4.16 Transportation

This section describes the existing transportation conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, cumulative impacts, and identifies mitigation measures related to implementation of the proposed project. This section analyzes the potential impacts of the project based on the CEQA Guidelines Section 15064.3(b), which focuses on vehicle miles traveled (VMT) for determining the significance of transportation impacts.

In addition to the documents incorporated by reference (see Section 2.7 of Chapter 2, Introduction, of this Draft EIR), the analysis in this section is based, in part, on the following source:

- **Appendix I:** Irvine Gateway Comprehensive Traffic Study (Traffic Study), prepared by LSA, dated May 2025

4.16.1 Existing Conditions

This section provides a summary of the existing circulation network, bicycle and pedestrian facilities, and transit service in the study area.

Existing Circulation Network

The project site is located north of Portola Parkway, east of Jeffrey Road, south of State Route (SR) 241, and west of Bee Canyon Access Road. Primary access to the site would be provided from three full access driveways along Jeffrey Road. Characteristics of the primary existing road system within the study area are described below. Figure 4.16-1, City of Irvine Master Plan of Highways, provides the City of Irvine (City) Master Plan of Highways from the 2045 Irvine General Plan.

- **SR-241** is a controlled access toll road operated by the Transportation Corridor Agencies. SR-241 begins at its interchange with Oso Parkway near Las Flores. SR-241 continues north through Rancho Santa Margarita and Trabuco Canyon and passes through eastern Mission Viejo and Lake Forest into Irvine. It runs along the eastern edge of Irvine before meeting the eastern terminus of SR-133. The nearest interchange to the project site is located at SR-241 and Portola Parkway.
- **Jeffrey Road** is a north–south roadway west of the project site. Direct project access via three full-access driveways (“A,” “B,” and “C” Streets) will be provided on Jeffrey Road. Jeffrey Road south of Portola Parkway is a six-lane Major Arterial Highway with a posted speed limit of 55 miles per hour (mph) between Encore and Portola Parkway. Jeffrey Road north of Portola Parkway, as recently constructed, is a four-lane Primary Arterial Highway that terminates near “C” Street (approximately 3,100 feet north of Portola Parkway). The current road provides access to existing uses, including electrical substations on the west side of Jeffrey Road and the Irvine Ranch Conservancy Native Seed Farm and other small businesses on the east side of Jeffrey Road. The proposed extension of Jeffrey Road from “C” Street to SR-241 and farther north to Santiago Canyon Road is classified as a Primary Arterial Highway in the Circulation Element of the City’s General Plan. On-street parking is prohibited on both sides of this roadway.
- **Portola Parkway** is an east–west roadway south of the project site. Direct project access via a right-in/right-out driveway (“E” Street) will be provided on Portola Parkway. It is a six-lane Major Arterial Highway west of Jeffrey Road and a four-lane Primary Arterial Highway east of Jeffrey Road. The posted speed limit is 55 mph. On-street parking is prohibited on both sides of this roadway.

Bicycle and Pedestrian Facilities

The City's pedestrian facilities are presented on Figure 4.16-2, City of Irvine Pedestrian Facilities, and the City's bicycle facilities are presented on Figure 4.16-3, City of Irvine Bicycle Facilities. In the vicinity of the proposed project, sidewalks are currently provided on the south side of Portola Parkway and the west side of Jeffrey Road (south of Portola Parkway). A sidewalk on the north side of Portola Parkway along the project property frontage is proposed as a project design feature.

The Jeffrey Open Space Trail (JOST) is located on the east side of Jeffrey Road (south of Portola Parkway). A proposed extension of the JOST would form the western edge of the project site and would connect to the proposed project's South Park. A pedestrian bridge would cross over Portola Parkway as part of the JOST extension. The JOST extension would mark the northernmost end of the JOST, which runs through Irvine.

On-street (Class II) bicycle lanes are currently provided on both sides of Portola Parkway and Jeffrey Road (south of Portola Parkway). Additionally, in the buildout conditions, the cross-section measurement for Jeffrey Road north of Portola Parkway would be approximately 33 feet in each direction, which is wide enough to provide two through lanes with on-street bike lanes. The project will provide bicycle parking amenities that meet the zoning ordinance update that was recently approved, including meeting minimum design and location specifications for short- and long-term bicycle parking.

Transit Service

The Orange County Transportation Authority (OCTA) provides 51 bus routes throughout Orange County (County). The bus network includes local, community, and express routes. In addition, Irvine CONNECT, a free shuttle service, is provided by the City to connect the northern end of Irvine to the Irvine Train Station via Yale Avenue, with stops at parks, schools, hospitals, and shopping centers. The existing transit routes are shown on Figure 4.16-4, City of Irvine Transit Services, and the Irvine CONNECT route is shown on Figure 4.16-5, Irvine CONNECT Transit Route.

There are no transit routes or stops near the project site. The closest bus stops are located at the northwest and southwest corners of Jeffrey Road/Irvine Boulevard, which are approximately 1 mile from the project site. OCTA Route 167 provides transportation to and from these bus stops and throughout the Cities of Orange and Irvine via Jeffrey Road and has stops at the major activity centers, such as the Village at Orange, Irvine Valley College, and University Center. The project would include a new transit stop and bus turnout on Jeffrey Road at approximately the northeast corner of Jeffrey Road and "C" Street. This new transit stop would serve the expanded Irvine CONNECT route to be implemented by the City, with the Irvine CONNECT shuttle route going adjacent to the Irvine Gateway project.

4.16.2 Relevant Plans, Policies, and Ordinances

The following section describes state and local regulations, plans, policies, and ordinances relevant to the study area. There are no transportation-specific federal regulations applicable to the project.

State

Assembly Bill 1358 (Complete Streets)

California's Complete Streets Act of 2008, Assembly Bill (AB) 1358, 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 be designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities.

Senate Bill 375 (Sustainable Communities and Climate Protection)

The Sustainable Communities and Climate Protection Act of 2008 (Sustainable Communities Act; Senate Bill [SB] 375, Chapter 728, Statutes of 2008) supports the state's climate action goals to reduce greenhouse gas (GHG) emissions through coordinated transportation and land use planning with the goal of more sustainable communities. Under the Sustainable Communities Act, the California Air Resources Board sets regional targets for GHG emissions reductions from passenger vehicle use. In 2010, the California Air Resources Board established these targets for 2020 and 2035 for each region covered by one of the state's metropolitan planning organizations (MPOs). The California Air Resources Board will periodically review and update the targets as needed.

Each of California's MPOs must prepare a Sustainable Communities Strategy (SCS) as an integral part of its Regional Transportation Plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its GHG emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region. The California Air Resources Board reviews the adopted SCS to confirm and accept the MPO's determination that the SCS, if implemented, meets the regional GHG emissions reduction targets. If the combination of measures in the SCS does not meet the regional targets, the MPO must prepare a separate alternative planning strategy to meet the targets. The alternative planning strategy is not a part of the RTP. The project is within the Southern California Association of Governments (SCAG) MPO, which has adopted Connect SoCal (2024–2050 RTP/SCS; SCAG 2024) as their SCS, as discussed under "Regional" in this section.

The Sustainable Communities Act also establishes incentives to encourage local governments and developers to implement the SCS or the alternative planning strategy. Developers can get relief from certain CEQA requirements if their new residential and mixed-use projects are consistent with a region's SCS (or alternative planning strategy) that meets the targets (see California Public Resources Code Sections 21155, 21155.1, 21155.2, 21159.28).

Senate Bill 743 (Transportation Impacts)

SB 743 was signed into law on September 27, 2013. This legislation seeks to balance the needs of congestion management, infill development, public health, GHG reductions, and other goals. Passage of SB 743 resulted in revisions to the 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. These metrics were replaced with VMT as the preferred CEQA transportation metric. The Governor's Office of Land Use and Climate Innovation (LCI), formerly 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.

California Department of Transportation

As the owner and operator of the State Highway System, the California Department of Transportation (Caltrans) implements established state planning priorities in all functional plans, programs, and activities. Caltrans has the responsibility for coordinating and consulting with local jurisdictions when proposed local land use planning and development may impact state highway facilities. To comply with SB 743 implementation, the Caltrans Vehicle Miles Traveled–Focused Transportation Impact Study Guide (VMT-Focused TISG; Caltrans 2020) replaced Caltrans's previous 2002 Guide for the Preparation of Traffic Impact Studies. The VMT-Focused TISG replaces LOS with VMT as the metric used in CEQA transportation analyses. Caltrans recommends using LCI's recommended thresholds and guidance on methods of VMT assessment found in the LCI Technical Advisory (LCI 2018). In addition to its VMT-Focused TISG (Caltrans 2020), Caltrans has developed a Local Development Review Safety Review Practitioner's Guidance (Caltrans 2024) to improve consistency and transparency of the safety review process and facilitate sustainable development while improving safety on the State Highway System. During the Local Development Review process, Caltrans may request that a safety analysis of pertinent State Highway Systems be included as part of a development's Transportation Impact Study.

Regional

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). 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 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, Caltrans, and South Coast Air Quality Management District.

Orange County Transportation Authority Long Range Transportation Plan

OCTA's Directions 2045: Long Range Transportation Plan (LRTP; OCTA 2023) 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 RTP and subsequently programmed into the Federal Transportation Improvement Program. The Directions 2045 LRTP (OCTA 2023) has four goals: (1) deliver on commitments; (2) improve transportation system performance, (3) expand transportation system choices; and (4) support sustainability.

OC Foothills Bikeways Strategy

The OC Foothills Bikeways Strategy (Bikeways Strategy; OCTA 2016) was developed as part of OCTA's regional bikeways planning process, which involves OCTA, local jurisdictions, and public stakeholders.

Regional bikeway planning supports the goals contained in existing countywide transportation plans, such as the OCTA LRTP, OCTA Commuter Bikeways Strategic Plan, and the 2012 Orange County SCS. These goals are interrelated and include expanding travel choices, improving safety, and supporting the viability of bicycle transportation. The Bikeways Strategy was completed in 2016 and identifies 11 regional bikeway corridors to help improve the viability of bicycling and cross-jurisdictional bikeway connectivity throughout the foothills of the County.

Two corridors, Corridor C (Cambridge to Portola) and Corridor J (Jeffrey Corridor), are located in the vicinity of the project site. Corridor C is an opportunity for a continuous, lower-stress, flat north–south connection, with an estimated 26 schools directly adjacent to the proposed corridor. Most of the bikeway corridor is in place today, and the next step will be to implement enhancements to create protected facilities for bicyclists. Corridor J has strong trip demand and requires only one significant gap closure to complete a corridor that would provide a primarily off-street connection to many destinations, such as the University of California, Irvine; Mason Regional Park; and Irvine Valley College. The JOST is along Corridor J and a proposed bridge over Interstate (I) 5 will allow the communities north of I-5 to link to Irvine Valley College and to the existing bridge over I-405 and points south (OCTA 2016).

Master Plan of Arterial Highways

OCTA administers the Master Plan of Arterial Highways (MPAH; OCTA 2025a), including the review and approval of amendments requested by local agencies. The MPAH is a countywide transportation plan for Orange County, designed to manage and improve the arterial highway network. Established in 1956, the MPAH was created to complement the county's developing freeway system and has evolved into a critical element of the County's long-range transportation policy. The current plan was updated in June 2025.

Over the years, the MPAH has played a crucial role in shaping the County's transportation infrastructure, ensuring a coordinated effort between OCTA and the cities within Orange County. The primary goal of the MPAH is to outline a regional arterial highway system that supports existing and future land uses, ensuring that roads are designed to accommodate projected traffic volumes. It aims to provide a circulation system that complements the County's freeway network, focusing on the efficient movement of people and goods.

