

4.9 TRANSPORTATION

This section discusses the results of the Transportation Impact Study (TIS)¹ conducted for the proposed project and included in Appendix F. Specifically, this section describes existing and future transportation and circulation within the study area, the analysis methodology and regulatory framework, and identifies potential transportation-related impacts of the proposed project and mitigation measures for identified significant impacts. Topics evaluated in the analysis include an assessment of daily vehicle miles traveled (VMT), site access and circulation, driveway site distance and vehicle queuing, and hazards and emergency vehicle access. Additionally, for informational purposes, this chapter includes an assessment of vehicle level of service (LOS).

Up until July 1, 2020, roadway congestion or LOS was used as the primary metric for planning and environmental review purposes in San Rafael and throughout the State. However, Senate Bill (SB) 743 required the Governor's Office of Planning and Research (OPR) to establish a new metric for identifying and mitigating transportation impacts under the California Environmental Quality Act (CEQA) in an effort to meet the State's goals to reduce greenhouse gas (GHG) emissions, encourage infill development, and improve public health through more active transportation. CEQA Section 21099(b)(2) states that, upon certification of the revised guidelines for determining transportation impacts pursuant to CEQA Section 21099(b)(1), automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment under CEQA. OPR identified VMT as the required CEQA transportation metric for determining potentially significant environmental impacts.² In December 2018, the California Natural Resources Agency certified and adopted the *State CEQA Guidelines* update package, including the section implementing SB 743 (*State CEQA Guidelines* Section 15064.3). OPR developed the Technical Advisory on Evaluating Transportation Impacts in CEQA, which contains the OPR's technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures.³ As of July 1, 2020, VMT (not LOS) is the only legally acceptable threshold for transportation-related environmental impacts pursuant to CEQA.

In accordance with SB 743, for purposes of determining potentially significant environmental impacts related to transportation, this Environmental Impact Report (EIR) focuses only on VMT as the threshold of significance. However, because LOS is still used for local planning purposes per Policy M-2.5 in the City of San Rafael General Plan,⁴ that information is summarized in Section 4.9.3, Non-CEQA Analysis.

The information in this section is based on the TIS, the Signal Warrant Analysis,⁵ and the identification of mitigation to reduce identified impacts, if any, according to established thresholds.

¹ W-Trans. 2023. *Transportation Impact Study for the Northgate Town Square Project*. February 14.

² Governor's Office of Planning and Research (OPR). 2016. *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA, Implementing Senate Bill 743 (Steinberg 2013)*. January 20.

³ Governor's Office of Planning and Research (OPR). 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December. Website: https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf (accessed February 7, 2019).

⁴ City of San Rafael. 2021. *San Rafael General Plan 2040*. August.

⁵ Parametrix. 2023. *Signal Warrant Analysis Results for the Northgate Town Square Project*. October 3.

The analyses were conducted in accordance with the current standards and methodologies required by law and set forth by the City of San Rafael (City).

4.9.1 Setting

This section describes the existing transportation conditions, including the roadway network, bicycle facilities, pedestrian facilities, and transit service within the study area. The applicable regulatory framework is also described.

4.9.1.1 Existing Transportation and Circulation System

Roadway Network. State highways, arterials, major collectors, and local streets run throughout the project area. Regional access to the project site is provided via United States Route 101 (US-101). Descriptions of the intersections within the vicinity of the project site are provided below.

- **Manuel T. Freitas Parkway/Las Gallinas Avenue** is a signalized four-legged intersection with protected left-turn phasing on the eastbound and westbound approach and permitted left-turn phasing on the northbound and southbound approaches. There is a stop-controlled channelized right-turn lane on the westbound approach. Pedestrian crosswalks and phasing exist on the north, west, and south legs, and there are bicycle lanes on all four legs.
- **Manuel T. Freitas Parkway/Northgate Drive** is a four-legged signalized intersection with protected left-turn phasing on the Manuel T. Freitas Parkway approaches and permitted left-turn phasing on the Northgate Drive approaches. There are crosswalks on all but the east leg.
- **Manuel T. Freitas Parkway/Del Presidio Boulevard** is a signalized intersection with four legs. The northbound and southbound approaches have permitted left-turn phasing, but left turns from Manuel T. Freitas Parkway are prohibited. The north leg of the intersection is the off-ramp from southbound US-101 and includes a channelized right-turn lane. There are crosswalks with pedestrian phasing on the south and east legs.
- **Manuel T. Freitas Parkway/US-101 South Ramps** includes two slip ramps from Manuel T. Freitas Parkway in each direction to US-101 South. There is a crosswalk across the ramp from the westbound Manuel T. Freitas Parkway.
- **Redwood Highway/US-101 North On-Ramp** is a tee intersection enabling access to US-101 North from Redwood Highway in both directions. There is a sidewalk on the east side of Redwood Highway.
- **Manuel T. Freitas Parkway/US-101 North Ramps** is a tee intersection directly adjacent to Manuel T. Freitas Parkway/Redwood Highway-Civic Center Drive with a sidewalk along the northeast corner. There are channelized right-turn lanes for movements to and from the connector to Civic Center Drive.
- **Manuel T. Freitas Parkway/Redwood Highway-Civic Center Drive** is an intersection with three approaches and four departures, as the east leg is eastbound only. The Redwood Highway and Civic Center Drive approaches are stop controlled, whereas the Manuel T. Freitas Parkway

approach is uncontrolled. There are sidewalks on the northeast, northwest, and southeast corners, and a crosswalk on the north leg. Bicycle lanes are on Civic Center Drive south of the intersection.

- **Las Gallinas Avenue/Nova Albion Way** is a signalized intersection with four legs, a protected northbound left-turn phase, split phasing on the eastbound and westbound approaches, and a southbound right-turn overlap. Crosswalks and pedestrian signals exist on all four legs, and there are bicycle lanes on Las Gallinas Avenue.
- **Las Gallinas Avenue/Northgate Drive** is a four-legged intersection controlled by a traffic signal with protected left-turn phasing on Northgate Drive and permissive phasing on Las Gallinas Avenue. There are crosswalks and pedestrian signals on all four legs, and bicycle route pavement markings on Las Gallinas Avenue west of the intersection.
- **Las Gallinas Avenue/Del Presidio Boulevard** is a signalized intersection with protected left-turn phasing in the eastbound direction, and a right-turn overlap in the westbound direction. The south leg is southbound only and left turns are prohibited on westbound Las Gallinas Avenue. Crosswalks and pedestrian signals exist across all but the east leg, and a multi-use trail runs along the south side of Las Gallinas Avenue in addition to a bicycle lane on the southbound departure on Del Presidio Boulevard.
- **Las Gallinas Avenue/Merrydale Road** is a four-legged signalized intersection with protected left-turn phasing in all directions and crosswalks with pedestrian signals on the west, north, and east legs. There is a multi-use trail on the west side of Las Gallinas Avenue in addition to bicycle lanes on Las Gallinas Avenue south of the intersection and Merrydale Road west of the intersection.
- **Merrydale Road/Civic Center Drive** is a signalized intersection with four legs and protected left-turn phasing in all four directions. Crosswalks and pedestrian signals exist on the north and east legs, as do bicycle lanes on the north, west, and south legs.
- **Northgate Drive/Thorndale Drive** is a four-legged intersection with stop controls on the eastbound and westbound approaches, and no controls on Northgate Drive. There is a crosswalk on the west leg and bicycle lanes on Northgate Drive.
- **Northgate Drive/El Faisan Drive** is a tee intersection with stop control on El Faisan Drive and bicycle lanes on Northgate Drive.
- **Northgate Drive/Nova Albion Way** has three legs and stop control on the Nova Albion Way approach with no controls on the Northgate Drive approaches. Crosswalks exist on the west and south legs, and there are bicycle lanes on Northgate Drive.
- **Los Ranchitos Road-Las Gallinas Avenue/Northgate Drive** is a four-legged signalized intersection with protected left-turn phasing on the northbound approach and permissive phasing for all other movements. The east leg is a driveway to the Mt. Olivet Cemetery. There

are crosswalks and pedestrian signals on the east and south legs, and bicycle lanes on the west and north legs.

- **Los Ranchitos Road/North San Pedro Road** is an intersection with three legs and signal control, including a protected phase for the eastbound left-turn movement. Crosswalks and pedestrian signals exist on the north and west legs, and there are bicycle lanes on Los Ranchitos Road, including high-visibility markings in the westbound direction.

Pedestrian Facilities. Pedestrian facilities include sidewalks, pedestrian signal phases, curb ramps, curb extension, and various streetscape amenities such as lighting and benches. In general, a network of sidewalks, crosswalks, pedestrian signals, and curb ramps provide access for pedestrians in the vicinity of the proposed project site.

There are no sidewalks on Merrydale Road between the Merrydale Road overpass over US-101 and the Marin Civic Center SMART station. Currently, pedestrians traveling between the project site and the station must either cross over the freeway to access the sidewalk along Civic Center Drive or walk in traffic along Merrydale Road. A multi-use trail to close this gap is included in the City's Bicycle and Pedestrian Master Plan.⁶ The City prepared the Merrydale Conceptual Design Informational Report in April 2022 to address the potential alternative designs, which generally include a 12-foot-wide shared-use trail along the north and east sides of Merrydale Road between Las Gallinas Avenue and the Sonoma-Marin Area Rail Transit (SMART) station.

Bicycle Facilities. Bikeways in the City are classified into the following four categories:

- **Class I Bikeways** (Bike Path) provide a completely separate right-of-way, are designated for the exclusive use of bicycles and pedestrians, and minimize vehicle and pedestrian cross-flow. In general, bike paths serve corridors that are not served by existing streets and highways, or where sufficient right-of-way exists for such facilities to be constructed.
- **Class II Bikeways** (Bicycle Lanes) are lanes for bicyclists generally adjacent to the outer vehicle travel lanes. These lanes have special lane markings, pavement legends, and signage. Bicycle lanes are generally 5 feet wide. Adjacent vehicle parking and vehicle/pedestrian cross-flow are permitted. Note that when grade separation or buffers are constructed between the bicycle and vehicle lanes, these facilities are classified as Class IV Bikeways.
- **Class III Bikeways** (Bicycle Routes/Bicycle Boulevards) are designated by signs or pavement markings for shared use with pedestrians or motor vehicles but have no separated bicycle right-of-way or lane striping. Bicycle routes serve either to (a) provide continuity to other bicycle facilities, or (b) designate preferred routes through high-demand corridors. Bicycle routes are implemented on low-speed (less than 25 miles per hour [mph]) and low-volume (fewer than 3,000 vehicles per day) streets.
- **Class IV Bikeways**, also known as "cycle tracks" or "protected bike lanes," provide a right-of-way designated exclusively for bicycle travel within a roadway and which are protected from other

⁶ City of San Rafael. 2011. Bicycle/Pedestrian Master Plan Update. April 4.

vehicle traffic with devices, including but not limited to grade separation, flexible posts, inflexible physical barriers, or parked cars.

