4.13 Transportation

This section evaluates potential impacts related to transportation due to implementation of the project. The analysis in this section is based on the Irvine General Plan Update Vehicle Miles Traveled (VMT) Traffic Study (2024; Appendix G).

4.13.1 Existing Conditions

4.13.1.1 Existing Roadway System

Arterial highways are designed to handle significant traffic volumes and/or high speeds. The current general plan categorizes types of arterial highways based on criteria set by the Orange County Master Plan of Arterial Highways (MPAH), overseen by the Orange County Transportation Authority (OCTA). Figure 4.13-1 presents an overview of the City of Irvine's (City) Master Plan of Arterial Highways. The defined categories are outlined as follows:

- Freeway: A divided state highway with restricted access solely through grade-separated interchanges, efficiently accommodating high volumes of traffic between cities. In Irvine, examples include the I-5 and I-405, forming the "El Toro Y" interchange, and the State Route 55 extending along the City's western border.
- Transportation Corridor: A multi-use facility with controlled access, featuring a wide median suitable for fixed rail or high occupancy vehicle lanes, alongside general purpose lanes, facilitating traffic flow between cities. In Irvine, toll roads like State Route 241 (Foothill Transportation Corridor), State Route 261, and State Route 133 (part of Eastern Transportation Corridor), and State Route 73 (San Joaquin Hills Transportation Corridor) serve this purpose.
- Expressway: An arterial highway with divided lanes and grade-separated intersections or access ramps, such as Jamboree Road in Irvine, linking the Irvine Business Complex (IBC) to northern neighborhoods and passing through former Marine Corps Air Station Tustin.
- Major Highway: A divided arterial highway with six to eight through lanes, connecting planning areas and providing access to freeways or transportation corridors. Examples in Irvine include Irvine Boulevard, Irvine Center Drive, and parts of Jamboree Road, Jeffrey Road, and Sand Canyon Avenue.
- Primary Highway: A divided arterial highway with four through lanes, connecting planning areas and activity centers within them, as well as serving as conduits to and from freeways or transportation corridors. Examples in Irvine include Barranca Parkway, Bryan Avenue, Trabuco Road, and Walnut Avenue.
- Secondary Highway: An undivided arterial highway with four through lanes, facilitating traffic movement between planning areas and activity centers within them. Examples in Irvine include Yale Loop, Ridgeline Drive, Research Drive, and Shady Canyon Drive.
- Commuter Highway: A two-lane undivided highway mainly serving as a collector road for through-traffic movements between arterials. Examples in Irvine include Harvard Avenue, Michelson Drive, and Turtle Rock Drive.

Map Source: City of Irvine

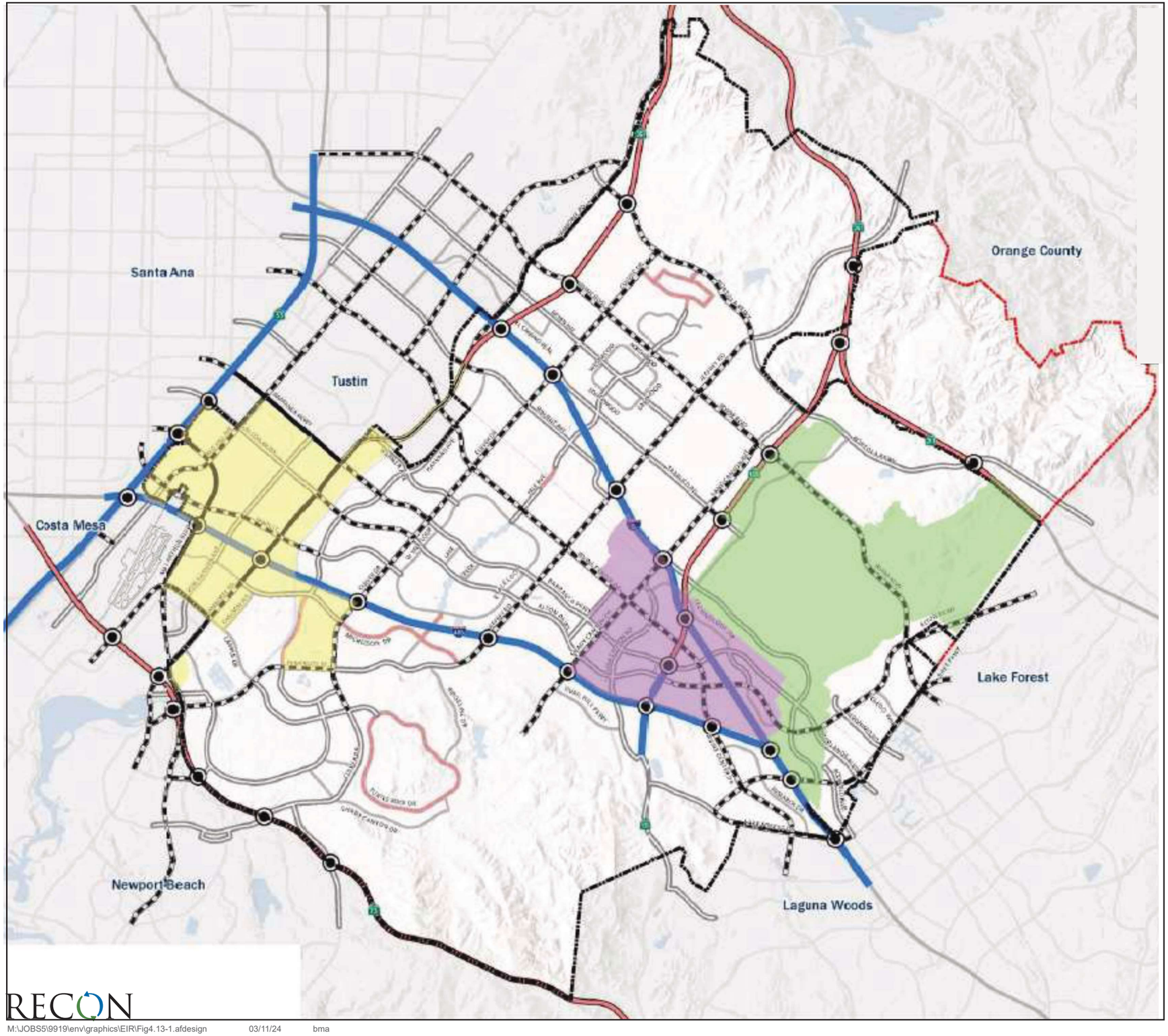

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FIGURE 4.13-1
Master Plan of Arterial Highways

The City's roadway system stands out for its well-defined hierarchy, contrasting with the typical layout seen in many large California cities. Unlike the scattered networks of streets often found elsewhere, Irvine's major arterial roads follow a predetermined master plan. Similarly, the City's minor streets, alleys, and trails are meticulously designed to serve specific land uses rather than adhering to a simple grid pattern. Collector streets may feature landscaped areas and offer views into public spaces, while residential streets often form curvilinear networks with cul-de-sacs. This deliberate layout reflects Irvine's segmented land use pattern, characterized by distinct enclaves, which contrasts with the continuous urban fabric seen in other cities.

- Local Streets: In the City, local streets are characterized by their low speed and traffic volume, primarily serving as access routes to residential, business, and adjacent properties. These streets often accommodate parking and witness significant pedestrian traffic. Examples are abundant in single-family residential neighborhoods, facilitating access to individual driveways and garages. Adjacent sidewalks may run parallel to the road or be separated by landscaping features.
- Alleys: Narrow, linear roadways behind buildings in Irvine, alleys link two or more local streets and offer direct access to garages or carports. Unlike older urban areas, Irvine has relatively few traditional alleys due to its post-World War II development.
- Driveways/Drive Aisle: Off-street roadways providing direct access to garages, carports, or parking lots are termed driveways, while those leading to multiple garages or parking spaces are drive aisles. In Irvine, multi-family residential complexes use internal drive-aisle networks to connect individual units to streets and provide guest parking, often landscaped with paths or gates.
- Private Ways and Private Courts: The City has several private ways and private courts, which are slow-speed roads within neighborhoods providing access to residential units, garages, and parking areas. Private courts are low-traffic dead-end lanes serving the same function but accommodating fewer daily vehicle trips.

4.13.1.2 Public Transit System

As operating costs for private autos rise, roadway congestion grows, and certain groups, such as the elderly, handicapped, and low-income individuals, face challenges in accessing private vehicles, public transit becomes a more attractive transportation option. As Irvine and the surrounding region continue to develop, regional transit providers are enhancing their services to meet the growing demand. Figure 4.13-2 presents an overview of transit services in the City.