OC Transit Vision Master Plan

OCTA developed the 2024 OC Transit Vision Master Plan (OC Transit Vision; OCTA 2025b), which aims to integrate, enhance, and expand multimodal transportation services in Orange County. This 18-month study builds upon the previous 2018 plan and other recent studies to establish a framework for future transit investments, including bus, streetcar, microtransit, first/last mile options, and other mobility services for the County. The OC Transit Vision analyzes current transit corridors, modes, transit-supportive design, and policy recommendations. In addition, the plan addresses the latest in transit technologies, responds to evolving ridership trends, and outlines potential funding sources. The updated OC Transit Vision provides a consistent, County-wide transit approach that has been shared with local jurisdictions and partner agencies to encourage coordination for advancing, funding, and implementing transit-related recommendations both locally and regionally.

OC TDM Plan

OCTA developed the Orange County Transportation Demand Management (TDM) Plan (OC TDM Plan; OCTA 2025c) that provides recommendations to shift trips away from solo trips (driving alone) and expand access to alternative travel options. The TDM Plan offers a set of strategies aimed at reimagining the County's transportation framework and prioritizing sustainability, efficiency, and accessibility by reducing drive-alone trips in Orange County. TDM strategies include carpooling, vanpooling, telecommuting, and other technology-enabled innovations such as carshare, bikeshare, and mobile trip planning apps.

OC Bike + Ped Plan

Orange County's Bike + Ped Plan (OC Bike + Ped Plan; OCTA 2019) is the first County-wide active transportation plan for Orange County that addresses both bicycle and pedestrian networks. OCTA developed the OC Bike + Ped Plan to provide a framework for bikeway and pedestrian planning across the County and to comply with Caltrans active transportation plan guidelines. This will allow cities and the County of Orange to use the plan as a foundation to apply for state funding to plan and implement local bicycle and pedestrian projects. The OC Bike + Ped Plan includes the following goals:

Goal 1: Reduce pedestrian and bicyclist collisions.

Goal 2: Advance strategic walking and biking network.

Goal 3: Enhance walking and biking access to transit.

Goal 4: Improve high-need pedestrian areas.

Goal 5: Strengthen stakeholder partnerships.

Goal 6: Incorporate diverse community perspectives.

Goal 7: Leverage funding opportunities.

Connect SoCal

Connect SoCal is a long-term plan for the Southern California region that details investment in the Southern California transportation system and development in regional communities to meet the needs of the region in both the short term and the long term. The horizon year for Connect SoCal is 2050 (SCAG 2024).[1]

The goals for Connect SoCal are designed to help Southern California achieve its vision. They fall into four core categories: mobility, communities, environment and economy. These goals are not mutually exclusive—rather, they are mutually reinforcing. For example, the decisions and actions taken to achieve mobility goals can also help to achieve and support environmental goals. The principal goals are as follows:

Mobility: Build and maintain an integrated multimodal transportation network

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

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

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

1 The "horizon year" is the year for which a transportation plan describes the envisioned transportation system. Typically, it is the last year of a metropolitan region's 20-year RTP.

Local

Irvine 2045 General Plan Circulation Element

The City is committed to fostering a sustainable and efficient transportation network that enhances accessibility, promotes connectivity, and prioritizes the safety and mobility of all residents, workers, and visitors. The Circulation Element of the City's General Plan (City of Irvine 2024) serves as a blueprint for the continued development and enhancement of the City's transportation system, ensuring that it evolves in harmony with the City's growth, economic vitality, and environmental stewardship. The Circulation Element includes the following goals and objectives related to circulation:

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 and growth.

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

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

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. Maintain and enhance the pedestrian circulation system to support and encourage walking as a mode of transportation.

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, maintain, and enhance a comprehensive bicycle network that encourages increased use of bicycles.

Goal 5: Foster a culture of active transportation by prioritizing walking, cycling, and other non-motorized modes of travel to improve public health, reduce greenhouse gas emissions, and enhance the quality of life for residents and visitors in Irvine.

Objective C-5. Enhance the City's infrastructure to support and encourage walking, cycling, and other forms of active transportation by developing safe, accessible, and interconnected networks of pathways, bike lanes, and multi-use trails throughout Irvine.

Goal 6: To plan, develop, and maintain a comprehensive trail network that caters to the needs of cyclists, 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 cyclists, equestrian riders, and hikers.

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.

Goal 9: Improve transportation efficiency and accessibility by optimizing the circulation system to provide convenient, reliable, and inclusive transportation options for all residents and visitors in the City of Irvine.

Objective C-9. Maximize transportation efficiency by streamlining traffic flow, reducing congestion, and enhancing connectivity between different transportation modes to facilitate seamless movement within the City.

Goal 11: Align transportation planning with land use and design strategies to foster sustainable development, bolster mobility, and realize broader community objectives within Irvine.

Objective C-11. Continue to ensure that transportation planning efforts are aligned with land use and design strategies to create compact, walkable, and transit-oriented developments that minimize automobile dependency, reduce greenhouse gas emissions, and enhance the overall quality of life for residents and visitors.

Goal 12: Ensure sustainable transportation design for enhanced mobility and the support of environmental conservation.

Objective C-12. Integrate sustainable transportation principles into the City's planning and development initiatives to reduce environmental impact, enhance livability, and improve mobility for all residents.

4.16.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to transportation are based on Appendix G of the CEQA Guidelines. According to Appendix G, a significant impact related to transportation would occur if the project would:

1. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
2. Conflict or be inconsistent with CEQA Guidelines § 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).
4. Result in inadequate emergency access.

4.16.4 Impacts Analysis

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

Less-Than-Significant Impact. The project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, as discussed below. This includes the Orange County CMP, the Directions 2045 LRTP, the OC Foothills

Bikeways Strategy, the MPAH, the OC Transit Vision, the OC TDM Plan, the OC Bike + Ped Plan, Connect SoCal, and the City's Circulation Element.

The proposed project would maintain the existing walkways/sidewalks, on-street (Class II) bicycle lanes, and JOST in the vicinity of the project site, as well as enhance pedestrian connectivity with new facilities. A proposed extension of the JOST would form the western edge of the project site and would connect to the new South Park. The JOST extension would mark the northernmost end of the JOST, which runs through Irvine. A pedestrian bridge would also cross over Portola Parkway as part of the JOST extension, thus improving pedestrian access in the area. A sidewalk on the north side of Portola Parkway along the project property frontage is proposed as a project design feature. Additionally, in the buildout conditions, the cross-section measurement for Jeffrey Road north of Portola Parkway would be approximately 33 feet in each direction, which is wide enough to provide two through lanes with on-street bike lanes. In addition, the OCTA proposed regional bikeway corridors C and J would provide additional biking opportunities within the vicinity of the project site. The project would provide bicycle parking amenities that meet the zoning ordinance update that was recently approved.

The closest bus stops are located at the northwest and southwest corners of Jeffrey Road/Irvine Boulevard, which are approximately 1 mile away from the project site. The project would include a new transit stop and bus turnout on Jeffrey Road at approximately the northeast corner of Jeffrey Road and "C" Street. This new transit stop would serve the expanded Irvine CONNECT route to be implemented by the City, with the Irvine CONNECT shuttle route going adjacent to the Irvine Gateway project. The project would not conflict with bus routes in the study area; therefore, the project would not severely delay, impact, or reduce the service level of transit in the area.

The project does not include site improvements that would interfere with the existing roadway network or impede the construction of new or the expansion of existing facilities, including public transit, bicycle, or pedestrian facilities in the future. Consistent with the City's circulation policies, the project would provide safe, convenient, and direct pedestrian access to surrounding land uses; plan and enhance a comprehensive bicycle network that encourages increased use of bicycles, and multi-use trails.

At the time of this writing, an amendment to the bicycle parking requirements, as stated in the City's Zoning Ordinance, has not been finalized and approved by the Planning Commission and City Council. However, the project would include bicycle parking amenities consistent with the upcoming zoning ordinance update. Furthermore, all pedestrian areas within the site would meet American Disability Act requirements and adhere to City design guidelines.

Therefore, the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Impacts would be less than significant.

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

Significant and Unavoidable Impact. 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 Section 4.16.2, Relevant Plans, Policies, and Ordinances.

A VMT analysis was prepared in accordance with the City's adopted Traffic Study Guidelines (City of Irvine 2023), which provides screening criteria and VMT thresholds for evaluating a project's potentially significant transportation impact. The detailed analysis results are provided in Appendix I, Traffic Study, and are summarized below.

VMT Screening

Per the City's Traffic Study Guidelines (City of Irvine 2023), there are five types of screening criteria that lead agencies can apply to effectively screen projects from project-level assessment. These criteria are summarized below:

1. The project requires an Addendum to a certified EIR and can demonstrate that it is not subject to VMT analysis per CEQA Guidelines Sections 15064.3 and 15007(c) and applicable guidance from LCI (formerly, the Governor's Office of Planning and Research).
2. The project results in a net increase of 250 or fewer weekday daily trips based on the latest edition of the Institute of Traffic Engineers (ITE) trip rates (or other trip generation rate approved by the City).
3. The project is located in a Transit Priority Area (i.e., within 0.5 miles of existing rail transit station or within 0.5 miles of two or more existing bus routes with a frequency of service interval of 15 minutes or less during morning and evening peak hours).
4. The project is 100% restricted affordable housing units.
5. The project is locally serving, such as 100,000 square feet or less of retail use, a daycare use, or a locally serving public school (kindergarten through 12th grade).

The project does not meet any of these screening criteria. The proposed project includes 1,360 residential units (408 single-family detached units and 952 multifamily units), which would generate 10,825 daily trips (see Appendix I). The project is not located within a Transit Priority Area, because there are no transit routes or stops within 0.5 miles of the project site. A total of 25% (340 units) of the total proposed units would be affordable housing units, which does not meet the affordable housing screening criteria. Finally, the project is not a locally serving use. Therefore, a project-level VMT analysis was prepared.

VMT Thresholds

The City's goal and associated significance criteria is for new projects to generate 15% less VMT per capita (or per employee for non-residential uses) compared to existing conditions, which is consistent with LCI's Technical Advisory recommendations. Table 4.16-1 identifies the existing residential VMT per capita as well as the proposed VMT per capita significance threshold. The residential significance threshold is based on the countywide population VMT divided by the countywide population.

Table 4.16-1. VMT Rate Threshold Goals for Projects in the City of Irvine

Land Use Type	Existing VMT Rate	Threshold Goal (15% Reduction)
Residential (VMT per population)	17.50	14.88

Source: City of Irvine 2023.
Note: VMT = vehicle miles traveled.

VMT Analysis

Table 4.16-2 presents the project-generated VMT analysis results. As shown in Table 4.16-2, the proposed project's VMT rate exceeds the City's VMT threshold, resulting in a significant VMT impact. The project is required to reduce its VMT by 25.7%.

Table 4.16-2. Project VMT Analysis

VMT Analysis Scenario	VMT Rate	
	VMT	Metric
VMT threshold goal	14.88	VMT per capita
Project VMT rate	20.03	VMT per capita
Exceeds City-wide VMT Threshold?	*Yes*	
Significant Impact?	*Yes*	
VMT Reduction Required	*25.7%*	

Source: Appendix I.
Note: VMT = vehicle miles traveled.

The California Air Pollution Control Officers Association (CAPCOA) Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (CAPCOA Handbook; CAPCOA 2024) is used for identifying the various mitigation strategies and methods to quantify VMT reductions. The CAPCOA VMT reduction strategies include built environment changes and transportation demand management actions. The transportation demand management strategies are separated into seven subsectors: Land Use, Trip Reduction Programs, Parking or Road Pricing/ Management, Neighborhood Design, Transit, Clean Vehicles and Fuels, and School Programs. Three mitigation measures (based on CAPCOA measures T-4, T-18, and T-20), Mitigation Measure (MM) TRA-1 (Affordable and Below Market Rate Housing), MM-TRA-2 (Pedestrian Network Improvement), and MM-TRA-3 (Expanded Bikeway Network), were identified as applicable measures for the proposed project (refer to Section 4.16.5 for the full text of all transportation mitigation measures). Other potential VMT mitigation measures were also reviewed but ruled out because of the nature of the proposed use and the lack of ongoing control that the property developer has with respect to implementation. The CAPCOA measures and potential reduction in VMT are described below.