In the vicinity of the project site there are Class I Bike Paths parallel to Las Gallinas Avenue, McInnis Parkway, and the SMART railroad tracks. There are Class II Bicycle Lanes on Manuel T. Freitas Parkway, Las Gallinas Avenue, Civic Center Drive, Northgate Drive, Merrydale Road, and Los Ranchitos Road. Bicycles ride on the roadways and/or on sidewalks along all other streets within the project study area. Table 4.9.A summarizes the existing and planned bicycle facilities in the project vicinity.

Table 4.9.A: Existing and Planned Bicycle Facilities Summary

Facility	Class	Length (miles)	Begin Point	End Point
Existing Facilities				
Las Gallinas Avenue	I	0.42	Northgate Drive (N)	425 feet north of Northgate Drive (S)
McInnis Parkway Side Path	I	0.68	North End	Civic Center Drive
SMART Pathway	I	0.86	Civic Center Drive	N San Pedro Road
Manuel T. Freitas Parkway	II	0.76	Montecillo Road	Las Gallinas Avenue
Las Gallinas Avenue	II	1.34	City Limit	Nova Albion Way
Civic Center Drive	II	0.52	Manuel T. Freitas Parkway	Peter Behr Drive (N)
Northgate Drive	II	0.54	Las Gallinas Avenue	Las Gallinas Avenue
Las Gallinas Avenue	II	0.18	Merrydale Road	Northgate Drive (S)
Merrydale Road	II	0.13	Las Gallinas Avenue	Civic Center Drive
Los Ranchitos Road	II	1.21	Golden Hinde Boulevard	Hammondale Court
Los Gamos Road	III	0.39	North End	Manuel T. Freitas Parkway
Las Gallinas Avenue	III	0.20	Nova Albion Way	Northgate Drive
Nova Albion Way	III	1.12	Las Gallinas Avenue	Northgate Drive
Golden Hinde Boulevard	III	0.48	Nova Albion Way	Los Ranchitos Road
Redwood Highway	III	1.16	Smith Ranch Road	Manuel T. Freitas Parkway
Civic Center Drive		0.17	SMART Crossing	Peter Behr Drive (N)
Planned Facilities				
Manuel T. Freitas Parkway	I	0.72	Montecillo Road	Del Presidio Boulevard
Nova Albion Way	I	0.26	155 feet south of Arias Street	Montecillo Road
Redwood Highway	I	0.25	Professional Center Parkway	Manuel T. Freitas Parkway
Merrydale Road	I	0.34	Las Gallinas Avenue	SMART Pathway
Manuel T. Freitas Parkway	II	0.23	Las Gallinas Avenue	Northgate Drive
Las Gallinas Avenue	II	0.53	Northgate Drive (N)	Golden Hinde Boulevard
Northgate Drive	II	0.05	Las Gallinas Avenue (N)	270 feet south of Las Gallinas Avenue (N)
Las Gallinas Avenue	IV	0.32	Manuel T. Freitas Parkway	Northgate Drive
Nova Albion Way	IV	0.03	Las Gallinas Avenue	155 feet south of Arias Street
N San Pedro Road	IV	0.57	Civic Center Drive	Los Ranchitos Road

Source: *Transportation Impact Study for the Northgate Town Square Project (W-Trans 2023)*.

N = north

S = south

SMART = Sonoma-Marin Area Rail Transit

Transit Services and Facilities. Regional and local fixed-route bus transit service is provided by the County of Marin through Marin Transit, the Golden Gate Bridge Highway and Transportation District through Golden Gate Transit, and SMART. These services connect to locations from the Mark West community north of Santa Rosa to San Francisco. Transit stations in the area provide a connection between local and regional transit services and the project site as summarized in Table 4.9.B.

Table 4.9.B: Existing Transit Service

Route	Distance to Stop (mi) ¹	Service			Destinations
		Operation Days	Time	Frequency	
Marin Transit					
35	Adjacent	Weekdays Weekends	6:30 a.m.–8:45 p.m. 7:00 a.m.–8:45 p.m.	30 min 30 min	Novato, Northgate, Civic Center, Downtown San Rafael, Canal
49	Adjacent	Weekdays Weekends	6:30 a.m.–8:30 p.m. 7:30 a.m.–10:45 p.m.	30 min 60 min	Novato, Hamilton, Northgate, Downtown San Rafael
71	0.19 (SB) 0.38 (NB)	Weekdays Weekends	5:30 a.m.–12:45 a.m. 5:45 a.m.–12:45 a.m.	30-60 min 30-60 min	Novato, San Rafael, Marin City
257	Adjacent	Weekdays	6:00 a.m.–10:45 p.m.	60 min	Novato (Ignacio), Hamilton, Kaiser, Downtown San Rafael
645	Adjacent	School days	a.m. (North) p.m. (South)	1 time NB 1 time SB	Terra Linda High School, Northgate, Civic Center, Downtown San Rafael, Canal
Golden Gate Transit					
54	0.19 (SB) 0.38 (NB)	Weekdays	6:00 a.m.–8:00 a.m. 4:45 p.m.–10:15 p.m.	4 times SB 4 times NB	Novato, San Rafael, San Francisco
70	0.19 (SB) 0.38 (NB)	Daily	5:15 a.m.–10:15 p.m.	60 min	Novato, San Rafael, Larkspur, Corte Madera, San Francisco
Sonoma-Marín Transit District (SMART)					
SMART	0.39	Weekdays Weekends	5:00 a.m.–9:45 p.m. 7:30 a.m.–9:00 p.m.	0.5-3.5 hrs 2 hrs	Larkspur to Sonoma County Airport

Source: *Transportation Impact Study for the Northgate Town Square Project (W-Trans 2023)*.

¹ Defined as the shortest walking distance between the project site and the nearest bus stop.

hrs = hours SB = southbound
mi = miles NB = northbound
min = minutes

The nearest stop for Marin Transit Routes 35, 49, 257, and 645 is adjacent to the project site on Las Gallinas Avenue just north of Merrydale Road. The Terra Linda bus pads serve Marin Transit Route 71 and Golden Gate Transit Routes 54 and 70 and are located between the on- and off-ramps for US-101 in each direction at the Manuel T. Freitas Parkway interchange. The pad for southbound service is located 0.19 mile from the project site, and the northbound pad is located 0.38 mile from the project site.

Regional rail service is provided by SMART at the Marin Civic Center Station, a 0.3-mile walk southeast of the project site along Merrydale Road. As noted above, this connection currently does not have a sidewalk and pedestrians must either walk in the road or take a longer, approximately 0.4-mile route to the station. However, a multi-use trail is planned to close this gap as documented in the City’s Bicycle and Pedestrian Master Plan, though this planned improvement is not currently funded.

Dial-a-ride, also known as paratransit, or door-to-door service, is available for those who are unable to independently use the transit system due to a physical or mental disability. Marin Transit offers dial-a-ride service designed to serve the needs of individuals with disabilities within the project area and Marin County overall.

4.9.1.2 Analysis Scope and Methodology

Until July 1, 2020, roadway congestion or LOS was used as the primary study metric for planning and environmental review of development projects in California. However, SB 743 required the OPR to establish a new metric for identifying and mitigating transportation impacts pursuant to CEQA to meet the State's goals to reduce GHG emissions, encourage infill development, and improve public health through more active transportation. OPR identified VMT as the required CEQA transportation metric, and beginning July 1, 2020, VMT (not LOS) is the only legally acceptable threshold for transportation-related environmental impacts pursuant to CEQA.

VMT is a measurement of the amount and distance that a person drives, accounting for the number of passengers within a vehicle. Many interdependent factors affect the amount and distance a person might drive. In particular, the type of built environment affects how many places a person can access within a given distance, time, and cost, using different ways of travel (e.g., private vehicle, public transit, bicycling, walking). Typically, low-density development located at great distances from other land uses and in areas with few alternatives to the private vehicle provides less access than a location with high-density development, mix of land uses, and numerous ways of travel. Therefore, low-density development typically generates more VMT per capita compared to a similarly sized development located in urban areas. In general, higher VMT areas are associated with more air pollution, including GHG emissions and energy usage, than lower VMT areas. Total VMT is calculated by multiplying the number of trips generated by a project by the total distance of each of those trips; VMT per capita is calculated by dividing the total daily VMT by the number of people (e.g., residents for residential use, employees for non-residential uses).

Lead agencies have the discretion to set their own thresholds of significance regarding the goals of reducing GHG emissions, developing multimodal transportation networks, and promoting a diversity of land uses. The OPR recommends that a per capita or per employee VMT that is 15 percent below the average for existing development in the area may be a reasonable threshold. The OPR's guidance on thresholds is presented in the OPR Technical Advisory and the California Air Resources Board's (CARB) 2017 Scoping Plan – Identified VMT Reductions and Relationship to State Climate Goals. The CARB analysis indicates that the VMT threshold would need to be 16.8 percent for automobile-only VMT to achieve State GHG reduction goals. These points of reference are subject to change over time, however, depending on statewide forecasts of population and travel, as well as economic conditions (e.g., short-term and long-term effects of the COVID-19 pandemic). The City of San Rafael has adopted VMT thresholds that are included in its Transportation Impact Analysis Guidelines,⁷ as outlined in Threshold 4.9.2 under Section 4.9.2.3, below in this EIR.

In accordance with the San Rafael Transportation Impact Analysis Guidelines, the analysis in this EIR uses a home-based VMT per capita as the metric for evaluation of the proposed project. Home-based VMT only accounts for trips that begin or end at a place of residence, and does not capture other trips that may occur between non-residence locations throughout the day (e.g., driving to lunch or to meetings during the middle of the day) due to differences in trip-based and tour-based

⁷ City of San Rafael. 2021. City of San Rafael Transportation Analysis Guidelines. June.

models. Home-based VMT per capita is an appropriate metric to use because it is normalized and compared to similar baseline values.

4.9.1.3 Regulatory Framework

The following State, regional, County of Marin, and local transportation plans, policies, and regulations guide transportation planning in San Rafael.

State Regulations. This section summarizes applicable State regulations guiding transportation planning in San Rafael.

California Department of Transportation (Caltrans). Caltrans is responsible for the maintenance and operation of State routes and highways. In San Rafael, Caltrans facilities include US-101 and Interstate 580 (I-580).

Caltrans released a VMT-Focused Transportation Impact Study Guide⁸ that recommends use of the OPR recommendations for land use projects and plans. For transportation projects, Caltrans has suggested that any increase in VMT would constitute a significant impact for transportation projects. This has been referred to as the “Net Zero VMT Threshold.”