- Rail Transit: The City enjoys convenient access to multiple rail transit options, including Amtrak and Metrolink. The Amtrak Pacific Surfliner provides regional passenger rail service with stops in key cities such as Fullerton, Anaheim, Santa Ana, Irvine, San Juan Capistrano, and San Clemente. Positioned between San Diego and Los Angeles, Irvine serves as a central stop in Orange County, boasting one of the nation's busiest Amtrak stations.

Map Source: City of Irvine

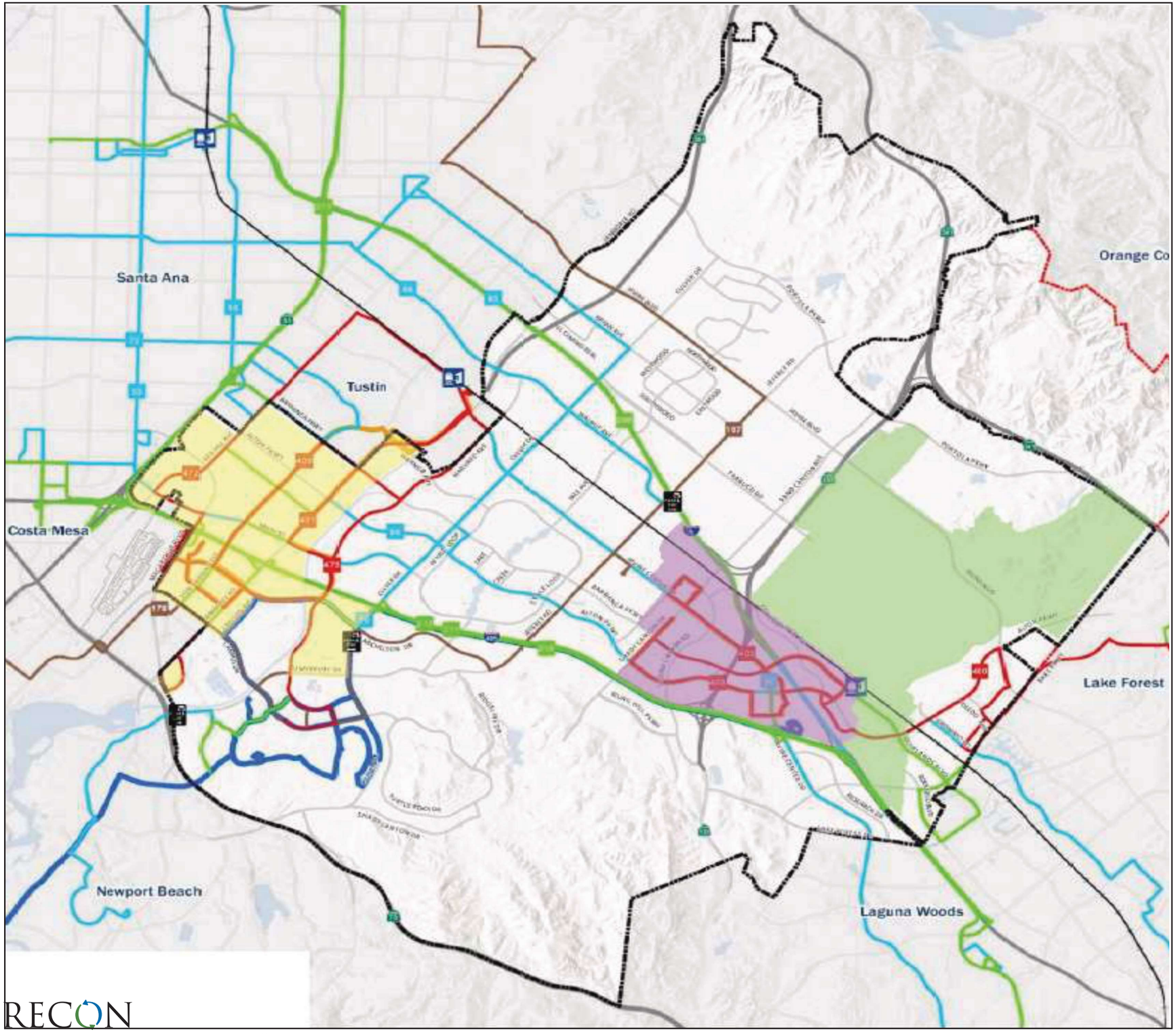

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FIGURE 4.13-2
Transit Services

- Metrolink: Metrolink operates trains along the Los Angeles to San Diego railroad right-of-way, including the Orange County Line and the Inland Empire-Orange County Line, offering weekday and weekend rail service. The Irvine Transportation Center, Orange County's busiest station, serves over a million commuters annually and offers connections to express, local, and rail-feeder bus services operated by OCTA and iShuttle. The station provides free parking in a 1,500-space structure, with extended parking options available for Amtrak customers through registration with on-site security.

- Local Transit: OCTA provides comprehensive transit services throughout Orange County, including Irvine, with routes catering to various needs, from regional commuters to local shuttles. In 2016, OCTA assumed operation and maintenance of the City's iShuttle program. The City offers Transportation for Irvine Residents with Disabilities (TRIPS) service, providing door-to-door transportation for residents aged 18 and above with permanent physical and/or cognitive disabilities. TRIPS operates during evenings, weekends, and holidays based on demand.

- Shuttle Service: The iShuttle, a clean-fuel, rubber-tire shuttle bus, operates within Irvine during weekday peak commute hours.

- Anteater Express: Managed by University of California, Irvine, the Anteater Express connects the campus with nearby neighborhoods, housing complexes, and destinations like Diamond Jamboree and the Irvine Spectrum. While some routes are free, others require a limited fare.

- Additional Public Transit: The City provides various transit options for seniors and individuals with special needs, including free transportation for seniors to medical appointments through the Senior Service Program. Age Well Senior Transportation Services offer nonemergency medical transportation countywide. The American Cancer Society provides complimentary transport for cancer treatments, and services are accessible for disabled American veterans. The City's Mobility Guide serves as a comprehensive directory of transit services tailored to seniors and special needs individuals.

4.13.1.3 Pedestrian and Bicycle Systems

Southern California is recognized for its heavy reliance on cars, often resulting in goods and services being distant from residential areas and limited accessibility within neighborhoods for accessing local amenities. However, owing to the City's meticulous master planning, the City boasts a robust network of pedestrian trails and bicycle routes. This well-constructed system of trails and pedestrian bridges has been strategically developed to facilitate unrestricted movement for both pedestrians and cyclists throughout the community. Figure 4.13-3 presents an overview of pedestrian facilities in the City and Figure 4.13-4 presents an overview of bicycle facilities in the City.

