notes:

- Highlighted rows indicate metrics that are used to evaluate VMT-related impacts.
- The revised numbers in this table reflect the minor modifications to the transportation network improvements included in the proposed Plan as well as minor corrections made to the ABM2+. Note: Highlighted rows indicate metrics that are used to evaluate VMT-related impacts.

As shown in Table 4.16-19, implementation of the proposed Plan under Year 2050 conditions would result in a ~~14.1~~15.4 percent decrease in the region's VMT per capita, compared to Baseline Year 2016 conditions. This is ~~less~~greater than the 14.3 percent reduction CARB estimates will eventually be needed to achieve 2050 State climate goals, and is therefore the proposed Plan will have a less thana significant impact on the State's climate goals, in regard to VMT per capita.

Implementation of the proposed Plan, under Year 2050 conditions, would result in an increase of ~~1,361,287~~1,361,021 residents in TPAs, as well as ~~854,106~~860,980 additional jobs in TPAs compared to 2016. The regional growth by 2050 would be 433,884 residents and 440,899 jobs, most of which would occur in a

TPA as transportation network improvements increase the overall TPAs in the region. As noted in CEQA Guidelines Section 15064.3(b)(1), land use projects located within a TPA should generally be presumed to cause a less-than-significant transportation impact. However, some growth by 2050 would occur outside of a TPA.

Implementation of the proposed Plan under Year 2050 conditions would also result in an increase in total daily VMT generated in the region of ~~5,611,752~~4,519,230 (~~6.65~~4 percent) compared to Baseline Year 2016 conditions. The increase is considered substantial because it does not help achieve statewide GHG reduction goals, and is therefore significant. VMT growth in Year 2050 is predominantly due to the population and employment growth within the region, notwithstanding that the SCS land use pattern and the proposed transportation network improvements and programs in the proposed Plan would help to reduce VMT growth.

Additionally, as shown in Table 4.16-14, implementation of the proposed Plan under Year 2050 conditions would increase the number of roadway lane miles within the region by ~~798~~788 net miles. The majority of the additional lane miles added to the network would be managed lanes (705 miles); however, these improvements would still increase the overall vehicular capacity of the region's roadway network, resulting in the potential for induced travel. It should be noted that the majority of transportation improvements included within the proposed Plan, including expansion of transit services, new or expanded bicycle facilities, and pedestrian improvements, would decrease VMT within the region. As noted in OPR's Technical Advisory these types of multi-modal improvements are not anticipated to induce travel (OPR 2018). A detailed discussion of induced travel demand is provided in Appendix D of the 2021 Regional Plan.

2050 Conclusion

As noted in Table 4.16-19, implementation of the proposed Plan under Year 2050 conditions would result in a decrease in VMT per capita of ~~14.4~~15.4 percent below Baseline Year 2016 conditions. When combined with the off model strategy reductions (approximately 2.2 percent) this would result in a total reduction of ~~16.17~~36 percent in 2050, which is greater than the 14.3 percent reduction CARB estimates will be needed to achieve the 2050 State climate goals; however, the proposed Plan would result in an increase of ~~6.65~~4 percent of total VMT, and therefore the impact is considered significant. Implementation of the proposed Plan would result in an increase of ~~5,611,752~~4,519,230 daily VMT generated within the San Diego region compared to 2016 conditions, which is considered a substantial increase. Therefore, this impact (TRA-2) is considered significant in the year 2050 because the proposed Plan would not achieve the substantial VMT reductions needed to help achieve statewide GHG reduction goals.

Exacerbation of Climate Change Effects

It is uncertain whether the proposed Plan would exacerbate climate change effects on VMT. Extreme climate hazards like higher temperatures, heavy rainfall, wildfires, and flooding may change transit ridership, bicycling, and walking patterns (Melillo et al. 2014). If changes in climate cause people to drive rather than walk or take alternative forms of transit, it is possible that VMT would increase. However, if people adapt by moving closer to work or working from home, VMT may not increase. Thus, the proposed Plan's effect on exacerbating climate change VMT impacts is unknown.