Senate Bill 375. As a means to achieve the Statewide emission reduction goals set by Assembly Bill (AB) 32 (“The California Global Warming Solutions Act of 2006”), SB 375 (“The Sustainable Communities and Climate Protection Act of 2008”) directs the CARB to set regional targets for reducing GHG emissions from cars and light trucks. Using the template provided by the State’s Regional Blueprint program to accomplish this goal, SB 375 seeks to align transportation and land use planning to reduce VMT through modified land use patterns. There are five basic directives of the bill: (1) creation of regional targets for GHG emissions reduction tied to land use; (2) a requirement that regional planning agencies create a Sustainable Communities Strategy (SCS) to meet those targets (or an Alternative Planning Strategy if the strategies in the SCS would not reach the target set by CARB); (3) a requirement that regional transportation funding decisions be consistent with the SCS; (4) a requirement that the Regional Housing Needs Allocation (RHNA) numbers for municipal general plan housing element updates must conform to the SCS; and (5) CEQA exemptions and streamlining for projects that conform to the SCS. The implementation mechanism for SB 375 that applies to land use in San Rafael is Plan Bay Area 2050.⁹

Senate Bill 743. SB 743 was signed into law in 2013 and fundamentally changed the way transportation impacts under CEQA are analyzed. It required OPR to “prepare, develop, and transmit to the Secretary of the Natural Resources Agency for certification and adoption proposed revisions to the [CEQA] guidelines ...establishing criteria for determining the significance of transportation impacts of projects” to “promote the reduction of greenhouse gas

⁸ California Department of Transportation (Caltrans). 2020. VMT-Focused Transportation Impact Study Guide. May 20.

⁹ Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC). 2018. *Plan Bay Area Projections 2040*. Website: <http://projections.planbayarea.org/> (accessed January 17, 2022).

emissions, the development of multimodal transportation networks, and a diversity of land uses.”

On December 28, 2018, the Natural Resources Agency adopted *State CEQA Guidelines* Section 15064.3, which establishes specific criteria for evaluating a project’s transportation impacts and states that “vehicle miles traveled is the most appropriate measure of transportation impacts.” It gives agencies the “discretion to choose the most appropriate methodology to evaluate a project’s vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure” provided that “[a]ny assumptions used to estimate vehicle miles traveled... should be documented and explained in the environmental document prepared for the project.” Section 15064.3 further states that except for certain transportation projects, “a project’s effect on automobile delay shall not constitute a significant environmental impact.” See *Citizens for Positive Growth & Preservation v. City of Sacramento* (2019) 43 Cal. App. 5th 609, 626 (holding that a general plan’s impact on LOS, which effectively measures automobile delay, can no longer constitute a significant environmental impact).

Additionally, OPR issued a technical advisory memorandum in December 2018 that includes general guidance and information for lead agencies to use in implementing SB 743, including choosing VMT methodology and establishing VMT thresholds. Lead agencies were given until July 1, 2020 to implement methodologies and thresholds related to VMT to comply fully with SB 743. As a CEQA lead agency, San Rafael has adopted citywide generally applicable VMT thresholds for impact determination in its Transportation Impact Analysis Guidelines (pursuant to 14 Cal. Code Regs 15064(b)). As such, VMT thresholds from the City’s Transportation Impact Analysis Guidelines are used for this analysis.

Regional Regulations. This section summarizes applicable regional regulations guiding transportation planning in San Rafael.

Metropolitan Transportation Commission. The Metropolitan Transportation Commission (MTC) is responsible for planning, coordinating, and financing transportation projects in the nine-county Bay Area. The local agencies that comprise these nine counties help the MTC prioritize projects based on need, feasibility, and conformance with federal and local transportation policies. In addition to coordinating with local agencies, the MTC distributes State and federal funding through the Regional Transportation Improvement Program.

Plan Bay Area 2050. Plan Bay Area 2050 is a State-mandated, integrated long-range transportation and land use plan. As required by SB 375, all metropolitan regions in California must complete an SCS as part of a Regional Transportation Plan (RTP). This strategy integrates transportation, land use, and housing to meet GHG reduction targets set by the CARB. Plan Bay Area 2050 meets those requirements. In addition, the plan sets a roadmap for future transportation investments and identifies what it would take to accommodate expected growth. The plan neither funds specific transportation projects nor changes local land use policies.

In the Bay Area, the MTC and the Association of Bay Area Governments (ABAG) adopted Plan Bay Area 2050 in October 2021. To meet the GHG reduction targets, the plan identifies four Growth Geographies where future growth in housing and jobs should be focused: Priority

Development Areas (PDAs), Priority Production Areas (PPAs), Transit-Rich Areas (TRAs), and High-Resource Areas (HRAs). The agencies estimate more than 80 percent of housing growth would occur within TRAs and nearly 30 percent would be within HRAs, and more than 60 percent of job growth would be within walking distance of high-quality transit between 2015 and 2050.¹⁰ The MTC established an “Equity Priority Communities Program” as part of their efforts to address transportation and social equity issues in the region. The Equity Priority Communities Program is designed to focus on addressing transportation challenges and disparities faced by communities that have historically experienced social and economic inequities. The proposed project site is located within an Equity Priority Community.

Transportation Authority of Marin. The 2021 Congestion Management Program (CMP) Update is a document of the Transportation Authority of Marin (TAM), the designated Congestion Management Agency (CMA) for Marin County.

As per the guidelines outlined in the Congestion Management Program by TAM, any proposed general plan update, amendment, or major development that is projected to result in a net increase of 100 vehicle trips during the PM (afternoon) peak hour necessitates the submission of relevant information for TAM’s review and comment. Local jurisdictions are tasked with determining which projects meet these specified criteria. The PM peak hour is considered the most suitable for this determination because traffic congestion levels are typically more pronounced during this time than compared to the AM peak hour. As discussed further below, the proposed project would not generate more than 100 new peak-hour trips. Nevertheless, all environmental review documents of countywide concern are transmitted to TAM for review.

City of San Rafael. This section summarizes applicable City regulations guiding transportation planning in San Rafael.

San Rafael General Plan. In August 2021, the City Council adopted San Rafael General Plan 2040. The General Plan envisions the project location within the North San Rafael Town Center area as a vibrant community gathering place, emphasizing public art, diverse shops, dining establishments, and entertainment options. It aims to transform Northgate into a walkable and evolving hub, serving as the heart of North San Rafael. Furthermore, several policies within the plan stress the improvement of transit connections, access, and the creation of bicycle and pedestrian connections between Northgate One, the Mall at Northgate, Northgate Three, the Civic Center SMART station, the Civic Center, and the surrounding neighborhoods.

Goals and policies relevant to the project include:

Policy C-11: Alternative Transportation Mode Users. Encourage and promote individuals to use alternative modes of transportation, such as regional and local transit, carpooling, bicycling, walking and use of low-impact alternative vehicles. Support development of programs that provide incentives for individuals to choose alternative modes.

¹⁰ Note: Growth projections do not sum to 100 percent because PDAs, TRAs, and HRAs are not mutually exclusive.

Program C-11e: Reduction of Single Occupancy Vehicles. Encourage developers of new projects in San Rafael, including City projects, to provide improvements that reduce the use of single occupancy vehicles. These improvements could include preferential parking spaces for carpools, bicycle storage and parking facilities, and bus stop shelters.

Policy M-2.1: Road Hierarchy. Maintain a network of arterial, collector, and local streets that efficiently moves traffic through the city. Engineering and design standards should reflect road type and function, the characteristics of adjacent uses, and the need to accommodate motorized and non-motorized travel.

Program M-2.1A: Complete Streets. Consistent with State “Complete Streets” requirements, maintain street design and engineering standards that plan for the needs of all travelers and minimize conflicts between competing modes.

Policy M-2.5: Traffic Level of Service. Maintain traffic Level of Service (LOS) standards that ensure an efficient roadway network and provide a consistent basis for evaluating the transportation effects of proposed development projects on local roadways.

Policy M-3.2: Using VMT in Environmental Review. Require an analysis of projected Vehicle Miles Traveled (VMT) as part of the environmental review process for projects with the potential to significantly increase VMT. As appropriate, this shall include transportation projects and land use/policy plans as well as proposed development projects.

Program M-3.2A: Screening Criteria for VMT Analysis. Adopt and maintain screening criteria for different land uses and project types to determine when a VMT analysis is required as part of the environmental review process. Screening criteria should be revisited over time to ensure that they are appropriate.

Program M-3.2B: Thresholds for Determining a Significant VMT Impact. Adopt and maintain thresholds to determine if a VMT impact may be considered “significant” under the California Environmental Quality Act (CEQA).

Program M-3.2C: Mitigation Measures for VMT Impacts. Develop and implement mitigation measures that can be applied to projects with potentially significant VMT impacts in order to reduce those impacts to less than significant levels (see Policy M-3.3 and Program M-3.3A).

Policy M-3.5: Alternative Transportation Modes. Support efforts to create convenient, cost-effective alternatives to single passenger auto travel. Ensure that public health, sanitation, and user safety is addressed in the design and operation of alternative travel modes.

Policy M-3.7: Design Features that Support Transit. For projects located in or near transit hubs such as Downtown San Rafael, incorporate design features that facilitate walking, cycling, and easy access to transit.

Policy M-5.2: Attractive Roadway Design. Design roadway projects to be attractive and, where possible, to include trees, landscape buffer areas, public art, public space, and other visual enhancements. Emphasize tree planting and landscaping along all streets.

Policy M-6.1: Encouraging Walking and Cycling. Wherever feasible, encourage walking and cycling as the travel mode of choice for short trips, such as trips to school, parks, transit stops, and neighborhood services. Safe, walkable neighborhoods with pleasant, attractive streets, bike lanes, public stairways, paths, and sidewalks should be part of San Rafael's identity.

Program M-6.1A: Bicycle and Pedestrian Master Plan Implementation. Maintain San Rafael's Bicycle and Pedestrian Master Plan (BPMP) and update the Plan as required to ensure eligibility for grant funding. The BPMP should be a guide for investment in pedestrian and bicycle infrastructure, and for programs to make walking and cycling a safer, more convenient way to travel.

Program M-6.1B: Station Area Plans. Implement the pedestrian and bicycle improvements in the 2012 Downtown Station Area Plan and the 2012 Civic Center Station Area Plan.