Map Source: City of Irvine

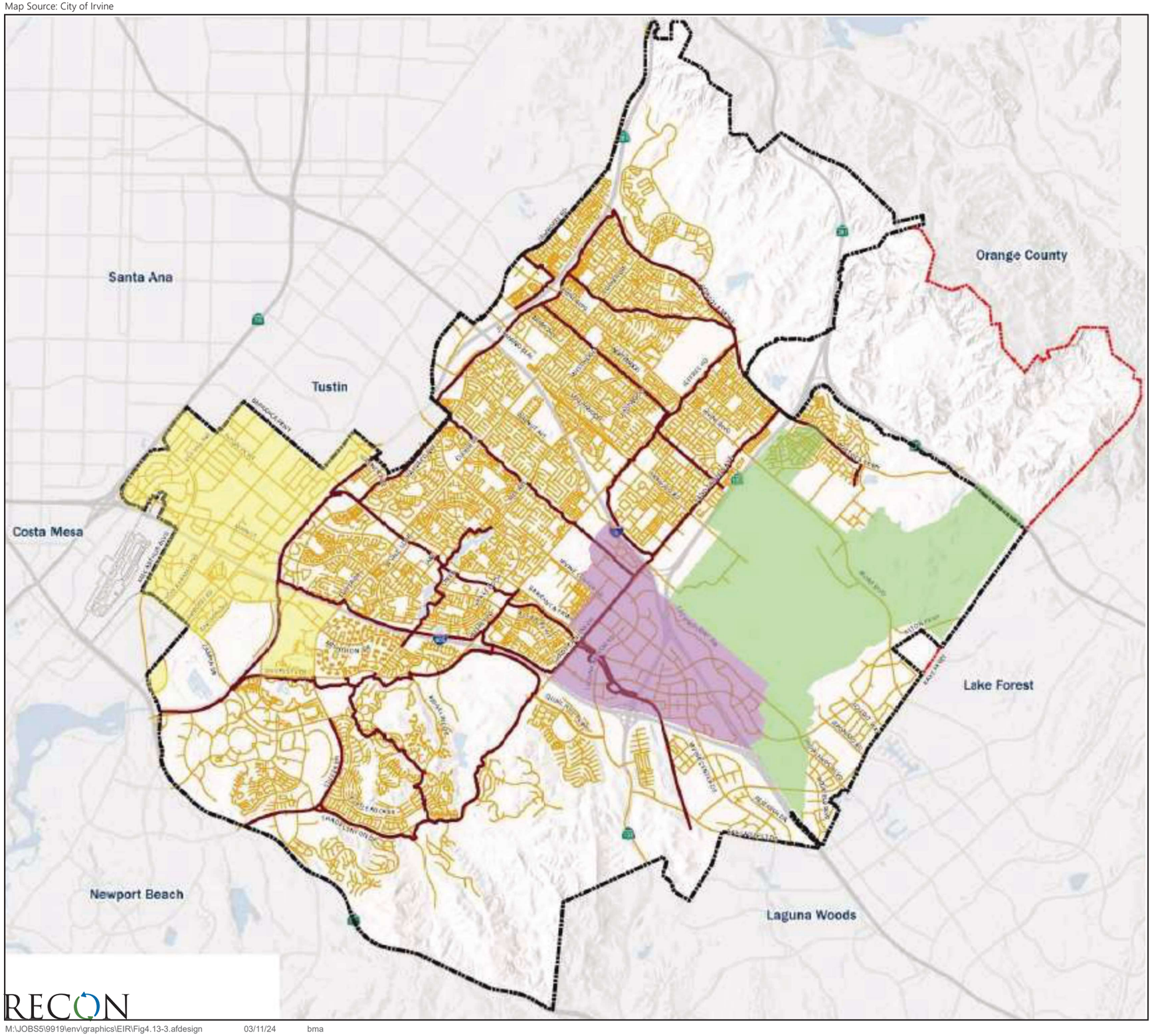

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FIGURE 4.13-3
Pedestrian Facilities

Map Source: City of Irvine

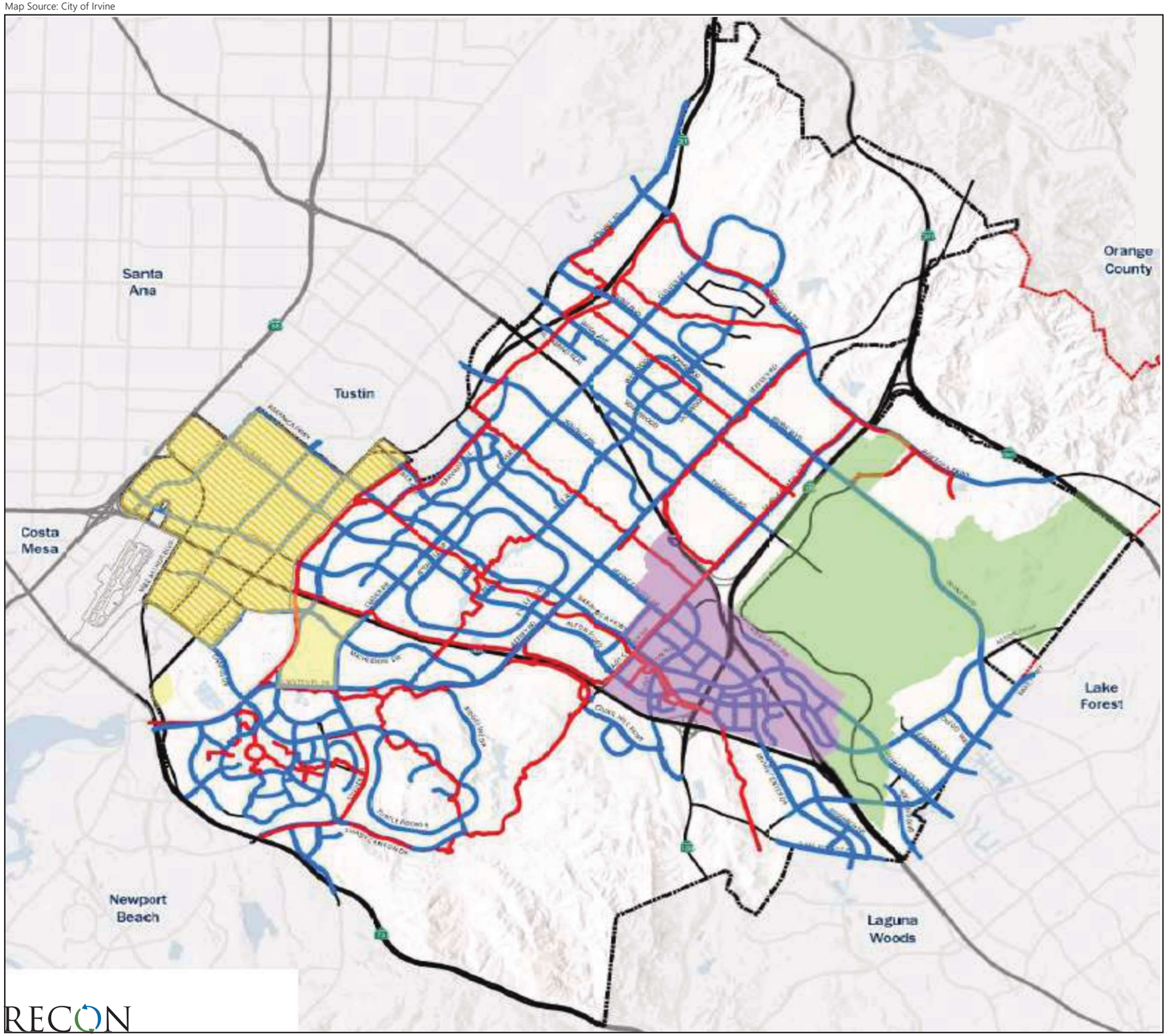

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FIGURE 4.13-4
Bicycle Facilities

- Sidewalks: The City boasts an extensive pedestrian-friendly sidewalk network, designed to enhance accessibility, and promote an active lifestyle. Most residential neighborhoods have well-served sidewalks, with parks conveniently located within walking distance. However, areas like the IBC historically lacked sidewalks due to their focus on commerce and industry, though recent residential development has spurred demand for pedestrian infrastructure. The City is responding by prioritizing new sidewalk construction aligned with the IBC Vision Plan. UC Irvine's campus is pedestrian and bicycle-friendly, with a layout focused on these modes of transportation. Pedestrian paths and a "ring road" facilitate convenient access to academic buildings and leisure activities. Informal trails in nature preserves like Quail Hill Preserve provide outdoor recreation opportunities.

- Pedestrian and Bicycle Bridges: Irvine's circulation system features numerous bridges and grade-separated crossings, enhancing safety and accessibility for cyclists and pedestrians. Notable examples include bridges within the Woodbridge community, across UC Irvine's campus, along the Jeffrey Open Space Trail, and planned bridges over Irvine Boulevard and Jamboree Road. These bridges are funded by area-wide fees and public benefit improvement funds.

- Bicycle Trails: Irvine's bicycle infrastructure includes Class I, II, and III bikeways, offering exclusive bike and pedestrian paths, marked lanes on streets, and shared routes with pedestrians or vehicles. With over 50 miles of off-street bikeways and 301 miles of on-street bikeways, Irvine provides extensive cycling opportunities along named routes like West Irvine Trail, Peters Canyon Trail, Jeffrey Open Space Trail, Sand Canyon Trail, and Portola Trail.

4.13.2 Applicable Regulatory Requirements

4.13.2.1 State Regulations

a. Assembly Bill 1358 (Complete Streets)

The California Complete Streets Act (Assembly Bill [AB] 1358) of 2008 requires circulation elements to address the transportation system from a multimodal perspective. The bill states that streets, roads, and highways must "meet the needs of all users . . . in a manner suitable to the rural, suburban, or urban context of the general plan." The Complete Streets Act requires that circulation elements plan for all modes of transportation where appropriate, including walking, biking, car travel, and transit, and that streets are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities.

b. Senate Bill 375 (Sustainable Communities and Climate Protection Act)

The Sustainable Communities and Climate Protection Act (Senate Bill [SB] 375) provides guidance to reduce the number and length of automobile commuting trips, helping to meet the statewide targets for reducing greenhouse gas emissions set by AB 32.

