4.13 TRANSPORTATION

4.13.1 INTRODUCTION

This section describes the existing transportation setting and analyzes the potential impacts on transportation from the proposed Scott Ranch Project. It also presents potential impacts to transportation from the construction and operation of a proposed regional park trail that would extend from the western boundary of the project site to the existing Ridge Trail on Helen Putnam Regional Park (see **Section 4.13.4.4** below).

The information in this section is based on the traffic impact analysis conducted for the proposed project by Fehr & Peers. Traffic counts and intersection operations analyses are in **Appendix 4.13.**

4.13.2 ENVIRONMENTAL SETTING

This subsection describes the existing condition of the transportation system that serves the project site, including roadway facilities, public transit service, pedestrian and bicycle facilities, traffic volumes, vehicle miles traveled (VMT), and intersection operations.

4.13.2.1 Existing Transportation Network

Regional and Local Roadways

The location of the project site and the surrounding roadway network are shown in **Figure 4.13-1, Project Location and Study Area.** Regional access to the project site is provided via U.S. Highway 101, D Street, and Point Reyes-Petaluma Road. Local access to the project site is via Windsor Drive, which connects D Street and Western Avenue. A description of the major roadway networks providing regional and local vehicular access to the project site is included below.

U.S. Highway 101 (U.S. 101) is a major north-south freeway serving the west coast between Los Angeles, California and northern Washington, near the Canadian border. In the Bay Area, U.S. 101 extends northward from San Francisco and the Golden Gate Bridge as a four-to-eight lane divided freeway through Marin County, reducing to four lanes with alternating freeway and highway segments through northern Marin County and into Sonoma County before continuing to the North Coast counties of Mendocino, Humboldt, and Del Norte. Near the project site, in Petaluma, U.S. 101 is a four-lane freeway. Access to the project site from U.S. 101 is provided via interchanges at San Antonio Road, Petaluma Boulevard South, Lakeville Street, and East Washington Street. Plans to widen U.S. 101 to provide high-occupancy vehicle (HOV) lanes in both directions are included as part of the Caltrans Marin-Sonoma Narrows HOV Widening (MSN) Project, component MSN-C, which is a top priority for Tier 1 funding in the Metropolitan Transportation Commission Regional Transportation Plan. HOV lanes on U.S. 101 have been completed north of Petaluma to Santa Rosa and from Central Marin County through Novato, in addition to several

interchanges in Petaluma to close the gap in HOV lanes between Novato and north of Petaluma. Additionally, the final Sonoma County segment of the MSN Project is currently under construction through Petaluma between the Petaluma Boulevard South interchange and the Old Redwood Highway interchange. The timing for the final Marin County segment between Novato and the Sonoma County border is currently unknown.

D Street is a two-lane arterial street that extends in the northeast-southwest direction and connects to rural western Marin County as Point Reyes-Petaluma Road through downtown Petaluma to Payran Street. Along with East Washington Street and Lakeville Street, D Street provides one of the few roadway crossings of the Petaluma River via a City-operated drawbridge in downtown Petaluma. Because of its connection to the Marin County coastal areas, D Street carries a notable amount of recreational traffic, mainly on weekends and during the summer months. Additionally, D Street (in conjunction with San Antonio Road and Novato Boulevard) provides an alternate route to U.S. 101 into Petaluma from the south. As a result, D Street carries a notable amount of northbound commuter traffic during the PM peak period. These vehicles use D Street to bypass congestion on U.S. 101 caused by the reduction of U.S. 101 from four lanes to two lanes north of Novato (also known as the Marin-Sonoma Narrows).[1] The posted speed limit on D Street is 40 miles per hour (mph) between the City limit and Windsor Drive, and 35 mph between Windsor Drive and Sunnyslope Road/El Rose Drive. North of Sunnyslope Road/El Rose Drive the speed limit reduces to 30 mph and then 25 mph north of 6th Street. D Street carries approximately 7,600 vehicles per day near its intersection with Windsor Drive.[2]

Windsor Drive is a two-lane primary collector street that extends in the east-west direction, connecting D Street and Western Avenue. This street functions to collect primarily residential traffic and distribute it to the adjacent arterials, D Street and Western Avenue. The speed limit along Windsor Drive is 25 mph along most of the project site except for a section near the intersection with D Street where it is posted 35 mph for westbound traffic. Windsor Drive is used as a "cut-thru" street for non-residential traffic attempting to bypass congestion on D Street during the PM peak period.

Sunnyslope Road/El Rose Drive is a two-lane primary collector street extending in the east west direction. West of D Street, the roadway is El Rose Drive, which extends approximately ¼ mile through primarily residential areas. East of D Street, the roadway becomes Sunnyslope Road, which extends east to I Street.

Sixth Street is a two-lane primary collector street extending in the east west direction between Washington Street to the northeast and Mountain View Avenue to the southwest. This street extends through downtown Petaluma and functions as part of the downtown grid system in providing circulation within central Petaluma.

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1 The US-101 Marin-Sonoma Narrows are currently being widened from four to six lanes; Therefore, the US-101 lane reduction represents a temporary condition.

2 Based on count data from May 2019.

Project Site

Study Intersection

SOURCE: Fehr & Peers, 2019

FIGURE **4.13-1**

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Project Location and Study Area

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Petaluma Boulevard is an arterial street extending in the northwest-southeast direction, parallel to the Petaluma River and U.S. 101 through the entire length of the City. Petaluma Boulevard is the principal northwest southeast arterial street serving central Petaluma and experiences congestion during peak periods, particularly north of its intersection with D Street. West of D Street, Petaluma Boulevard is a two-lane roadway with a two-way left turn median. East of D Street, Petaluma Boulevard is a four-lane roadway. The City of Petaluma is scheduled in 2021 to implement a road diet on Petaluma Boulevard from D Street east to Crystal Lane Roundabout to include two-lanes and a center turn lane. Petaluma Boulevard carries approximately 20,100[3] vehicles per day near its intersection with D Street.

Public Transit

Petaluma Transit offers public transit service within the City of Petaluma[4]. The nearest transit stop to the project site is located on El Rose Drive north of D Street, which is approximately one-half mile north of the project site. However, this stop serves Route 501, which provides school service to Petaluma Junior High School on school days only (i.e., Monday-Friday). The nearest transit stop to the project site that provides regular service is located on 4th Street west of C Street, which is more than a mile walking distance from the project site. Petaluma Transit Routes 10 and 11 stop at this location and provide connections to Sonoma County Transit lines and Golden Gate Transit lines. On weekdays, Route 11 runs on 30-minute headways and Route 10 runs on one-hour headways. On weekends, Route 11 runs on limited service. There is no weekend service on Route 10. In downtown Petaluma, riders can also access other local service provided by Petaluma Transit and regional services provided by Sonoma County Transit and Golden Gate Transit that travel to cities in Marin and Sonoma Counties and to San Francisco. Additionally, the project site is located within the Petaluma Paratransit service area. **Appendix 4.13** contains the City's Bicycle Map and Transit Map.

Bicycle Facilities

Caltrans recognizes four classifications of bicycle facilities.

- Class I – commonly referred to as a bike path or bikeway, is a facility separated from automobile traffic for the exclusive use of bicyclists.
- Class II – commonly referred to as bike lanes, are dedicated facilities for bicyclists immediately adjacent to automobile traffic.
- Class III – commonly referred to as bike routes, are on-street routes where bicyclists and automobiles share the road.

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3 W-Trans. 2019. *Draft Feasibility Study for a Road Diet on Petaluma Boulevard South*. September.

4 City of Petaluma Transit. http://transit.cityofpetaluma.net/.

- Class IV – commonly referred to as cycle tracks or protected bike lanes, are facilities that combine elements of Class I and Class II facilities to offer an exclusive bicycle route immediately adjacent to a roadway similar to a Class II facility, but provides a physical separation from traffic with raised curb, plastic delineators, or parked automobiles.

The City of Petaluma *2025 General Plan* calls for an expanded system of interconnected pedestrian and bicycle facilities to serve alternative transportation and recreational needs. D Street currently has designated Class II bicycle lanes from the Petaluma city limits to Fourth Street in downtown Petaluma. In addition, Class II bicycle lanes are striped on Windsor Drive from D Street to B Street.

The Helen Putnam Regional Park is located immediately west of the project site. This 216-acre park includes about six miles of hiking, bicycling, and horseback riding trails. The main access to this park is located on Chileno Valley Road, which includes a 35-vehicle parking lot, horse staging area, and picnic area. A Class I multi-use trail through the park connects from Chileno Valley Road to Oxford Court, just west of the project site along Windsor Drive. From Oxford Court, users can connect via Windsor Drive and B Street to another multi-use trail that connects to El Rose Drive.

Pedestrian Facilities

The project site is located on the City's urban edge, approximately one mile from Petaluma's downtown area, making walking a less common mode for many trips to the downtown core. However, the Helen Putnam Regional Park is a desirable pedestrian destination near the project site and generates recreational walking trips in the area. The primary walking route to the project site from the west and north would be along the existing sidewalks on Windsor Drive and B Street. B Street provides a continuous walking route to downtown Petaluma via the cul-de-sac just west of the project site and a paved off-street pathway approximately a quarter mile north of the project site that connects B Street to El Rose Drive and D Street. Directly adjacent to the project site, both Windsor Drive and D Street currently lack sidewalks. On Windsor Drive, sidewalks extend from the western edge of the project site to 200 feet west of Edinburgh Lane, where the northern sidewalk transitions to an off-street pathway that extends to West Haven Lane. There is a sidewalk on the east side of D Street, north of Windsor Drive fronting the Pinnacle Heights Subdivision, that is continuous to downtown. However, this sidewalk does not meet ADA nor City standards as it narrows to less than two feet wide and is in need of repair and with tree roots and other foliage disrupting the path of travel.

4.13.2.2 Roadway Network Analysis

Data Collection

Traffic counts were collected at six study intersections along the D Street corridor during the morning (7:00 AM to 9:00 AM) and evening (4:00 PM to 6:00 PM) peak periods on Thursday, May 2, 2019. The six intersection turn movement counts included bicycle and pedestrian counts at the intersections. During all

counts, weather conditions were generally dry, no unusual traffic patterns were observed, and the Petaluma City Unified School District was in full session.

In addition to the intersection turn movement counts, a 72-hour roadway count was collected on D Street between El Rose Drive/Sunnyslope Drive and Windsor Drive from Thursday, May 2, 2019 through Saturday, May 4, 2019 to measure changes between weekday and weekend traffic.

Lastly, anonymous GPS and cell phone data collected as part of the ongoing update to the Sonoma County Transportation Authority (SCTA) Travel Demand Model was used to understand travel patterns near the project site.

Existing Intersection Volumes and Lane Configurations

Existing intersection traffic volumes, lane configurations, and traffic control devices for the study intersections are shown on **Figure 4.13-2, Peak Hour Intersection Turn Movement Volumes – Existing Conditions**. Detailed traffic count data are provided in **Appendix 4.13** of this RDEIR.

The 72-hour roadway count on D Street between El Rose Drive/Sunnyslope Avenue and Windsor Drive (collected on Thursday, May 2 to Saturday, May 4) recorded a 25 percent increase in northbound traffic volumes during the Friday PM peak hour compared to the Thursday PM peak hour during which intersection turn movement counts were collected. There was no significant change in southbound traffic volumes or volumes during the AM peak hour. This is likely due to some traffic exiting northbound U.S. 101 to use Novato Boulevard, Point Reyes-Petaluma Road, and D Street to bypass the highway congestion on northbound US-101 during the Friday PM peak period. Based on site observations, congestion on northbound U.S. 101 during the Friday PM peak period is worse than the mid-week PM peak period due to additional recreational traffic from San Francisco and Marin Counties travelling north to Sonoma County for the weekend.

A supplemental site visit was performed on Friday, June 7, 2019 to observe traffic conditions during the Friday PM peak period. Increased queueing was observed along northbound D Street at the D Street/El Rose Drive/Sunnyslope Avenue intersection, however queueing at intersections in Downtown Petaluma (i.e., the D Street/Petaluma Boulevard intersection) was not significantly worse than during the Thursday PM peak hour. Additionally, a greater number of northbound left turns were observed at intersections in the southern part of the study area. These vehicles are likely using cut-through routes, including Windsor Drive and other east-west collector streets, to avoid queueing that occurs along D Street through Downtown Petaluma during this period.

To study "worst case" conditions that occur during the Friday PM peak hour, the northbound D Street PM peak hour traffic counts were increased by 25 percent between El Rose Drive/Sunnyslope Avenue and Windsor Drive. The northbound left turn volume at the D Street/Windsor Drive intersection was also increased by 25 percent. The increased volume was carried north along D Street, and distributed to the northbound left and through movements at study intersections. As a result, the increase in northbound traffic volumes at the D Street/Petaluma Boulevard and D Street/Lakeville Street intersections is less significant than at the southern intersections. This is consistent with field observations that showed a more significant increase in northbound queueing at the southern study intersections than at the northern study intersections during the Friday PM peak hour. The traffic counts for the other turn movements were not increased because no increase in queueing was observed for these movements during the Friday PM peak hour and these turn movements are not complimentary to north-south directional travel. The AM peak hour traffic counts were also not adjusted because there was no measurable change between the Thursday and Friday counts.