Bicycle and Pedestrian Master Plan. The Bicycle and Pedestrian Master Plan (BPMP) is a San Rafael framework aimed at enhancing the city's walkability and bike-friendliness while concurrently reducing carbon emissions. Its primary goals are to transform San Rafael into a pedestrian and cyclist-friendly environment, thereby encouraging more residents to walk and bike as modes of transportation. The BPMP also emphasizes community involvement by soliciting public input to identify and guide investments in pedestrian and bicycle infrastructure for the next 5 to 10 years. This plan was last updated in 2018 and identifies several improvements in the proposed project vicinity (see Table 4.9.A) that emphasize project site connection with the SMART Civic Center Station, including a proposed multi-use path along Merrydale Road between Las Gallinas Avenue and the Civic Center Station and improved bicycle and pedestrian crossing conditions at the intersection of Merrydale Road and Las Gallinas Avenue.

Civic Center Station Area Plan. The Civic Center Station Area Plan, developed through an extensive public process in 2012, aimed to create a community vision around the SMART station, prioritizing accessibility for pedestrians, cyclists, and transit users, while fostering housing and economic development. Preserving neighborhood character, managing station parking, and protecting nearby creeks and wetlands were key objectives. The plan proposed improvements like wider sidewalks, pedestrian/bicycle links, shuttle routes, a bus transfer point, and traffic safety enhancements.

North San Rafael Vision Promenade Conceptual Plan. The North San Rafael Vision Promenade Conceptual Plan (Promenade Conceptual Plan), which is an integral component of the community's "Vision North San Rafael in The Year 2010" report, outlines several key proposals. These include enhancing bicycle and pedestrian connections between the Terra Linda Recreation Center and Lagoon Park at the Marin County Civic Center, addressing the need for improved public parks and the creation of new plazas, and implementing a cohesive and recurring theme that celebrates local culture, people, natural history, and North San Rafael's community identity through consistent "theme details." This plan serves as a framework to enrich the area with enhanced amenities while fostering a sense of place and community.

San Rafael Transportation Impact Analysis (TIA) Guidelines The City's TIA Guidelines prescribe VMT thresholds of significance and local criteria for analysis. The TIA Guidelines define the following project types and thresholds of significance for VMT under baseline conditions:

- **Residential:** Home-based VMT per capita exceeds the existing regional average minus 15 percent;
- **Employment (e.g., office):** Home-based work VMT per employee exceeds the existing regional average minus 15 percent;
- **Retail:** Project total VMT rate exceeds the existing regional average rate per employees minus 15 percent
- **Mixed-Use Projects and Land Use Plans:** Each land use type evaluated individually against residential, office, and retail thresholds above, and aggregate VMT per service population exceeds the regional average minus 15 percent;
- **Other Land Use Types:** City to develop project-specific threshold; and
- **Redevelopment:** If a redevelopment project leads to a net increase in VMT based on evaluation of individual land uses, or project exceeds the respective thresholds for applicable land use types.

4.9.2 Impacts and Mitigation Measures

This section analyzes the potential of the proposed project to result in impacts on the transportation network. The section begins with the criteria of significance, which establish the thresholds used to determine whether an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and identifies mitigation measures, as appropriate.

4.9.2.1 Significance Criteria

The following thresholds of significance were adapted from Appendix G of the *State CEQA Guidelines* and the specific thresholds identified in the San Rafael TIA Guidelines. Based on these thresholds, implementation of the proposed project would have a significant impact related to transportation if it would:

- Threshold 4.9.1:** Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;
- Threshold 4.9.2:** Conflict or be inconsistent with *State CEQA Guidelines* Section 15064.3, subdivision (b);
- Threshold 4.9.3:** Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or

Threshold 4.9.4: Result in inadequate emergency access.

To apply the significance criteria listed above, the analysis in this section uses the following significance thresholds, which are based on federal, State, and local regulations.

Threshold 4.9.1: Conflict with Applicable Plans, Ordinances, or Policies. The following thresholds are used to determine whether the proposed project would conflict with an applicable plan, ordinance, or policy, including the CMP.

Roadway System. The proposed project would create a significant impact related to the roadway system if any of the following criteria are met:

1. At unsignalized intersections, the project results in any of the traffic signal warrants included in the California Manual on Uniform Traffic Control Devices to be satisfied, or for a location where any of the warrants are satisfied prior to the project, the project increases overall travel through the intersection by more than 1 percent; or
2. The proposed project creates the potential for excessive vehicle queue spillback that could periodically block or interfere with pedestrian, bicycle, or transit facilities.

Transit System. The proposed project would create a significant impact related to transit service if it interferes with existing transit facilities or precludes the construction of planned transit facilities.

Bicycle System. The proposed project would create a significant impact related to the bicycle system if any of the following criteria are met:

1. The proposed project disrupts existing bicycle facilities;
2. The proposed project interferes with planned bicycle facilities; or
3. The proposed project creates inconsistencies with adopted bicycle system plans, guidelines, policies, or standards.

Pedestrian System. The proposed project would create a significant impact related to the pedestrian system if any of the following criteria are met:

1. The proposed project disrupts existing pedestrian facilities;
2. The proposed project interferes with planned pedestrian facilities; or
3. The proposed project creates inconsistencies with adopted pedestrian system plans, guidelines, policies, or standards.

Threshold 4.9.2: Vehicle Miles Traveled. The proposed project would include a mix of residential and retail uses and would also entail redevelopment of some existing retail space with residential uses. Recognizing that the proposed project does not fit into a single VMT threshold category, the City has chosen to directly apply the City's VMT significance threshold for residential uses. For retail

uses, VMT is assessed consistent with the redevelopment threshold given that there are existing retail uses on the site that would be redeveloped. To analyze the specific VMT effects of retail development, the total retail VMT generated at the site under plus project conditions is compared to VMT generated under a no-build condition. Based on the above, the following thresholds are used for baseline VMT:

- **Residential:** The impact would be significant if the home-based VMT per capita exceeds 11.4 miles (15 percent below the nine-county Bay Area regional average of 13.4 VMT per capita as obtained from the Transportation Authority of Marin Demand Model [TAMDM]);
- **Retail:** The impact would be significant if the total retail VMT exceeds the VMT generated under the no-build conditions.

In addition to assessing project VMT under baseline conditions, the TIA Guidelines specify that cumulative conditions shall also be assessed. The TIA Guidelines indicate that the citywide average total VMT per service population should be compared between the cumulative “no project” and “plus project” scenarios. Therefore, the following threshold is used for cumulative VMT:

- **Cumulative (Year 2040):** The impact would be significant if the City of San Rafael cumulative (year 2040) average total VMT per service population of 18.8 miles increases as a result of the proposed project.

Threshold 4.9.3: Hazards and Incompatible Uses. The proposed project results in impacts related to hazardous design features if it would not meet the criteria for sight distance contained in the Highway Design Manual (HDM) published by Caltrans.

Threshold 4.9.4: Emergency Access. The proposed project would result in impacts related to emergency access if it would create a project site that is inaccessible to emergency vehicles or limit or restrict emergency vehicle access to emergency routes or roadway facilities in the vicinity of the project site.

4.9.2.2 Proposed Project

As described in Chapter 3.0, Project Description, of this EIR, the proposed project would result in the redevelopment of the project site in two phases. The buildout of Phase 1 would include the demolition of approximately 308,946 square feet of existing commercial space and construction of approximately 44,380 square feet of new commercial space and up to 922 residential units and would be completed by 2025. Buildout of Phase 2 is expected to occur by 2040, and would include the demolition of approximately 339,861 square feet of existing commercial space and construction of up to 55,440 square feet of commercial space and up to 500 additional residential units. At full buildout, the proposed project would include a total of up to approximately 217,520 square feet of commercial space and up to 1,422 residential units in six buildings (1,746,936 square feet of residential area). The potential impacts that would occur with implementation of Phase 1 (2025 Master Plan) and Phase 2 (2040 Vision Plan) are differentiated by phase in this section.

Trip Generation. The anticipated trip generation for the existing mall and proposed project were estimated using standard rates published by the Institute of Transportation Engineers (ITE) in the Trip Generation Manual, 11th Edition. The ITE rates for a Shopping Center larger than 150,000 square feet (ITE Code 820) and Mid-Rise Multifamily Housing (ITE Code 221) were used. As trip generation rates for shopping centers grow logarithmically with size (larger shopping centers generate fewer trips per square foot than smaller shopping centers), the fitted curve equation was applied for the existing and proposed retail land uses to reflect the increased trip rates as the size of the shopping center decreases.

Internal Capture Trips. The Trip Generation Manual also includes data and methodologies that can be applied to determine the proportion of internal trips that may occur within a development area that includes a variety of land uses. Internal trips occur at mixed-use development, and in the case of the proposed project, would consist of residents working or patronizing adjacent retail uses and shoppers visiting more than one retailer. The majority of these trips would be made by walking, and the few that would be made by automobile would only travel on site and therefore would not affect the adjacent street network or contribute substantial VMT.

Pass-by Trips. Some portion of traffic associated with retail uses is drawn from existing traffic on nearby streets. These vehicle trips are not considered new, but instead are comprised of drivers who are already driving on the adjacent street system and choose to make an interim stop and are referred to as “pass-by.” The percentage of these pass-by trips was developed based on information provided in the Trip Generation Manual. This reference includes PM peak-hour pass-by data collected at numerous locations for many land uses, such as the retail use applied in this traffic analysis. It is noted that larger shopping centers tend to have lower pass-by rates because they act more as primary destinations. Therefore, only data points with areas within 150,000 square feet of each shopping center size were used, resulting in average pass-by rates of 15 percent for the existing 766,507-square-foot shopping center, 20 percent for the Phase 1 shopping center of 501,941 square feet,¹¹ and 32 percent for the Phase 2 shopping center of 217,520 square feet. While fewer pass-by trips would occur during the AM peak hour, a portion of the PM peak-hour pass-by rate was assigned to the AM peak hour to account for trips made to uses such as the existing Peets Coffee, which may attract some drivers from Northgate Drive or Las Gallinas Avenue heading to work or from dropping children off at area schools. A pass-by value between the AM and PM peak hour was assigned to each daily rate to account for the overall average pass-by across a typical weekday.

¹¹ Since completion of the TIA, the project plans have been refined from 498,661 square feet of commercial area during Phase 1 and a total of 225,100 square feet of commercial area at project buildout (implementation through Phase 2); this minor increase in Phase 1 square footage and decrease in buildout square footage would be negligible and would not substantially change the analysis or conclusions presented in the TIA or in the analysis in this section of the EIR.

Total Project Trip Generation. The expected trip generation for the Master Plan phase of the proposed project is shown in Table 4.9.C, with deduction taken for trips made to and from building space in the existing Northgate Mall, which would cease with demolition of the space for construction of the proposed project, as well as for pass-by and internal capture. Phase 1 of the proposed project is expected to generate an average of 20,739 trips per day, including 735 trips during the AM peak hour and 1,734 during the PM peak hour. After deductions are taken into account, the proposed project would be expected to generate a net reduction of 3,585 trips on a daily basis, including **adding 172 trips during the AM peak hour and reducing 345 trips during the PM peak hour**. These new morning peak-hour trips would represent the increase in traffic associated with the proposed project compared to existing volumes.