SB 375 requires each Metropolitan Planning Organization to add a broader vision for growth to its transportation plan through development of a Sustainable Communities Strategy (SCS). The SCS

must lay out a plan to meet the region's transportation, housing, economic, and environmental needs in a way that enables the area to lower greenhouse gas emissions. The SCS should integrate transportation, land use, and housing policies to plan for achievement of the emissions target for each region. The latest Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) was adopted in 2020.

c. Senate bill 743 (General CEQA Reform, VMT)

SB 743 was signed into law on September 27, 2013. This legislation seeks to balance the needs of congestion management, infill development, public health, greenhouse gas reductions, and other goals. Passage of SB 743 resulted in revisions to the California Environmental Quality Act (CEQA) Guidelines, including elimination of auto delay, level of service (LOS), and similar measurements of vehicular roadway capacity and traffic congestion as the basis for determining significant impacts, which were replaced with vehicle miles traveled (VMT) as the preferred CEQA transportation metric. The Office of Planning and Research released the Technical Advisory on Evaluating Transportation Impacts in CEQA in December 2018 to provide recommendations for the use of VMT metrics when analyzing land use projects and plans under CEQA.

d. California Fire Code

The California Fire Code establishes requirements pertaining to fire and life safety, including for building materials and methods, fire protection systems in buildings, emergency access to buildings, and handling and storage of hazardous materials (California Code of Regulations Title 24 Part 9).

4.13.2.2 Regional Regulations

a. Transportation Demand Management

Transportation Demand Management (TDM) refers to a comprehensive strategy to reduce driving and resulting VMT by promoting alternatives such as public transit, carpooling, bicycling, walking, and telecommuting. While some TDM measures can be undertaken by the City, such as investments in facilities and programs to encourage alternative modes of transportation, other TDM measures require collaboration with other jurisdictions, for example with transit providers to seek expanded service, or with employers to encourage flexible work schedules and the provision of on-site childcare, preferential carpool parking, and subsidized transit passes.

SCAG has developed a long-range planning vision to balance future mobility and housing needs with economic, environmental, and public health goals. The SCAG's 2020-2045 RTP/SCS has allocated $7.3 billion through 2045 to implement TDM strategies throughout the region. There are three primary goals of SCAG's TDM program:

- Reduce the number of single-occupant vehicle trips and per capita VMT through ridesharing (which includes carpooling and vanpooling) and providing first/last mile services to and from transit;
- Redistribute or eliminate vehicle trips during peak demand periods by supporting telecommuting and alternative work schedules; and

- Reduce the number of single-occupant vehicle trips through use of other modes such as transit, rail, bicycling, and walking, or other micro-mobility modes.

It should be noted that SCAG is currently in the process of updating this document and recently released the draft Connect SoCal 2024 for review and comment. The final Connect SoCal 2024 document is expected to go to the Regional Council for adoption in April 2024.

b. Orange County Congestion Management Program

The passage of Proposition 111 in June 1990 established a process for each metropolitan county in California, including Orange County, to prepare a Congestion Management Plan (CMP). The OCTA prepared the County's CMP in consultation with the County of Orange and the cities within Orange County. The Orange County CMP sets forth regional mobility objectives to reduce traffic congestion, provide a system for coordinating land-use and development decisions that support the regional economy, and to support gas tax funding eligibility. The CMP outlines policies for monitoring and managing system performance issues. The OCTA developed these policies in conjunction with local jurisdictions, the California Department of Transportation, and South Coast Air Quality Management District.

c. OC Go (Measure M2)

Measure M is a 30-year half-cent sales tax for transportation improvements in Orange County from 2011 to 2041. To be eligible for Measure M2 funds, a local jurisdiction must satisfy the following requirements:

- Comply with the conditions and requirements of the Orange County CMP.
- Establish a policy which requires new development to pay its fair share of transportation related improvements associated with their new development.
- Adopt a General Plan Circulation Element consistent with the MPAH.
- Adopt and update a Capital Improvement Program.
- Participate in Traffic Forums.
- Adopt and maintain a Local Signal Synchronization Plan.
- Adopt and update biennially a Pavement Management Plan.
- Adopt and provide an annual Expenditure Report to OCTA.
- Provide OCTA with a Project Final Report within six months following completion of a project funded with Net Revenues.
- Agree to expend Net Revenues received through M2 within three years of receipt.
- Satisfy Maintenance of Effort requirements.
- Agree that Net Revenues shall not be used to supplant developer funding.
- Consider, as part of the eligible jurisdiction's General Plan, land use and planning strategies that accommodate transit and non-motorized transportation

d. Orange County Transportation Authority Long Range Transportation Plan

The OCTA Long Range Transportation Plan (LRTP) outlines the vision and plan for multimodal transportation in Orange County. OCTA prepares the LRTP and submits it to SCAG so that county

transportation projects will be incorporated into the regional transportation plan and subsequently programmed into the Federal Transportation Improvement Program. The 2022 LRTP has four goals: (1) deliver on commitments; (2) improve transportation system performance, (3) expand transportation system choices; and (4) support sustainability.

e. Master Plan of Arterial Highways

The MPAH was established in 1956 to ensure that a regional arterial highway network would be developed to supplement Orange County's developing freeway system. OCTA is responsible for administering the MPAH, including the review and approval of amendments. The MPAH map is a critical element of transportation planning and operations because it defines a countywide circulation system in response to existing and planned land uses. It is regularly updated to reflect changing development and traffic patterns. In order to be eligible for OC Go (Measure M2) revenues and programs, a city's circulation element must be consistent with the MPAH and maintain the minimum number of lanes on each arterial in the MPAH.

f. Districts 1 and 2 Bikeways Strategy (2013)

OCTA's regional bikeways planning expanded the 2009 OCTA Commuter Bicycle Strategic Plan to identify potential regional bikeway improvements. The Districts 1 and 2 Bikeways Strategy was completed in 2013 and identifies 11 regional bikeway corridors that collectively comprise over 120 miles. These corridors connect to major activity centers, including employment areas, transit stations, and colleges and universities. The corridors also include key connections to regional bikeway routes and major destinations within the districts.

g. OCTA's OC Transit Vision

The OC Transit Vision is a 30-year plan for enhancing and expanding public transit service in Orange County. Adopted in 2018, the Transit Vision focuses future investments along transit opportunity corridors on major arterials and freeways. The Transit Vision also supports improvements to rail service planned by Metrolink and other partner agencies, including plans to improve station access and reduce the number of at-grade road crossings. The circulation mobility element adopts the transit opportunity corridors as part of its transit plan.

OCTA is currently developing the 2024 OC Transit Vision, which aims to integrate, enhance, and expand multimodal transportation services in Orange County. The OC Transit Vision will analyze current transit corridors, modes, transit supportive design, and policy recommendations. In addition, the plan will address the latest in transit technologies, respond to evolving ridership trends, and outline potential funding sources. The updated OC Transit Vision will provide a consistent, countywide transit approach that will be shared with local jurisdictions and other partner agencies to encourage coordination for advancing, funding, and implementation of transit-related recommendations both locally and regionally.

4.13.2.3 Local Regulations

a. Current General Plan (2000)

The Circulation Element of the City's existing General Plan (2000) includes the following objectives related to circulation:

Objective B-1: Roadway Development: Plan, provide and maintain an integrated vehicular circulation system to accommodate projected local and regional needs. This objective includes Policy (c), which establishes level of service (LOS) E as the acceptable standard of roadway operations.

Objective B-2: Roadway Design: Develop a vehicular circulation system consistent with high standards of transportation engineering safety and with sensitivity to adjoining land uses.

Objective B-3: Pedestrian Circulation: Establish a pedestrian circulation system to support and encourage walking as a mode of transportation.

Objective B-4: Bicycle Circulation: Plan, provide and maintain a comprehensive bicycle trail network that together with the regional trail system, encourages increased use of bicycle trails for commuters and recreational purposes.

Objective B-5: Riding and Hiking Trail Networks: Plan, develop and maintain a riding and hiking trail network and support facilities to satisfy the needs of riders and hikers.