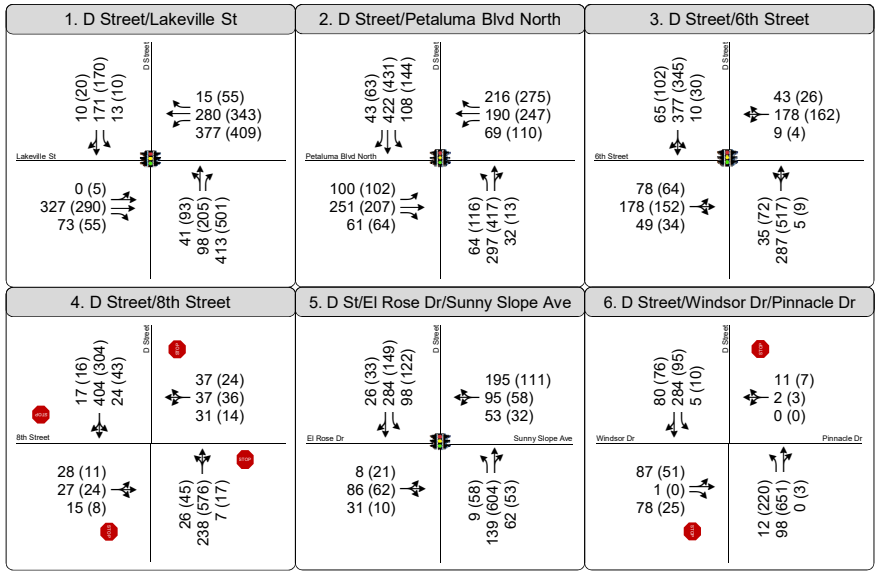
Vehicle Miles Traveled Analysis

Vehicle miles traveled (VMT) is a measure of traffic flow, determined by multiplying the number of automobile trips within a given geography by the average trip length. Unlike the Level of Service (LOS), which is a measure of automobile delay, VMT is a measure of automobile travel. For the purposes of this RDEIR, VMT is estimated for a typical weekday. The efficacy of this measure is as a result of several factors:

- VMT is relatively easy to measure by counting traffic on roadways at different locations. It is one of the few measures of transportation performance that has been consistently and comprehensively monitored and documented over time.

- VMT bears a strong and direct relationship to vehicle emissions, although this relationship is becoming more complex as vehicular technologies evolve. State and federal policies pertaining to vehicle efficiency and formulation of vehicle fuels suggest that on a per VMT basis, emissions for most pollutants and greenhouse gases will decline relative to today. However, even with these per VMT improvements due to fuel and vehicle technology changes, lower VMT will mean lower emissions.

VMT can be influenced by policy in a number of different ways. By providing more attractive alternatives to driving alone, VMT can be reduced by shifting from vehicle to non-vehicle modes (i.e., from a car trip to a bike or walk trip), or from low occupancy to higher occupancy vehicles (i.e., from a single-occupant vehicle trip to a carpool or transit trip). VMT can be influenced by land use patterns as



SOURCE: Fehr & Peers, 2019

FIGURE **4.13-2**

Peak Hour Intersection Turn Movement Volumes – Existing Conditions

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well. A better mix of residential, employment, education, and service uses in an area can allow people to accomplish their daily activities with less driving, and consequently less VMT. Locating land uses in closer proximity to each also makes walking and bicycling more viable, while also making transit more effective.

The primary tool used for calculating VMT is the Metropolitan Transportation Commission (MTC) Travel Demand Model, an activity-based regional travel demand model covering the nine-county Bay Area. The Model includes a base year scenario, which is used to measure existing levels of VMT, and a future year scenario, which is used to measure cumulative levels of VMT. The model inputs include land use information, demographic information, and information related to the transportation system. This information is organized into a structure of traffic analysis zones (TAZs) that simplify the information for model purposes. The TAZ structure can be used to extract VMT data for a single TAZ (i.e., neighborhood level) or aggregated to extract VMT data for an entire city, county, or region. VMT data extracted from the model is reported as VMT per capita, which is the total daily VMT generated by residents (also referred to as home-based VMT) divided by the total number of residents. Based on the data extracted from the aggregate of TAZs within the City of Petaluma, the City of Petaluma generates 19.1 VMT per capita under the base year scenario.

Intersection Operations Analysis

Intersection operations during weekday AM and PM peak hours were evaluated under existing conditions at the following six intersections using the traffic volumes, lane configurations, traffic control devices shown on **Figure 4.13-2**.

1. D Street and Lakeville Street
2. D Street and Petaluma Boulevard
3. D Street and Sixth Street
4. D Street and Eighth Street
5. D Street and El Rose Drive/Sunnyslope Road
6. D Street and Windsor Drive/Pinnacle Drive

Evaluation of traffic conditions on local streets involves analysis of intersection operations, as intersections represent the locations where the roadway capacity is most constrained. Transportation engineers and planners commonly use the LOS system—a grading system that measures and describes the operation of a local roadway network. The LOS grading system qualitatively characterizes traffic conditions associated with varying levels of traffic.

LOS varies from LOS A, indicating free flow traffic conditions with little or no delay, to LOS F, representing over-saturated conditions where traffic flows exceed design capacity of the facility, resulting in long queues and delay for drivers who may need to wait through multiple signal cycles.

All but two of the study intersections are signalized. The intersections D Street/Windsor Drive and D Street/Eighth Street intersections are controlled by side-street stop and all-way stop control, respectively.

Intersection traffic conditions and resulting LOS for signalized intersections were determined using the methodology described in the *Highway Capacity Manual, 6th Edition* (Transportation Research Board 2017). This methodology uses intersection characteristics (such as traffic volumes, lane geometry, and signal phasing) to determine the LOS rating based on the average control delay experienced at the intersection, measured in seconds per vehicle. Control delay is defined as total delay attributed to signal operations and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. **Table 4.13-1**, **Signalized Intersection Level of Service Definitions**, summarizes the LOS criteria for signalized intersections.

Table 4.13-1
Signalized Intersection Level of Service Definitions

LOS	Description	Average Control Delay Per Vehicle (Seconds)
A	No approach phase is fully utilized and no vehicle waits longer than one red indication.	≤ 10
B	An occasional approach phase is fully utilized. Drivers begin to feel restricted.	> 10 – 20
C	Major approach phase may become fully utilized. Most drivers feel somewhat restricted.	> 20 – 35
D	Drivers may wait through no more than one red indication. Queues may develop but dissipate rapidly, without excessive delays.	> 35 – 55
E	Volumes approach capacity. Vehicles may wait through several signal cycles and long vehicle queues form upstream.	> 55 – 80
F	Conditions at capacity, with extremely long delays. Queues may block upstream intersections.	> 80

Source: Highway Capacity Manual, Transportation Research Board, 2017.

Intersection traffic conditions and resulting LOS for unsignalized intersections (all-way stop-controlled and side street stop-controlled) were determined using the methodology described in *Highway Capacity Manual 6th Edition* (Transportation Research Board 2017). Similar to signalized intersections, LOS ratings are based on the average control delay experienced at the intersection, measured in seconds per vehicle. At all-way stop-controlled intersections, the control delay is calculated for the overall intersection. At two-way or side street stop-controlled intersections, the control delay is calculated for each movement, not for the intersection as a whole. The LOS for the intersection is reported based on the single controlled movement

with the highest average control delay. For approaches composed of a single lane, the control delay is computed as the average of all movements in that lane. The correlation between the average control delay and LOS for unsignalized intersections is summarized in **Table 4.13-2, Unsignalized Intersection Level of Service Definitions**.

Table 4.13-2
Unsignalized Intersection Level of Service Definitions

LOS	Description	Average Control Delay Per Vehicle (Seconds)
A	No delay for stop-controlled approaches.	≤ 10
B	Operations with minor delay.	> 10 – 15
C	Operations with moderate delays.	> 15 – 25
D	Operations with some delays.	> 25 – 35
E	Operations with high delays, and long queues.	> 35 – 50
F	Operation with extreme congestion, with very high delays and long queues unacceptable to most drivers.	> 50

Source: Highway Capacity Manual, Transportation Research Board, 2017.

Table 4.13-3, Existing Conditions – Study Intersection LOS Summary, summarizes the existing weekday AM and PM peak hour intersection LOS. Detailed calculation work sheets are provided in **Appendix 4.13** of this RDEIR. These traffic conditions establish the existing baseline against which the proposed project is evaluated. The Pipeline and Cumulative Conditions traffic analyses in this report account for the growth in vehicle volumes that may occur as a result of economic growth and/or new development.

As shown in **Table 4.13-3**, all but two of the study intersections currently operate at LOS D or better during both peak hours. The signalized intersection of D Street/Lakeville Street operates at LOS E during the PM peak hour due to the recent implementation of split phasing in response to the SMART rail line adjacent to this intersection. At the unsignalized intersection of D Street/Windsor Drive, the eastbound approach operates at LOS E during the PM peak hour, due to relatively high delay on the eastbound left turning movement.

Table 4.13-3
Existing Conditions – Study Intersection LOS Summary

Intersection	Intersection Control[1]	Peak Hour[2]	Average Delay[3]	LOS[4]
1. D Street and Lakeville Street[5]	Signal	AM	51	D
		PM	**60**	**E**
2. D Street and Petaluma Boulevard	Signal	AM	31	C
		PM	39	D
3. D Street and Sixth Street	Signal	AM	9	A
		PM	9	A
4. D Street and Eighth Street	AWSC	AM	16	C
		PM	28	D
5. D Street and Sunnyslope Road	Signal	AM	14	B
		PM	22	C
6. D Street and Windsor Drive	SSSC	AM	13 (EB)[6]	B
		PM	**44 (EB)**	**E**

Source: Fehr & Peers, 2019.
Notes:
*Intersections operating at LOS E or LOS F are shown in **bold**.*
[1] *SSSC = side street stop-controlled; AWSC = all way stop-controlled.*
[2] *AM = morning peak hour, PM = evening peak hour.*
[3] *Average control delay expressed in seconds per vehicle. For worst-case movement at side street stop-controlled intersections, delay presented with worst-case movement in parenthesis. Average control delay calculated using Synchro 10 analysis software.*
[4] *LOS = Level of Service based on average control delay calculations.*
[5] *The City of Petaluma 2025 General Plan identifies LOS E operations as acceptable at the D Street/Lakeville Street intersection.*
[6] *EB= Eastbound*

4.13.3 REGULATORY CONSIDERATIONS

The City of Petaluma *2025 General Plan* and City of Petaluma Municipal Code provide local policies related to transportation that are applicable to the proposed project. There are currently no Federal transportation plans, policies or regulations that apply to this project. Therefore, the local policies and guidelines associated with circulation and transportation, as defined by the City of Petaluma, were utilized for this analysis, in addition to the thresholds of significance outlined in Appendix G of the *California Environmental Quality Act (CEQA) Guidelines*.

4.13.3.1 State Plans and Policies

Senate Bill 375

Senate Bill 375 (SB 375) (Stats. 2008, chapter 728) requires Metropolitan Planning Organizations (MPOs) to prepare a Sustainable Communities Strategy (SCS) that demonstrates how the region will meet its greenhouse gas (GHG) reduction targets through integrated land use, housing and transportation planning. Specifically, the SCS must identify a transportation network that is integrated with the forecasted development pattern for the plan area and will reduce GHG emissions from automobiles and light trucks in accordance with targets set by the California Air Resources Board. While MPOs have consistently produced SCSs that contain forecasts demonstrating compliance with SB 375 GHG reduction targets, observed data related to VMT and GHG mobile emission trends tell a different story. The *2018 Progress Report California's Sustainable Communities and Climate Protection Act, California Air Resources Board,* November 2018, VMT per capita and GHG per capita rates have been increasing after 2012.[5] According to the report, "California – at the state, regional, and local levels – has not yet gone far enough in making the systemic and structural changes to how we build and invest in communities that are needed to meet state climate goals." Of note, local agencies have not changed land use patterns or housing amounts consistent with SCS expectations. Further, improved economic activity, new vehicle travel options (i.e., Uber and Lyft), internet shopping and delivery, higher visitation, and low fuel prices have contributed to increased vehicle travel that was not fully accounted for in SCS forecasts. The COVID-19 pandemic has stalled these trends, with a reduction of VMT and GHG emissions in 2020.[6] However, the long-term effects on travel of the health, economic, and behavior changes due to the pandemic are uncertain.

Senate Bill 743

Senate Bill 743 (Stats. 2013, ch. 386) (SB 743) creates several statewide CEQA changes. First, it requires the Governor's Office of Planning and Research (OPR) to establish new metrics for determining the significance of transportation impacts of projects within transit priority areas (TPAs) and allows OPR to extend use of the metrics beyond TPAs. OPR selected vehicle miles traveled (VMT) as the preferred transportation impact metric and applied their discretion to require its use statewide. Second, this legislation establishes that aesthetic and parking impacts of a residential, mixed-use residential, or employment center projects on an infill site within a TPA shall not be considered significant impacts on the environment. Third, the new CEQA Guidelines that implement this legislation, state that vehicle LOS and similar measures related to vehicle delay shall not be used as the sole basis for determining the significance of transportation impacts,

5 Source: https://ww2.arb.ca.gov/sites/default/files/2018-11/Final2018Report_SB150_112618_02_Report.pdf.

6 Source: https://www.streetlightdata.com/special-report-post-covid-climate-impact/.

and that as of July 1, 2020, this requirement shall apply statewide. Finally, it establishes a new CEQA exemption for a residential, mixed-use, or employment center project a) within a transit priority area, b) consistent with a specific or general plan for which an EIR has been certified, and c) consistent with a RTP/SCS. This exemption requires further review if the project or circumstances changes significantly.

To aid in SB 743 implementation, the following non-binding state guidance has been produced.