TRA-2 CONFLICT OR BE INCONSISTENT WITH CEQA GUIDELINES SECTION 15064.3 BY NOT ACHIEVING THE SUBSTANTIAL VMT REDUCTIONS NEEDED TO HELP ACHIEVE STATEWIDE GHG REDUCTION GOALS

MITIGATION MEASURES

Achieving further reductions in the total and per capita VMT generated within the region depends upon additional State policy actions and funding, as well as local jurisdictions' review and entitlement of individual land use development projects and Regional Arterial System (RAS) transportation projects. In addition, transportation sponsors other than SANDAG, such as Caltrans, must evaluate and potentially mitigate any induced VMT that may be associated with the implementation of enhancements to the freeway and State Highway system.

Therefore, mitigation measure TRA-2 focuses on project-specific mitigation measures that can and should be implemented to further reduce the region's total VMT and VMT per capita. In addition, a regional plan-level alternative, Alternative 3, would further reduce VMT through measures such as more compact land use patterns, and policies to reduce transit fares, increase parking prices, and establish higher road user fees; this alternative is analyzed in Chapter 6, *Alternatives Analysis*.

2025, 2035, and 2050

The following mitigation measures presented in Section 4.8 will further reduce both the total VMT and VMT per capita:

- **GHG-5a Allocate Competitive Grant Funding to Projects that Reduce GHG Emissions and for Updates to CAPs or GHG Reduction Plans**
- **GHG-5d Develop and Implement Regional Digital Equity Strategy and Action Plan to Advance Smart Cities and Close the Digital Divide**
- **GHG-5f Implement Measures to Reduce GHG Emissions from Development Projects**

In addition, the following measure is proposed:

TRA-2 Achieve Further VMT Reductions for Transportation and Development Projects. During the project design and project-level CEQA review phases of transportation network improvements or land use development projects, SANDAG shall, and other transportation project sponsors, the County of San Diego, cities, and other local jurisdictions can and should implement project-level VMT reduction measures in addition to those included in the Regional Plan. VMT reducing measures include, but are not limited to, the following:

- **Require TDM Strategies** – SANDAG shall and other transportation project sponsors, the County of San Diego, cities, and other local jurisdictions can and should require all transportation network improvements or land use development projects, that are identified to have a significant VMT-related impact, to implement feasible TDM strategies to help offset their impacts. This mitigation measure will further reduce the proposed Plan's VMT because the potential VMT reductions associated with four⁹ TDM programs, which include pooled rides (private), vanpool, carshare, and the implementation of a regional TDM ordinance, were not incorporated into ABM2+¹⁰. Strategies such as free shuttles, parking facilities for

⁹ Five total measures are evaluated in the "Off-Model" calculations included in Appendix D of the 2021 Regional Plan. However, EV Programs (Vehicle Incentive and Charger Program) only relates to reductions in GHG and does not help to reduce VMT specifically. See Appendix D of the 2021 Regional Plan

¹⁰ These TDM strategies were calculated as part of the off-model strategies (Appendix S of the 2021 Regional Plan). If implemented these strategies could reduce total VMT by 1.05 percent by 2035 and 2.2 percent by 2050 (Appendix S of the 2021 Regional Plan).

carshare, and site design features to facilitate walking, biking, and transit can and should be used by land development projects to reduce VMT-related impacts. Additional project-level TDM measures not included in the proposed Plan can and should also be used, include walking, school bus programs, school pool programs, subsidized transit passes, unbundled parking, preferential parking programs for carpools/vanpools, and bike sharing programs.

- **Reduce Parking Minimums** – The County of San Diego, cities, and other local jurisdictions can and should evaluate the feasibility of reducing their currently required parking minimums. Reducing the parking minimums for different land use types, where appropriate, can decrease project-level VMT by up to 12.5 percent (CAPCOA 2010).
- **Implement Additional Active Transportation Facilities Not Included in the Proposed Plan** – To further reduce local VMT-related impacts and take advantage of the regional bike network, SANDAG shall and other transportation project sponsors, the County of San Diego, cities, and other local jurisdictions can and should implement additional active transportation facilities that provide connections from the regional bicycle network to local neighborhoods. The proposed Plan includes funding for Complete Streets investments in Mobility Hub areas including implementation of bicycle and pedestrian facilities that provide local connections throughout Mobility Hub areas; however, the associated VMT reductions from this funding could not be modeled, so this mitigation measure would achieve further VMT reductions. Direct access to bicycle facilities can reduce project-related VMT by 0.65 percent, while incorporating new pedestrian facilities can reduce project VMT by up to 2 percent (CAPCOA 2010).
- **Road Diet and Traffic Calming** – The County of San Diego, cities, and other local jurisdictions can and should implement road diets¹¹ or other traffic calming measures within their local roadway network, where feasible, to further reduce VMT-related impacts that may be associated with land development projects or local transportation projects. Road diet and traffic calming measures would also be eligible for Complete Streets funding in Mobility Hub areas. The reduction of existing travel lanes in favor of multi-modal facilities or additional public space can help to calm and deter vehicular trips within an area or along a roadway segment. Traffic calming measures can reduce VMT by 0.5 percent (CAPCOA 2010). It should be noted that the proposed Plan includes funding, through grants, for local jurisdictions to implement road diets.