Objective B-6: Public Transit Program: Work with Orange County Transportation Authority to implement a public transit system for trips within the City and adjacent areas.

b. Municipal Code

Title 6 (Public Works), Division 3 (Transportation), Chapter 6 (Trip Reduction Facilities)

This chapter is intended to meet the requirements of California Government Code Section 65089.3(b)(3), which requires development of a trip reduction and travel demand element to the Congestion Management Plan, and California Government Code Section 65089.3(b), which requires adoption and implementation of a trip reduction and travel demand ordinance. Developers of commercial, industrial, and mixed-use projects are required to provide the trip reduction support measures set forth in Section 6-3-605, as applicable, within each such development. Measures include:

1. A percentage of parking spaces, located as close as is practical to the entrance(s) of the use they are intended to serve, shall be reserved for use of carpool vehicles.
2. Secure, adequate, and convenient storage shall be provided for bicycles pursuant to the Zoning Code of the City.
3. Bus bays, bus stops and bus shelters shall be provided adjacent to roads and streets traversing or bounding the development, as requested by the City and pursuant to proposed

or existing bus stop locations identified by Orange County Transit District or its successor agency (i.e., Orange County Transportation Authority).
4. A transportation information center shall be provided within each building generating 100 or more employees.
5. A shower and locker room facility for each sex shall be provided in each building generating 400 or more employees.
6. Sidewalks or other paved pathways following direct and safe routes from the external pedestrian circulation system to each building in the development shall be provided.

Title 6 (Public Works), Division 3 (Transportation), Chapter 7 (North Irvine Transportation Mitigation Program)

The North Irvine Transportation Mitigation Program (NITM Program) is established for the purpose of providing funding for the coordinated and phased installation of required traffic and transportation improvements required under CEQA documents previously certified or adopted by the City in connection with land use entitlements for City Planning Areas 1/2, 5, 6, 8, 9, 40, and 30/51. The requirements regarding the preparation of traffic studies, reports, and analyses set forth in this chapter shall supersede the requirements regarding the preparation of traffic studies, reports, and analyses set forth in other City ordinances, resolutions, or determinations. This section also outlines the required NITM fees.

c. Zoning Ordinance

Chapter 5-8 (Irvine Business Complex Residential Mixed-Use Overlay District)

Section 5-8-4.C (Airport Restrictions) of Chapter 5-8 outlines the provisions for development within the jurisdiction of the Airport Land Use Commission, including: building height limitations in accordance with the Orange County Environs Land Use Plan standards and Federal Aviation Administration Part 77 Imaginary Surfaces for John Wayne Airport; the prohibition of residential land uses within Safety Zone 3; and sound attenuation standards for residential and park uses.

Chapter 9-36 (Planning Area 36-Irvine Business Complex)

As outlined in Section 9-36-14 (IBC Traffic Improvement Fee Program) of Chapter 9-36, the intent of the IBC Traffic Improvement Fee Program is to provide partial funding for implementation of the area-wide circulation mitigation program identified in the Final Program EIR for the IBC Vision Plan. Section 9-36-14 requires all development projects within the IBC for which building permits are issued after the effective date of the 2010 IBC Vision Plan to comply with the requirements of the 2010 IBC Traffic Improvement Fee Program, including the payment of fees prior to the issuance of building permits as established by this section for the construction of area-wide traffic improvements, or if selected by the project applicant, construction of area-wide improvements in lieu of payment of fees.

d. Planning Commission Resolution No. 09-2968

City Standard Condition 1.5 (Shared Access Agreement)

Prior to the release of a final map by the City, the applicant shall submit to the City for review by the City Attorney the required shared access agreement. The City Engineer and the Director of Community Development shall have approved, appropriate documents (e.g., shared access agreement, Covenant, Conditions & Restrictions, etc.) which ensure that utilities, access, parking, landscape areas, and drainage (including private catch basins) will be commonly shared and maintained.

City Standard Condition 3.17 (Emergency Access Plan)

Prior to the issuance of the first building permit, the applicant shall submit and have approved by the Chief of Police an Emergency Access Plan, which identifies and locates all Knox Boxes, Knox key switches, and Click2Enter radio access control receivers per the Irvine Uniform Security Code requirements. Said plan shall be incorporated into the plan set approved for building permits.

City Standard Condition 3.27 (Construction Phasing Plan)

Prior to the issuance of building permits, the applicant shall submit a proposed Construction Phasing Pan for review and approval by the Chief Building Official. The following is the list of specific items that should be provided in Construction Phasing Plan.

- An Exhibit showing:
  - Separation zones between Construction areas and Public areas, as required to maintain occupied areas safe based on projected construction schedules and absorption rates.
  - Laydown areas.
  - Carpool parking areas.
  - Delivery procedures and approved delivery areas.
  - Orange County Fire Authority (OCFA) no parking zones.
  - If the project is part of a master development then information about all the other projects shall also be included in the exhibit for detailed safety evaluation. In addition, the master developer shall identify one individual responsible for the oversight of the entire project including implementation of all the phasing requirements.

Should the phasing plan change during construction, a revised phasing shall be submitted to the Chief Building Official for review and approval prior to MEPS inspection. Construction Site Security requirements shall be in place at all the times during construction. This condition shall not apply to single-phase projects.

City Standard Condition 4.9 (Emergency Access Inspection)

Prior to authorization to use, occupy, and/or operate, the applicant shall arrange for and have passed an inspection, to be performed by the Irvine Police Department and the OCFA, to ensure compliance with the Emergency Access Plan requirements. The inspector shall verify test acceptance and locations of all Knox boxes, key switches and Click2Enter devices as depicted on the approved plan.

City Standard Condition 6.4 (Privacy Gates–Vehicle Stacking)

If the Director of Public Works and Transportation determines that the operation of the residential privacy gates approved with this application is negatively affecting the flow of traffic on an adjacent public roadway, the property owner or homeowners association may be required to submit a plan to the Director of Community Development that identifies specific measures to resolve these problems. The plan shall be submitted within 30 days of notification by the Public Works and Transportation Department and shall be reviewed and approved by the Director of Community Development in consultation with the Director of Public Works and Transportation. The property owner or homeowners association shall be required, at its sole expense, to implement any modifications required by the plan within 30 days of written notice from the Director of Community Development to implement such measures, or in such time frame as directed by the Director of Community Development in consultation with the Director of Public Works and Transportation.

e. Existing Plans, Programs, and Policies

Compliance measures are regulations imposed uniformly by the approving agency based on the proposed action taken and are required of the proposed project to reduce its potential environmental effects. Because these features are standard requirements, they do not constitute mitigation measures. The following measures are existing plans, programs, or policies (PPP) that apply to the proposed project and will help to reduce and avoid potential impacts related to transportation:

- PPP TRA-1 Compliance with Municipal Code Title 6 (Public Works), Division 3 (Transportation), Chapter 6 (Trip Reduction Facilities)
- PPP TRA-2: Compliance with Standard Condition 6.4 (Privacy Gates–Vehicle Stacking)
- PPP TRA-3: Compliance with Standard Condition 3.17 (Emergency Access Plan)
- PPP TRA-4: Compliance with Standard Condition 4.9 (Emergency Access Inspection)
- PPP TRA-5: Compliance with Standard Condition 3.27 (Construction Phasing Plan)

Proposed General Plan Strategies and Policies

In addition to the above-listed PPPs, the following proposed goals, objectives, policies, and implementation actions are applicable to the analysis of transportation and would replace existing goals, strategies, and policies outlined in the City's existing General Plan following project approval:

Circulation Element:

Goal 1: To facilitate the planning, provision, and maintenance of a well-integrated roadway network that effectively meets the anticipated demands of both local communities and the broader regional transportation system.

Objective C-1. Plan, provide, and maintain an integrated vehicular circulation system to accommodate projected local and regional needs.

- Policy (a): Use the Circulation and Land Use Elements to determine roadway sizing and phasing while striving to maintain a balanced transportation system.

- **Policy (b):** Use Figure B-1, Master Plan of Arterial Highways (presented as Figure 4.13-1), for the purpose of detailed planning of the circulation network. Calls for the City to develop, on an incremental basis, a vehicular circulation system responding to local and regional access requirements consistent with the City's Level of Service (LOS) Standards. Future development under the project would be required to demonstrate compliance with this policy through preparation and approval of a traffic study demonstrating that vehicle trips generated would not cause intersection and roadway segment operations to drop below LOS E. Policies (d) through (r) in the updated Circulation Element provide additional guidance to improve the City's roadway system. Future site-specific development under the project would be required to provide the trip reduction support measures consistent with the requirements of Municipal Code Title 6 (Public Works), Division 3 (Transportation), Chapter 6 (Trip Reduction Facilities).

Goal 2: To design a circulation system for roadways that adheres to the highest standards of transportation engineering safety while taking into account the surrounding land uses and their sensitivities.

Objective C-2. Develop a vehicular circulation system consistent with high standards for transportation engineering safety and with sensitivity to adjoining land uses.

- **Policy (a):** Design alignment, intersections and classification of roadways to facilitate the neighboring land uses while minimizing noise, emissions, and visual impacts of the proposed development.

- **Policy (d):** Ensure roadways are designed to complement other circulation networks and minimize the need to complete major reconstruction on the existing network.