- Land Use

T-4 (Integrate Affordable and Below Market Rate Housing): Implementation of this measure could result in a 28.6% maximum VMT reduction (expressed as a reduction in GHG emissions resulting from VMT in the CAPCOA Handbook). Individuals living in affordable multifamily housing have lower rates of car ownership and higher rates of other transportation modes, such as transit, bicycling, and walking.

- Neighborhood Design

T-18 (Provide Pedestrian Network Improvement): Implementation of this measure could result in a 6.4% maximum VMT reduction. Providing sidewalks and an enhanced pedestrian network encourages people to walk instead of drive, and this mode shift results in a reduction in VMT.

T-20 (Expand Bikeway Network): Implementation of this measure could result in a 0.5% maximum VMT reduction. Providing bike lanes and an enhanced bikeway network can increase access to and from transit hubs. This encourages a mode shift from vehicles to bicycles and displaces VMT.

Because 25% of the total proposed units are affordable housing units, CAPCOA measure T-4 will reduce the VMT impact by no more than 7.15% (28.6% * 25%). In addition, per the City's Traffic Study Guidelines, the City allows for a 2.5% VMT reduction related to pedestrian and bicycle connectivity. As such, the combination of CAPCOA measures T-18 and T-20 would provide a maximum VMT reduction of 2.5%. Assuming that each proposed project mitigation measure could achieve its maximum VMT reduction value, the implementation of MM-TRA-1 through MM-TRA-3 could reduce VMT by a total of 9.5%, which is less than the project's expected VMT impact of 25.7%. Detailed calculations of the VMT reductions with mitigation are provided in Appendix I, Traffic Study. The mitigation measures are provided in full in Section 4.16.5. Even with mitigation incorporated, the proposed project would have a significant and unavoidable VMT impact.

3. ***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)?***

Less-Than-Significant Impact with Mitigation Incorporated. Roadway design has the potential to increase hazards via sharp curves that are difficult to negotiate or intersections that provide poor lines of sight. In addition, queueing associated with turn pockets can lead to speed differentials, creating a potential safety issue. The following discussion describes the potential for increased hazards as a result of geometric design features of the project and/or as a result of the addition of project traffic to adjacent roadways.

Access to the project site would be provided via three full-access driveways ("A" Street, "B" Street, and "C" Street) on Jeffrey Road and a right-in/right-out driveway ("E" Street) on Portola Parkway. A site access analysis, consistent with the City's Transportation Design Procedures (TDPs; City of Irvine 2007), was conducted for the project for both the Existing (Baseline and Plus Project) scenario and the Buildout Approved (Baseline and Plus Project) scenario. The following TDPs were reviewed for both scenarios:

- **TDP-1:** Turn lane pocket lengths
- **TDP-3:** Left-turn in/out access
- **TDP-4:** Right-turn lanes at uncontrolled driveways
- **TDP-10:** Distance between driveways and intersections
- **TDP-12:** Traffic signal warrant
- **TDP-14:** Driveway lengths

The results of the access analysis for the Existing (Baseline and Plus Project) scenario are summarized below. The results of the Buildout Approved (Baseline and Plus Project) scenario analysis are described in Section 4.16.7, Cumulative Impacts.

Existing (Baseline and Plus Project) Scenario

Under this scenario, the extension of Jeffrey Road toward SR-241, based on the City's MPAH, would not exist. As recently constructed, Jeffrey Road (north of Portola Parkway) is a four-lane Primary roadway that terminates near "C" Street (approximately 3,100 feet north of Portola Parkway).

With the development of the proposed project, the segment of Jeffrey Road north of Portola Parkway would allow traffic to access the project site via three driveways on Jeffrey Road. The roadway segment of Jeffrey Road between Portola Parkway and "C" Street would continue to be a four-lane facility. At each project driveway ("A," "B," and "C" Streets) on Jeffrey Road, a northbound de-facto right-turn lane would be provided.[2] In addition, a 150-foot dedicated southbound left-turn lane with a 90-foot taper would be provided at "A" and "B" Streets. Figure 4.16-6, Jeffrey Road Configuration – Existing + Project Condition, shows the roadway configuration of Jeffrey Road between Portola Parkway and "C" Street in the Existing Plus Project condition. Additionally, the project is proposing to provide a 300-foot dedicated westbound right-turn lane with a 145-foot taper at "E" Street on Portola Parkway.

TDP-1: Turn Lane Pocket Lengths

The length of left-turn lane pockets (turn pockets) at signalized intersections is based on several parameters, including traffic control, turn volume, and cycle length. The purpose of the turn pocket length is to allow the turning vehicle to exit the through movement and decelerate into the turn pocket without affecting the through movement. The minimum single turn pocket length for Major, Primary, and Secondary Highways (e.g., Jeffrey Road and Portola Parkway) is 150 feet.

- **Jeffrey Road/Portola Parkway (Southbound Jeffrey Road).** The dual southbound left-turn lanes at the signalized intersection of Jeffrey Road/Portola Parkway are each approximately 240 feet long (480 feet long in total), with a 160-foot-long transition. The Existing Baseline left-turn demand at this location is 6 vehicles during the AM peak hour and 1 vehicle during the PM peak hour. Based on TDP-1 criteria, the dual southbound left-turn lanes meet the 5-foot length required to accommodate the existing AM peak hour vehicles. The Existing Plus Project left-turn demand at this location is 96 vehicles during the AM peak hour and 57 vehicles during the PM peak hour, which would require a 120-foot-long left-turn lane. The 480-foot-long southbound left-turn lane pocket length would continue to meet the TDP-1 criteria with the project-added traffic.
- **Jeffrey Road/Portola Parkway (Eastbound Portola Parkway).** The dual eastbound left-turn lanes at the signalized intersection of Jeffrey Road/Portola Parkway are each approximately 385 feet long (770 feet long in total), with a 120-foot-long transition. The Existing Baseline left-turn demand at this location is 20 vehicles during the AM peak hour and 6 vehicles during the PM peak hour. Based on TDP-1 criteria, the dual eastbound left-turn lanes meet the 25-foot length required to accommodate the existing 20 AM peak hour vehicles. The Existing Plus Project left-turn demand at this location would be 66 vehicles during the AM peak hour and 129 vehicles during the PM peak hour, which would require a 160-foot-long left-turn lane. Therefore, the 770-foot-long eastbound left-turn lane pocket length would continue to meet the TDP-1 criteria with the project-added traffic.

TDP-3: Left-Turn In/Out Access

TDP-3 provides procedures to determine whether left-turn in only or left-turn in/out access will be considered along Major, Primary, Secondary, and Commuter Streets. This TDP is based on the volume of vehicles entering and/or exiting a driveway in relationship to the conflicting volumes along the highway.

[2] A de facto right-turn lane has no signs or pavement markings, but functions as a right-turn lane in practice because it is wide enough to accommodate both through movements and turns.

Conflicting volumes refer to the traffic volumes that could potentially collide or interfere with each other (e.g., left-turn movements conflicting with a through movement).

- **Jeffrey Road/"A" Street.** Under Existing Plus Project conditions, the southbound Jeffrey Road left-turn volume into the project site via this unsignalized driveway would be minimal (if any) because Jeffrey Road terminates near "C" Street. The conflicting volume for left-turn in/out access would be 194 vehicles during the AM peak hour and 526 vehicles during the PM peak hour for the Existing Plus Project condition. Based on TDP-3, the volumes would be below the point representing the left-turn-in volume and the conflicting volumes; therefore, the TDP-3 criteria for left-turn-in access would be satisfied for this project driveway. Under Existing Plus Project conditions, the left-turn volumes out of the project site via this unsignalized driveway would be 286 vehicles during the AM peak hour and 179 vehicles during the PM peak hour. The conflicting volumes for left-turn-out access would be 403 vehicles during the AM peak hour and 578 vehicles during the PM peak hour for the Existing Plus Project condition. Based on TDP-3, the volumes would be above the point representing the left-turn-out volume and the conflicting volumes. Therefore, the TDP-3 criteria for left-turn-out access would not be satisfied for this project driveway. The intersection geometry at this location in the Existing Plus Project condition would be one through and one dedicated right-turn lane for the northbound direction on Jeffrey Road, one shared lane for through and left-turn movements for the southbound direction on Jeffrey Road, and one lane for all the traffic movements going out from "A" Street. The intersection was further analyzed assuming a one-way stop control on "A" Street (the results are provided in Appendix I). With a stop control, the intersection would operate at satisfactory LOS for the Existing Plus Project condition during both peak hours. Therefore, even though left-turn-out access at "A" Street does not meet the TDP-3 criteria, no operational deficiencies or impacts are expected at this unsignalized driveway and minimal adverse effects are expected on adjacent public roadways.
- **Jeffrey Road/"B" Street.** Under Existing Plus Project conditions, the southbound Jeffrey Road left-turn volumes into the project site via this unsignalized driveway would be minimal (if any) because Jeffrey Road terminates near "C" Street. The conflicting volumes for left-turn-in access would be 115 vehicles during the AM peak hour and 245 vehicles during the PM peak hour for the Existing Plus Project condition. Based on TDP-3, the volumes would be below the point representing the left-turn-in volume and the conflicting volumes. Therefore, the TDP-3 criteria for left-turn-in access would be satisfied for this project driveway. Under Existing Plus Project conditions, the left-turn volumes out of the project site via this unsignalized driveway would be 118 vehicles during the AM peak hour and 74 vehicles during the PM peak hour. The conflicting volumes for left-turn-out access would be 227 vehicles during the AM peak hour and 302 vehicles during the PM peak hour for the Existing Plus Project condition. Based on TDP-3, the volumes would be below the point representing the left-turn-out volume and the conflicting volumes. Therefore, the TDP-3 criteria for left-turn-out access would be satisfied for this project driveway.
- **Jeffrey Road/"C" Street.** Under Existing Plus Project conditions, the southbound Jeffrey Road left-turn volumes into the project site via this unsignalized driveway would be minimal (if any) because Jeffrey Road terminates near "C" Street. The conflicting volumes for left-turn-in access would be 78 vehicles during the AM peak hour and 122 vehicles during the PM peak hour for the Existing Plus Project condition. Based on TDP-3, the volumes would be below the point representing the left-turn-in volume and the conflicting volumes. Therefore, the TDP-3 criteria for left-turn-in access would be satisfied for this project driveway. Under Existing Plus Project conditions, the left-turn volumes out of the project site via this unsignalized driveway would be 130 vehicles during

the AM peak hour and 118 vehicles during the PM peak hour. The conflicting volumes for left-turn-out access would be 39 vehicles during the AM peak hour and 61 vehicles during the PM peak hour for the Existing Plus Project condition. Based on TDP-3, the volumes would be below the point representing the left-turn-out volume and the conflicting volumes. Therefore, the TDP-3 criteria for left-turn-out access would be satisfied for this project driveway.

TDP-4: Right-Turn Lanes at Uncontrolled Driveways

TDP-4 states that right-turn lanes at unsignalized driveways along Primary Highways (e.g., Portola Parkway east of Jeffrey Road and Jeffrey Road north of Portola Parkway) are required for a peak hourly right-turn volume of 100 vehicles. The City currently permits a de-facto right-turn lane, provided the curb lane is a minimum of 19 feet or, where existing on-street bike lanes are provided, the curb lane width is at least 12 feet wide plus a 7-foot-wide bike lane. Jeffrey Road north of Portola Parkway has been recently constructed with a 12-foot-wide outside lane and an 8-foot-wide bike lane, which provides for a dedicated right-turn lane at "A," "B," and "C" Streets.