SIGNIFICANCE AFTER MITIGATION

2025, 2035, and 2050

By Year 2050 the proposed Plan would reduce the region's VMT per capita by ~~14.1~~15.4 percent over Baseline Year 2016 conditions. As outlined in Tables S-17 through S-22 in Appendix S of the proposed Plan, there are some TDM strategies included in the proposed Plan that could not be incorporated into ABM2+ and were therefore not assumed in the transportation impact analysis. As noted within the appendix, these reductions could further reduce the total VMT generated within the region by an additional 2.2 percent by Year 2050. These reductions were calculated based on their influence of the total VMT generated within the region. As such, it is reasonable to assume that these strategies would have a similar effect on region's VMT per capita, as the majority of trips within the region are home based. Therefore, the region could achieve reductions of up to of ~~16.3~~17.6 percent (~~14.1~~15.4 + 2.2 percent) in VMT per capita, over 2016 conditions, by 2050,¹² if these

¹¹ Road Diet = narrowing or eliminating travel lanes and/or shoulders to provide more space for pedestrians, bicyclists, transit, or public spaces.

¹² This exceeds the CARB target reduction of 14.3 percent by 2050.

strategies are fully implemented. However, as noted in the mitigation section above, TDM strategies generally are required and implemented at the project level, by local agencies, to be most effective. The VMT reductions associated with these project-level TDM measures can vary greatly based on the project type, location, and size; therefore, an overall regionwide reduction cannot be estimated at the program level.

SANDAG cannot require local agencies implementing development projects, or other transportation project sponsors, to adopt the above mitigation measures, and it is ultimately the responsibility of the CEQA lead agency to determine and adopt mitigation. In addition, the State has indicated that additional State policy actions and funding would be required to close the VMT gap between what the MPOs could achieve through implementation of their SCSs and reductions needed to meet State goals. Therefore, this impact would be significant and unavoidable.

TRA-3 SUBSTANTIALLY INCREASE HAZARDS DUE TO A DESIGN FEATURE (E.G., SHARP CURVES OR DANGEROUS INTERSECTIONS) OR INCOMPATIBLE USES

ANALYSIS METHODOLOGY

The focus of this analysis is to determine if implementation of the proposed Plan would lead to new or increased safety hazards within the region's transportation network. The proposed Plan contains various projects that would modify or expand the regional transportation network. These projects were developed to address existing deficiencies and/or future needs given projected population, employment, and travel growth in the region. If implementation of these projects were determined to increase hazards within the region's transportation network (e.g., increase the likelihood of collisions or other dangers) there would be a significant impact. The impact analysis focuses on consistency with design standards related to traffic safety in order to determine whether impacts are significant. The impact analysis considers the proposed Plan's transportation network improvements and programs, but not the proposed Plan's regional growth and land use change, because the Impact TRA-3 significance criterion is limited to transportation project safety hazard issues.

IMPACT ANALYSIS

2025

Transportation Network Improvements and Programs

The proposed Plan would expand regional transportation safety programs and efforts. Highlighted below are several planning efforts included in the proposed Plan that would improve transportation safety within the region:

- *Development of Regional Vision Zero Program:* The proposed Plan introduces the Vision Zero Program with the aim of keeping all roadway users—especially vulnerable users—safe through the use of data, project prioritization, education, and community engagement.
- *Proposed Plan Network Development:* Safety data were applied to project bundles during the network-development process through evaluation criteria. See Appendix T of the 2021 Regional Plan for more information.
- *Federal Transportation Performance Management:* Planning and programming are informed by five safety performance targets for all public roads and seven transit safety performance targets that the lead CEQA agency monitors and updates on a regular schedule. See Appendix O of the 2021 Regional Plan for more information.