Table 4.9.C: Phase 1 Trip Generation Summary

Land Use	Units	Daily		AM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Existing											
Shopping Center	-766,507 ksf	33.76	-25,877	0.76	-586	-363	-223	3.19	-2,446	-1,174	-1,272
Pass-by		-6%	1,553	-4%	23	15	8	-15%	367	176	191
Existing Subtotal			-24,324	--	-563	-348	-215	--	-2,079	-998	-1,081
Proposed – Phase 1											
Shopping Center	498,661 ksf	37.87	18,884	0.86	428	265	163	3.60	1,795	861	934
Townhouses	92 du	7.20	662	0.48	44	14	30	0.57	52	30	22
Apartments	885 du	4.54	4,018	0.37	327	75	252	0.39	345	211	134
Proposed Subtotal			23,564	--	799	354	445	--	2,192	1,102	1,090
Internal Capture		-5%	-1,178	-5%	-40	-18	-22	-5%	-110	-55	-55
Pass-by		-9%	-1,647	-6%	-24	-15	-9	-20%	-348	-167	-181
Proposed Total			20,739	--	735	321	414	--	1,734	880	854
Net New Total (Phase 1 Proposed Less Existing)			-3,585	--	172	-27	199	--	-345	-118	-227

Source: *Transportation Impact Study for the Northgate Town Square Project* (W-Trans 2023).

du = dwelling units

ksf = thousand square feet

The expected trip generation for buildout through Phase 2 (including Phase 1) of the proposed project is shown in Table 4.9.D. As shown in Table 4.9.D, buildout of the proposed project would generate an average of 15,940 trips per day, including 740 during the AM peak hour and 1,193 during the PM peak hour (or a total decrease of 4,799 trips compared to Phase 1). With deductions for the existing land use, pass-by trips, and internal capture included, the proposed project is anticipated to result in 8,384 fewer trips per day compared to existing conditions, including **a net increase of 177 trips during the AM peak hour and a net decrease of 886 trips during the PM peak hour**. Compared to Phase 1, buildout of the project would further reduce trips by 4,799 per day and 541 during the PM peak hour, and would add 5 more trips during the AM peak hour.

Table 4.9.D: Full Buildout Trip Generation Summary

Land Use	Units	Daily		AM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Existing											
Shopping Center	-766,507 ksf	33.76	-25,877	0.76	-586	-363	-223	3.19	-2,446	-1,174	-1,272
Pass-by		-6%	1,553	-4%	23	15	8	-15%	367	176	191
Existing Subtotal			-24,324		-563	-348	-215		-2,079	-998	-1,081
Proposed - Buildout											
Shopping Center	225,100 ksf	52.16	11,741	1.18	266	165	101	4.50	1,012	486	526
Townhouses	92 du	7.20	662	0.48	44	14	30	0.57	52	30	22
Apartments	1,330 du	4.54	6,038	0.37	492	113	379	0.39	519	316	203
Proposed Subtotal			18,441		802	292	510		1,583	832	751
Internal Capture		-5%	-922	-5%	-40	-15	-25	-5%	-79	-42	-37
Pass-by		-14%	-1,579	-9%	-22	-14	-8	-32%	-311	-149	-162
Proposed Total			15,940		740	263	477		1,193	641	552
Net New Total (Proposed Buildout Less Existing)			-8,384		177	-85	262		-886	-357	-529

Source: *Transportation Impact Study for the Northgate Town Square Project* (W-Trans 2023).

du = dwelling unit

ksf = 1,000 square feet

4.9.2.3 Project Impacts

This section analyzes potential project-specific and cumulative impacts to the transportation and circulation network in the study area. Impacts that would occur with implementation of Phase 1 (2025 Master Plan) and Phase 2 (2040 Vision Plan) are differentiated where appropriate.

Threshold 4.9.1: Conflict with Applicable Plans, Ordinances, or Policies. This section discusses the proposed project’s impacts related to conflicts with applicable plans, ordinances, and policies. As stated above in Section 4.9.2.1, specific thresholds are used to determine whether the proposed project would conflict with an applicable plan, ordinance, or policy. This section assesses project consistency with each of these thresholds.

Roadway System. Impacts to the roadway system were evaluated through a signal warrant analysis and a vehicle queuing analysis, described below.

Signal Warrant Analysis. A signal warrant analysis was conducted to evaluate whether or not vehicle trips generated by the proposed project would require signalization of currently unsignalized intersections to accommodate traffic flows. The signal warrant analysis was performed at unsignalized intersections in the project vicinity according to the methodology contained in the California Manual on Uniform Traffic Control Devices (MUTCD) published by Caltrans. The study analyzed the intersections of Northgate Drive/Thorndale Drive, Northgate Drive/El Faisan Drive, and Northgate Drive/Nova Albion Way. Based on the signal warrant analysis results, a traffic signal is not warranted at any of the study intersections.¹² Since signal warrant conditions are not met at any of the intersections, the proposed project

¹² Parametrix. 2023. *Signal Warrant Analysis Results for the Northgate Town Square Project*. October 3.

would result in a **less than significant** impact related to needed signalization of intersections on the roadway system.

Vehicle Queuing Analysis. A vehicle queuing analysis was performed according to the City's TIA Guidelines to determine adequacy of stacking space in dedicated turn lanes at study intersections as a result of vehicle trips that would be generated by the project. Based on queue analysis results, vehicle queues at intersections in the project vicinity would either be contained within the existing turn lane capacities, or the queue increase in an already deficient stacking distance would be less than 50 feet.¹³ As a result, the proposed project would not create the excessive vehicle queue spillback that could periodically block or interfere with pedestrian, bicycle, or transit facilities. This impact would be **less than significant**.

Transit System. Existing and planned transit facilities within the vicinity of or accessed from the project area are described above in Section 4.9.1.1. The proposed project would not interfere with existing transit facilities and would not preclude the construction of planned transit facilities, including the currently unfunded multi-use trail planned along Merrydale Road. Existing transit routes are adequate to accommodate project-generated trips, and existing transit stops are within an acceptable walking distance of the site. Consequently, the proposed project would have a **less than significant** impact on the transit system.

Bicycle System. Existing bicycle facilities together with the shared use of minor streets provide adequate access for bicyclists. The facilities adjacent to the project site include bicycle lanes on Northgate Drive, Las Gallinas Avenue, and Del Presidio Boulevard, and the multi-use trail parallel to Las Gallinas Avenue. These facilities would be maintained with development of the project. A network of bicycle lanes would be provided on the internal street network around the project's residential areas, while the remainder of the streets would have shared lane markings. A new multi-use trail is proposed to extend from the existing multi-use trail at Las Gallinas Avenue/Merrydale Road into the center of the site, where a bicycle station with a repair area and bicycle lockers would be located. Additionally, the multi-use trail along the Las Gallinas Avenue frontage would be extended south to Northgate Drive as part of the project. The proposed project would not disrupt existing bicycle facilities, would not interfere with planned bicycle facilities, and would maintain consistency with the San Rafael Bicycle and Pedestrian Master Plan. As a result, the proposed project would have a **less than significant** impact on the bicycle system.

Pedestrian System. Pedestrian access to the project site is provided by continuous sidewalks along Northgate Drive and Las Gallinas Avenue, as well as sidewalks along the internal roadways. Sidewalks surrounding the project site would not be altered and would continue to provide access to the site. A new multi-modal path would be introduced by the project along the Las Gallinas Avenue frontage. Internal sidewalks and walkways proposed by the project would provide access to and between the residential and commercial uses. Additionally, the proposed project would connect to existing and planned pedestrian facilities, including the planned but currently unfunded multi-modal path along Merrydale Road to the Marin Civic Center SMART station. The proposed project would not disrupt existing pedestrian facilities, would not

¹³ W-Trans. 2023. *Transportation Impact Study for the Northgate Town Square Project*. February 14.

interfere with planned pedestrian facilities, and would maintain consistency with the San Rafael Bicycle and Pedestrian Master Plan. As such, the proposed project would result in a **less than significant** impact on the pedestrian system.

As discussed in Section 4.9.1.3, Regulatory Framework, additional adopted plans and policies are applicable to the project at the regional and local level. As discussed in more detail below, for CEQA purposes, the proposed project would be consistent with applicable plans, ordinances, and policies that address the circulation system as shown in Table 4.9.E; therefore, impacts would be **less than significant**.

Threshold 4.9.2: Vehicle Miles Traveled. As discussed in Section 4.9.2.1, Significance Criteria, the proposed project would result in a significant impact related to VMT if the home-based VMT per capita exceeds 11.4 miles or the total retail VMT exceeds the VMT generated under the no-build conditions.

Forecasts of regional travel by various modes were determined using TAMDM; the travel model is a set of mathematical procedures and equations that represent the variety of transportation choices that people make, and how those choices result in trips on the transportation network. The TAMDM is an activity-based model that is a member of the Coordinated Travel – Regional Activity-Based Modeling Platform (CT-RAMP) family of models. TAMDM is nested within the nine-county Bay Area Travel Model Two activity-based model maintained by the MTC. The MTC version of the CT-RAMP features a detailed spatial system, including an all-streets transportation network with 4,800 Transportation Analysis Zones (TAZs) and almost 40,000 Micro-Analysis Zones (MAZs). The project site is located within TAZ 800168 and MAZs 811396, 811677, 812868, and 812896 in TAMDM.

The most recent version of TAMDM was used to identify the VMT generated by land uses in Marin County as well as the entire Bay Area region. For the proposed project, the 2019 version of TAMDM that includes the SMART commuter rail service, and the 2040 version that incorporates the changes envisioned by long-range land use plans throughout Marin County, including the San Rafael General Plan adopted in 2021, were used to produce VMT estimates. TAMDM requires land uses to be defined for each geographic area in the region (i.e., the MAZ). The model land use inputs include numbers of households, persons and their attributes, employees by employment category, as well as enrollment at schools. The land use and population changes associated with the proposed project were compiled and used in the applied model runs.

For analysis of the residential uses, the VMT associated with all home-based trips made by residents are assessed. The associated average residential VMT per capita is calculated by summing this total vehicle mileage and dividing by the projected number of residents. Similarly, the regional average VMT per capita is calculated by summing the vehicle mileage for all Bay Area trips and dividing the Bay Area population. For retail uses, VMT is analyzed as total retail VMT rather than in a per-person efficiency metric. The total retail VMT associated with existing and proposed quantities of retail development within the project TAZ and MAZs were extracted from the TAMDM for each analysis scenario. For the cumulative (2040) scenarios, a total VMT per service population performance metric was used, focusing on the total VMT generated within San Rafael. This total citywide VMT and corresponding service populations were extracted from the TAMDM for each cumulative scenario. The service population is defined as the sum of all residents and workers in San Rafael.