- *Technical Advisory on Evaluating Transportation Impacts in CEQA,* California Governor's Office of Planning and Research, December 2018[7]

- *California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals*, California Air Resources Board, January 2019[8]

- *Draft VMT-Focused Transportation Impact Study Guide*, Caltrans, February 28, 2020[9]

The *California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals* provides recommendations for VMT reduction thresholds that would be necessary to achieve the State's GHG reduction goals. CARB finds per-capita light-duty vehicle travel would need to be approximately 16.8 percent lower than existing, and overall per-capita vehicle travel would need to be approximately 14.3 percent lower than existing levels under that scenario. CARB also acknowledges that the SCS targets are not sufficient to meet climate goals. As stated in the report, "…the full reduction needed to meet our climate goals is an approximately 25 percent reduction in statewide per capita on-road light-duty transportation-related GHG emissions by 2035 relative to 2005." This estimate was made with a model that does not fully capture emerging transportation trends such as greater internet shopping, growing use of Uber and Lyft, future transitions to autonomous vehicles, nor behavior changes due to the COVID-19 (e.g., telecommuting). As such, the level of VMT reduction necessary to reach the State's GHG reduction goals may exceed 25 percent if travel patterns return to pre-COVID levels.

OPR considered this research when developing recommended VMT thresholds. In the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018), OPR recommends that a per capita or per employee VMT that is 15 percent below that of existing development may be a reasonable threshold. This threshold is based on the abovementioned research documents from CARB as well as evidence that suggests a 15 percent reduction in VMT is an achievable reduction at the project level in a variety of place

7 Source: http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.

8 https://ww2.arb.ca.gov/sites/default/files/2019-01/2017_sp_vmt_reductions_jan19.pdf.

9 https://dot.ca.gov/programs/transportation-planning/office-of-smart-mobility-climate-change/sb-743.

types[10] and would help the state towards achieving its climate goals based on currently available information. Caltrans' *Draft VMT-Focused Transportation Impact Study Guide* supports the use of the OPR recommendations for land use projects and plans.

Caltrans Guidelines

Caltrans is responsible for the maintenance and operation of state routes and highways. In Petaluma, Caltrans facilities include US 101 and SR 116. Caltrans maintains a volume monitoring program and reviews local agencies planning documents (such as this EIR) to assist in its forecasting of future volumes and congestion points. The Guide for the Preparation of Traffic Impacts Studies published by Caltrans[11] is intended to provide a consistent basis for evaluating traffic impacts to state facilities. The City recognizes that "Caltrans endeavors to maintain a target level of service at the transition between LOS C and LOS D on state highway facilities;" however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target level of service. Caltrans states that, for existing state highway facilities operating at less than the target level of service, the existing level of service should be maintained.

Caltrans released the *VMT-Focused Transportation Impact Study Guide* (February 28, 2020) 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. This has been referred to as the "Net Zero VMT threshold." Caltrans also recently released the *Interim Land Development and Intergovernmental Review (LDIGR) Safety Review Practitioners Guidance* (July 2020) to provide guidance about the analysis of safety on the state highway system.

4.13.3.2 Regional Plans and Policies

Metropolitan Transportation Commission

The Metropolitan Transportation Commission (MTC) is the transportation planning, coordinating, and financing agency for the nine-county San Francisco Bay Area (Bay Area). It is responsible for developing the regional transportation plan and prioritizing regional transportation projects for state and federal funding. MTC maintains the Travel Demand Model used for this VMT analysis.

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10 Place types refer to the context of a project, whether it is urban, suburban, or rural. The research is presented in the following report: CAPCOA (2010) Quantifying Greenhouse Gas Mitigation Measures, p. 55, available at http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf

11 Caltrans, 2002. Guide for the Preparation of Traffic Impacts Studies, December.

Sonoma County Transportation Authority

The Sonoma County Transportation Authority (SCTA) is the County's Congestion Management Agency. The SCTA works with the local jurisdictions to provide countywide transportation planning to help meet demands and improve Sonoma County's transportation system. SCTA produces long range documents including the Comprehensive Transportation Plan and the Countywide Bicycle and Pedestrian Master Plan. The SCTA also assists local jurisdictions in local specific plans, like Station Area Plans around transit stations and Priority Development Area plans for transit oriented and walkable communities. SCTA prepared the Sonoma County Travel Behavior Study that was used to estimate trip distribution for this study.

4.13.3.3 Local Plans and Policies

City of Petaluma 2025 General Plan

The following transportation-related policies in the City of Petaluma *2025 General Plan* (effective June 2008) are applicable to the proposed project:

Chapter 5 Mobility

Goal 5-G-1: **Mobility Framework**

To improve Petaluma's mobility system to increase efficiency for all modes of travel.

Policy 5-P-1: Develop an interconnected mobility system that allows travel on multiple routes by multiple modes.

A. Develop a network that categorizes streets according to function and type, considering the surrounding land use context.

B. Develop a network for off-street paths and routes according to function and type, considering the intensity of use and purpose.

C. Review and update the City's Street Design Standards to be consistent with street function and typology.

D. Explore the redesign of existing streets to potentially reduce the width and/or number of travel lanes, improve the multimodal function of intersections and street segments, and introduce amenities such as wider sidewalks, special

paving treatments, bus priority treatments, landscaped medians, and street trees within parking lanes.

E. Evaluate the feasibility of road diets on streets with projected excess capacity at buildout (see Section 5.3).

Policy 5-P-2: Ensure the identified mobility system is provided in a timely manner to meet the needs of the community by updating the City's transportation impact fee program to insure that necessary citywide improvements are funded.

A. Transportation impact fees will be determined based on each project's fair share of the aggregate costs of roadway improvements identified within the Mobility Element and EIR.

B. The fee program is intended to ensure that new developments pay its proportionate share of traffic infrastructure improvements to mitigate direct traffic impacts from new development.

C. Some portion(s) of the identified mobility system improvements will be constructed as part of project related frontage improvements.

D. Allocation of mitigation funds shall be designated to the capital improvement project for which it was exacted.

E. Transportation impact fees will be routinely updated to reflect project timing and costs.

Policy 5-P-4: New development and/or major expansion or change of use may require construction of off-site mobility improvements to complete appropriate links in the network necessary for connecting the proposed development with existing neighborhoods and land uses.

Policy 5-P-5: Consider impacts on overall mobility and travel by multiple travel modes when evaluating transportation impacts.

Policy 5-P-6: Ensure new streets are connected into the existing street system and encourage a grid-based network of streets.

Policy 5-P-7: Where aesthetic, safety, and emergency access can be addressed, allow narrower streets in residential development to create a pedestrian scaled street environment.

Policy 5-P-8: The priority of mobility is the movement of people within the community including the preservation of quality of life and community character.

Chapter 5.3: Motor Vehicle Circulation

Goal 5-G-2: **Motor Vehicle Circulation**

Promote the safe movement of people and goods through Petaluma's streets**.**

Policy 5-P-10: Maintain an intersection level of service (LOS) standard for motor vehicle circulation that ensures efficient traffic flow and supports multi-modal mobility goals. LOS should be maintained at Level D or better for motor vehicles due to traffic from any development project.

A. A lower level of service may be deemed acceptable, by the City, in instances where the City finds that potential vehicular traffic mitigations (such as adding additional lanes or modifying signal timing) would conflict with the Guiding Principles of the General Plan, particularly with regard to:

- Guiding Principle #2. Preserve and enhance Petaluma's historic character.
- Guiding Principle #6. Provide a range of attractive and viable transportation alternatives, such as bicycle, pedestrian, rail and transit.
- Guiding Principle #7. Enhance Downtown by preserving its historic character, increasing accessibility, and ensuring a broad range of business and activities and increasing residential activities.

The above does not relieve any need to mitigate development related impacts, which may include multi-modal improvements to reduce identified impacts.

Chapter 5.5: Bicycle and Pedestrian Circulation

Goal 5-G-5: Bicycle and Pedestrian Improvements

Create and maintain a safe, comprehensive, and integrated bicycle and pedestrian system throughout Petaluma that encourages bicycling and walking and is accessible to all.

Policy 5-P-15: Implement the bikeway system as outlined in the Bicycle and Pedestrian Plan, and expand and improve the bikeway system wherever the opportunity arises.

A. Fund and implement the Bicycle Plan and complete gaps in the bikeway network through new development, redevelopment and the Capital Improvements Program.

B. Develop and update guidelines and standards for the design of bicycle facilities.

C. Design and maintain bikeways at or above local, state, and federal standards in order to maximize safety for bicyclists (e.g. width).

D. Develop and implement a uniform bicycle signage program to enhance safety and ease of travel for all who use the city transportation network.

E. Identify loop detectors along bikeways with stencils where (a) the outline of the loop is not identifiable on the surface of the roadway, or (b) where it is unclear which of the identifiable loops will activate the signal.

F. Preserve the Highway 101 pedestrian/bicycle over-crossing south of East Washington Street interchange.

G. Continue to outfit local transit busses with bike racks; and encourage regional transit providers to provide bike racks as well.

Note the following bicycle facilities in the project site's vicinity (Petaluma General Plan, Figure 5-2):

- *D Street – Existing Class II – on-street, striped bikeway*
- *Windsor Drive – Proposed Class II – on-street, striped bikeway*

- *Kelly Creek – Proposed Class I – off-street bikeway*

Policy 5-P-19: All new and redesigned streets shall be bicycle and pedestrian friendly in design.

Policy 5-P-20: Ensure that new development provides connections to and does not interfere with existing and proposed bicycle facilities.

Policy 5-P-22: Preserve and enhance pedestrian connectivity in existing neighborhoods and require a well-connected pedestrian network linking new and existing developments to adjacent land uses.

A. Improve the pedestrian experience through streetscape enhancements, focusing improvements where there is the greatest need, and by orienting development toward the street.

B. Improve street crossings and complete gaps in the sidewalk system through development review and capital improvement projects.

Policy 5-P-23: Require the provision of pedestrian site access for all new development.

Policy 5-P-25: Establish a network of multi-use trails to facilitate safe and direct off-street bicycle and pedestrian travel. At the minimum, Class I standards shall be applied unless otherwise specified.

Policy 5-P-26: Require all new development and those requiring new city entitlements with "frontage" along creeks and the river to permit through travel adjacent to creeks and the river with access points from parallel corridors spaced at minimum intervals of 500–1,000 feet.

Policy 5-P-28: Allow bicyclists and pedestrians use of all emergency access routes required of existing and new developments.

Policy 5-P-30: Require all new development abutting any public trail to provide access to the trail.

Policy 5-P-31: Make bicycling and walking more desirable by providing or requiring development to provide necessary support facilities throughout the City.

A. Require projects subject to discretionary approval to install public benches where appropriate.

Chapter 5.7: Traffic Calming/Neighborhood Traffic Management

Goal 5-G-7: **Neighborhood Traffic Management**

Enhance quality of life and community character within neighborhoods through the use of neighborhood traffic management techniques.

Policy 5-P-48: The City should not assume public responsibility for maintenance of private streets not built consistent with current public street standards.

A. Require private streets to be consistent with public street standards where deemed necessary and appropriate by the City (e.g., for utilities, street lights, sidewalks, street trees, parking) as well as to include traffic calming measures where appropriate.

City of Petaluma Municipal Code

Title 20 of the Petaluma Municipal Code outlines specific provisions pertaining to subdivisions and subdivided land. Municipal Code Chapter 20.32, Streets, describes minimum design standards for different subdivision street types and settings. For example, Section 20.32.060, Dead-end Streets – Turnaround provision states that "a turn-around having a minimum pavement radius of fifty feet measured to the face of the curb shall be required." Regarding sidewalks, Section 20.32.220, Required sidewalks, states that "Sidewalks shall be required on both sides of the street in any subdivision or portion thereof having lots with an area of less than one-half acre."

Where Chapter 20.32 of the Petaluma Municipal Code does not provide details about street and sidewalk widths, Chapter 5 of the City's *2025 General Plan* outlines typical attributes of different street types in Table 5.2-1. Per *2025 General Plan* Table 5.2-1, residential streets shall include five- to six-foot wide sidewalks and should include five-foot wide landscaped strips and 10-foot wide vehicle travel lanes.

City of Petaluma Development Impact Fees

Transportation impact fees are assessed through the City of Petaluma Development Impact Fees initially adopted on May 19, 2008 and adjusted annually as provided for in the adopting resolutions for each fee. The purpose of the Traffic Development Impact Fee is to provide funds for the construction and implementation of improvements to key elements of the citywide transportation system sufficient to accommodate the development's share of traffic volumes generated by the new development. Fees are based on a "per unit" measure for single-family residential, multi-family residential, mobile home, senior

housing, assisted living units and commercial lodging. For retail, office, and industrial uses, fees are calculated on a "per square foot" basis.

4.13.4 IMPACTS AND MITIGATION MEASURES

4.13.4.1 Significance Criteria

The impacts of the proposed project related to traffic or transportation would be considered significant if any of the following Standards of Significance are exceeded, in accordance with Appendix G of the *California Environmental Quality Act (CEQA) Guidelines*:

- conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;
- conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b);
- substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- result in inadequate emergency access.

The subsections below describe the criteria which the City of Petaluma considers to be significant impacts. Consistent with Senate Bill 743, impacts to level of service are no longer considered environmental impacts under CEQA. Therefore, this EIR analyzes the proposed project's impacts related to vehicular traffic based on VMT. However, an analysis of the project's effect on level of service is provided for informational purposes.

Vehicular Traffic

As a component of the City of Petaluma's on-going SB 743 implementation, the City is currently engaged in a process to update the performance metrics and thresholds used to measure transportation system impacts of discretionary projects. Since the City has not yet adopted a VMT threshold, OPR's recommended threshold of 15 percent below the City average is used for analyzing VMT impacts of the project (*Technical Advisory on Evaluating Transportation Impacts in CEQA*, OPR, 2018). For the Scott Ranch project, a significant impact would occur if the project generates:

- greater than 16.2 VMT per capita under existing plus project conditions based on 15 percent below the existing City average of 19.1 VMT per capita; or

- greater than 13.9 VMT per capita under cumulative plus project conditions based on 15 percent below the cumulative City average of 16.3 VMT per capita. The methodology for calculating cumulative City average VMT per capita is presented in **Section 4.13.4.2 Vehicular Traffic Analysis**, under Scenario 5: Cumulative Conditions (without Project).