- *Strategic Highway Safety Plan*: The proposed Plan is consistent with the 2020 Strategic Highway Safety Plan (SHSP). SANDAG supported the development of this statewide plan and continues support of plan implementation through SHSP Challenge Area Teams.
- *Comprehensive Multimodal Corridor Plans (CMCPs)*: These subregional plans develop groupings of transportation projects that are evaluated using performance measures, including safety improvements (SANDAG 2021d).

The transportation network improvements and programs in the proposed Plan would be required to conform to the design standards of the public agency responsible for implementation. Design standard conformance is a key part of developing networks that provides common expectations for users to minimize hazardous conflicts and conditions that could contribute to collisions. The standards outlined in the California MUTCD, HDM, and MTS' *Design for Transit* (see Section 4.16.2), as well as the street design manuals established by the local jurisdictions, cover all aspects of the transportation right-of-way, including physical and operational features as well as appropriate actions during construction.

The transportation network improvements and programs included under Year 2025 conditions in the proposed Plan would not change the applicable safety design standards of the implementing agencies. The transportation network improvements would be designed consistent with those standards. Further, the proposed Plan includes several planning efforts that would improve transportation safety within the region. Therefore, this impact is less than significant.

2025 Conclusion

Implementation of the proposed Plan, under 2025 conditions, would not change the applicable design standards of the implementing agencies, and the transportation network improvements would be designed consistent with those standards. Further, the proposed Plan includes several planning efforts that would improve transportation safety. Therefore, impacts would be less than significant.

2035

Transportation Network Improvements and Programs

The proposed Plan would expand regional transportation safety programs and efforts. As highlighted in the 2025 impact analysis, there are several planning efforts included in the proposed Plan that would improve transportation safety within the region.

The transportation network improvements and programs in the proposed Plan would be required to conform to the design standards of the public agency responsible for implementation. Design standard conformance is a key part of developing networks that provides common expectations for users to minimize hazardous conflicts and conditions that could contribute to collisions. The standards outlined in the California MUTCD, HDM, and MTS' *Design for Transit* (see Section 4.16.2), as well as the street design manuals established by the local jurisdictions, cover all aspects of the transportation right-of-way, including physical and operational features as well as appropriate actions during construction.

The transportation network improvements and programs included under Year 2025 conditions in the proposed Plan would not change the applicable safety design standards of the implementing agencies. The transportation network improvements would be designed consistent with those standards. Further, the proposed Plan includes several planning efforts that would improve transportation safety within the region. Therefore, this impact is less than significant.

2035 Conclusion

Implementation of the proposed Plan, under 2035 conditions, would not change the applicable design standards of the implementing agencies, and the transportation network improvements would be designed consistent with those standards. Further, the proposed Plan includes several planning efforts that would improve transportation safety. Therefore, impacts would be less than significant.

2050

Transportation Network Improvements and Programs

The proposed Plan would expand regional transportation safety programs and efforts. As highlighted in the 2025 impact analysis, there are several planning efforts included in the proposed Plan that would improve transportation safety within the region.

The transportation network improvements and programs in the proposed Plan would be required to conform to the design standards of the public agency responsible for implementation. Design standard conformance is a key part of developing networks that provides common expectations for users to minimize hazardous conflicts and conditions that could contribute to collisions. The standards outlined in the California MUTCD, HDM, and MTS' *Design for Transit* (see Section 4.16.2), as well as the street design manuals established by the local jurisdictions, cover all aspects of the transportation right-of-way, including physical and operational features as well as appropriate actions during construction.

The transportation network improvements and programs included under Year 2025 conditions in the proposed Plan would not change the applicable safety design standards of the implementing agencies. The transportation network improvements would be designed consistent with those standards. Further, the proposed Plan includes several planning efforts that would improve transportation safety within the region. Therefore, this impact is less than significant.

2050 Conclusion

Implementation of the proposed Plan, under 2050 conditions, would not change the applicable design standards of the implementing agencies, and the transportation network improvements would be designed consistent with those standards. Further, the proposed Plan includes several planning efforts that would improve transportation safety. Therefore, impacts would be less than significant.

Exacerbation of Climate Change Effects

The proposed Plan is not expected to exacerbate climate change effects regarding substantially increasing hazards due to a design feature, assuming that applicable design standards incorporate projections for future climate conditions.