- **Jeffrey Road/"A," "B," and "C" Streets.** The proposed driveways on Jeffrey Road at "A," "B," and "C" Streets would be unsignalized full-access driveways. "A" Street on Jeffrey Road would have northbound right-turn volumes of 79 vehicles during the AM peak hour and 281 vehicles during the PM peak hour under Existing Plus Project conditions. "B" Street on Jeffrey Road would have northbound right-turn volumes of 37 vehicles during the AM peak hour and 123 vehicles during the PM peak hour under Existing Plus Project conditions. "C" Street on Jeffrey Road would have northbound right-turn volumes of 78 vehicles during the AM peak hour and 122 vehicles during the PM peak hour under Existing Plus Project conditions. As such, a dedicated right-turn lane would be required at all three project driveways. However, as previously stated, a northbound dedicated right-turn lane is currently provided along these locations. This additional roadway capacity would adequately accommodate the queueing that may be expected from these northbound right turns on Jeffrey Road, resulting in minimal adverse effects to the operation of Jeffrey Road. Therefore, the proposed condition meets the intent of TDP-4 for the Existing Plus Project condition at all three driveways.
- **"E" Street/Portola Parkway.** "E" Street is an unsignalized right-in/right-out driveway on Portola Parkway. Portola Parkway at "E" Street would have westbound right-turn volumes of 30 vehicles during the AM peak hour and 76 vehicles during the PM peak hour under Existing Plus Project conditions. As such, a dedicated right-turn lane would not be required at this project driveway. Although it is not required, the proposed project would include provision of a 300-foot-long dedicated westbound right-turn lane with a 145-foot taper at "E" Street on Portola Parkway.

TDP-10: Distance Between Driveways and Intersections

TDP-10 states that the recommended minimum spacing between a driveway and an intersection, or between two driveways, is 230 feet for a Primary Highway (e.g., Portola Parkway east of Jeffrey Road and Jeffrey Road north of Portola Parkway).

- **Jeffrey Road/"A" Street.** "A" Street on Jeffrey Road is approximately 860 feet north of the signalized intersection of Jeffrey Road and Portola Parkway. This driveway is approximately 1,120 feet south of a driveway on the same side of the street and approximately 520 feet north of a driveway on the opposite side of the street. As such, the TDP-10 criteria are met for this project driveway.

- **Jeffrey Road/“B” Street.** “B” Street on Jeffrey Road is approximately 750 feet south and 1,120 feet north of driveways on the same side of the street. As such, the TDP-10 criteria are met for this project driveway.
- **Jeffrey Road/“C” Street.** “C” Street on Jeffrey Road is approximately 750 feet north of a driveway on the same side of the street. As such, the TDP-10 criteria are met for this project driveway.
- **“E” Street/Portola Parkway.** “E” Street (the right-in/right-out driveway) is located on Portola Parkway, which has a raised median, and this driveway does not have adjacent driveways on the same or the opposite side of the street. “E” Street is approximately 1,030 feet east of the signalized intersection of Jeffrey Road/Portola Parkway and approximately 870 feet west of the signalized intersection of Bee Canyon Access Road/Portola Parkway. As such, the TDP-10 criteria are met for this project driveway.

TDP-12: Traffic Signal Warrant

TDP-12 provides guidance to determine whether installation of a traffic signal would be justified at a particular location. The peak-hour traffic signal warrant is generally intended for use at locations where traffic conditions are such that for a minimum of 1 hour of an average day, the minor street (e.g., project driveway) suffers undue delay when entering or crossing the major street (e.g., Jeffrey Road).

A peak-hour traffic signal warrant analysis (FHWA 2023, Section 4C.04) per TDP-12 criteria was prepared to determine if the installation of a traffic signal would be warranted at the proposed driveways (“A,” “B,” and “C” Streets) along Jeffrey Road. Based on the analysis, traffic signals would not be warranted at “A,” “B,” and “C” Streets under the Existing Plus Project conditions, per TDP-12.

TDP-14: Driveway Lengths

TDP-14 provides guidance regarding a sufficient driveway length to allow vehicles to enter the parking area without causing subsequent vehicles to back out on the City street system. The measurement of sufficient length is based on the distance from the back of the sidewalk or stop bar to the first intersecting parking space or traffic control measure (e.g., gate/internal drive aisle) on site.

Based on the Existing Plus Project peak-hour traffic volumes, the following driveway lengths are recommended to meet the City’s minimum requirements:

- **Jeffrey Road/“A” Street.** A driveway length of 300 feet is recommended to accommodate the 79 vehicles and 281 vehicles entering “A” Street on Jeffrey Road during the AM peak hour and the PM peak hour, respectively.
- **Jeffrey Road/“B” Street.** A driveway length of 125 feet is recommended to accommodate the 37 vehicles and 123 vehicles entering “B” Street on Jeffrey Road during the AM peak hour and the PM peak hour, respectively.
- **Jeffrey Road/“C” Street.** A driveway length of 125 feet is recommended to accommodate the 78 vehicles and 122 vehicles entering “C” Street on Jeffrey Road during the AM peak hour and the PM peak hour, respectively.
- **“E” Street/Portola Parkway.** A driveway length of 100 feet is recommended to accommodate the 30 vehicles and 76 vehicles entering “E” Street on Portola Parkway during the AM peak hour and the PM peak hour, respectively.

The project applicant is aware that the minimum requirements for driveway lengths per TDP-14 should be incorporated into the project design.

Summary

Based on the findings above, no impacts relating to hazards due to a geometric design feature or incompatible uses were identified using the design guidelines TDP-1: Turn lane pocket lengths, TDP-3: Left-turn in/out access, TDP-4: Right-turn lanes at uncontrolled driveways, TDP-10: Distance between driveways and intersections, and TDP-14: Driveway lengths. Additionally, a traffic signal would not be warranted based on expected traffic conditions at any of the proposed project access points from Jeffrey Road in the Existing Plus Project scenario, per the TDP-12 criteria.

Buildout Approved (Baseline and Plus Project) Scenario

Under this scenario, the extension of Jeffrey Road toward SR-241 and farther north to Santiago Canyon Road is assumed to be built. Figure 4.16-7, Jeffrey Road Extension Location, shows the location of the extension. Jeffrey Road north of Portola Parkway is classified as a Primary Highway in the City's General Plan. The cross-section measurement for Jeffrey Road north of Portola Parkway would be approximately 33 feet wide in each direction of travel, for a total width of 66 feet of travel surface, which is wide enough to provide two through lanes with on-street bike lanes and de-facto right-turn lanes at the project driveways. In addition, for purposes of analysis, a 150-foot-long dedicated southbound left-turn lane with a 90-foot-long taper was assumed to be provided at each driveway on Jeffrey Road. Figure 4.16-8, Jeffrey Road Configuration – Buildout Approved + Project Condition, shows the roadway configuration of Jeffrey Road between Portola Parkway and "C" Street in the Buildout Approved Plus Project condition. Additionally, the proposed project would include the provision of a 300-foot-long dedicated westbound right-turn lane with a 145-foot taper at "E" Street on Portola Parkway.

TDP-1: Turn Lane Pocket Lengths

- **Jeffrey Road/Portola Parkway (Southbound Jeffrey Road).** The dual southbound left-turn lanes at the signalized intersection of Jeffrey Road/Portola Parkway are each approximately 240 feet long (480 feet long in total) with a 160-foot-long transition. The Buildout Approved No Project left-turn demand at this location is 251 vehicles during the AM peak hour and 30 vehicles during the PM peak hour. Based on TDP-1 criteria, the dual southbound left-turn lanes meet the 315-foot length required to accommodate the 251 vehicles during the AM peak hour. The Buildout Approved Plus Project left-turn demand at this location would be 341 vehicles during the AM peak hour and 86 vehicles during the PM peak hour, which would require a 425-foot-long left-turn lane. The 480-foot-long southbound left-turn pocket length would continue to meet the TDP-1 criteria in the Buildout Approved conditions.
- **Jeffrey Road/Portola Parkway (Eastbound Portola Parkway).** The dual eastbound left-turn lanes at the signalized intersection of Jeffrey Road/Portola Parkway are each approximately 385 feet long (770 feet long in total), with a 120-foot-long transition. The Buildout Approved Baseline left-turn demand at this location is 120 vehicles during the AM peak hour and 229 vehicles during the PM peak hour. Based on the TDP-1 criteria, the dual eastbound left-turn lanes meet the 285-foot length required to accommodate the 229 vehicles during the PM peak hour. The Buildout Approved Plus Project left-turn demand at this location would be 164 vehicles during the AM peak hour and 346 vehicles during the PM peak hour, which would require a 430-foot-long left-turn lane. The 770-foot-

long eastbound left-turn pocket length would continue to meet the TDP-1 criteria in the Buildout Approved conditions.

- **Jeffrey Road/"A," "B," and "C" Streets (Southbound).** As mentioned before, a 150-foot-long dedicated southbound left-turn lane with a 90-foot-long taper was assumed to be built at Jeffrey Road at "A," "B," and "C" Streets in the Buildout Approved Plus Project condition. The Buildout Approved Plus Project left-turn demand at "A" Street would be minimal, expected to be 2 vehicles during the AM peak hour and 6 vehicles during the PM peak hour. The Buildout Approved Plus Project left-turn demand at "B" Street would be minimal, expected to be 1 vehicle during the AM peak hour and 3 vehicles during the PM peak hour. The Buildout Approved Plus Project left-turn demand at "C" Street would be minimal, expected to be 1 vehicle during the AM peak hour and 3 vehicles during the PM peak hour. Therefore, a minimum 150-foot-long southbound left-turn pocket would meet the TDP-1 criteria in the Buildout Approved Plus Project condition at each of the project driveways.

TDP-3: Left-Turn In/Out Access

- **Jeffrey Road/"A" Street.** Under Buildout Approved Plus Project conditions, the southbound Jeffrey Road left-turn volumes into the project site via this unsignalized driveway would be 2 vehicles during the AM peak hour and 6 vehicles during the PM peak hour. The conflicting volumes for left-turn-in access would be 350 vehicles during the AM peak hour and 1,088 vehicles during the PM peak hour for the Buildout Approved Plus Project condition. Based on TDP-3, the volumes would be below the point representing the left-turn-in volume and the conflicting volumes. Therefore, the TDP-3 criteria for left-turn-in access are satisfied for this project driveway. Under Buildout Approved Plus Project conditions, the left-turn volumes out of the project site would be 280 vehicles during the AM peak hour and 175 vehicles during the PM peak hour. The conflicting volumes for left-turn-out access would be 1,391 vehicles during the AM peak hour and 1,217 vehicles during the PM peak hour for the Buildout Approved Plus Project condition. Based on TDP-3, the volumes would be above the point representing the left-turn-out volume and the conflicting volumes. Therefore, the TDP-3 criteria for left-turn-out access would not be satisfied for this project driveway. The Highway Capacity Manual (HCM) methodology (NAS and TRB 2022) and Synchro software were used to evaluate this project driveway, and a stop control was considered. With a consideration of one stop sign installed on "A" Street (one-way stop controlled), the HCM results (provided in Appendix I) show that the AM and PM peak-hour LOS at this location would be an unsatisfactory LOS F in the Buildout Approved Plus Project condition. With consideration of stop signs installed on both Jeffrey Road (north and south) and "A" Street (all-way stop controlled), the HCM results show that the AM peak-hour LOS at this location would be an unsatisfactory LOS E, and the PM peak-hour LOS would be a satisfactory LOS C in the Buildout Approved Plus Project condition. Because an operational deficiency is expected at this unsignalized driveway, a traffic signal is recommended to provide safe and efficient operation at this location in the Buildout Approved Plus Project condition. Per TDP-12 (FHWA 2023, FHWA 2023, Section 4C.04), a signal warrant analysis indicates that a traffic signal would be warranted at this location under the Buildout Approved Plus Project condition. No operational deficiency or impact is expected at this driveway once the traffic signal is installed in the Buildout Approved Plus Project condition when and if Jeffrey Road is extended to SR-241. Therefore, MM-TRA-4, Traffic Signal Installation (refer to Section 4.16.5), is recommended.