- **Policy (e):** Ensure safe and efficient traffic flow while providing adequate and convenient access to retail sites.

Goal 3: To establish a pedestrian circulation system that supports and promotes walking as a viable mode of transportation within the community.

Objective C-3. Pedestrian Circulation. Establish a pedestrian circulation system to support and encourage walking as a mode of transportation. The following policies support Objective C-3:

- **Policy (a)**: Link residences with schools, job centers, shopping centers, parks and other public facilities/destination centers, both within a planning area and to adjacent planning areas, through an internal system consisting of pedestrian facilities (e.g., sidewalks and/or shared-use paths).
- **Policy (b)**: Encourage proposed developments to provide safe, convenient, and direct pedestrian access to surrounding land uses, on-street parking, and transit stops, as applicable, emphasizing active transportation and supporting the Complete Streets Act.
- **Policy (c)**: Design and locate land uses that facilitate access by non-automotive means (e.g., walking and/or bicycling).

- Policy (d): Continue to implement the existing sidewalk improvement program and enhance standards for improved active transportation and connectivity to create an interconnected system of pedestrian-friendly boulevards, avenues, and streets.

Goal 4: To develop and maintain a comprehensive bicycle network that encourages increased bicycle usage for both commuting and recreational purposes.

Objective C-4: Plan, provide, and maintain a comprehensive bicycle network that encourages increased use of bicycles for commuters and recreational purposes. The following policies support Objective C-4:

- Policy (a): Encourage proposed developments to provide connectivity to the existing bicycle circulation network, both on- and off-street, and within the proposed planning area. Such trails shall be linked to the system shown in Figure B-4. The on-street and off-street trails shall be designed for the safety of all users per the Complete Streets initiative, using design guidelines from the Active Transportation Plan which may include buffered bikeways and/ or other means of protected bikeways.
- Policy (b): Accommodate cyclists of all levels of experience and provide for both recreation and functional transportation when designing shared-use pathways.
- Policy (c): Enhance the existing bicycle network to improve connectivity between residential areas, employment areas, schools, parks, community facilities, commercial centers, and transit facilities.
- Policy (d): Encourage new developments to include detailed circulation plans for pedestrian and bicycle trails providing access to the subject property, adjacent properties, and community facilities, as applicable.
- Policy (e): Bicycle trip destinations, including community facilities, commercial centers, and transit facilities, shall be equipped with appropriate bicycle facilities/amenities including, but not limited to, the provision of bike racks, shade trees, drinking fountains, benches and showers, where feasible.
- Policy (f): Encourage grade-separated crossings for pedestrians and cyclists, wherever feasible, to increase safety and efficiency.
- Policy (g): Encourage off-street bicycle trails and shared-use paths in areas with minimal cross traffic, such as open space spine, flood control and utility easements, where feasible.
- Policy (h): Support programs and engage the community to increase public awareness of bicycle safety and bicycling as an alternative mode of transportation.
- Policy (i): Incorporate, where appropriate, school and park locations within the design of the bicycle system.

Goal 6: To plan, develop, and maintain a comprehensive trail network that caters to the needs of both equestrian riders and hikers, ensuring accessibility and enjoyment for all.

Objective C-6. Plan, develop, and maintain a trail network to support facilities that support the needs of equestrian riders and hikers. The following policies support Objective C-5:

- **Policy (a)**: Phase expansion and improve the existing trail network consistent with the City's growth, incorporating the needs of the equestrian and hiking community.
- **Policy (b)**: Continue to maintain, support, and evolve the equestrian and hiking trails as illustrated on Figure B-5, Trails Network, and in areas identified as permanent open space, scenic highway corridors, agricultural edges, public utility rights of way and easements, flood control channels, and areas designated for rural and estate density.
- **Policy (c)**: Encourage the development of trail facilities that minimize impacts on existing or planned development and wildlife preservation areas.
- **Policy (d)**: Continue to provide and maintain equestrian staging areas, rest stops, and boarding centers at locations which provide easy access to the trail system and are away from high-density urban areas.
- **Policy (e)**: Continue to encourage developer dedication and final improvements to the trail alignments.
- **Policy (f)**: Monitor and seek funds for trail system development and maintenance from all available sources.

Goal 7: Foster collaboration and coordination with regional transportation agencies to improve connectivity, accessibility, and efficiency of transportation networks serving Irvine and neighboring communities.
Objective C-7 Maintain a public transit system for trips within the City and to/from adjacent areas.

- **Policy (a):** Plan residential, commercial, and industrial areas to enable effective use of public transit.
- **Policy (b):** Consider designating excess right-of-way areas on arterial highways for potential public transit corridors or for emergency parking lanes.
- **Policy (c):** Continue to expand the bus service network within the City and regionally as an alternative mode of transportation through the following:
  - Pursue additional transit service to and within the City e.g., increase frequency and/or provide service to new developments.
  - Provide infrastructure at transit stops for convenience and safety (e.g., proper lighting, covered shelter and safe crossings) to encourage commuting to work.
  - Incorporate public art and green infrastructure to enhance existing and future transit stops.
  - Continue to expand the bus service network within the City and regionally as an alternative mode of transportation.
- **Policy (d):** Continue planning efforts as necessary to further develop the advanced transit network providing connection to all local and activity center systems encompassing the City and its sphere of influence.
- **Policy (e)** Coordinate the development of intra-county and regional transit stops with Irvine's intracity transit system.

- **Policy (f):** Encourage the short-term use of rights of way reserved for the various circulation systems for other uses, such as recreational open space.
- **Policy (g):** Consider the use of railroad rights of way as transportation corridors.
- **Policy (h):** Explore the use of technology to communicate transit patterns, promote safety, and attract passengers.
- **Policy (i):** Consider implementing and supporting proposed guidelines for near- and long-term improvements to transit infrastructure within the City limits.

4.13.3 Significance Determination Thresholds

Thresholds used to evaluate impacts to transportation are based on applicable criteria in the CEQA Guidelines (California Code of Regulations Sections 15000-15387), Appendix G. A significant impact would occur if the project would:

1) Conflict with a plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;

2) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b);

3) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or

4) Result in inadequate emergency access.

4.13.4 Methodology

The analysis included in this section is based on the VMT Traffic Study evaluated project impacts associated with additional residential and non-residential land uses that may occur under the project in accordance with the City's Traffic Study Guidelines and consistent with Section 15064.3 of the CEQA Guidelines (Appendix G).

4.13.5 Topic 1: Circulation System

Would the project conflict with a plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

4.13.5.1 Impact Analysis

a. Roadway System

Implementation of the project would allow for the future development of new residential uses associated with the proposed General Plan Update (57,656 residential units), the development of nonresidential uses that are also currently permitted under the existing General Plan, and nonresidential uses associated with the Great Park area, and the extension of Ada roadway. Increased

development within the City is likely to increase the use of the City's roadway network.[1] In order to meet this anticipated increase in demand, the updated Circulation Element includes the following objectives and policies that would be consistent with the planning goals established by OCTA in their LRTP and would improve the City's roadway network. The extension of Ada from its current terminus in the parking lot of the Irvine train station south of the Southern California Railroad Authority (SCRRA) railroad tracks to extend approximately one-quarter of a mile north under the railroad tracks to meet the future Marine Way extension north of the railroad tracks is proposed with the project. The Ada roadway extension between the Irvine train station and Marine Way provides vehicle, pedestrian, and other multi-modal connectivity to support the residential uses. The Ada roadway extension will be included in the updated.

The Circulation Element which includes objectives and policies aimed at improving the existing roadway network. For example, Objective C-1 aims to improve an integrated roadway network that accommodates existing and projected local and regional needs, and Objective C-2 aims to develop a high-quality vehicle circulation system. Supporting policies are aimed at designing roadways to be safe and efficient, while minimizing environmental impacts. The proposed project would also be consistent with the Complete Streets Act because the project aims to prioritize multimodal transportation options, with a specific emphasis on reducing vehicle miles travelled through bikeway and/or pedestrian infrastructure improvements. Therefore, the project would not conflict with a plan, ordinance, or policy addressing roadway circulation, and impacts would be less than significant.

b. Public Transit System

The proposed project would allow for the future development of new residential uses associated with the proposed General Plan Update (57,656 residential units), the development of nonresidential uses that are also currently permitted under the existing General Plan, and nonresidential uses associated with the Great Park area, and the extension of Ada roadway. Increased development within the City is likely to increase demand for public transportation. In order to meet this anticipated increase in demand, the updated Circulation Element includes objectives and policies related to public transit. Planned development associated with the project are expected to utilize the public transit system, and the project supports this by planning development near the Irvine Transit Station, IBC Proposed concentration of future development near the Irvine Transit Station within the Spectrum (adjacent the Focus Area 2 and 3),and Tustin Transit Station near Focus Area 1 which is served by the iShuttle-citywide transit provided by OCTA. For example, Objective C-6 encourages continued coordination with transit authorities to maintain the public transit system. Supporting policies aim to encourage and promote expanded transit service within the City.