Table 4.9.E: Project Compliance with Applicable Transportation-Related Plans, Ordinance, and Policies

Plan/Ordinance/Policy	Project Consistency
Plan Bay Area 2050	Consistent. The proposed project would be consistent with the Plan Bay Area 2050 goals and performance targets for transportation system effectiveness. The proposed project would develop new housing units that would locate residents near existing residential, office, and commercial uses, reducing the demand for travel by single-occupancy vehicles. In addition, the project area is served by public transit facilities and would provide enhanced internal bicycle and pedestrian facilities, which would also help to reduce the demand for travel by single-occupancy vehicles. According to the Equity Priority Community designation, the project would align with regional growth strategies and equity priority zones.
Congestion Management Program (CMP)	Not Applicable. Phase 1 of the proposed project would generate 345 fewer vehicle trips during the PM peak hour, and Phase 2 would generate 866 fewer vehicle trips during the PM peak hour, compared to the CMP threshold of projects that would generate 100 PM peak-hour vehicle trips. Consequently, the project would not conflict with the CMP requirements, and a CMP analysis is not necessary.
San Rafael General Plan: Program C-11e: Reduction of Single-Occupancy Vehicles. Encourage developers of new projects in San Rafael, including City projects, to provide improvements that reduce the use of single-occupancy vehicles. These improvements could include preferential parking spaces for carpools, bicycle storage and parking facilities, and bus stop shelters.	Consistent. The proposed project would align with the goal of reducing single-occupancy vehicle use in San Rafael. The project would promote biking by creating new bicycle facilities and a network of bicycle facilities and sidewalks throughout the project site and connecting to external bicycle facilities. The project’s location near public transit facilities would further encourage and support the use of alternative transportation modes. This comprehensive approach would ensure consistency with the objective to reduce single-occupancy vehicle travel in San Rafael.
Policy M-2.5: Traffic Level of Service. Maintain traffic level of service (LOS) standards that ensure an efficient roadway network and provide a consistent basis for evaluating the transportation effects of proposed development projects on local roadways.	Consistent. A comprehensive LOS analysis was conducted to determine potential impacts of the project on traffic circulation (refer to Section 4.9.3, Non-CEQA Analysis). The evaluation provided in the analysis shows that all of the intersections in the project vicinity would operate at an acceptable LOS in the future with the addition of traffic generated by both Phase 1 and Phase 2 (through buildout) of the proposed project.
Program M-2.1A: Complete Streets. Consistent with State “Complete Streets” requirements, maintain street design and engineering standards that plan for the needs of all travelers and minimize conflicts between competing modes.	Consistent. In alignment with State “Complete Streets” requirements, both phases of the proposed project would co-locate diverse land uses and would provide pedestrian and bicycle infrastructure that minimizes conflicts between competing travel modes.
Policy M-3.2: Using VMT in Environmental Review. Require an analysis of projected vehicle miles traveled (VMT) as part of the environmental review process for projects with the potential to significantly increase VMT. As appropriate, this shall include transportation projects and land use/policy plans as well as proposed development projects.	Consistent. The proposed project would align with Policy M-3.2, which necessitates the inclusion of an analysis of projected VMT as a component of the environmental review process. The project’s VMT assessment indicates that both the residential and retail land use components would be expected to have a less than significant impact on VMT for both phases of the proposed project (Section 4.9.2), thereby adhering to the policy’s directives.
Policy M-3.5: Alternative Transportation Modes. Support efforts to create convenient, cost-effective alternatives to single passenger auto travel. Ensure that public health, sanitation, and user safety is addressed in the design and operation of alternative travel modes.	Consistent. Both phases of the proposed project would actively encourage alternative transportation options that are convenient and cost-effective, reducing reliance on single-passenger car travel. Furthermore, the proposed project would incorporate dedicated pedestrian and bike infrastructure, facilitating safe and accessible travel and fostering sustainability, safety, and inclusivity in urban mobility.
Policy M-3.7: Design Features that Support Transit. For projects located in or near transit hubs such as Downtown San Rafael, incorporate design features that facilitate walking, cycling, and easy access to transit.	Consistent. The project would be located near the SMART Civic Center Station and would also be adjacent to several local bus routes. The project would facilitate easy access to transit stops by implementing a network of attractive bicycle and pedestrian facilities throughout the site.

Table 4.9.E: Project Compliance with Applicable Transportation-Related Plans, Ordinance, and Policies

Plan/Ordinance/Policy	Project Consistency
<p>Policy M-5.2: Attractive Roadway Design. Design roadway projects to be attractive and, where possible, to include trees, landscape buffer areas, public art, public space, and other visual enhancements. Emphasize tree planting and landscaping along all streets.</p>	<p>Consistent. Both phases of the proposed project would incorporate landscaping and planted trees along a new roadway surrounding the Town Square and along other internal drive aisles throughout the site.</p>
<p>Policy M-6.1: Encouraging Walking and Cycling. Wherever feasible, encourage walking and cycling as the travel mode of choice for short trips (e.g., trips to school, parks, transit stops, and neighborhood services). Safe, walkable neighborhoods with pleasant, attractive streets, bike lanes, public stairways, paths, and sidewalks should be part of San Rafael’s identity.</p>	<p>Consistent. The proposed project would align with the goal of encouraging walking and cycling as the preferred travel mode for short trips, such as journeys to schools, parks, transit stops, and neighborhood services. It would create safe and walkable access ways with appealing streets that are enhanced by the presence of bike lanes and sidewalks. Both phases of the proposed project would promote active transportation by implementing a network of bicycle facilities and sidewalks throughout the project and connecting to existing active transportation networks outside the project site.</p>
<p>San Rafael Bicycle and Pedestrian Master Plan</p>	<p>Consistent. The project would align with planned projects identified in the Bicycle and Pedestrian Master Plan, including the facilitation of an enhanced crossing at the intersection of Merrydale Road and Las Gallinas Avenue. The project is consistent with plan goals of increasing safety and connectivity for all circulation network users, and would also establish new bicycle and pedestrian facilities throughout the project site.</p>
<p>Civic Center Station Plan</p>	<p>Consistent. The proposed project would align with the Civic Center Station Area Plan’s vision to enhance multi-modal connection between the project site and the SMART Civic Center Station by providing for improved intersection crossing of Las Gallinas Avenue at Merrydale Road for bicyclists and pedestrians.</p>
<p>Promenade Conceptual Plan</p>	<p>Consistent. The proposed project would be consistent with the Promenade Conceptual Plan by providing pedestrian and bicycle facilities throughout the site, which would serve to foster a sense of place and community on the northern end of the envisioned promenade.</p>

Source: Compiled by Parametrix (2023).

SMART = Sonoma-Marín Area Rail Transit

Residential Land Uses. The TAMDM indicates that the nine-county Bay Area has a baseline average VMT of 13.4 miles per capita. Applying the residential significance threshold, the proposed project would have a significant VMT impact if its residential VMT per capita exceeds a level of 15 percent below the regional average, or 11.4 VMT per capita.

A summary of the VMT analysis is provided in Table 4.9.F. As shown in Table 4.9.F, Phase 1 of the proposed project is projected to produce 11.0 VMT per capita under the existing baseline scenario, reducing to 9.0 VMT per capita under the 2040 scenario. Buildout of the proposed project with implementation of Phase 2 is projected to result in 10.7 VMT per capita under the 2040 scenario. Therefore, the residential components of the proposed project would have a **less than significant impact** on VMT during implementation of Phase 1 and projected buildout through Phase 2.

Table 4.9.F: Residential VMT Analysis Summary

Scenario	VMT per Capita Significance Threshold	Project Site			
		Residential VMT	Residential Population	VMT Per Capita	Below Threshold?
Existing Plus Phase 1	11.4	26,187	2,391	11.0	Yes
2040 Plus Phase 1	11.4	21,570	2,391	9.0	Yes
2040 Plus Phase 2	11.4	39,340	3,662	10.7	Yes

Source: *Transportation Impact Study for the Northgate Town Square Project* (W-Trans 2023).

Note: Existing conditions reflect full occupancy of the existing mall site.

VMT= vehicle miles traveled

Retail Land Uses. The proposed project would have a significant VMT impact if its total retail VMT exceeds that generated under “no build” conditions. Dedicated runs of the TAMDM were performed for existing baseline and 2040 conditions without the project, as well as baseline conditions with implementation of Phase 1, and 2040 conditions with Phase 2. Post-processing of the TAMDM model output was conducted to isolate the total retail VMT projected to be generated by retail uses at the project site.

As shown in Table 4.9.G, the TAMDM modeling results indicate that Phase 1 would be expected to reduce the total retail VMT generated at the project site by approximately 38,350 to 39,600 miles per day as compared to “no build” conditions. In the year 2040 with buildout of Phase 2, the total retail VMT is projected to be approximately 81,100 miles less per day than “no build” conditions. Since the redevelopment of retail uses proposed by the project would lead to a reduction in total retail VMT, the project’s retail component is considered to have a **less than significant impact** on VMT.

Table 4.9.G: Project Site Retail VMT Summary

Scenario	No Build Conditions		Plus Project Conditions		
	Model Base Year	Total Retail VMT	Total Retail VMT	Change	Below Threshold?
Existing Plus Phase 1	2019	95,846	57,495	-38,351	Yes
2040 Plus Phase 1	2040	108,865	69,253	-39,612	Yes
2040 Plus Phase 2	2040	108,865	27,721	-81,144	Yes

Source: *Transportation Impact Study for the Northgate Town Square Project* (W-Trans 2023).

VMT = vehicle miles traveled

Cumulative VMT. As discussed in Section 4.9.2.1, Significance Criteria, the proposed project would have a significant impact on VMT if it causes the City’s cumulative (year 2040) average total VMT per service population to increase. Based on the TAMDM model runs performed for the proposed project, which are summarized below in Table 4.9.H, the City is projected to have an average total VMT per service population of 18.8 under the “no build” condition. In 2040 with development under Phase 1, the City’s average VMT per service population is projected to be 18.1 miles, and in 2040 with implementation of Phase 2 it is projected to be 18.0 miles. Therefore, because both Phases 1 and 2 would each result in reduction to the City’s average total VMT per service population, the proposed project would be considered to have a **less than significant** impact on VMT.