- **Jeffrey Road/"B" Street.** Under Buildout Approved Plus Project conditions, the southbound Jeffrey Road left-turn volumes into the project site via this unsignalized driveway would be 1 vehicle during the AM peak hour and 3 vehicles during the PM peak hour. The conflicting volumes for left-turn-in access would be 279 vehicles during the AM peak hour and 817 vehicles during the PM peak hour for the Buildout Approved Plus Project condition. Based on TDP-3, the volumes would be below the point representing the left-turn-in volume and the conflicting volumes. Therefore, the TDP-3 criteria for left-turn-in access would be satisfied for this project driveway. Under Buildout Approved Plus Project conditions, the left-turn volumes out of the project site via this unsignalized driveway would be 115 vehicles during the AM peak hour and 72 vehicles during the PM peak hour. The conflicting volumes for left-turn-out access would be 1,226 vehicles during the AM peak hour and 954 vehicles during the PM peak hour for the Buildout Approved Plus Project condition. Based on TDP-3, the volumes would be above the point representing the left-turn out volume and the conflicting volumes. Therefore, the TDP-3 criteria for left-turn out access would not be satisfied for this project driveway. The HCM methodology (NAS and TRB 2022) and Synchro software were used to evaluate this project driveway, and a stop control was considered. With consideration of one stop sign installed on "B" Street (one-way stop controlled), the HCM results (provided in Appendix I) show that the AM and PM peak-hour LOS at this location would be a satisfactory LOS C in the Buildout Approved Plus Project condition. Therefore, even though left-turn-out access at "B" Street would not meet the TDP-3 criteria, no operational deficiencies are expected at this unsignalized driveway or adjacent public roadways, and the intent of TDP-3 would be met.
- **Jeffrey Road/"C" Street.** Under Buildout Approved Plus Project conditions, the southbound Jeffrey Road left-turn volumes into the project site via this unsignalized driveway would be 1 vehicle during the AM peak hour and 3 vehicles during the PM peak hour. The conflicting volumes for left-turn-in access would be 246 vehicles during the AM peak hour and 699 vehicles during the PM peak hour for the Buildout Approved Plus Project condition. Based on TDP-3, the volumes would be below the point representing the left-turn-in volume and the conflicting volumes. Therefore, the TDP-3 criteria for left-turn-in access would be satisfied for this project driveway. Under Buildout Approved Plus Project conditions, the left-turn volumes out of the project site via this unsignalized driveway would be 127 vehicles during the AM peak hour and 116 vehicles during the PM peak hour. The conflicting volumes for left-turn-out access would be 1,047 vehicles during the AM peak hour and 724 vehicles during the PM peak hour for the Buildout Approved Plus Project condition. Based on TDP-3, the volumes would be above the point representing the left-turn-out volume and the conflicting volumes. Therefore, the TDP-3 criteria for left-turn-out access would not be satisfied for this project driveway. The HCM methodology (NAS and TRB 2022) and Synchro software were used to evaluate this project driveway, and a stop control was considered. With a consideration of one stop sign installed on "C" Street (one-way stop controlled), the HCM results (provided in Appendix I) show that the AM and PM peak-hour LOS at this location would be a satisfactory LOS C in the Buildout Approved Plus Project condition. Therefore, even though left-turn-out access at C Street would not meet the TDP-3 criteria, no operational deficiencies are expected at this unsignalized driveway or adjacent public roadways, and the intent of TDP-3 would be met.

TDP-4: Right-Turn Lanes at Uncontrolled Driveways

- **Jeffrey Road/"A" Street.** As described in the TDP-3 subsection above, and later in the TDP-12 subsection, the intersection of Jeffrey Road and "A" Street is recommended as a signalized intersection. The northbound right-turn volumes on Jeffrey Road at "A" Street would be 77 vehicles during the AM peak hour and 275 vehicles during the PM peak hour under Buildout Approved Plus Project conditions. A de-facto right-turn lane would be provided at this location, along with signalization of the intersection in the Buildout Approved Plus Project condition. This signalized location is not subject to the TDP-4 criteria.

- **Jeffrey Road/"B" Street.** The northbound right-turn volumes on Jeffrey Road at "B" Street would be 36 vehicles during the AM peak hour and 120 vehicles during the PM peak hour under Buildout Approved Plus Project conditions. Jeffrey Road north of Portola Parkway is classified as a Primary facility. Expected project traffic volumes would be more than the 100 vehicles per hour that is the trigger for recommendation of a right-turn lane for Primary Highways per TDP-4; therefore, a dedicated right-turn lane would be required at this project driveway. As previously stated, a de-facto right-turn lane would be provided at this location. This additional roadway capacity would adequately accommodate the queueing that may be expected from these northbound right turns on Jeffrey Road, resulting in minimal adverse effects to the operation of Jeffrey Road. Therefore, the proposed condition would meet the intent of TDP-4 for the Buildout Approved Plus Project condition.
- **Jeffrey Road/"C" Street.** The northbound right-turn volumes on Jeffrey Road at "C" Street would be 77 vehicles during the AM peak hour and 119 vehicles during the PM peak hour under Buildout Approved Plus Project conditions. Jeffrey Road north of Portola Parkway is classified as a Primary facility. Expected project traffic volumes would be more than the 100 vehicles per hour that is the trigger for recommendation of a right-turn lane for Primary Highways per TDP-4; therefore, a dedicated right-turn lane would be required at this project driveway. As previously stated, a de-facto right-turn lane would be provided at this location. This additional roadway capacity would adequately accommodate the queueing that may be expected from these northbound right turns on Jeffrey Road, resulting in minimal adverse effects to the operation of Jeffrey Road. Therefore, the proposed condition would meet the intent of TDP-4 for the Buildout Approved Plus Project condition.
- **"E" Street/Portola Parkway.** "E" Street is an unsignalized right-in/right-out driveway on Portola Parkway. The westbound right-turn volumes on Portola Parkway at "E" Street would be 30 vehicles during the AM peak hour and 76 vehicles during the PM peak hour under Buildout Approved Plus Project conditions. Portola Parkway east of Jeffrey Road is a Primary facility. Expected project traffic volumes would be less than the 100 vehicles per hour that is the trigger for recommendation of a right-turn lane for Primary Highways per TDP-4; therefore, a dedicated right-turn lane would not be required at this project driveway. Although it is not required, the proposed project would include the provision of a 300-foot-long dedicated westbound right-turn lane with a 145-foot taper at "E" Street on Portola Parkway

TDP-10: Distance Between Driveways and Intersections

TDP-10 states that the recommended minimum spacing between a driveway and an intersection, or between two driveways, is 230 feet for a Primary Highway (e.g., Portola Parkway east of Jeffrey Road and Jeffrey Road north of Portola Parkway).

- **Jeffrey Road/"A" Street.** "A" Street on Jeffrey Road is approximately 860 feet north of the signalized intersection of Jeffrey Road and Portola Parkway. This driveway is approximately 1,120 feet south of a driveway on the same side of the street and approximately 520 feet north of a driveway on the opposite side of the street. As such, the TDP-10 criteria are met for this project driveway.

- **Jeffrey Road/"B" Street.** "B" Street on Jeffrey Road is approximately 750 feet south and 1,120 feet north of driveways on the same side of the street. As such, the TDP-10 criteria are met for this project driveway.
- **Jeffrey Road/"C" Street.** "C" Street on Jeffrey Road is approximately 750 feet north of a driveway on the same side of the street. As such, the TDP-10 criteria are met for this project driveway.
- **"E" Street/Portola Parkway.** "E" Street (the right-in/right-out driveway) is located on Portola Parkway, which has a raised median, and this driveway does not have adjacent driveways on the same or the opposite side of the street. "E" Street is approximately 1,030 feet east of the signalized intersection of Jeffrey Road/Portola Parkway and approximately 870 feet west of the signalized intersection of Bee Canyon Access Road/Portola Parkway. As such, the TDP-10 criteria are met for this project driveway.

TDP-12: Traffic Signal Warrant

Traffic signals would be warranted at "A," "B," and "C" Streets along Jeffrey Road under the Buildout Approved Plus Project condition, per TDP-12 (FHWA 2023, Section 4C.04). Although traffic signals would be warranted at all three driveway locations on Jeffrey Road, a traffic signal is only recommended at "A" Street under the Buildout Approved Plus Project condition for the following reasons:

- Considering the TDP-3 analysis results for the Buildout Approved Plus Project condition, a traffic signal at "A" Street would be recommended to provide safe and efficient operation at this location, particularly related to left-turn in/out access. Regarding "B" and "C" Streets, these intersections would operate at a satisfactory LOS C with a one-way stop control installed on the project driveways ("B" and "C" Streets).
- An internal driveway ("D" Street), as shown on Figure 3-5, Conceptual Site Plan, provides internal connection for all driveways intersecting with Jeffrey Road or Portola Parkway. It allows residents living adjacent to "B" and "C" Streets to access Jeffrey Road via "A" Street, where a traffic signal is warranted and recommended.
- Additionally, a traffic signal is provided at the intersection of Jeffrey Road and Portola Parkway. The distance between Jeffrey Road/Portola Parkway and "A," "B," and "C" Streets is relatively short, ranging from approximately 750 feet to approximately 1,120 feet. Multiple traffic signals on such a short segment of Jeffrey Road would potentially result in an unnecessary breakdown in traffic flow.

TDP-14: Driveway Lengths

Per TDP-14, the minimum signalized driveway length should be 75 feet and should increase at a rate of 1 foot of storage per peak-hour vehicle (in 25-foot increments) and the minimum unsignalized driveway length should be 25 feet and should increase at a rate of 1 foot of storage per peak-hour vehicle (in 25-foot increments). The minimum requirements for driveway lengths per TDP-14 shall be incorporated into the project design, as summarized below:

- **Jeffrey Road/"A" Street.** "A" Street is recommended as a signalized full-access driveway on Jeffrey Road. Application of the minimum signalized driveway length criteria provided in TDP-14 to the Buildout Plus Project peak-hour inbound traffic volumes results in a recommended driveway length of 350 feet for the 79 vehicles or 281 vehicles entering "A" Street from Jeffrey Road during the AM peak hour or the PM peak hour, respectively.

- **Jeffrey Road/"B" Street.** This is an unsignalized driveway proposed by this project on Jeffrey Road. Application of the minimum unsignalized driveway length criteria provided in TDP-14 to the Buildout Plus Project peak-hour inbound traffic volumes results in a recommended driveway length of 125 feet for the 37 vehicles or 123 vehicles entering "B" Street from Jeffrey Road during the AM peak hour or the PM peak hour, respectively.
- **Jeffrey Road/"C" Street.** This is an unsignalized driveway proposed by this project on Jeffrey Road. Application of the minimum unsignalized driveway length criteria provided in TDP-14 to the Buildout Plus Project peak-hour inbound traffic volumes results in a recommended driveway length of 125 feet for the 78 vehicles or 122 vehicles entering "C" Street from Jeffrey Road during the AM peak hour or the PM peak hour, respectively.
- **"E" Street/Portola Parkway.** This is an unsignalized right-in/right-out driveway proposed by this project on Portola Parkway. Application of the minimum unsignalized driveway length criteria provided in TDP-14 to the Buildout Plus Project peak-hour inbound traffic volumes results in a recommended driveway length of 100 feet for the 30 vehicles or 76 vehicles entering "E" Street from Portola Parkway during the AM peak hour or the PM peak hour, respectively.