While OPR's recommended threshold applies to the residential components of the project, OPR does not recommend thresholds for parks or the park expansion proposed by the project. Parks or open space typically redistribute local recreational trips rather than creating new trips and lead agencies may presume a less than significant impact because they do not conflict with the State's GHG reduction goals. The proposed project includes an extension and new access point to an existing park and would not introduce new features or substantially change access to recreational space within Petaluma or the region that could induce a substantial amount of vehicle travel and thus increase GHG emissions. Therefore, the Putnam Park Extension Project component would have a less than significant impact related to VMT and no further analysis of VMT for this land use is provided.

Hazards and Emergency Access

The proposed project would have a significant impact related to hazard and emergency access if it does not provide an adequate internal circulation system, if it substantially increases hazards due to a geometric design feature, or if it substantially impacts emergency access.

Public Transit Impact Criteria

The proposed project would have a significant impact on public transit if it would:

- result in a significant unanticipated increase in transit patronage; or
- be inconsistent with or preclude an adopted policy in the City of Petaluma *2025 General Plan*.

Bicycle and Pedestrian Impact Criteria

The proposed project would have a significant impact on bicyclists or pedestrians if it would:

- cause unsafe pedestrian and/or bicycle traffic flow patterns;
- exacerbate currently unsafe pedestrian and/or bicycle condition within the area;
- restrict or compromise pedestrian and/or bicycle flows within the area;
- fail to provide good pedestrian and bicycle linkages internal to the project and connecting to adjacent facilities;

- fail to provide secure and safe bicycle parking in adequate proportion to anticipated demand for bicycle parking; or

- be inconsistent with or preclude an adopted policy in the City of Petaluma 2025 *General Plan*.

Construction

Construction of the project would have a significant effect on the environment if it would require a substantially extended duration or intense activity and the effects would disrupt emergency access or accessibility for people traveling on the surrounding roadway network.

Informational Transportation Topics (Not Used to Assess Environmental Impacts)

An assessment of the project's effect on intersection operations and parking supply in relation to City policies are presented for informational purposes and are not used for determining environmental impacts.

Intersection Operations

Intersection LOS is compared to the intersection LOS standards in the City of Petaluma *2025 General Plan.* These results are documented for informational purposes only, and no CEQA significance findings are made for intersection LOS. According to the City of Petaluma *2025 General Plan*, the proposed project would result in unacceptable operations at the study intersections if it would cause:

- operations at a signalized or unsignalized intersection to degrade from an acceptable level (LOS D or better) under conditions without the project to an unacceptable level (LOS E or F) under Project conditions, where Pipeline represents conditions under which all approved and pending projects are built and fully occupied;

- unacceptable intersection operations (signalized or unsignalized) to be exacerbated by degrading the service level from LOS E under conditions without the project to LOS F under Project conditions; or

- any increase in vehicle trips under Project conditions at a signalized or unsignalized intersection operating at unacceptable service level LOS F under conditions without the project.

However, according to Policy 5-P-10-A in the City's *2025 General Plan* (listed above), a lower level of service may be deemed acceptable by the City, in instances where the City finds that potential vehicular traffic mitigations (such as adding additional lanes or modifying signal timing) would conflict with the Guiding Principles of the General Plan. The City's *2025 General Plan* EIR identified several intersections where a lower level of service was deemed acceptable due to physical constraints that limited feasible improvements, including the intersection of D Street and Lakeville Street, where LOS F was found acceptable and overrides were adopted by the City Council when the General Plan EIR was certified. As

described above, in accordance with SB 743, LOS is no longer used by the City in assessing environmental impacts to circulation.

Note that an analysis of freeway level of service was not conducted for this RDEIR because previous project specific studies for the 93-unit ad 66-unit projects[12] analyzed a larger trip generation than that which is analyzed for this RDEIR and found that there would be no impacts to freeway segments.

Parking

- The proposed parking supply was compared to City standards.

4.13.4.2 Vehicular Traffic Analysis

The proposed project's vehicle traffic generation, vehicle miles traveled, and LOS were evaluated for the six scenarios listed below. Pipeline conditions were evaluated to support the informational assessment of the project's effect on level of service and are not used for the assessment of CEQA impacts. Consistent with CEQA Guidelines section 15130(b)(1), the evaluation of impacts associated with the proposed project in combination with other reasonably foreseeable projects based on the City's adopted General Plan is presented within the cumulative conditions.

- Scenario 1: Existing Conditions
- Scenario 2: Existing Plus Project Conditions
- Scenario 3: Pipeline Conditions (Informational)
- Scenario 4: Pipeline Plus Project Conditions (Informational)
- Scenario 5: Cumulative Conditions
- Scenario 6: Cumulative Plus Project Conditions

A description of the methods used to estimate the amount of traffic and VMT generated by the proposed project, pipeline, and cumulative projects is provided below. Project-specific impacts related to vehicle miles traveled for each scenario are described under subsection **4.13.4.3, Project Impacts and Mitigation Measures**. The following section also presents the LOS analysis for each scenario. This analysis is intended to inform the reader about the effects of the project on vehicle delay but is not used for the identification of

[12] Impact Sciences, Inc. 2017. Davidon/Scott Ranch General Plan Amendment, Rezoning, and Vesting Tentative Map Project Revised Draft Environmental Impact Report. March.

environmental impacts as described in subsection **4.13.5, Vehicle Delay and Parking Informational Topics**.

Scenario 1: Existing Conditions

Existing conditions represent the baseline condition upon which project impacts are measured. The baseline condition represents conditions in 2019 and are documented in subsection **4.13.2, Environmental Setting**.

Scenario 2: Existing Plus Project Conditions

Existing Plus Project conditions represent the baseline condition with the addition of the proposed project. Traffic volumes for Existing Plus Project conditions comprise existing traffic volumes *plus* traffic generated by the proposed project. Existing Plus Project conditions were compared to Existing conditions to determine potential immediate project impacts.

The project proposes several transportation network changes, which are assumed under all analyses of Existing Plus Project conditions. These network changes include a new roundabout at the D Street/Windsor Drive intersection, a new north-south local roadway (comprised of the proposed A and B Streets) with new intersection on Windsor Drive between Oxford Court and D Street, and two new surface lots adjacent to D Street and Windsor Drive, respectively. The proposed project also includes infrastructure improvements to the pedestrian network along Windsor Drive, including sidewalks along the south side of Windsor Drive to D Street and a high-visibility crosswalk on the east leg of the intersection of Windsor Drive with the proposed A and B Streets. The proposed project also includes off-site crossing improvements at the D Street/Windsor Drive intersection and sidewalk improvements along the east side of D Street between Windsor Street and Sunnyslope Avenue, for a distance of approximately 800 feet, to replace the existing asphalt with concrete that would meet the City's standards.

Project Traffic Estimates

The amount of traffic added to the roadway system by the proposed project was estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. The first step estimates the amount of traffic that would be generated once the proposed project is built and fully occupied. The second step estimates the direction of travel to and from the project site. The third step assigns the proposed project trips to specific street segments and intersection turning movements. The results are described below.

Project Trip Generation

The amount of traffic added to the surrounding roadway system by the proposed project was estimated using peak hour trip generation rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (10th Edition). Trip generation rates were selected based on project type and multiplied by the size of the proposed project (number of dwelling units and acres of parkland) to determine peak hour and daily trip generation totals, shown in **Table 4.13-4, Project Trip Generation Rates and Estimates**. The Davidon (28-Lot) Residential Project component of the proposed project would construct 28 new single-family detached homes on a site that is currently undeveloped. According to the trip generation analysis, the 28-unit residential subdivision would generate 322 new daily trips, 25 new AM peak hour trips (6 inbound and 19 outbound), and 30 new PM peak hour trips (19 inbound and 11 outbound). It should be noted that ITE trip generation rates are sourced nationally and do not reflect locally-calibrated trip rates within the City of Petaluma. However, ITE trip generation rates are generally reflective of suburban and single use type developments, which is consistent with the project.

The proposed project would also construct two off-street surface public parking lots (one adjacent to D Street and one adjacent to Windsor Drive) with a combined capacity of 37 vehicles. The lots would serve the visitors of the 44-acre Putnam Park Extension Project component at the project site, which includes amenities such as trails and an education center. As shown in **Table 4.13-4**, the 44-acre extension of the county park and amenities would generate one vehicle trip during the AM peak hour and five vehicle trips during the PM peak hour. The trip generation rates for the proposed Putnam Park Extension Project component are conservatively based on the ITE's Trip Generation Manuel (10th Edition) for a Public Park (land use 411). These rates were found to be higher than trip generation rates prepared for the Taylor Mountain Regional Park and Tolay Lake Regional Park Master Plan studies[13], which used ITE rates and a survey of Sonoma County Parks. While these parks generally have similar amenities to Helen Putnam Regional Park, the Putnam Park Extension Project component would include some additional active park amenities such as the education center. Therefore, the ITE Trip Generation rates were used, which include surveys of public parks with more active facilities such as sporting events with ball fields, in addition to passive uses such as hiking trails and picnic facilities.

13 The Sonoma County Agricultural Preservation and Open Space District Sonoma County Regional Parks Department. *Taylor Mountain Regional Park and Open Space Preserve Master Plan Final Initial Study and Mitigated Negative Declaration* (2012) and *Tolay Lake Regional Park Master Plan Draft Environmental Impact Report* (2017).

Table 4.13-4
Project Trip Generation Rates and Estimates

	Trip Generation Rates[1]			Number of Trips Generated						
		AM Peak	PM Peak		AM Peak Hour			PM Peak Hour		
Use	Daily	Hour	Hour	Daily	Total	In	Out	Total	In	Out
Single Family (28 du)	11.50	0.89 25%/75%	1.07 63%/37%	322	25	6	19	30	19	11
Putnam Park Extension - Public Park (44 acres)[2]	0.78	0.02 59%/41%	0.11 55%/45%	34	1	1	0	5	3	2
			Total	356	26	7	19	35	22	13

Source: Trip Generation, 10th Edition, Institute of Transportation Engineers (ITE), 2017. Fehr & Peers, 2019.
Notes:
[1] *Trip rates are expressed as trips per dwelling unit (du) or trips per acre. For peak hour trip rates, the direction of travel is expressed as (inbound percentage) / (outbound percentage).*
[2] *Trip rates based on Public Park Land Use 411 from the ITE Trip Generation Manuel, 10th Edition. These national trip rates were compared to local rates prepared for Taylor Mountain Regional Park study, which were lower than ITE Trip Rates.*

In addition to the new project-generated vehicle trips associated with the Davidon (28-Lot) Residential Project component and Putnam Park Extension Project component, the combination of the Putnam Park Extension Project component and regional park trail improvements (presented in subsection **4.13.4.4, Regional Park Trail Impacts and Mitigation Measures**) would supplement access to the existing 216-acre Helen Putnam Regional Park. This may cause some people who are currently driving to Helen Putnam Regional Park to shift from the parking lots off Chileno Valley Drive and Windsor Drive just east of Western Avenue and street parking on Oxford Court to the proposed parking lots. Those visitors who shift to the proposed parking facilities would likely do so out of convenience, attracted by a parking location closer than the existing parking lots. Therefore, the effect of the proposed project and related project would be to reduce driving distances for people already driving through the study area and would not increase traffic volumes at the study intersections.[14] The Hazards discussion in subsection **4.13.4.4, Regional Park Trail Impacts and Mitigation Measures** presents an assessment of the effect of existing or new vehicles accessing the Helen Putnam Regional Park via the proposed parking lots.

[14] For example, a person currently driving to Helen Putnam Regional Park from Sunnyslope Avenue would use D Street and Windsor Drive to reach the parking locations on Oxford Drive, Windsor Drive, or Chileno Valley Road. Under the project conditions, they would still pass through the intersection of D Street and Windsor Drive to reach either parking lot.

Project Trip Distribution

The directions of approach and departure for the proposed project traffic were estimated based on the Petaluma Travel Demand Model, developed for the *2025 General Plan,* and anonymous GPS and cell phone data collected as part of the update to the Sonoma County Transportation Authority (SCTA) Travel Demand Model.[15] **Figure 4.13-3, Project Trip Distribution**, shows the general trip distribution pattern for the proposed project.

The majority of project traffic (77 percent) would approach and depart north of the project site, while 15 percent would travel to and from the south on D Street and 8 percent would travel to and from the west on Windsor Drive. Within the city, the greatest number of trips would occur between the west side of U.S. 101 and the project site.

Project Trip Assignment

The proposed project trips were assigned to the roadway system based on the directions of approach and departure discussed above. The locations of complimentary land uses and local knowledge of the study area helped to determine specific trip routes. **Figure 4.13-4, Peak Hour Turning Movement Volumes – Project Trip Assignment**, shows the expected increases in peak hour intersection turning movements due to the proposed project. The new project trips (as shown in **Figure 4.13-4)** were added to Existing traffic volumes to establish intersection volumes for Existing Plus Project conditions, shown in **Figure 4.13-5, Peak Hour Turning Movement Volumes – Existing Plus Project Conditions**.

The proposed new 28 single-family homes would access the existing roadway network at Windsor Drive west of D Street, while the new Putnam Park Extension Project component and regional park trips would access the existing roadway network from parking lots adjacent to Windsor Drive and D Street. Most people driving to and from the project site would use Windsor Drive to D Street and head north on D Street, as described in the above **Project Trip Distribution** section. The largest increases in traffic would occur on Windsor Drive just west of D Street, with an additional 18 eastbound trips during the AM peak hour and 20 westbound trips during the PM peak hour, and on D Street, with 16 northbound trips in the AM peak hour and 17 southbound trips in the PM peak hour.