TRA-4 LEAD TO A LACK OF PARKING SUPPLY THAT WOULD CAUSE SIGNIFICANT SECONDARY ENVIRONMENTAL IMPACTS NOT ALREADY ANALYZED IN THE EIR

ANALYSIS METHODOLOGY

Per Public Resources Code Section 2099(d)(1), parking impacts are not considered an environmental impact under CEQA for residential, mixed-use residential, or employment center projects located on an infill site within

a TPA. The majority of the proposed policies in the proposed Plan relating to parking operations and management would occur within a TPA. Changes in parking operations, supply, and management can, however, have an effect on the way people travel within the region and ultimately influence VMT. These changes may affect the air quality, energy, and GHG impact impacts, as disclosed within Sections 4.3, 4.6, and 4.8 of this EIR, respectively.

IMPACT ANALYSIS

2025

Transportation Network Improvements and Programs

One of the proposed Plan core strategies is to implement innovative parking demand and system management tools to help reduce solo driving and congestion. This would be accomplished through policies that encourage increases in remote working, carsharing, vanpooling, pricing strategies, and parking management programs that leverage partnerships and technology. The following policies in the proposed Plan pertain to the proposed Plan's vision on how public parking can be improved within the region.

Mobility Hubs

- Intelligent Transportation Solutions, which include wireless electric vehicle charging, smart parking solutions, infrastructure supporting automated and connected vehicles, and dynamically managed curbs.

Regional Pricing Strategy

- Parking and curb pricing: combined with the availability of convenient alternatives to driving alone and effective parking management strategies, charging for parking encourages vehicular turnover and reduces congestion as drivers search for a parking spot. Better management of valuable curb space also includes pricing to encourage a rapid turnover by commercial vehicles, rideshare services, shuttles, and parcel delivery vehicles. The result: access is maximized for a wider range of popular services. Local jurisdictions are responsible for managing parking and curb space. SANDAG will provide resources and technical support to jurisdictions in developing parking and curb pricing strategies.

As noted in the policies above, the parking strategies and policies included in the proposed Plan would incorporate technology into both public on-street parking and Mobility Hubs. This is intended to let travelers know, in real time, where parking is available and its associated cost. This technology would help to reduce the number of motorists who are circling around busy areas in search of available parking, thus reducing associated VMT as well as associated GHG emissions that affect air quality. The technology would also allow for dynamic pricing, where the hourly cost of parking increases as parking becomes less available. Dynamic pricing incentivizes travelers to utilize other modes of travel during peak times, thus potentially reducing VMT. The California Air Pollution Control Officers Association (CAPCOA) finds that charging for public parking or increasing the existing price of parking can reduce VMT by 2.8 to 5.5 percent (CAPCOA 2010). This strategy and its associated effects are incorporated into the ABM2+, which uses travel survey data to determine how the cost to operate a vehicle (including gas prices, maintenance, tolls, and parking costs) affects a traveler's choice in modes.

The parking strategies and policies outlined above were reflected in the ABM2+ results for the proposed Plan and are reflected in the VMT results outlined in Table 4.16-17. As shown, the VMT per capita, VMT per employee, and VMT per service population would decrease under the proposed Plan, which includes the effects of proposed parking strategies and policies.

It should be noted that the ABM2+ does not specifically account for additional localized VMT that could be generated by additional vehicles in search of parking. Therefore, any VMT effects specifically associated with parking shortages cannot be quantified and would be dictated by local conditions, to which the model is not sensitive.¹³ The effect on VMT associated with additional vehicles circling around and looking for available parking, or cheaper parking, is likely negligible on a regional scale, and would be offset by the VMT reductions from the parking strategies and policies described above.

2025 Conclusion

Proposed Plan parking strategies and policies were integrated into the Year 2025 VMT results analyzed under Impact TRA-2. These VMT results were relied upon for air quality, energy, and GHG impact analyses conducted in Sections 4.3, 4.6, and 4.8. Therefore, the proposed Plan would not lead to a lack of parking supply that would cause significant secondary impacts not already analyzed in the EIR, and this impact is less than significant.

2035

Transportation Network Improvements and Programs

As noted previously, the parking strategies and policies included in the proposed Plan would incorporate technology into both public on-street parking and Mobility Hubs. This is intended to let travelers know, in real time, where parking is available and its associated cost. This technology would help to reduce the number of motorists who are circling around busy areas in search of available parking, thus reducing associated VMT as well as associated GHG emissions that affect air quality. The technology would also allow for dynamic pricing, where the hourly cost of parking increases as parking becomes less available. Dynamic pricing incentivizes travelers to utilize other modes of travel during peak times, thus potentially reducing VMT. The CAPCOA *Quantifying Greenhouse Gas Mitigation Measures* (2010), finds that charging for public parking or increasing the existing price of parking can reduce VMT by 2.8 to 5.5 percent. This strategy and its associated effects are incorporated into the ABM2+, which uses travel survey data to determine how the cost to operate a vehicle (including gas prices, maintenance, tolls, and parking costs) affects a traveler's choice in modes.