Summary

Based on the findings above, no impacts relating to hazards due to a geometric design feature or incompatible uses were identified using the design guidelines TDP-1: Turn lane pocket lengths, TDP-4: Right-turn lanes at uncontrolled driveways, TDP-10: Distance between driveways and intersections, and TDP-14: Driveway lengths.

Under this scenario, a traffic signal would be warranted and recommended at "A" Street on Jeffrey Road (MM-TRA-4; refer to Section 4.16.5 for the text of this mitigation measure) to satisfy both the TDP-3 and TDP-12 criteria, if and when Jeffrey Road is extended north to SR-241. This is based on several factors, including the distance between driveways, the peak-hour traffic volumes primarily at "A" Street, and the internal circulation (i.e., "D" Street) that would allow project vehicles to access the proposed signal at "A" Street. In addition to a four-lane Primary facility for Jeffrey Road, a northbound de-facto right-turn lane is provided at "A," "B," and "C" Streets on Jeffrey Road to satisfy the TDP-4 criteria. With implementation of MM-TRA-4, the project would result in a less-than-significant impact with mitigation incorporated relating to substantially increasing hazards due to a geometric design feature such as a dangerous intersection.

4. Would the project result in inadequate emergency access?

Less-Than-Significant Impact. The project site is located in an established, developed area with sufficient access for emergency service providers. All project access points would be designed according to the City's applicable design standards to ensure adequate access to the project site, including access for emergency vehicles and adequate turning radii, is provided. The internal drive aisles and loading and parking areas would be designed to comply with the City's width and clearance requirements, as well as the turning-radius requirements of the Orange County Fire Authority, which were established to ensure safe and efficient vehicular circulation. Because the project would comply with all applicable local requirements related to emergency vehicle access and circulation, the project would not result in inadequate emergency access. Therefore, operational impacts associated with inadequate emergency access would be less than significant.

Summary of Impacts

As analyzed in Section 4.16.4(2), the proposed project would result in a significant VMT impact that is unavoidable and cannot be mitigated. As analyzed in Section 4.16.4(3), under the Buildout Approved scenario, the project would result in a potentially significant impact, absent mitigation, on access at the unsignalized intersection at "A" Street and Jeffrey Road. All other impacts analyzed would be less than significant or would not occur.

4.16.5 Mitigation Measures

Implementation of the following mitigation measures would address potentially significant impacts identified in the analysis in Section 4.16.4:

MM-TRA-1 Affordable and Below Market Rate Housing. The project shall include affordable and below market housing integrated into the design. Individuals living in affordable multifamily housing have lower rates of car ownership and higher rates of other transportation modes, such as transit, bicycling, and walking.

MM-TRA-2 Pedestrian Network Improvement. The project shall include pedestrian network improvements. Providing sidewalks and an enhanced pedestrian network encourages people to walk instead of drive, and this mode shift results in a reduction in vehicle miles traveled.

MM-TRA-3 Expanded Bikeway Network. The project shall include expansion of the bikeway network. Providing bike lanes and an enhanced bikeway network can increase access to and from transit hubs. This encourages a mode shift from vehicles to bicycles and displaces vehicle miles travel.

MM-TRA-4 Traffic Signal Installation. The project shall include a traffic signal at "A" Street on Jeffrey Road if and when the extension of Jeffrey Road to SR-241 is built, to satisfy both TDP-3 and TDP-12 criteria in the Buildout Approved Plus Project condition.

4.16.6 Level of Significance After Mitigation

Even with implementation of MM-TRA-1 through MM-TRA-3, the proposed project would have a significant and unavoidable impact related to conflicts or inconsistencies with CEQA Guidelines Section 15064.3(b) due to increased VMT.

With implementation of MM-TRA-4, the project would have a less-than-significant impact related to potentially dangerous intersections.

The remaining impacts would be less than significant or would not occur; therefore, they do not require mitigation and would remain less than significant.

4.16.7 Cumulative Impacts

The proposed project is consistent with the Orange County CMP, the LRTP, the OC Foothills Bikeways Strategy, and the City's Circulation Element. Development in the area, including the proposed project and related projects, would be required to comply with applicable adopted policies, plans, or programs regarding public transit, roadway, bicycle, and pedestrian facilities. Due to the urbanized nature of the project area and existing access to transit facilities, as well as required compliance with applicable plans and policies pertaining to transit, roadway, bicycle and pedestrian facilities, cumulative impacts related to potential conflicts with a program, plan, ordinance, or policy addressing the circulation system would be less than significant.

Based on the guidance provided in California Public Resources Code Section 21083(b)(2), and CEQA Guidelines Section 15064(h)(1), "A project's cumulative impacts are based on an assessment of whether the "incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." In the context of VMT, when the VMT threshold is an efficiency-based threshold, the LCI Technical Advisory states, "[a] project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less than-significant project impact would imply a less than significant cumulative impact, and vice versa." (LCI 2018). Likewise, if a project results in a VMT increase when modeled under base year conditions, then the project would likely exhibit the same characteristics under future conditions. Therefore, given that the project's VMT impacts were determined to be significant and unavoidable, the project's cumulative VMT impacts are also assumed to be significant and unavoidable. Implementation of MM-TRA-1 through MM-TRA-3 would address the VMT impacts; however, impacts would remain significant and unavoidable.

A site access analysis, consistent with the City's TDPs, was conducted to assess the potential for increased hazards as a result of geometric design features of the project, and/or as a result of the addition of project traffic to adjacent roadways. Based on the findings above, no impacts to vehicle access for the Buildout Approved Baseline and Plus Project scenario were identified using the design guidelines TDP-1: Turn lane pocket lengths, TDP-4: Right-turn lanes at uncontrolled driveways, TDP-10: Distance between driveways and intersections, and TDP-14: Driveway lengths.

Under this scenario, a traffic signal would be warranted and recommended at "A" Street on Jeffrey Road (MM-TRA-4) to satisfy both the TDP-3 and TDP-12 criteria, if and when Jeffrey Road is extended north to SR-241. This is based on several factors, including the distance between driveways, the peak-hour traffic volumes, primarily at "A" Street, and the internal circulation (i.e., "D" Street) that would allow project vehicles to access the proposed signal at Jeffrey Road/"A" Street. In addition to a four-lane Primary facility for Jeffrey Road, a northbound de-facto right-turn lane is provided at "A," "B," and "C" Streets on Jeffrey Road to satisfy the TDP-4 criteria. With implementation of MM-TRA-4, the project would result in a less-than-significant impact relating to substantially increasing hazards due to a geometric design feature such as a dangerous intersection.

All cumulative projects would be designed with adequate emergency access and the project would not impede emergency access; under cumulative conditions, the same impact would be assumed. Therefore, cumulative emergency access impacts would be less than significant.

4.16.8 References

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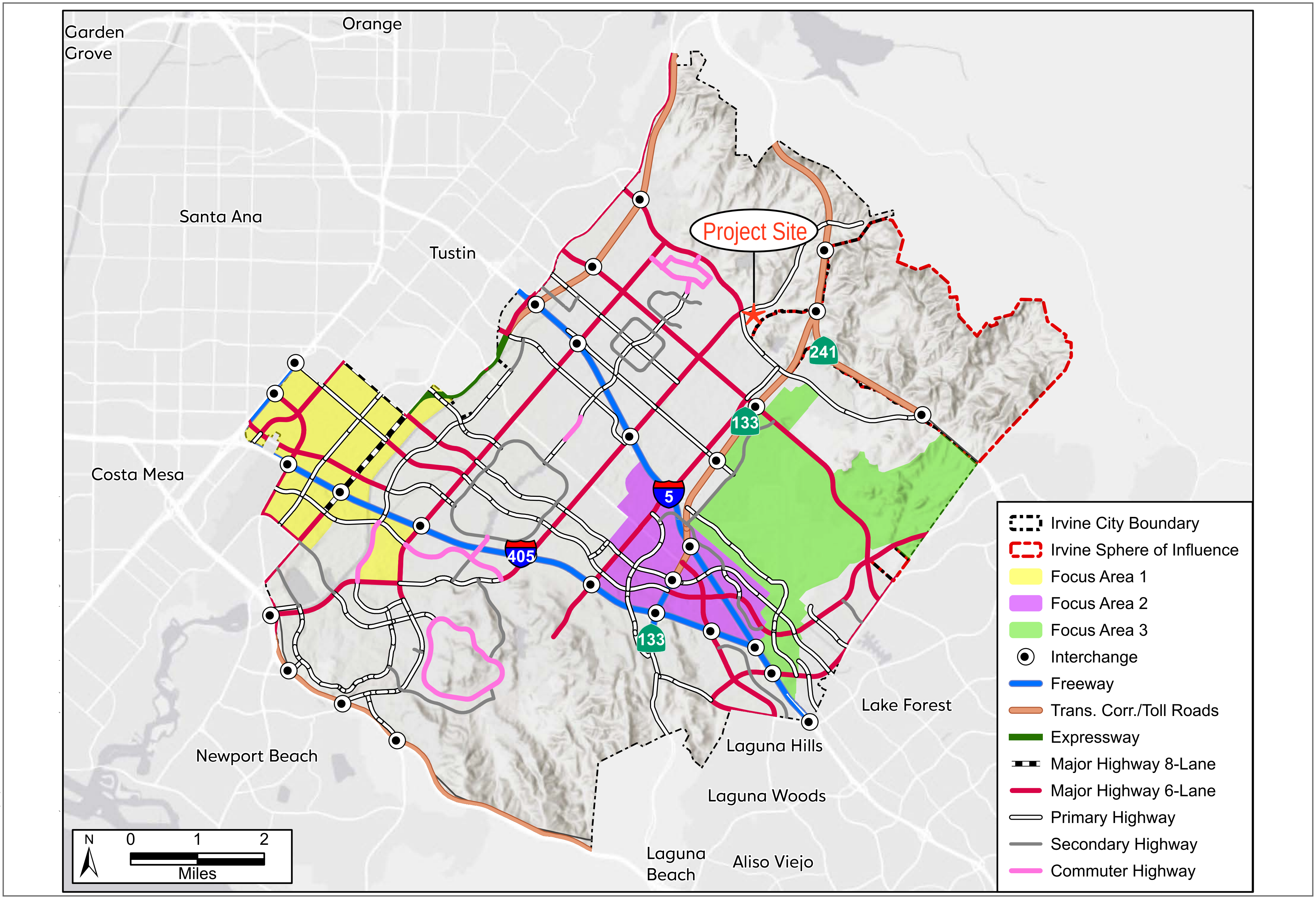

SOURCE: Orange County 2023; City of Irvine 2023.