Project-Generated VMT per Capita

Project-generated VMT per capita is calculated based on the VMT generated by residents living in the MTC Travel Demand Model TAZ in which the project is located divided by the residential population of the

15 SCTA Administrative and Operational Travel Demand Modeling Guidelines. https://scta.ca.gov/wp-content/uploads/2017/09/AdminGuidelines-2017-Sept-Update-revised.pdf

TAZ. Based on this methodology, the project would generate 19.6 VMT per capita at operation under existing conditions.

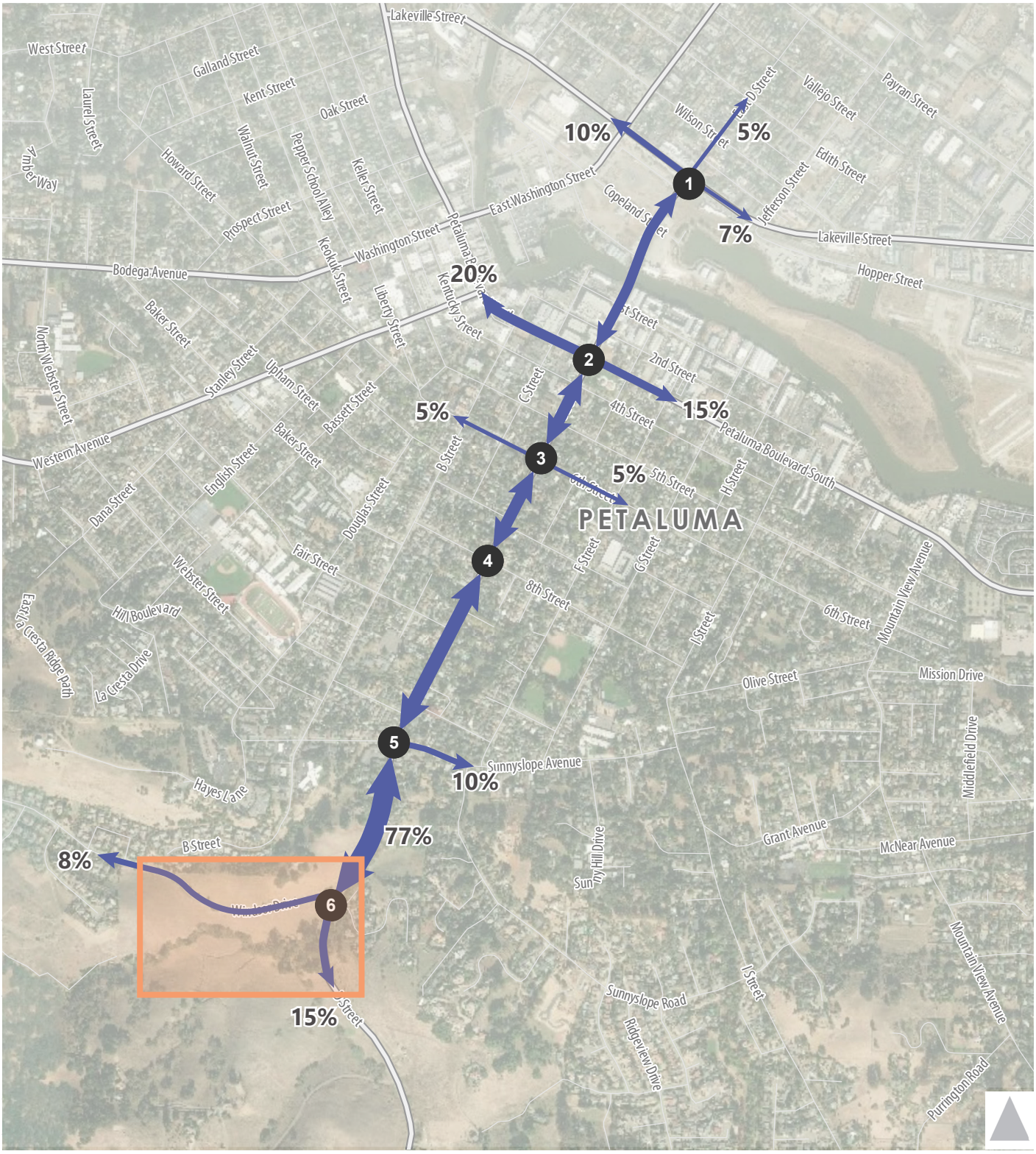
Project Effect on VMT

The project's effect on VMT describes changes in VMT generation from neighboring land uses by comparing area VMT for "no project" and "plus project" scenarios. An analysis of the project's effect on VMT requires the use of sophisticated tools, such as a locally-calibrated and validated travel demand forecasting model. The MTC Travel Demand Model, which is used to analyze project-generated VMT per capita, is a regional travel demand forecasting model that has limited sensitivity to local changes in land use and therefore is not appropriate for use in analyzing project effect on VMT for this project. Two other forecasting models which geographically overlap with the project site, are the SCTA Travel Demand Model and the City of Petaluma Travel Demand Model. However, as of 2019 when the traffic analysis was completed, these two models did not have a recently completed calibration and validation process, and therefore, are not appropriate for use at the time of this analysis. Due to these limitations in available tools and the limited effect that a small project of this size would have on VMT, a quantitative analysis of the project's effect on VMT is not included in this RDEIR. However, given the similarities in the proposed project land uses to those of the surrounding land uses (e.g., location that generates higher than average VMT for the City and similarly sized single-family dwelling units), the analysis of project-generated VMT per capita provides a reasonable estimation of the environmental consequences associated with the project's effect on VMT.

Existing Plus Project Intersection Operations (Informational)

As shown in **Table 4.13-4**, the proposed project would result in the addition of 27 net new AM peak hour vehicle trips and 35 net new PM peak hour vehicle trips on the study area road network. The effects of these additional vehicle trips on intersection levels of service were calculated for the Existing Plus Project condition, and the resulting levels of service are presented in **Table 4.13-5, Existing and Existing Plus Project Intersection LOS Summary**.

The addition of project traffic would increase average delay by one second at D Street/Lakeville Street, which operates at LOS E during the PM peak hour under existing conditions. At the study intersection D Street/Windsor Drive, operations would improve from an unacceptable LOS E under Existing conditions to LOS B under Existing Plus Project conditions during the PM peak hour due to installation of a roundabout at the intersection, which reduces delay for the side-street movements. All other study intersections would continue to operate at an acceptable level (LOS D or better) under Existing Plus Project conditions.



Project Site

XX% Trip Distribution

Study Intersection

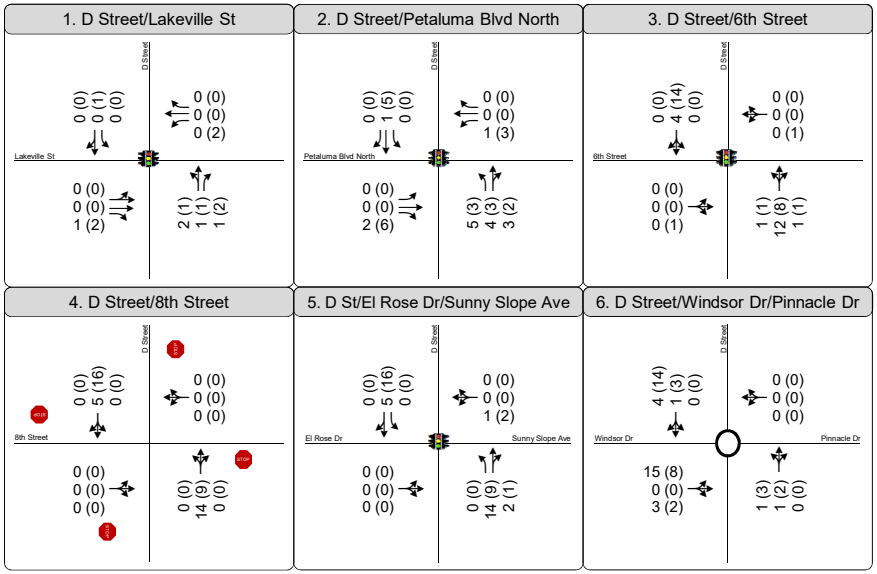
SOURCE: Fehr & Peers, 2019

FIGURE **4.13-3**

Project Trip Distribution

IMPACT SCIENCES

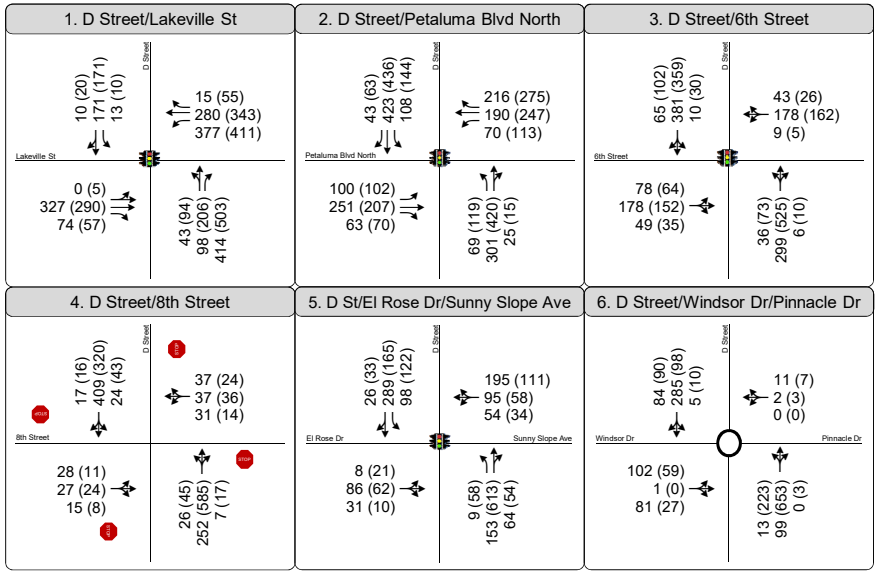
1222.001•09/19



SOURCE: Fehr & Peers, 2019

FIGURE **4.13-4**

Peak Hour Turning Movement Volumes – Project Trip Assignment



SOURCE: Fehr & Peers, 2019

FIGURE **4.13-5**

Peak Hour Turning Movement Volumes – Existing Plus Project Conditions

IMPACT SCIENCES

Table 4.13-5
Existing and Existing Plus Project Intersection LOS Summary

Intersection	Intersection Control[1]	Peak Hour[2]	Existing Conditions Average Delay[3]	Existing Conditions LOS[4]	Existing Plus Project Conditions Average Delay[3]	Existing Plus Project Conditions LOS[4]
1. D Street and Lakeville Street	Signal	AM	51	D	51	D
		PM	**60**	**E**	**61**	**E**
2. D Street and Petaluma Boulevard	Signal	AM	31	C	31	C
		PM	39	D	39	D
3. D Street and Sixth Street	Signal	AM	9	A	9	A
		PM	9	A	9	A
4. D Street and Eighth Street	AWSC	AM	16	C	16	C
		PM	28	D	30	D
5. D Street and Sunnyslope Road	Signal	AM	14	B	14	B
		PM	22	C	23	C
6. D Street and Windsor Drive	SSSC[5]	AM	13 (EB)	B	5	A
		PM	**44 (EB)**	**E**	11	B

Source: Fehr & Peers, 2019.
Notes:
*Intersections operating at LOS E or LOS F are shown in **bold**.*
[1] *SSSC = side street stop-controlled, AWSC = all way stop-controlled*
[2] *AM = morning peak hour, PM = evening peak hour.*
[3] *Average control delay expressed in seconds per vehicle. For worst-case movement at side street stop-controlled intersections, delay presented with worst-case movement in parenthesis. Average control delay calculated using Synchro 10 analysis software.*
[4] *LOS = Level of Service based on average control delay calculations.*
[5] *The D Street/Windsor Drive intersection is analyzed as a roundabout under Existing Plus Project conditions.*

Scenario 3: Pipeline Conditions (Informational)

Pipeline represents conditions under which all approved and pending projects are built and fully occupied and represent an interim informational scenario between the existing conditions and cumulative conditions scenarios. Traffic volumes for Pipeline conditions comprise existing traffic volumes *plus* anticipated traffic generated by approved or pending development in the area. These developments are expected to be built, so it is reasonable to assume that traffic associated with them will be added to the study area road network. This analysis also accounts for two transportation improvements which would likely be implemented prior to completion of the proposed projects, HOV lanes on U.S. 101 and a road diet (lane reduction) along Petaluma Boulevard east of D Street. However, these transportation improvements would not result in

changes to lane configurations at the study intersections. Therefore, existing intersection lane configurations were used for the analysis of Pipeline conditions.

Pipeline Projects and Traffic Estimates (Informational)

Traffic volumes for Pipeline conditions were estimated by adding to existing volumes the anticipated traffic generated by approved or pending, but not yet constructed or occupied, developments in the study area. The list of 26 approved and pending projects, presented in **Table 4.13-6, Approved and Pending Pipeline Projects** and in **Figure 4.13-6, Approved and Pending Pipeline Projects**, was developed by City of Petaluma staff in 2019.