Future site-specific development under the project may be required to provide bus bays, bus stops and bus shelters adjacent to roads and streets traversing or bounding the development, as requested

[1]As a separate policy requirement, the City conducted an LOS analysis for the proposed project, which resulted in recommended infrastructure improvements. Specific projects associated with recommended improvements are not proposed as part of the project and have not yet been identified. However, future infrastructure projects would be required to undergo a separate environmental review process and would likely be identified in the City's CIP at the time they are proposed and details on such projects are available.

by the City consistent with the requirements of Municipal Code Title 6 (Public Works), Division 3 (Transportation), Chapter 6 (Trip Reduction Facilities) (PPP TRA-1).

In summary, the proposed project prioritizes multimodal transportation systems, supports first/last mile connectivity to transit, supports complete street improvements, which is consistent with regional transportation planning efforts. Therefore, the project would not conflict with a plan, ordinance, or policy addressing pedestrian and public transportation, and impacts would be less than significant.

c. Pedestrian and Bicycle System

The proposed project would allow for the future development of new residential uses associated with the proposed General Plan Update (57,656 residential units), the development of nonresidential uses that are also currently permitted under the existing General Plan, and nonresidential uses associated with the Great Park area, and the extension of Ada roadway. Because implementation of the project would increase the amount of housing within the City, the project is also anticipated to increase demand for pedestrian and multi-modal travel opportunities including bicycle and other wheeled travel opportunities. In order to meet this anticipated increase in demand, the updated Circulation Element includes several objectives and policies that would support various forms of pedestrian and bicycle travel. For example, Objective C-3 aims to establish a pedestrian circulation system that supports and encourages walking as a mode of transportation, while Objective C-4 aims to plan, provide, and maintain a comprehensive bicycle network that encourages increased use of bicycles for commutes and recreational purposes. Supporting policies aim to link pedestrian and bicycle infrastructure with residences, schools, job centers, retail, parks, and other public facilities.

In summary, the proposed project incorporates policies that support pedestrian and bicycle facilities. These include prioritizing multimodal systems, maintaining a network of complete streets to provide mobility opportunities for all users, promoting development of mixed-use projects (particularly within proximity villages within the three Focus Areas) to create pedestrian- and bicyclist-friendly areas, maintaining the existing bicycle and pedestrian network, and promoting pedestrian and bicyclist safety. Therefore, the project would not conflict with a plan, ordinance, or policy addressing pedestrian and bicycle travel, and impacts would be less than significant.

Therefore, the project would not conflict with a plan, ordinance, or policy addressing airplane travel, and impacts would be less than significant.

d. Conclusion

Implementation of the proposed project would increase the demand for public transit, bicycle, pedestrian, and airport facilities, particularly within the three Focus Areas where most of the planned residential units are located. This increased demand would require improvements and expansions to the existing circulation system. The proposed project includes a number of goals, policies, objectives, and implementation actions aimed at supporting transit, bicycles, pedestrians, and airports within and adjacent to the City. These are consistent with regional and local planning efforts supporting these modes of travel.

4.13.5.2 Significance of Impacts

The project would not conflict with a plan, ordinance, or policy addressing the circulation system, and impacts would be less than significant.

4.13.5.3 Mitigation

Impacts would be less than significant. No mitigation is required.

4.13.6 Topic 2: Vehicle Miles Traveled

Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

4.13.6.1 Impact Analysis

CEQA Guidelines Section 15064.3 requires that the determination of significance for transportation impacts be based on VMT instead of a congestion metric such as LOS. The change in the focus of transportation analysis is the result of SB 743, as detailed in 4.13.2.1c above. The VMT Traffic Study evaluated project impacts associated with additional residential units proposed project, non-residential land uses within the Great Park,[2] and the Ada extension that may occur under the project in accordance with the City's Traffic Study Guidelines and consistent with Section 15064.3 of the CEQA Guidelines (Appendix G). The adopted methodology in the Traffic Study Guidelines identifies thresholds of significance for residential and non-residential projects based on a 15 percent reduction of existing countywide average VMT per population or employment. Similarly, the threshold of significance applied for the Citywide plan is based on a 15 percent reduction of existing countywide average VMT per service population of which service population is the sum of the countywide population and employment. This analysis utilized a VMT per service population metric for this evaluation.

Table 4.13-1 identifies the existing residential VMT per resident, the non-residential VMT per employee, as well as the VMT per service population with their respective significance thresholds using the City's VMT traffic model. The residential VMT significance threshold is based on the countywide population VMT divided by the countywide population. The non-residential VMT significance threshold is based on the countywide commute and other (i.e., customer and client) VMT trips divided by the number of countywide employees. The VMT per service population threshold is based on the total countywide VMT divided by the summation of the total countywide population and countywide employees. If the project VMT rate exceeds the significance threshold for VMT per service population (24.06), then the project would have a significant impact.

[2]Nonresidential uses in all other areas of the City would be permitted at the same intensities identified in the City's currently adopted General Plan.

Table 4.13-1 VMT Rate Threshold Goals for Projects within the City			
VMT Metric	Existing	Threshold Goal (15 Percent Reduction)	VMT Metric
VMT per resident	17.50	14.88	VMT per resident
VMT per employee	48.66	41.36	VMT per employee
VMT per service population	28.30	24.06	VMT per service population
SOURCE: Appendix G.			

Consistent with the 2021-2029 Housing Element, the project would update the General Plan Land Use Element to support the City's RHNA allocation of 23,610 units. The 6th Cyle 2021-2029 Housing Element (2021-2029 Housing Element) identified adequate sites to accommodate 57,656 new residential units to ensure consistency with housing statute, including no-net loss and affirmatively furthering fair housing requirements. The City's existing General Plan has a significant amount of unbuilt non-residential square footage available throughout the City's Planning Areas identified in the 2021-2029 Housing Element site inventory that would remain available for development as part of the proposed project

The proposed project would accommodate the City's RHNA requirement and implement the 2021-2029 Housing Element through the introduction of additional residential and/or mixed-use development throughout the City using residential and residential mixed-use overlay zones that would allow greater flexibility for property owners and developers proposing to develop affordable housing projects. The overlays would promote higher density residential and mixed-use in three Focus Areas, targeted retail centers, conversion of hotel/motel sites, and on religious and school sites. Most of the future residential growth would occur in the three focus areas that are most suited for new growth and development as they are located near existing job centers and are along major travel corridors with access to existing and future public transit opportunities. Focus Area 1 consists of the Greater IBC and would be allowed a maximum of 15,000 base units under the proposed project. Focus Area 2 would consist of the Greater Spectrum Area. The project would increase the residential intensity in Focus Area 2 by an additional 26,607 residential units. Focus Area 3 would consist of the Great Park Neighborhood Transit Village. The project would increase the residential intensity in Focus Area 3 with an additional 5,252 residential units. Refer to Chapter 3.0 for further details related to development proposed as part of the project.

The project would also accommodate the remaining 8,536 residential units required by the City's RHNA assessment outside of the aforementioned focus areas throughout the City. These units would be accommodated using the same proposed residential overlay.

Overall, new residential units proposed as part of the project would be developed under a proximity village approach, building upon the City's current approach to master planning in the City. The primary intent of the proximity village approach would ensure that future development is balanced with a mix of uses including neighborhood-serving non-residential square footage (retail, restaurants, medical offices, etc.) and parks and open space uses that are connected through multi-modal transportation and complete street strategies.

Non-residential land uses: In addition to the RHNA residential component, the project includes additional non-residential land uses in the Irvine Great Park (Great Park). Phase 1 of the Great Park Framework Plan is in the baseline (no build condition) and the remaining land uses supporting the buildout of the Great Park Framework (200 acres in total) are included as part of the project. Phase 2 (or the remaining buildout of the Great Park) includes the following: a botanical garden, a veteran's memorial garden, a library, a discovery center, two museums, a 65-acre central park area, an accessory restaurant use, an aquatic center, an aquatic stadium, an all-wheel park, and pickleball courts.

Transportation Improvements: The project also includes the extension of Ada from its current terminus in the parking lot of the Irvine train station south of the SCRRA railroad tracks to extend north under the railroad tracks to meet the future Marine Way extension north of the railroad tracks. The Ada roadway extension between the Irvine train station and Marine Way provides multi-modal connectivity to support the residential uses.