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FIGURE 4.16-1

City of Irvine Master Plan of Highways

Irvine Gateway Village Project EIR

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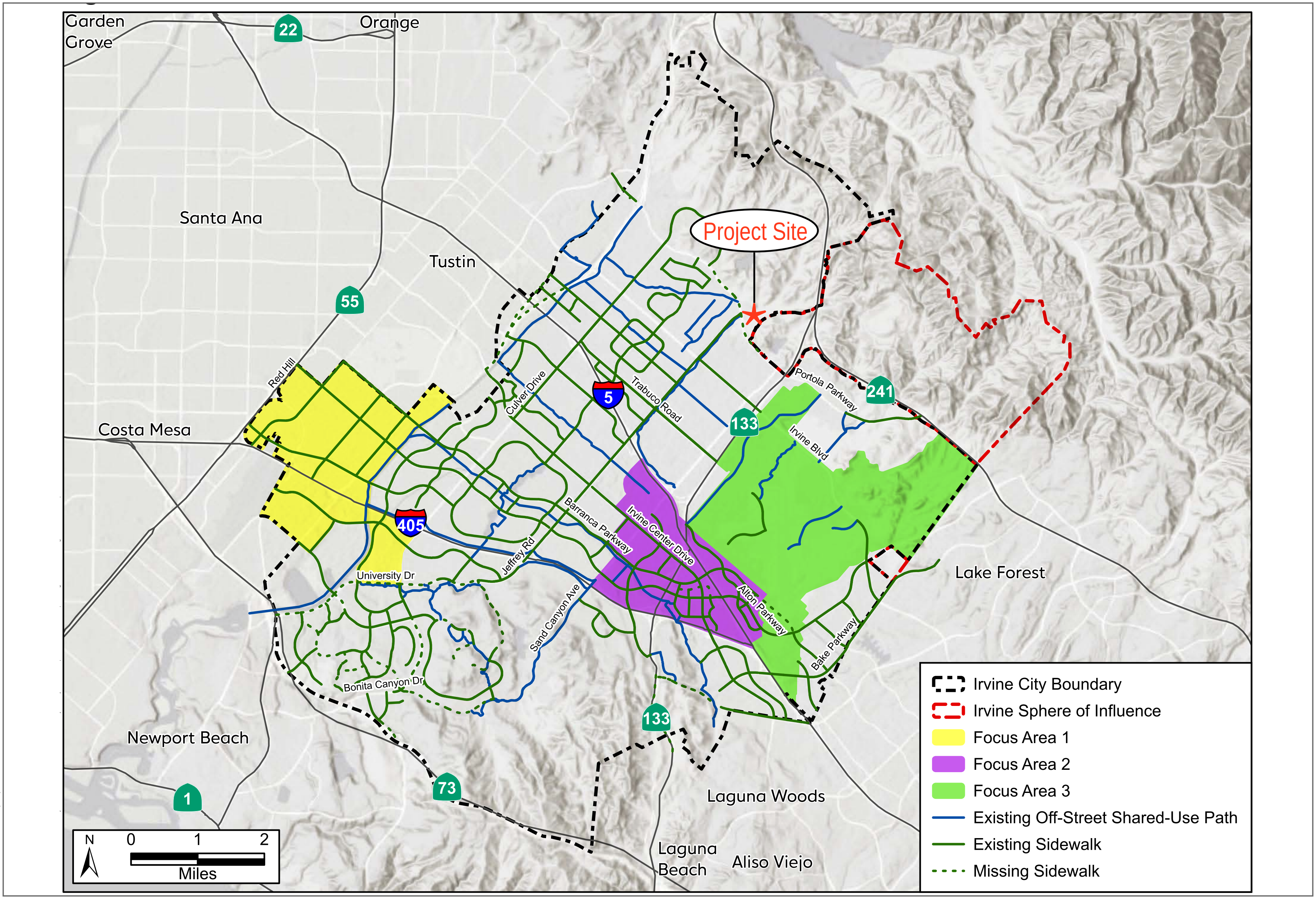

SOURCE: Orange County 2023; City of Irvine 2023.

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FIGURE 4.16-2

City of Irvine Pedestrian Facilities

Irvine Gateway Village Project EIR

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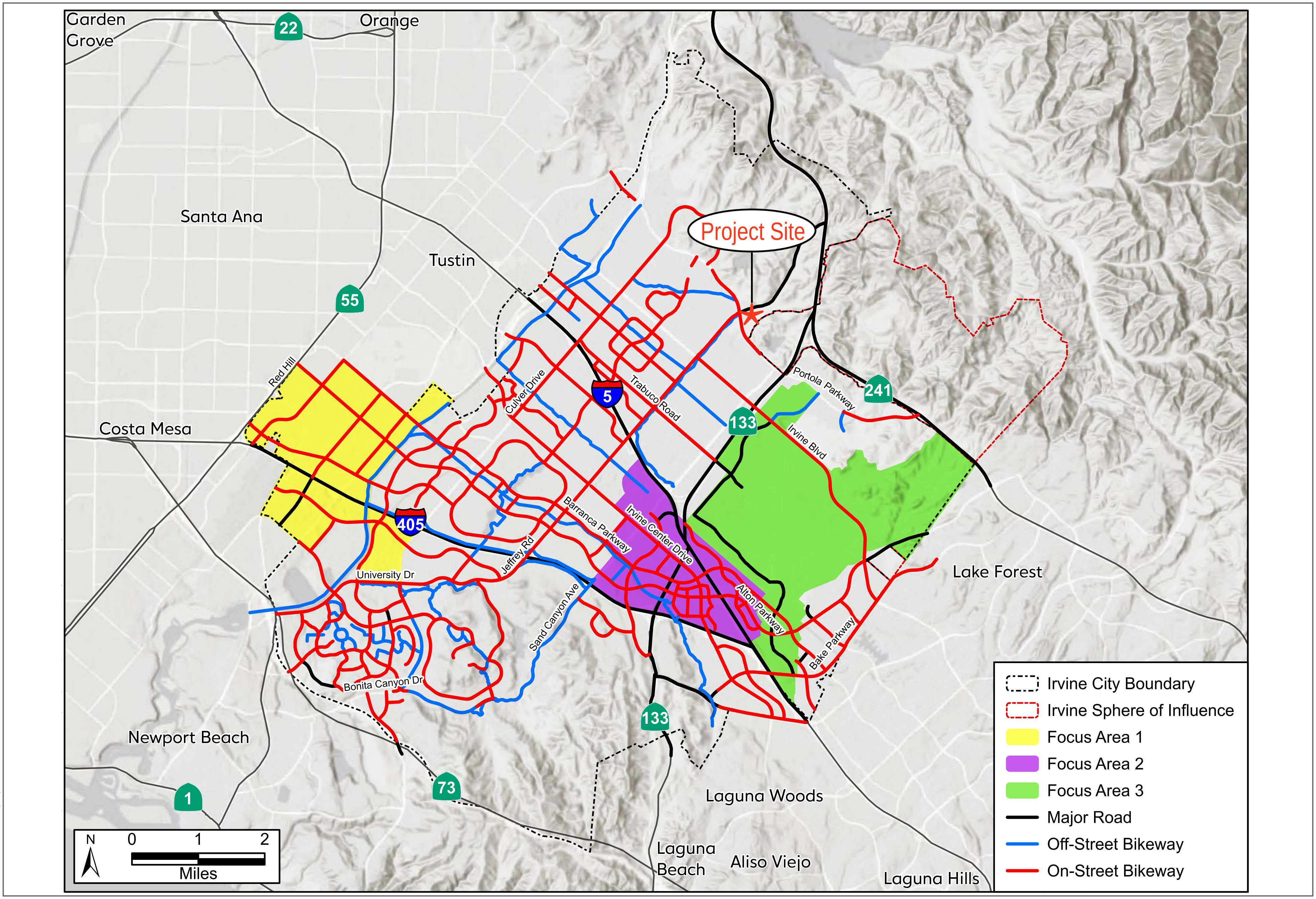

SOURCE: Orange County 2023; City of Irvine 2023.

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FIGURE 4.16-3

City of Irvine Bicycle Facilities

Irvine Gateway Village Project EIR

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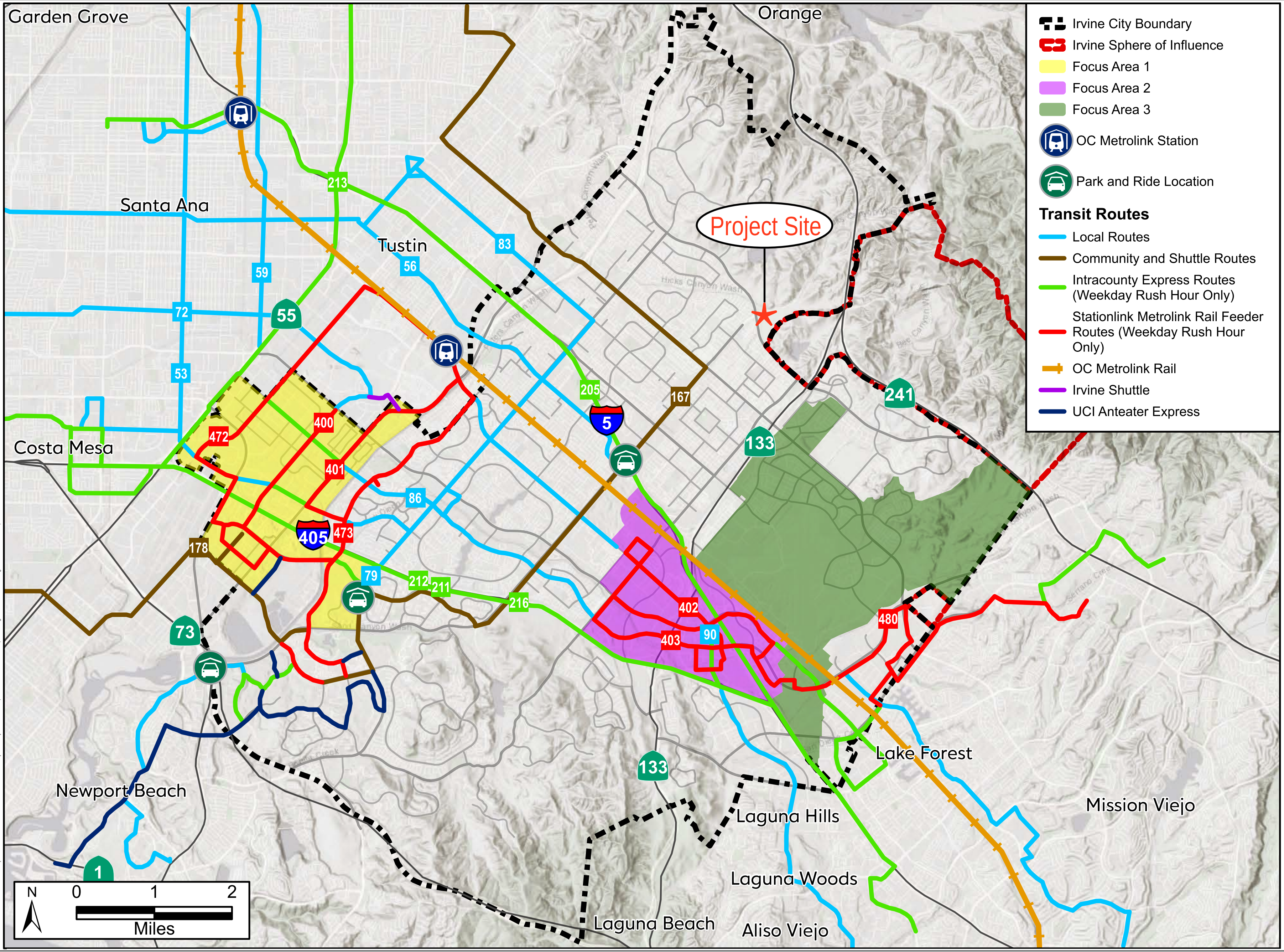

SOURCE: Orange County 2023; City of Irvine 2023.

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FIGURE 4.16-4

City of Irvine Transit Services

Irvine Gateway Village Project EIR

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SOURCE: Orange County 2023; City of Irvine 2023.