Table 4.13-6
Approved and Pending Pipeline Projects

Project	Location	Land Use[1]	Size[2]
COMMERCIAL PROJECTS[3]			
Adobe Road Winery	1 C Street	Winery	16 ksf
1395 N. McDowell Boulevard SPAR	1395 N. McDowell Blvd.	Restaurant	6 ksf
Cagwin and Dorward	0 Lakeville Highway	Office	23 ksf
Hansel Toyota Expansion/Remodel	1125 Auto Center Drive	Auto Sales	11 ksf
Petaluma Poultry Expansion	2700 Lakeville Hwy.	Office	4 ksf
Petaluman Hotel	2 Petaluma Blvd. S	Hotel	54 rooms
Safeway Fuel Center	335 S McDowell Blvd.	Gas Station	8 dispensers
Home 2 Suites	1205 Redwood Way	Hotel	140 rooms
MIXED USE PROJECTS[3]			
Omahony Mixed Use Building	131 Liberty Street	Shopping Center, MF	2 ksf, 10 ksf
Riverfront 2010	500 Hopper Street	SF, MF, Hotel, Office, Retail	134 units, 39 units, 100 units,120 rooms, 60 ksf, 30 ksf
North River Apartments	368 and 402 Petaluma Blvd. N	MF	184 units
Haystack Pacifica	215 Weller Street	Shopping Center, MF	178 units, 15 ksf
Deer Creek Village	N. McDowell Blvd. between Lynch Creek and Rainier Ave.	Shopping Center, Office, MF	345 ksf commercial, 129 units
RESIDENTIAL PROJECTS[3]			
109 Ellis Street	109 Ellis Street	MF	13 units
Deer Creek Residential	0 N. McDowell Blvd.	MF	129 units

Project	Location	Land Use[1]	Size[2]
Baywood Apartments	2592 Casa Grande Road	MF	299 units
PEP Housing Senior Housing	951 Petaluma Blvd S.	Senior Housing	54 units
Sepaher Residential Building	315 Lakeville Street	MF	4 units
Brody Ranch Subdivision	360 Corona Road	SF, MF	59 units, 140 units
East Washington Commons	817, 822, 825 E. Washington St.	MF	24 units
Riverbend Crossing	529 Madison	SF	29 units
Altura Apartments	NE corner of Baywood Drive and Perry Lane	MF	150 units
Addison Ranch Apartments	200 Greenbriar Circle	MF	100 units
Sid Commons	End of Graylawn Ave.	MF	278 units
Sunnyslope II	674 Sunnyslope Road	SF	18 units
Quarry Heights (Lomas)	Petaluma Blvd. S (Dutra Quarry)	SF	90 units
Corona Station SPAR	890 N. McDowell Blvd.	SF	112 units

Source: City of Petaluma, August May 2019; Fehr & Peers, 2019.
Notes:
[1] *MF = multi-family residential; SF = single-family residential.*
[2] *ksf = thousand square feet; units = residential dwelling units.*

[3] This table includes all projects for which complete applications were received by the City at the time that the traffic analysis for this RDEIR commenced. Note that any impacts due to the traffic generated by the General Plan Buildout (which includes these and other projects) are presented as a part of the Cumulative Conditions analysis.

Traffic estimates for the approved and pending developments included in Pipeline conditions were estimated using trip generation rates from the ITE *Trip Generation Manual*. The trips associated with each approved or pending development were assigned to the roadway network in a pattern consistent with similar previous studies in the City of Petaluma and based on knowledge of the local street network. **Figure 4.13-7, Peak Hour Turning Movement Volumes – Pipeline Conditions**, illustrates the AM and PM peak hour traffic volumes at the study intersections under Pipeline conditions.

Pipeline VMT per Capita (Informational)

The analysis of VMT under Pipeline conditions is not required for CEQA and the available travel demand models do not reflect this scenario; therefore, an analysis of VMT per capita for Pipeline conditions was not conducted. Cumulative conditions include an assessment of the effect of the Pipeline projects in combination with other Citywide and regional land use and transportation changes.

Pipeline Intersection Operations (Informational)

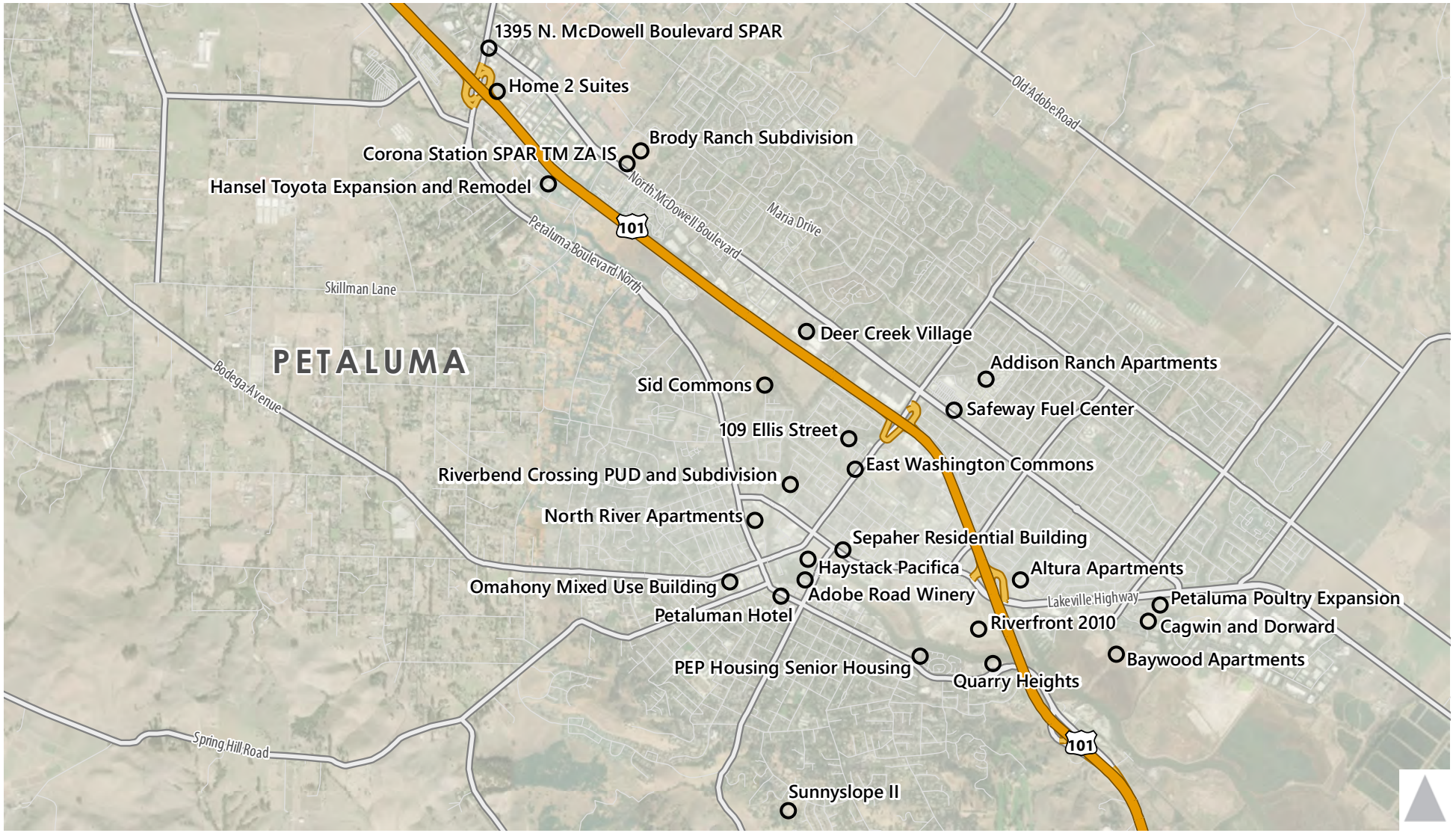
Table 4.13-7, Pipeline Conditions – Study Intersection LOS Summary, shows delay and LOS at the eight study intersections under Pipeline conditions. All but three study intersections would remain at acceptable

levels of service. At the intersection of D Street/Windsor Drive, the eastbound approach would operate at LOS F during the PM peak hour. At the intersection of D Street/Eighth Street, operations would worsen to LOS E during the PM peak hour. At the intersection of D Street/Lakeville Street, operations would worsen to LOS F during the PM peak hour.

Table 4.13-7
Pipeline Conditions – Study Intersection LOS Summary (Informational)

Intersection	Intersection Control[1]	Peak Hour[2]	Average Delay[3]	LOS[4]
1. D Street/Lakeville Street	Signal	AM	**59**	**E**
		PM	**>80**	**F**
2. D Street/Petaluma Boulevard	Signal	AM	34	C
		PM	44	D
3. D Street/Sixth Street	Signal	AM	9	B
		PM	10	B
4. D Street/Eighth Street	AWSC	AM	19	C
		PM	**44**	**E**
5. D Street/El Rose Drive/Sunnyslope Road	Signal	AM	14	B
		PM	25	C
6. D Street/Windsor Drive/Pinnacle Drive	SSSC	AM	14 (EB)	B
		PM	**56 (EB)**	**F**

Source: Fehr & Peers, 2019.
Notes:
*Intersections operating at LOS E or LOS F are shown in **bold**.*
[1] *SSSC = side street stop-controlled, AWSC = all-way stop-controlled.*
[2] *AM = morning peak hour, PM = evening peak hour.*
[3] *Average control delay expressed in seconds per vehicle. For worst-case movement at side street stop-controlled intersections, delay presented with worst-case movement in parenthesis. Average control delay calculated using Synchro 10 analysis software.*
[4] *LOS = Level of Service based on average control delay calculations.*



SOURCE: Fehr & Peers, 2019

FIGURE **4.13-6**

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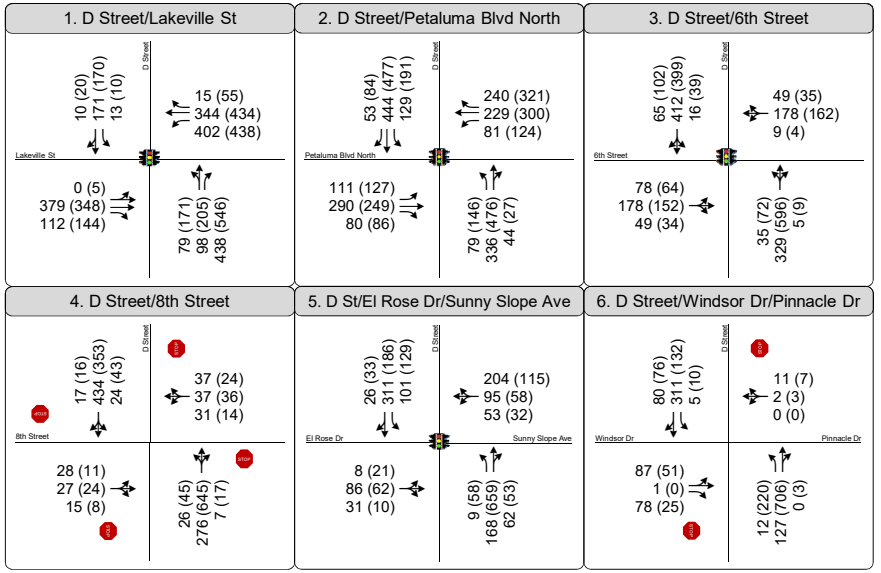
Approved and Pending Pipeline Projects



SOURCE: Fehr & Peers, 2019

FIGURE **4.13-7**

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Peak Hour Turning Movement Volumes – Pipeline Conditions

Scenario 4: Pipeline Plus Project Conditions (Informational)

Pipeline Plus Project conditions are represented by the addition of proposed project traffic to Pipeline traffic volumes on the existing roadway network. Proposed project traffic used here is the same as that estimated for Existing Plus Project conditions. Pipeline Plus Project conditions were compared to Pipeline conditions to determine potential near-term project effects.

Pipeline Plus Project traffic volumes are shown in **Figure 4.13-8, Peak Hour Turning Movement Volumes – Pipeline Plus Project Conditions**.

Pipeline Plus Project VMT per Capita (Informational)

As noted for Pipeline conditions, the analysis of VMT under Pipeline conditions is not required for CEQA and the available travel demand models do not reflect this scenario; therefore, an analysis of VMT per capita for Pipeline conditions was not conducted. Cumulative conditions include an assessment of the effect of the Pipeline projects in combination with other Citywide and regional land use and transportation changes.

Pipeline Plus Project Intersection Operations (Informational)

The effects of the project vehicle trips on intersection levels of service were calculated for the Pipeline Plus Project condition, and the resulting levels of service are presented in **Table 4.13-8, Pipeline and Pipeline Plus Project Intersection LOS Summary**.

The addition of project traffic would worsen LOS F operations at the D Street/Lakeville Street intersection by adding nine vehicle trips during the PM peak hour, representing a 0.4 percent change to the existing volumes at the intersection. At the study intersection D Street/Windsor Drive, operations would improve from an unacceptable LOS F under Existing conditions to LOS B under Existing Plus Project conditions during the PM peak hour due to installation of a roundabout at the intersection. All other study intersections would continue to operate at an acceptable level (LOS D or better) under Pipeline Plus Project conditions.