The parking strategies and policies outlined above were reflected in the ABM2+ results for the proposed Plan and are reflected in the VMT results outlined in Table 4.16-18. As shown, the VMT per capita, VMT per employee, and VMT per service population would decrease under the proposed Plan, which includes the effects of proposed parking strategies and policies.

It should be noted that the ABM2+ does not specifically account for additional localized VMT that could be generated by additional vehicles in search for parking. Therefore, any VMT effects specifically associated with parking shortages cannot be quantified and would be dictated by local conditions, to which the model is not

¹³ Per CEQA Guidelines Section 15064.3(b)(3), if current models are not sufficiently refined to capture the indirect VMT effects of a project, then such analysis can be performed qualitatively.

sensitive.¹⁴ The effect on VMT associated with additional vehicles circling around and looking for available parking, or cheaper parking, is likely negligible on a regional scale, and would be offset by the VMT reductions from the parking strategies and policies described above.

2035 Conclusion

Proposed Plan parking strategies and policies were integrated into the Year 2035 VMT results analyzed under Impact TRA-2. These VMT results were relied upon for air quality, energy, and GHG impact analyses conducted in Sections 4.3, 4.6, and 4.8. Therefore, the proposed Plan would not lead to a lack of parking supply that would cause significant secondary impacts not already analyzed in the EIR, and this impact is less than significant.

2050

Transportation Network Improvements and Programs

The parking strategies and policies included in the proposed Plan would incorporate technology into both public on-street parking and Mobility Hubs. This is intended to let travelers know, in real time, where parking is available and its associated cost. This technology would help to reduce the number of motorists who are circling around busy areas in search of available parking, thus reducing associated VMT as well as associated GHG emissions that affect air quality. The technology would also allow for dynamic pricing, where the hourly cost of parking increases as parking becomes less available. Dynamic pricing incentivizes travelers to utilize other modes of travel during peak times, thus potentially reducing VMT. CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures* (2010), finds that charging for public parking or increasing the existing price of parking can reduce VMT by 2.8 to 5.5 percent. This strategy and its associated effects are incorporated into the ABM2+, which uses travel survey data to determine how the cost to operate a vehicle (including gas prices, maintenance, tolls, and parking costs) affects a traveler's choice in modes.

The parking strategies and policies outlined in the year 2025 analysis were reflected in the ABM2+ results for the proposed Plan and are reflected in the VMT results outlined in Table 4.16-19. As shown, the VMT per capita, VMT per employee, and VMT per service population would decrease under the proposed Plan, which includes the effects of proposed parking strategies and policies.

It should be noted that the ABM2+ does not specifically account for additional localized VMT that could be generated by additional vehicles in search for parking. Therefore, any VMT effects specifically associated with parking shortages cannot be quantified and would be dictated by local conditions, to which the model is not sensitive.¹⁵ The effect on VMT associated with additional vehicles circling around and looking for available parking, or cheaper parking, is likely negligible on a regional scale, and would be offset by the VMT reductions from the parking strategies and policies described above.

2050 Conclusion

Proposed Plan parking strategies and policies were integrated into the Year 2050 VMT results analyzed under Impact TRA-2. These VMT results were relied upon for air quality, energy, and GHG impact analyses conducted

¹⁴ Per CEQA Guidelines Section 15064.3(b)(3), if current models are not sufficiently refined to capture the indirect VMT effects of a project, then such analysis can be performed qualitatively.

¹⁵ Per CEQA Guidelines Section 15064.3(b)(3), if current models are not sufficiently refined to capture the indirect VMT effects of a project, then such analysis can be performed qualitatively.

in Sections 4.3, 4.6, and 4.8. Therefore, the proposed Plan would not lead to a lack of parking supply that would cause significant secondary impacts not already analyzed in the EIR, and this impact is less than significant.

Exacerbation of Climate Change Effects

The proposed Plan is not expected to exacerbate climate change effects on parking supply.