Table 4.9.H: Cumulative VMT Analysis Summary

Scenario	Total VMT City of San Rafael	Total Service Population	Total VMT per Service Population	Below Threshold?
2040 No Project	2,130,263	113,571	18.8	N/A
2040 Plus Phase 1	2,095,779	115,515	18.1	Yes
2040 Plus Phase 2	2,089,433	116,330	18.0	Yes

Source: *Transportation Impact Study for the Northgate Town Square Project* (W-Trans 2023).

N/A = not applicable

VMT = vehicle miles traveled

Threshold 4.9.3: Hazards and Incompatible Uses. This section discusses whether or not the proposed project would substantially increase hazards due to geometric design features or incompatible uses. The potential for the project to impact safety is evaluated in terms of the adequacy of sight distance and the need for turn lanes at the project driveways.

Site Access. The project site has 12 access points. Clockwise from the northwest corner, they are:

1. Intersection of Las Gallinas Avenue/Del Presidio Boulevard (inbound only);
2. Driveway 580 feet east of Las Gallinas Avenue/Del Presidio Boulevard;
3. Driveway 300 feet north of Las Gallinas Avenue/Merrydale Road;
4. Intersection of Las Gallinas Avenue/Merrydale Road;
5. Driveway 400 feet north of Los Ranchitos Road-Las Gallinas Avenue/Northgate Drive;
6. Driveway 230 feet north of Los Ranchitos Road-Las Gallinas Avenue/Northgate Drive;
7. Driveway 140 feet north of Los Ranchitos Road-Las Gallinas Avenue/Northgate Drive;
8. Driveway 340 feet west of Los Ranchitos Road-Las Gallinas Avenue/Northgate Drive
9. Driveway 100 feet west of Northgate Drive/El Faisan Drive
10. Intersection of Northgate Drive/Thorndale Drive; and
11. Driveway 400 feet south of Las Gallinas Avenue/Northgate Drive.

With implementation of the proposed project, the driveways 230 feet and 140 feet north of Los Ranchitos Road-Las Gallinas Avenue/Northgate Drive would be removed, and the driveway 100 feet west of Northgate Drive/El Faisan Drive would be moved to Northgate Drive/El Faisan Drive,

converting the existing tee intersection into a four-legged intersection. The other driveways would remain unchanged.

Sight Distance. Sight distances along Northgate Drive and Las Gallinas Avenue at the project driveways were evaluated using sight distance criteria contained in the HDM. The recommended sight distances for approaches on the major street to driveways and private street intersections are based on stopping sight distance with approach travel speed used as the basis for determining the recommended sight distance.

For the posted speed limit of 25 mph on Northgate Drive and Las Gallinas Avenue, the minimum stopping sight distance needed is 150 feet. Sight distances from each driveway except two were measured in excess of 250 feet in both directions, providing adequate stopping sight distance for vehicles traveling on the roadway at all driveway and side street approaches except for two.

One of the exceptions is the driveway 580 feet east of Las Gallinas Avenue/Del Presidio Boulevard. At this location, sight distance to the right (of traffic heading westbound) was measured at 210 feet. The speed of westbound drivers was checked through an informal speed survey using a speed radar gun. Due to the horizontal curve east of the driveway, no westbound drivers were recorded traveling faster than 23 mph. Since 150 feet of stopping sight distance is recommended for 25 mph and 210 feet of sight distance is available, sight lines to and from this driveway are adequate.

The other exception is the driveway 280 feet north of Northgate Drive/Thorndale Drive. Due to the dense vegetation south of this driveway combined with vertical grade on the driveway ascending up to the roadway, sight distance from the driveway to the left (of northbound traffic) is restricted to 160 feet. Another informal speed study was conducted to estimate the critical speed of traffic, which is defined as the speed at or below which 85 percent of drivers are observed to be traveling. Based on this informal study, the critical speed of northbound drivers on Northgate Drive just south of this driveway was measured at 32 mph.

The HDM provides minimum stopping sight distances for increments of 5 mph. Between these increments, the HDM defers to a Policy on Geometric Design of Highways and Streets published by the American Association of State Highway and Transportation Officials (AASHTO) (referred to as the Greenbook). The Greenbook prescribes a formula for converting speed into stopping sight distance that results in 216 feet for 32 mph. Therefore, the sight distance at this intersection would be inadequate resulting in a potentially hazardous design. This is a potentially significant impact.

Impact TRA-1 Implementation of the proposed project would worsen an existing hazardous geometric design feature at the driveway 280 feet north of Northgate Drive/Thorndale Drive. (S)

The Federal Highway Administration (FHWA) recommends that bushes and shrubs in the motorists' line of sight should be kept under 3 feet in height, and that trees and hanging branches be trimmed to a minimum height of 7 feet. It is noted that due to the vertical rise of the driveway as it ascends to match Northgate Drive, the eye level of a driver looking to enter

Northgate Drive is lower than on a descending or level driveway and therefore ground-based foliage such as shrubs and grasses may restrict sight lines more than at other locations. Therefore, the foliage in the sight triangle bound by a driver waiting 15 feet from the edge of travel on Northgate Drive, a northbound driver approaching from 216 feet from the south, and a straight line between the two should be entirely removed, as specified in Mitigation Measure TRA-1, below.

Mitigation Measure TRA-1: Sight Triangle Maintenance. The project sponsor shall submit plans showing that vegetation would be removed from the sight triangle shown on Plate 2 in the Transportation Impact Study (TIS) prepared for the proposed project (included as Appendix F to the Environmental Impact Report [EIR]). Consistent with the Federal Highway Administration's (FHWA) guide on Vegetation Control for Safety (2007), bushes and shrubs within a motorists' line of sight shall be kept under 3 feet in height, and trees and hanging branches shall be trimmed to a minimum height of 7 feet. The City's Community Development Director, or their designee, shall verify that the project plans show the sight triangle clear of vegetation consistent with FHWA guidelines prior to the issuance of any building permits. These conditions shall also be maintained throughout the life of the project. (LTS)

Implementation of Mitigation Measure TRA-1 would ensure that a minimum of 216 feet of sight distance would be available for drivers at the driveway 280 feet north of Northgate Drive/Thorndale Drive. Therefore, implementation of Mitigation Measure TRA-1 would reduce this impact to a **less than significant** level.

Access Analysis. Most driveways that would serve the project have existing left-turn lanes. The exceptions that were assessed for the need for a left-turn lane are:

- The driveway 580 feet east of Las Gallinas Avenue/Del Presidio Boulevard;
- The driveway 400 feet north of Los Ranchitos Road-Las Gallinas Avenue/Northgate Drive; and
- The intersection at Northgate Drive/Thorndale Drive.

It is noted that a left-turn lane into the project site does not exist at Las Gallinas Avenue/Del Presidio Boulevard; however, this movement is prohibited, so a warrant was not studied.

The need for a left-turn lane at each of the three driveways was evaluated in the TIS. Warrants were assessed for each driveway for both Phase 1 and Phase 2 under future 2040 conditions because this represents the highest background traffic volumes assessed. Because the left-turn warrant is based on traffic volumes, this presents the "worst case" scenario for a warranted left-turn lane. Under the AM peak-hour condition assessed, a left-turn lane is not warranted at any of the three driveways.

Conditions for the PM peak hour were not assessed as Phases 1 and 2 would both result in a reduction to inbound volumes during the PM peak hour compared to existing fully occupied site conditions. Additionally, there is no history of collisions involving drivers turning left into the project site that would demonstrate the need for additional left-turn lanes because there was only one collision reported during the 5-year study period involving a driver turning left into the project site, and that was at a location that already had a left-turn lane. Turn lane warrant worksheets are provided in the TIS. Therefore, project impacts due to site access would be **less than significant**.

Threshold 4.9.4: Emergency Access. The following section addresses potential impacts related to the adequacy of emergency access and the impact of the proposed project on response times.

Adequacy of Emergency Access. The City of San Rafael Municipal Code Chapter 4.08 adopts the 2019 California Fire Code with several amendments regarding emergency access. With regard to traffic, a fire access road of at least 20 feet in unobstructed width must be provided within 150 feet of all exterior building walls. Both phases of the proposed project would include a network of interior roads and parking aisles at least 20 feet wide that provide access within 150 feet of all building exteriors when combined with the public streets of Las Gallinas Avenue and Northgate Drive around the outside of the project site. There would be multiple interior paths through the project that connect the multiple driveways, providing alternative routes in the event one aisle or driveway is blocked. The proposed project would therefore have adequate emergency access, and this impact would be **less than significant**.

Impact on Response Times. As described in Section 4.9.2.2, the proposed project would result in a reduction in traffic on the surrounding roadway network over the course of the day and during the critical PM peak period. Therefore, neither phase of the proposed project would result in adverse impacts on emergency response times within the vicinity of the project site, and this impact would be **less than significant**.

4.9.2.4 Cumulative Impacts

This section discusses potential cumulative impacts to the transportation and circulation network in the study area. As summarized in this section, the proposed project, in combination with cumulative projects, would have **less than significant** impacts with respect to conflicts with applicable plans, VMT, hazards, and emergency access.

Conflicts with Applicable Plans, Ordinances, or Policies. As discussed above, for CEQA purposes, the proposed project would be consistent with applicable plans, ordinances, and policies that address the circulation system as shown in Table 4.9.E. The proposed project, in combination with future projects occurring over the 2040 buildout horizon of the General Plan, would not result in conflicts with applicable plans, policies, or ordinances governing the transportation system because each individual future project would be evaluated for consistency.

Vehicle Miles Traveled. Consistent with the OPR Technical Advisory on Evaluating Transportation Impacts in CEQA, 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.” A project that falls below an efficiency-based threshold that aligns with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. As described in Section 4.9.2.3, Project Impacts, the City of San Rafael cumulative (year 2040) average total VMT per service population would be 18.0 miles, which is less than the average total VMT per service population of 18.8 miles under the 2040 no build condition. Therefore cumulative VMT impacts would be less than significant.

Hazards or Incompatible Uses. Overall, cumulative land use development and transportation projects would promote accessibility for people walking to and through the site by conforming to General Plan policies and zoning regulations, and by adhering to planning principles that emphasize providing convenient connections and safe routes for people walking, bicycling, driving, and taking transit. Additionally, as with current practice, projects would be designed and reviewed in accordance with the City’s Public Works Department requirements, and the Department would provide oversight engineering review to ensure that the project is constructed according to City specifications. As a result, the cumulative projects would not generate activities that would increase hazards due to a design feature or incompatible use. For these reasons, the proposed project, in combination with cumulative projects, would have a less than significant cumulative impact with respect to design features or incompatible uses.