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FIGURE 4.16-5

Irvine CONNECT Transit Route

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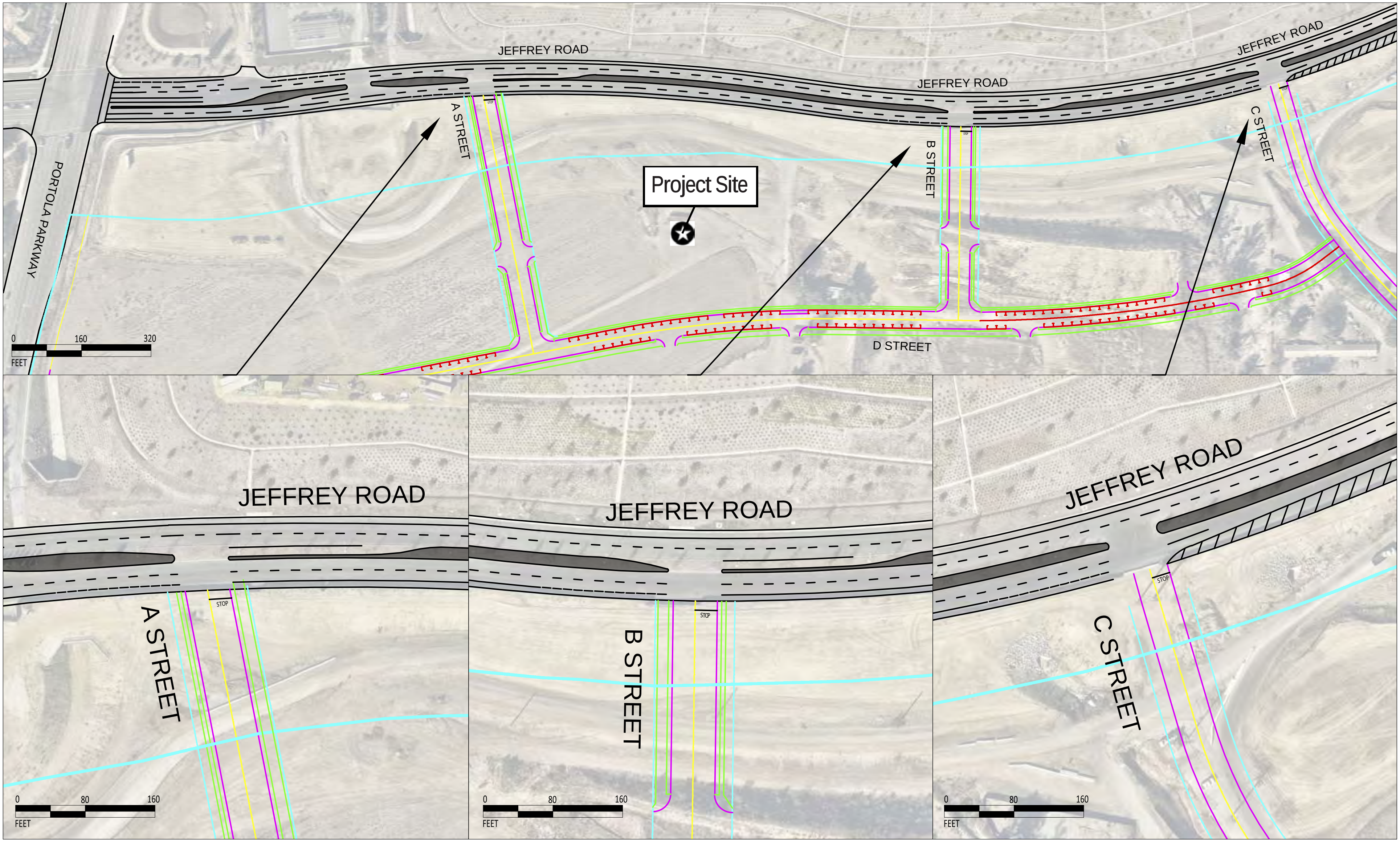

SOURCE: LSA 2025

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FIGURE 4.16-6

Jeffrey Road Configuration - Existing + Project Condition

Irvine Gateway Village Project EIR

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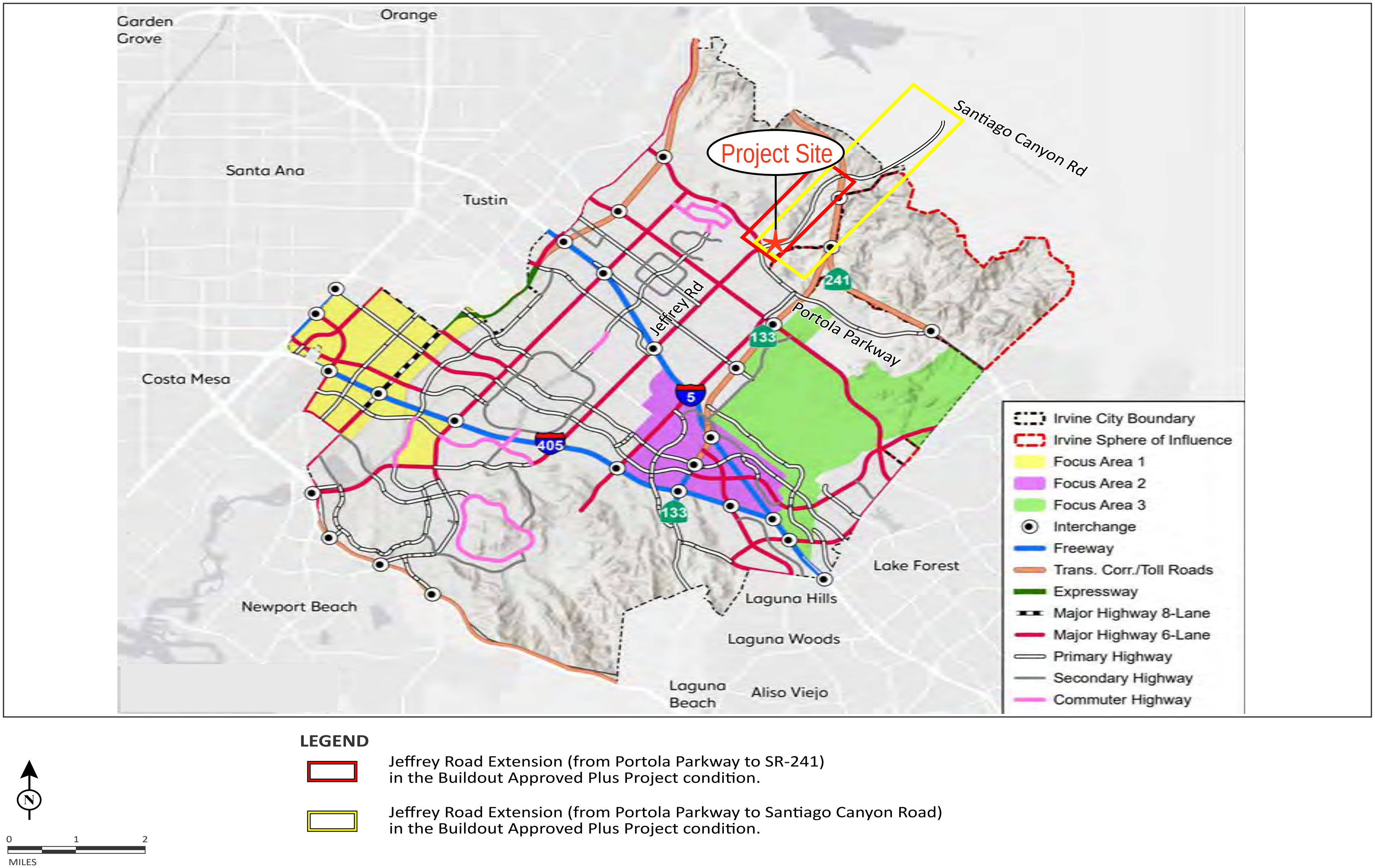

LEGEND

Jeffrey Road Extension (from Portola Parkway to SR-241) in the Buildout Approved Plus Project condition.

Jeffrey Road Extension (from Portola Parkway to Santiago Canyon Road) in the Buildout Approved Plus Project condition.

SOURCE: 2045 Irvine General Plan, 2024

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FIGURE 4.16-7

Jeffrey Road Extension Location

Irvine Gateway Village Project EIR

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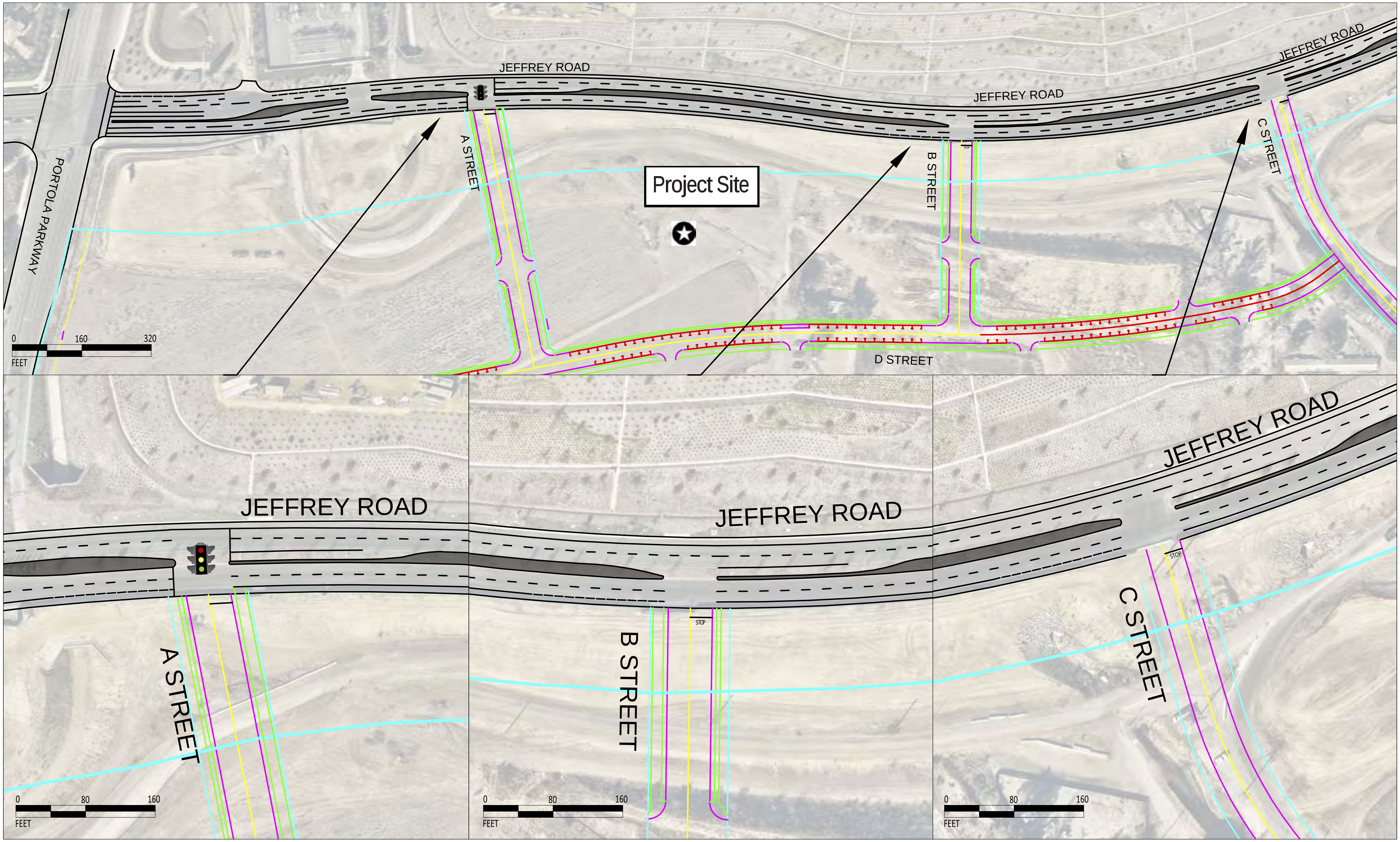

SOURCE: LSA 2025

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FIGURE 4.16-8

Jeffrey Road Configuration - Buildout Approved + Project Condition

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