Table 4.13-8
Pipeline and Pipeline Plus Project Intersection LOS Summary (Informational)

Intersection	Intersection Control[1]	Peak Hour[2]	Pipeline Conditions Average Delay[3]	Pipeline Conditions LOS[4]	Pipeline Plus Project Conditions Average Delay[3]	Pipeline Plus Project Conditions LOS[4]
1. D Street and Lakeville Street	Signal	AM	**59**	**E**	**59**	**E**
		PM	**>80**	**F**	**>80**	**F**
2. D Street and Petaluma Boulevard	Signal	AM	34	C	34	C
		PM	44	D	45	D
3. D Street and Sixth Street	Signal	AM	9	B	9	A
		PM	10	B	10	A
4. D Street and Eighth Street	AWSC	AM	19	C	19	C
		PM	**44**	**E**	**48**	**E**
5. D Street and Sunnyslope Road	Signal	AM	14	B	14	B
		PM	25	C	25	C
6. D Street and Windsor Drive[5]	SSSC	AM	14 (EB)	B	6	A
		PM	**56 (EB)**	**F**	13	B

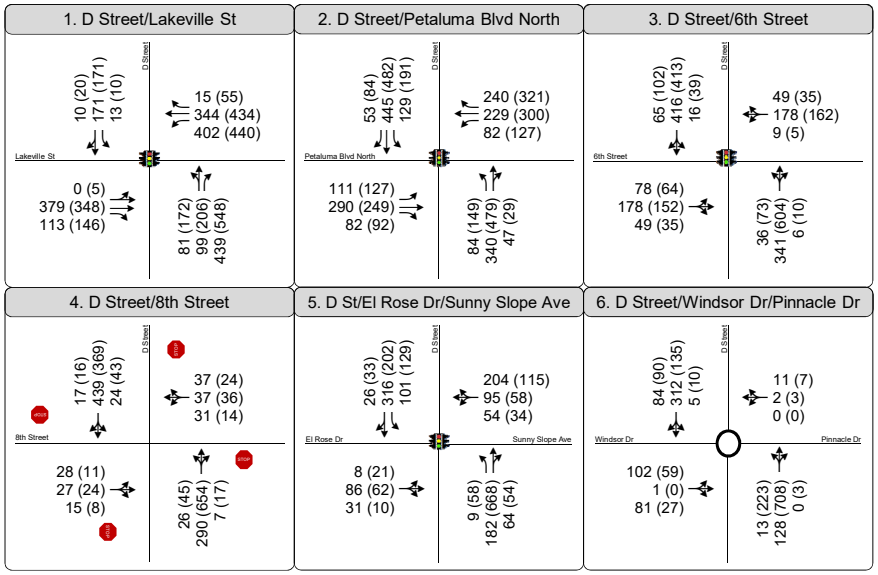
Source: Fehr & Peers, 2019.
Notes:
*Intersections operating at LOS E or LOS F are shown in **bold**.*
[1] *SSSC = side street stop-controlled; AWSC = all-way stop-controlled.*
[2] *AM = morning peak hour, PM = evening peak hour.*
[3] *Average control delay expressed in seconds per vehicle. For worst-case movement at side street stop-controlled intersections, delay presented with worst-case movement in parenthesis. Average control delay calculated using Synchro 10 analysis software.*
[4] *LOS = Level of Service based on average control delay calculations.*
[5] *The D Street/Windsor Drive intersection is analyzed as a roundabout under Pipeline Plus Pipeline conditions.*

Scenario 5: Cumulative Conditions (without Project)

Cumulative conditions represent conditions with planned future development and transportation network changes.

Cumulative Projects and Traffic Estimates

The cumulative analysis in this RDEIR is based on the buildout of the City under the *2025 General Plan*, which at the time of preparation of the City of Petaluma *2025 General Plan* was predicted to occur by 2025. Due to economic factors and a slowdown in the economy, this buildout likely will not be reached until after



SOURCE: Fehr & Peers, 2019

FIGURE **4.13-8**

Peak Hour Turning Movement Volumes – Pipeline Plus Project Conditions

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2025. Therefore, the cumulative analysis is assumed as 2025 or later, based on buildout of development foreseen in the City of Petaluma *2025 General Plan*. Major roadway improvements assumed for the cumulative analysis are consistent with the *2025 General Plan* and include the projects described below. With the exception of the Highway 101 widening, these major roadway improvements are included in the City's Capital Improvement Plan and are assumed to be fully funded through development contribution and the City's Traffic Impact Fee program.

Highway 101 Widening. Highway 101 would be widened to provide high-occupancy vehicle (HOV) lanes in both directions. This project is a part of the Caltrans Marin-Sonoma Narrows HOV Widening (MSN) Project, component MSN-C, which is included as a top priority for Tier 1 funding in the Metropolitan Transportation Commission Regional Transportation Plan. At the time that the RDEIR preparation was commenced, the HOV lanes on U.S. 101 had been completed north of Petaluma to Santa Rosa and from Central Marin County through Novato. In addition, at the time of RDEIR preparation, several interchanges in Petaluma were under construction to close the gap in HOV lanes between Novato and north of Petaluma.

Rainier Avenue Extension and Interchange Project. Rainier Avenue would be extended from McDowell Avenue to Petaluma Boulevard North. An interchange would be constructed at Rainier Avenue between the Old Redwood Highway and Washington Street interchanges. The new interchange would consist of a partial-cloverleaf design with auxiliary lanes in both directions between the Rainier Avenue and Washington Street interchanges. Ramp metering and HOV bypass lanes would be provided at all onramps. The Rainier Avenue extension and Interchange projects are two separate projects that would be built separately as money becomes available.

North Petaluma Boulevard Grid. A grid of streets would be developed near North Petaluma Boulevard adjacent to the Rainier Avenue extension and a planned southward extension of Industrial Avenue.

Caulfield Lane Connection. Caulfield Lane would be connected between its existing terminus at Hopper Street and Petaluma Boulevard South via a new bridge over the Petaluma River.

Traffic volumes for Cumulative conditions were forecasted by the Petaluma citywide traffic model, which uses land use and transportation network information to predict traffic volumes on local roadways. The traffic model forecasts traffic volumes on roadway segments, but it does not predict intersection turning movement volumes. Turning movement volumes at the study intersections for Cumulative conditions were estimated using methodologies defined in *National Cooperative Highway Research Program (NCHRP Report 255), Highway Traffic Data for Urbanized Area Project Planning and Design*, Pedersen, N.J. and Samdahl, D.R., Transportation Research Board, 1982 - specifically, those outlined in Chapter Eight, Turning Movement Procedures. Generally, this methodology calculates the difference between base year and future

year model outputs on the roadway segments that make up the study intersection approaches and applies that difference to existing vehicular turning movement counts.

Since the City's model was calibrated to 2007 conditions and does not account for changes in background conditions that have occurred since 2007, the reasonableness of using cumulative traffic forecasts developed using the model was evaluated by comparing the following:

- The existing intersection volumes in **Figure 4.13-2, Peak Hour Intersection Turn Movement Volumes – Existing Conditions** were compared to the existing intersection volumes in the City of Petaluma's *2025 General Plan*.

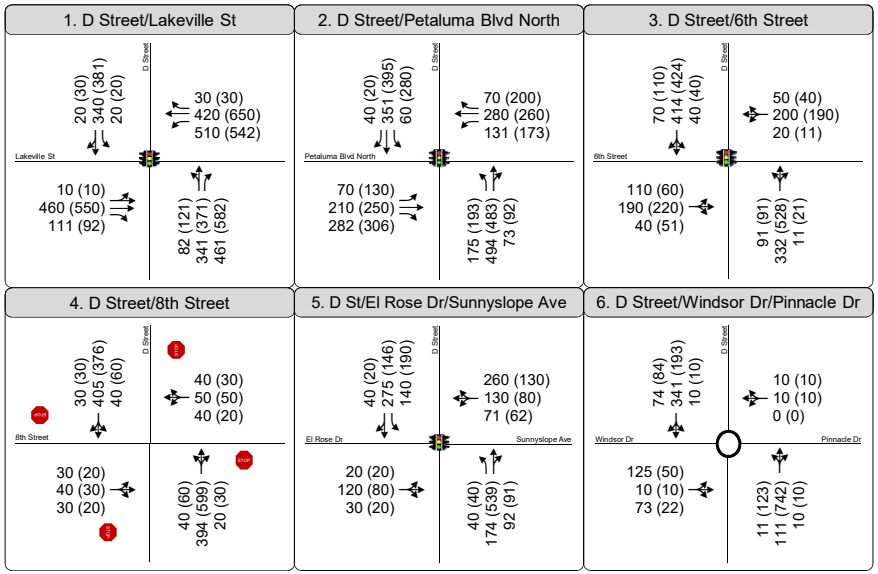
- The growth in land use assumed in the Petaluma Travel Demand Forecasting model was compared to the growth in land use within the City of Petaluma assumed in the ABAG/MTC Plan Bay Area 2040.

The results of the comparison showed that the existing intersection volumes in **Figure 4.13-2** are generally lower than the existing intersection volumes in the City of Petaluma's *2025 General Plan*, and the growth in land use assumed in the Petaluma Travel Demand Forecasting model was greater than the growth in land use within the City of Petaluma assumed in the ABAG/MTC Plan Bay Area 2040. These results demonstrate that the cumulative traffic forecasts developed using the aforementioned methodology are conservative. See **Appendix 4.13** for the results of the comparison of cumulative land use growth.

Traffic volumes at the study intersections under cumulative conditions are shown in **Figure 4.13-9, Peak Hour Turning Movement Volumes – Cumulative No Project Conditions**.

Cumulative VMT per Capita

Cumulative VMT per Capita is calculated based on the methodology described in **Section 4.13.2.2** using the future year scenario of the MTC Travel Demand Model, which assumes land use growth and transportation improvements consistent with Plan Bay Area. Based on this data, under cumulative conditions the City of Petaluma would generate 16.3 VMT per capita (based on the average of all the TAZ's within Petaluma, including the project site) and the TAZ containing the site of the proposed project would generate 16.1 VMT per capita. The lower VMT per capita under cumulative conditions compared to existing conditions indicates that the addition of land use growth in the region and transportation improvements would lower the total amount of miles each person in Petaluma travels.



SOURCE: Fehr & Peers, 2019

FIGURE **4.13-9**

Peak Hour Turning Movement Volumes – Cumulative Plus Project Conditions

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Cumulative Intersection Operations (Informational)

Intersection levels of service under cumulative conditions were calculated and are shown in **Table 4.13-9, Cumulative Conditions – Study Intersection LOS Summary**.

Table 4.13-9
Cumulative Conditions – Study Intersection LOS Summary

Intersection	Intersection Control[1]	Peak Hour[2]	Average Delay[3]	LOS[4]
1. D Street/Lakeville Street	Signal	AM	**>80**	**F**
		PM	**>80**	**F**
2. D Street/Petaluma Boulevard	Signal	AM	22	C
		PM	44	D
3. D Street/Sixth Street	Signal	AM	10	B
		PM	11	B
4. D Street/Eighth Street	AWSC	AM	21	D
		PM	**49**	**E**
5. D Street/El Rose Drive/Sunnyslope Road	Signal	AM	25	C
		PM	22	C
6. D Street/Windsor Drive/Pinnacle Drive	SSSC	AM	16 (EB)	C
		PM	**>50 (EB)**	**F**

Source: Fehr & Peers, 2019.
Notes:
*Intersections operating at LOS E or LOS F are shown in **bold**.*
[1] *SSSC = side street stop-controlled, AWSC = all-way stop-controlled.*
[2] *AM = morning peak hour, PM = evening peak hour.*
[3] *Average control delay expressed in seconds per vehicle. For worst-case movement at side street stop-controlled intersections, delay presented with worst-case movement in parenthesis. Average control delay calculated using Synchro 10 analysis software.*
[4] *LOS = Level of Service based on average control delay calculations.*

As shown in **Table 4.13-9**, the following three intersections would operate at unacceptable levels of service based on their LOS standard under cumulative conditions:

- D Street/Lakeville Street (AM and PM peak hours)
- D Street/Eighth Street (PM peak hour)
- D Street/Windsor Drive (PM peak hour)

All other study intersections would continue to operate at an acceptable level (LOS D or better) under cumulative conditions.

Scenario 6: Cumulative Plus Project Conditions

Cumulative conditions were evaluated with the proposed project to determine the extent to which the proposed project would contribute to long-term cumulative transportation impacts. Cumulative Plus Project traffic volumes are shown in **Figure 4.13-10, Peak Hour Turning Movement Volumes – Cumulative Plus Project Conditions**.

Cumulative Plus Project VMT Per Capita

Cumulative VMT per Capita for the proposed project was analyzed based on the future year scenario of the MTC Travel Demand Model, which assumes land use growth and transportation improvements consistent with Plan Bay Area. Based on this data, under cumulative conditions the City of Petaluma would generate 16.3 VMT per capita and the TAZ containing the site of the proposed project would generate 16.1 VMT per capita.

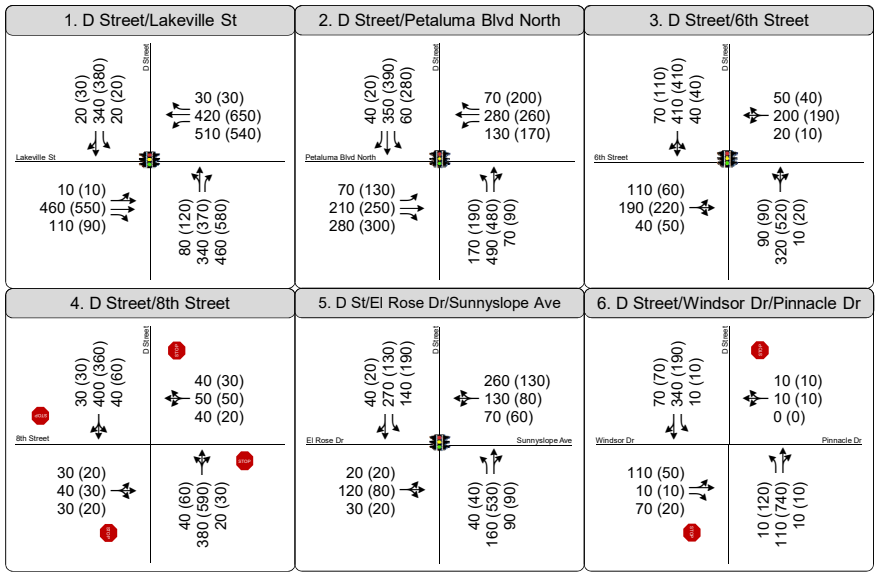
Cumulative Plus Project Intersection Operations (Informational)

Intersection levels of service under Cumulative (without Project) and Cumulative Plus Project conditions were calculated and are shown in **Table 4.13-10, Cumulative Conditions – Study Intersection LOS Summary**.