Emergency Access. Future development, as part of the City’s project approval process, would be required to comply with existing regulations, including General Plan policies and zoning regulations that have been prepared to minimize impacts related to emergency access. The City, throughout the 2040 buildout horizon, would implement the General Plan programs that require the City’s continued coordination with the San Rafael Police Department and the San Rafael Fire Department to establish circulation standards, adopt an emergency response route map, and equip all new traffic signals with pre-emptive traffic signal devices for emergency services. Furthermore, the implementation of the zoning regulations would help to minimize traffic congestion that could impact emergency access. For these reasons, the proposed project, in combination with cumulative projects, would have a less than significant cumulative impact with respect to emergency access.

4.9.3 Non-CEQA Analysis

4.9.3.1 Intersection Level of Service Analysis

The findings of the intersection LOS compliance analysis are presented in this section for informational purposes. The analysis scope and methodology, analysis scenarios, data collection, and LOS policy standards are detailed in the Transportation Operations Study¹⁴ prepared for the proposed project and included as Appendix H of this EIR. As stated above, LOS is no longer a CEQA threshold. However, LOS is used for local planning purposes. The LOS analysis determines whether the project traffic would cause an intersection’s LOS to exceed the City’s LOS standards or cause either the average delay or average critical delay to exceed the City’s intersection delay standards under existing and cumulative conditions.

¹⁴ W-Trans. 2023. *Transportation Operations Study for the Northgate Town Square Project*. February 14.

Baseline Plus Phase 1 Conditions. Traffic operations were evaluated at the study intersections under baseline conditions plus traffic generated by Phase 1 of the proposed project. Table 4.9.I provides the LOS result for the study intersections during the AM peak hour. As shown, all of the study intersections would operate at an acceptable LOS with the addition of Phase 1 project traffic.

Table 4.9.I: Baseline Plus Phase 1 AM Peak-Hour Intersection Levels of Service

Study Intersection & Approach	Standard		Baseline Conditions		Baseline Plus Master Plan	
	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
1. Manuel T. Freitas Parkway/Las Gallinas Avenue	<55.0	D	37.1	D	36.5	D
2. Manuel T. Freitas Parkway/Northgate Drive	<55.0	D	19.3	B	19.5	B
3. Manuel T. Freitas Parkway/Del Presidio Boulevard	--	Exempt	8.3	A	8.2	A
4. Manuel T. Freitas Parkway /US-101 South Ramps	<35.0	D	0.0	A	0.0	A
5. Redwood Highway/US-101 North On-Ramp	<35.0	D	0.7	A	1.0	A
6. Manuel T. Freitas Parkway/US-101 North Ramps	<35.0	D	4.5	A	4.5	A
7. Manuel T. Freitas Parkway/Redwood Highway-Civic Center Drive <i>Northbound (Civic Center Drive) Approach</i> <i>Southbound (Redwood Highway) Approach</i>	<55.0	E	4.4	A	4.8	A
	<55.0	E	7.9	A	8.9	A
	<55.0	E	8.1	A	8.0	A
8. Las Gallinas Avenue/Nova Albion Way	<55.0	D	33.3	C	34.8	C
9. Las Gallinas Avenue/Northgate Drive	<55.0	D	16.6	B	19.2	B
10. Las Gallinas Avenue/Del Presidio Boulevard	<55.0	D	22.1	C	22.6	C
11. Las Gallinas Avenue/Merrydale Road	<55.0	D	11.9	B	11.0	B
12. Merrydale Road/Civic Center Drive	N/A	F	15.1	B	16.4	B
13. Northgate Drive/Thorndale Drive <i>Eastbound (Thorndale Drive) Approach</i>	<35.0	D	0.7	A	0.6	A
	<35.0	D	12.7	B	14.3	B
14. Northgate Drive/El Faisan Drive <i>Northbound (El Faisan Drive) Approach</i> <i>Southbound (Project Driveway) Approach</i>	<35.0	D	1.2	A	2.7	A
	<35.0	D	12.4	B	15.3	C
	<35.0	D	--	--	13.9	B
15. Northgate Drive/Nova Albion Way <i>Northbound (Nova Albion Way) Approach</i>	<35.0	D	4.4	A	4.7	A
	<35.0	D	15.6	C	19.8	C
16. Los Ranchitos Road-Las Gallinas Avenue/Northgate Drive	<55.0	D	9.4	A	10.0	B
17. Los Ranchitos Road/North San Pedro Road	<55.0	D	7.6	A	7.6	A

Source: *Transportation Operations Study for the Northgate Town Square Project (W-Trans 2023)*

LOS = level of service

sec = seconds

US-101 = United States Route 101

Future Plus Phase 1 Conditions. Traffic operations were evaluated at the study intersections under future conditions plus traffic generated by Phase 1 of the proposed project. Table 4.9.J provides the LOS result for the study intersections during the AM peak hour. As shown, all of the study intersections would operate at an acceptable LOS with the addition of Phase 1 project traffic.

Future Plus Phase 2 Conditions. Traffic operations were evaluated at the study intersections under future conditions plus traffic generated by Phase 2 of the proposed project. Table 4.9.K provides the LOS result for the study intersections during the AM peak hour. As shown, all of the study intersections would operate at an acceptable LOS with the addition of Phase 2 project traffic.

Table 4.9.J: Future Plus Phase 1 AM Peak-Hour Intersection Levels of Service

Study Intersection & Approach	Standard		Future Conditions		Future Plus Master Plan	
	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
1. Manuel T. Freitas Parkway/Las Gallinas Avenue	<55.0	D	50.2	D	49.8	D
2. Manuel T. Freitas Parkway/Northgate Drive	<55.0	D	20.2	C	20.3	C
3. Manuel T. Freitas Parkway/Del Presidio Boulevard	--	Exempt ¹	8.5	A	8.3	A
4. Manuel T. Freitas Parkway/US-101 South Ramps	<35.0	D	0.0	A	0.0	A
5. Redwood Highway/US-101 North On-Ramp	<35.0	D	0.6	A	0.8	A
6. Manuel T. Freitas Parkway/US-101 North Ramps	<35.0	D	10.4	B	7.2	A
7. Manuel T. Freitas Parkway/Redwood Highway-Civic Center Drive <i>Northbound (Civic Center Drive) Approach</i> <i>Southbound (Redwood Highway) Approach</i>	<55.0	E	6.1	A	6.8	A
	<55.0	E	10.6	B	13.6	B
	<55.0	E	11.5	B	10.9	B
8. Las Gallinas Avenue/Nova Albion Way	<55.0	D	33.4	C	34.8	C
9. Las Gallinas Avenue/Northgate Drive	<55.0	D	14.7	B	17.4	B
10. Las Gallinas Avenue/Del Presidio Boulevard	<55.0	D	21.3	C	21.8	C
11. Las Gallinas Avenue/Merrydale Road	<55.0	D	12.0	B	11.0	B
12. Merrydale Road/Civic Center Drive	--	F	22.3	C	24.4	C
13. Northgate Drive/Thorndale Drive <i>Eastbound (Thorndale Drive) Approach</i>	<35.0	D	0.6	A	0.5	A
	<35.0	D	15.7	C	18.0	C
14. Northgate Drive/El Faisan Drive <i>Northbound (El Faisan Drive) Approach</i> <i>Southbound (Project Driveway) Approach</i>	<35.0	D	1.1	A	2.7	A
	<35.0	D	15.2	C	19.8	C
	<35.0	D	--	-	17.4	C
15. Northgate Drive/Nova Albion Way <i>Northbound (Nova Albion Way) Approach</i>	<35.0	D	5.1	A	6.3	A
	<35.0	D	22.4	C	32.0	D
16. Los Ranchitos Road-Las Gallinas Avenue/Northgate Drive	<55.0	D	10.5	B	11.0	B
17. Los Ranchitos Road/North San Pedro Road	<55.0	D	11.2	B	11.4	B

Source: *Transportation Operations Study for the Northgate Town Square Project (W-Trans 2023)*.

¹ Per General Plan Policy M-2.5, signalized freeway ramp intersections are exempt from LOS standards.

LOS = level of service

sec = seconds

US-101 = United States Route 101

Table 4.9.K: Future Plus Phase 2 AM Peak Hour Intersection Levels of Service

Study Intersection & Approach	Standard		Future Conditions		Future Plus Vision Plan	
	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
1. Manuel T. Freitas Parkway/Las Gallinas Avenue	<55.0	D	50.2	D	49.4	D
2. Manuel T. Freitas Parkway/Northgate Drive	<55.0	D	20.2	C	19.9	B
3. Manuel T. Freitas Parkway/Del Presidio Boulevard	--	Exempt ¹	8.5	A	8.1	A
4. Manuel T. Freitas Parkway/US-101 South Ramps	<35.0	D	0.0	A	0.0	A
5. Redwood Highway/US-101 North On-Ramp	<35.0	D	0.6	A	0.9	A
6. Manuel T. Freitas Parkway/US-101 North Ramps	<35.0	D	10.4	B	9.3	A
7. Manuel T. Freitas Parkway/Redwood Highway-Civic Center Drive <i>Northbound (Civic Center Drive) Approach</i> <i>Southbound (Redwood Highway) Approach</i>	<55.0	E	6.1	A	6.8	A
	<55.0	E	10.6	B	13.0	B
	<55.0	E	11.5	B	11.5	B
8. Las Gallinas Avenue/Nova Albion Way	<55.0	D	33.4	C	35.2	D
9. Las Gallinas Avenue/Northgate Drive	<55.0	D	14.7	B	16.0	B
10. Las Gallinas Avenue/Del Presidio Boulevard	<55.0	D	21.3	C	22.5	C
11. Las Gallinas Avenue/Merrydale Road	<55.0	D	12.0	B	14.5	B
12. Merrydale Road/Civic Center Drive	--	F	22.3	C	25.8	C
13. Northgate Drive/Thorndale Drive <i>Eastbound (Thorndale Drive) Approach</i>	<35.0	D	0.6	A	0.6	A
	<35.0	D	15.7	C	17.4	C
14. Northgate Drive/El Faisan Drive <i>Northbound (El Faisan Drive) Approach</i> <i>Southbound (Project Driveway) Approach</i>	<35.0	D	1.1	A	2.6	A
	<35.0	D	15.2	C	18.7	C
	<35.0	D	--	-	16.7	C
15. Northgate Drive/Nova Albion Way <i>Northbound (Nova Albion Way) Approach</i>	<35.0	D	5.1	A	5.8	A
	<35.0	D	22.4	C	28.8	D
16. Los Ranchitos Road-Las Gallinas Avenue/Northgate Drive	<55.0	D	10.5	B	10.6	B
17. Los Ranchitos Road/N San Pedro Road	<55.0	D	11.2	B	11.5	B

Source: *Transportation Operations Study for the Northgate Town Square Project (W-Trans 2023)*.

¹ Per General Plan Policy M-2.5, signalized freeway ramp intersections are exempt from LOS standards.

LOS = level of service

sec = seconds

US-101 = United States Route 101

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