Table 4.13-2 presents the results of the VMT analysis comparing buildout of the Existing General Plan (or a No Project Scenario) to buildout of the project.[3] As shown in Table 4.13-2, both scenarios exceed the City's VMT per service population threshold of 24.06 VMT per service population. Buildout of the General Plan would result in an average VMT per service population value of 28.97, which would require a 17.0 percent reduction in VMT to meet the significance threshold. Buildout of the project would generate a VMT per service population value of 24.94, which would require a 3.5 percent reduction in VMT to meet the significance threshold. Based on these results, the project would reduce VMT compared to buildout of the adopted General Plan (or a No Project Scenario). This reduction is due to the fact the City currently is a major employment center with a high jobs-to-population ratio.[4] The City has more jobs than can be sustained by the City's own population. Many of the jobs are in relatively high-paying professions, and employees are more likely and able to afford to make longer distance commutes from less dense residential areas within the City, as well as residential areas outside the city. While some of this long-distance travel may occur on freeways outside the city, a large proportion of the VMT will end up on city streets and intersections. Shifting towards a more balanced jobs/population ratio as would occur under the project can be expected to improve VMT metrics.

[3] A conservative approach was used for the preparation of the VMT impact analysis. VMT impact identification and resulting mitigation is based on a non-cumulative approach that identifies more mitigation requirement than the cumulative condition."

[4] The City currently has roughly double the number of jobs per population as the rest of Orange County (1.01 vs. 0.49).

Table 4.13-2 VMT Analysis Results Summary							
Scenario	Total VMT (miles)	Total Population	Total Employees	Service Population	VMT Per Service Population	VMT Per Service Rate Above Threshold	Percent VMT Reduction Needed
Adopted General Plan	20,426,702	368,261	336,730	704,991	28.97	4.98	17.0
Project	21,337,558	517,654	337,910	855m564	24,94	0.88	3.5
SOURCE: Appendix G.							

4.13.6.2 Significance of Impacts

Buildout of the existing adopted General Plan would result in an average VMT per service population value of 28.97, which would require a 17.0 percent reduction in VMT to meet the significance threshold. Buildout of the project would generate a VMT per service population value of 24.94, which would require a 3.5 percent reduction in VMT to meet the significance threshold. Based on these results, the project would reduce VMT compared to buildout of the existing adopted General Plan. Nonetheless, the project would still exceed the VMT per service population threshold and would require a 3.5 percent reduction in VMT to meet the significance threshold. This would be considered a significant impact. Therefore, projected VMT generated under buildout of the project would be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). This would be considered a potentially significant impact.

4.13.6.3 Mitigation

The City's Traffic Study Guidelines contain a two-tier system for the VMT Mitigation Program:

TRA-1: On-Site Infrastructure

The City of Irvine Director of Community Development, or designee, shall require applicants for future proposed projects that exceed VMT thresholds to incorporate on-site connectivity into site design in order to achieve a reduction of 2.5 percent VMT rate. Site design measures to achieve this VMT reduction would include promotion of bicycle activity (i.e., bike facilities) and pedestrian walkability (i.e., connected sidewalks from building entrances to public streets).

TRA-2 On-Site Transportation Demand Management

The City of Irvine Director of Community Development, or designee, shall require applicants for future proposed projects that exceed VMT thresholds to incorporate a TDM program to achieve a reduction of up to 5 percent VMT rate. While TDM programs in the past have typically focused on employer sites, they can also be implemented to new residential developments with measures such as bike share or car share programs.

4.13.6.4 Significance of Impacts after Mitigation

Implementation of the mitigation measures TRA-1 and TRA-2 described above would potentially reduce impacts related to VMT to a level less than significant. However, as no specific development projects have been identified at this time, it is not possible to ensure that every future project could fully mitigate potentially significant impacts. Therefore, impacts related to VMT would remain significant and unavoidable at this program level of review.

4.13.7 Topic 3: Hazards Due to a Design Feature

Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

4.13.7.1 Impact Analysis

Buildout of the proposed project would involve the alteration, intensification, and redistribution of residential land uses in the City. Specifically, buildout of the project would allow for the future development of new residential uses associated with the proposed General Plan Update (57,656 residential units), the development of nonresidential uses that are also currently permitted under the existing General Plan, and nonresidential uses associated with the Great Park area, and the extension of Ada roadway.

The General Plan Update includes several policies aimed at improving the City's circulation network that are aimed at reducing existing and potential transportation hazards. Future site-specific development under the project would be subject to the appropriate entitlement application review process (Conditional Use Permit or Master Plan) as well as design and engineering review to ensure roads and access is configured consistent with established roadway design standards. As described in Section 4.13.5.1a above, update Circulation Element Objective C-2 seeks to "Develop a circulation system consistent with high standards for transportation engineering safety and with sensitivity to adjoining land uses." Furthermore, Policy (i) encourages that "intersections and public right of ways to be designed to provide adequate and safe access for all users including pedestrians, bicyclists, and motorists of all ages and abilities." Furthermore, future site-specific development under the project (including residential projects, Great Park improvements, and the Ada extension) would be subject to both a design and engineering review (and likely a review by the Orange County Fire Authority) to ensure roads and access is configured consistent with established roadway design standards. Future projects would also be required to comply Standard Condition 6.4, (PPP TRA-2) which outlines procedures to be followed should vehicle stacking result from the operation of residential privacy gates associated with residential development projects. Therefore, implementation of the project would not result in hazardous conditions, create conflicting uses, or cause a detriment to emergency vehicle access.

4.13.7.2 Significance of Impacts

The project would not substantially increase hazards due to a geometric design feature of incompatible uses, and impacts would be less than significant.

4.13.7.3 Mitigation

Impacts would be less than significant. No mitigation is required.

4.13.8 Topic 4: Emergency Access

Would the project result in inadequate emergency access?

4.13.8.1 Impact Analysis

Future site-specific development under the project allow for the future development of new residential uses associated with the proposed General Plan Update (57,656 residential units), the development of nonresidential uses at the same intensities permitted under the existing General Plan, nonresidential uses associated with the Great Park area, and the extension of Ada roadway.. Future projects would be subject to the City's design requirements regarding emergency access per Planning Commission Resolution No. 09.2968. City Standard Condition 3.17 (Emergency Access Plan) requires an applicant to submit and have approved by the Chief of Police an Emergency Access Plan, which identifies and locates all Knox Boxes, Knox key switches, and Click2Enter radio access control receivers per the Irvine Uniform Security Code requirements. Similarly, City Standard Condition 4.9 (Emergency Access Inspection) requires an applicant to pass an inspection, to be performed by the Police Department and the Orange County Fire Authority, to ensure compliance with the Emergency Access Plan requirements. The inspector shall verify test acceptance and locations of all Knox boxes, key switches and Click2Enter devices as depicted on the approved plan. Prior to construction, future development would prepare a construction phasing plan (PPP TRA-5) that would include measures to maintain emergency access.

4.13.8.2 Significance of Impacts

The project would not result in inadequate emergency access, and impacts would be less than significant. With compliance with the above PPPs, impacts would be less than significant.

4.13.8.3 Mitigation

Impacts would be less than significant. No mitigation is required.

4.13.9 Cumulative Analysis

As defined in Section 15130 of the State CEQA Guidelines, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for hazards and transportation. The study area for the assessment of cumulative impacts related to transportation is the City. The nature of the project is also inherently cumulative as it establishes a long-term plan that would improve the circulation network through project buildout in 2045. This would include implementing objective and policies described above that would improve the circulation network, ensure future projects would

not introduce hazards onto the circulation network, and ensure future development and redevelopment would not interfere with emergency access.

Cumulative transportation impacts associated with buildout of the project were evaluated in the VMT Traffic Study (Appendix G) that was prepared for the project. The analysis within that study assumed a cumulative scenario that included buildout of the proposed General Plan, cumulative projects (cumulative projects in the City and residential uses associated with neighboring jurisdictions' RHNA requirements) as well as buildout of the Great Park area and the extension of Ada.

The Proposed Project Plus Cumulative Scenario would generate a VMT per service population of 24.88. Therefore, there would be a significant impact under CEQA that would require a 3.3 percent reduction in VMT to meet this threshold. Although mitigation as described in Section 4.13.6.3 above would be feasible under the cumulative alternative, no specific projects have been identified. Therefore, cumulative impacts related to VMT would remain significant and unavoidable. Therefore, projected VMT generated under buildout of the project would be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b), and the project would result in cumulative impacts related to VMT.