As shown in **Table 4.13-10**, the following two intersections would continue to operate at unacceptable levels of service based on their LOS standard under Cumulative Plus Project conditions:

- D Street/Lakeville Street (AM and PM peak hours)
- D Street/Eighth Street (PM peak hour)

All other study intersections would continue to operate at an acceptable level (LOS D or better) under Cumulative Plus Project conditions.



SOURCE: Fehr & Peers, 2019

FIGURE **4.13-10**

Peak Hour Turning Movement Volumes – Cumulative No Project Conditions

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Table 4.13-10
Cumulative Conditions – Study Intersection LOS Summary

Intersection	Intersection Control[1]	Peak Hour[2]	Cumulative (without Project) Conditions Average Delay[3]	Cumulative (without Project) Conditions LOS[4]	Cumulative Plus Project Conditions Average Delay[3]	Cumulative Plus Project Conditions LOS[4]
1. D Street and Lakeville Street	Signal	AM	**>80**	**F**	**>80**	**F**
		PM	**>80**	**F**	**>80**	**F**
2. D Street and Petaluma Boulevard	Signal	AM	22	C	22	C
		PM	44	D	45	D
3. D Street and Sixth Street	Signal	AM	10	B	10	B
		PM	11	B	12	B
4. D Street and Eighth Street	AWSC	AM	21	D	22	D
		PM	**49**	**E**	**53**	**F**
5. D Street and Sunnyslope Road	Signal	AM	25	C	26	C
		PM	22	C	23	C
6. D Street and Windsor Drive	SSSC	AM	16 (EB)	C	6	A
		PM	**>50 (EB)**	**F**	13	B

Source: Fehr & Peers, 2019.
Notes:
*Intersections operating at LOS E or LOS F are shown in **bold**.*
[1] *SSSC = side street stop-controlled; AWSC = all way stop-controlled.*
[2] *AM = morning peak hour, PM = evening peak hour.*
[3] *Average control delay expressed in seconds per vehicle. For worst-case movement at side street stop-controlled intersections, delay presented with worst-case movement in parenthesis. Average control delay calculated using Synchro 10 analysis software.*
[4] *LOS = Level of Service based on average control delay calculations.*

4.13.4.3 Project Impacts and Mitigation Measures

Vehicular Traffic

This section includes the evaluation of the project's impact on VMT. The project's effect on intersection operations under existing and Pipeline conditions is provided for informational purposes only in subsection **4.13.5, Vehicle Delay and Parking Informational Topics.**

Impact TRANS-1: Development of the proposed project would generate VMT per capita greater than the project threshold (*Significant; Significant and Unavoidable*)

As documented above, the proposed project would generate 19.6 VMT per capita at operation under existing conditions, which is greater than the significance threshold of 16.2 VMT per capita based on 15 percent below the City average. Therefore, the proposed project would have a significant impact on VMT.

As noted above in the Vehicle Traffic Analysis (**Section 4.13.4.2**), the 44-acre Putnam Park Extension Project component is screened out from VMT analysis due to the size and characteristics and the impact on VMT would be less-than-significant.

Mitigation Measures: As a component of the City's on-going SB 743 implementation, the City will be adopting a set of preferred VMT mitigation measures and methodologies for quantifying VMT reductions resulting from these mitigation measures. These mitigation measures for significant VMT impacts may include transportation demand management (TDM) strategies that are required for individual projects or on a citywide basis. Research on the effectiveness of TDM strategies published in *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA, August 2010)[16] identifies 50 transportation measures for reducing VMT with a range of effectiveness. Of the 50 transportation measures presented in the report, 41 are applicable at building and site level. The remaining nine transportation measures are functions of, or depend on, site location and/or actions by local and regional agencies or funders.

Based on research documented in *SB 743 Implementation TDM Strategy Assessment* (Fehr & Peers, February 26, 2019)[17], the most effective TDM strategies for VMT reductions (and resultant emissions) derive from regional infrastructure and service investments that support use of transit, walking, and bicycling. However, many of these measures would be outside the capabilities at the project-level. Of the 41 strategies applicable at the building and site level, only a few are likely to be effective in a suburban setting, such as on the urban fringe of Petaluma, since they are dependent on the land use context and final building occupants who choose to be located in walkable or transit-supportive locations. **Appendix 4.13** documents the VMT reduction strategies and an assessment of their potential application to this RDEIR. Within the context of the project, the following four CAPCOA strategies were determined to be most applicable to the project:

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16 CAPCOA. *Quantifying Greenhouse Gas Mitigation Measures.* August 2010. http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.

17 Fehr & Peers. *SB 743 Implementation TDM Strategy Assessment.* February 2019. https://www.fehrandpeers.com/wp-content/uploads/2019/03/WRCOG-SB743-Document-Package.pdf.

- LUT-5 Increase Transit Accessibility: this strategy focuses on encouraging a mode shift from private automobile to transit by promoting convenient access to high-frequency transit, thereby reducing VMT.

- SDT-1 Provide Pedestrian Network Improvements: this strategy focuses on creating a pedestrian network within the project and connecting the project to nearby destinations. Given the small size of the proposed project, this strategy would likely focus on the construction of network improvements that connect the project site directly to nearby destinations.

- SDT-2 Provide Traffic Calming Measures and Low-Street Bicycle Network Improvements: this strategy creates networks with low vehicle speeds and volumes that are more conducive to walking and bicycling. Building a low-stress bicycle network produces a similar outcome. Implementation options are similar to those for providing pedestrian network improvements. One potential change in this strategy over time is that e-bikes (and e-scooters) could extend the effective range of travel on the bicycle network, which could enhance the effectiveness of this strategy. However, given that these technologies have only recently gained popularity, there is not currently evidence to support a VMT reduction in a setting similar to Petaluma.

- TRT-13 Implement School Bus Program: this strategy implements a school bus program that reduces VMT for school trips only.

Pedestrian and bicycle network improvements (SDT-1 and SDT-2, respectively) are included as part of the proposed project to fulfill City requirements as outlined in the below Pedestrian, Bicycle, and Public Transit section. These infrastructure improvements include new sidewalks along the south side of Windsor Drive, a crosswalk at the new intersection of Windsor Drive at the proposed A and B Streets, as well as off-site crossing improvements at the D Street/Windsor Drive intersection and sidewalk improvements along the east side of D Street between Windsor Street and Sunnyslope Avenue, for a distance of approximately 800 feet, to connect with the existing sidewalk. The project also includes infrastructure improvements to the bicycle network via a Class I trail along the west side of D Street from the southeast corner of the project site to connect with a proposed sidewalk at the northeast corner of the site. Project improvements would also include a new multi-use trail connecting D Street with the proposed multi-use trail along Kelly Creek. However, the project location on the edge of the City and urban development and the hilly terrain limits the effectiveness of bicycle and pedestrian network improvements in reducing project-generated VMT as documented in **Appendix 4.13**. Therefore, TDM strategies SDT-1 and SDT-2 would have a negligible effect on reducing the project's VMT.

A school bus program (TRT-13) was evaluated as mitigation for the proposed project's VMT impact. Research documented in **Appendix 4.13** suggests that a school bus program has a VMT reduction potential of 5-30 percent of VMT generated by school trips. The project site is within one-half mile of Route 501, which provides public transit school service, so the proposed project is within walking distance of this program. However, output from the MTC Travel Demand Model TAZ in which the project is located shows that school trips represent only two percent of total home-based VMT. Therefore, this strategy would have a negligible effect on reducing the project's VMT.

TDM Strategy LUT-5 would require providing funding for expanding the transit network to the project site. This measure is estimated to have VMT reduction potential of 0.0 to 5.8 percent. However, the City of Petaluma does not have plans to extend transit service to the project site due to the low density and other design characteristics of the surrounding community that would not support a viable fixed transit service.[18] Therefore, this strategy would be infeasible for reducing the project's VMT.

While there are few, if any, feasible strategies for reducing project-generated VMT due to the location and characteristics of the proposed project and project site, these measures are proven effective at reducing VMT for people living, working, and visiting in areas of Petaluma with higher density, a mix of uses, and more amenities within a convenient walk, bike, or transit trip. Therefore, the project could help the City and state meet their GHG goals by contributing to measures consistent with these strategies elsewhere in the City. This concept can include VMT impact fees, VMT mitigation exchange, and VMT mitigation bank.[19] As a component of the City of Petaluma's on-going SB 743 implementation, the City is currently engaged in a process to develop a mitigation program that would address the transportation system impacts of discretionary projects, including those for which there is no feasible mitigation measure for VMT impacts.

Mitigation Measure:

TRANS-1 The Applicants shall contribute their fair share to mitigation measures that aim to reduce Citywide VMT per capita by an equivalent amount to the reduction of project-generated VMT from 19.6 VMT per capita to a

18 Per email on March 13, 2020 from Jared Hall, City of Petaluma Transit Manager.

19 Source: https://www.fehrandpeers.com/wp-content/uploads/2020/04/VMT-Fees_Exchanges_Banks-White-Paper_Apr2020.pdf.

level at or below 16.2 VMT per capita. [20] These mitigation measures for reducing VMT shall include funding for transit passes or multi-modal infrastructure, such as transit shelters or other accessibility improvements, to address existing capital needs determined by the City of Petaluma's Engineer and Transit Manager. These measures, when applied to people working, living, or visiting areas of Petaluma with higher density, a greater mix of uses, and more amenities within a convenient walk, bike, or transit trip, are effective at reducing VMT. For example, constructing transit shelters and other amenities that support transit-oriented neighborhoods as outlined in the CAPCOA Strategy LUT-5 Increase Transit Accessibility are estimated to have a VMT reduction potential up to 5.8 percent. However, in the absence of a Citywide policy outlining the specific improvements and the effectiveness of these improvements at reducing VMT, the feasibility of the mitigation measure is currently unknown.

Significance after Mitigation: Implementation of **Mitigation Measure TRANS-1** would improve the attractiveness of transit service or access for people walking or bicycling in Petaluma; however, the effect of this measure on reducing Citywide VMT is unknown. Therefore, since this mitigation measure cannot guarantee that the impact of the proposed project on VMT would be reduced to a less-than-significant level, this impact would be significant and unavoidable.

Hazards and Emergency Access

Impact TRANS-2: **Development of the proposed project would not result in impacts related to the internal circulation system, substantially increase hazards due to a geometric design feature, nor substantially impact emergency access. (*Less than Significant*)**

Vehicular access to the site would be provided at a new intersection on Windsor Drive. While the proposed project does not include access to individual residential lots from Windsor Drive or D Street, it includes two new public roads (A and B Streets) that would be accessed via Windsor Drive and end in cul-de-sacs.

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20 Based on the MTC 2015 model, the existing total Citywide daily VMT is 986,618. The project would generate 1,356 total daily VMT (19.6 VMT per capita * 28 homes * 2.47 average household size in Petaluma = 1,356 total VMT), and would be required to reduce this amount by 233 VMT (28 homes * 2.47 average household size * [19.6 VMT – 16.2 VMT per capita]). Therefore, the project would be responsible for a 0.02% reduction to total citywide VMT (233 total VMT / [986,618 total VMT + 1,356 total VMT] = 0.02%) in order to reduce citywide VMT per capita by an equivalent level of 16.1 VMT per capita for the project.

The proposed project also includes direct access to the parking lots of the Putnam Park Extension Project component from Windsor Drive and D Street. The potential for the proposed project to affect emergency access or increase hazards due to a design feature is evaluated below.

Emergency Access

Emergency vehicle access to the project site would be provided by nearby roadways, including D Street and Windsor Drive. The project site is approximately one mile and less than a five-minute drive from the nearest fire station, located on D Street in downtown Petaluma. Traffic congestion is not heavy along southbound D Street and likely would not affect the emergency response time. The emergency vehicle access on the project site would be designed to meet requirements of the Petaluma Fire Code and developed in consultation with City Fire Department staff (see **Section 4.11, Public Services**, of this RDEIR for a discussion of impacts on fire service, and **Section 4.15, Wildfires,** for the project's impacts associated with emergency response plan). The project site would be required to provide turning radii and back-up space adequate to accommodate emergency fire equipment.

Construction activities have the potential to add construction traffic to the street network and potentially could require partial lane closures during street improvements or utility installations. However, construction activities are temporary by nature, and project-related construction activities would not cause a substantial disruption to roadway capacity that limit emergency access. In compliance with the Petaluma Fire Code, City and emergency services would be notified of planned road closures or roadway restrictions, alternative emergency routes, and detours due to construction activities of the proposed project. Based on the proposed project and its incorporation of the standard requirements, emergency vehicle access would be considered adequate.

Proposed A and B Streets, as well as driveways, would be constructed to provide internal circulation within the Davidon (28-Lot) Residential Project component. These facilities would be designed and constructed in accordance with City regulations to ensure visibility and safety of all users and adequate access for emergency and fire vehicles. The internal roadways have been designed to provide a 50-foot right-of-way, including a 36-foot roadway with on-street parking and sidewalks on both sides. Cul-de-sacs would have a 43-foot radius at face of curb to accommodate emergency vehicles. One guest on-street parking space per home would be provided, and each house would have a driveway and garage.

Emergency access to the barn center within the Putnam Park Extension Project component would be provided via direct access from D Street. The access would include removable bollards to prohibit automobile use. The access would also be designed to accommodate turning radii for emergency vehicles. Indirect emergency vehicle access to the Putnam Park Extension Project component would be also provided via surface lots on D Street and B Street.

Given the above, the proposed on-site circulation is adequate to serve the proposed 28 single-family homes and the Putnam Park Extension Project component. Therefore, the proposed project would have a less-than-significant impact related to hazards resulting from project design or inadequate emergency access.

Hazards

The assessment of hazards includes a review of sight distance and access at the proposed driveways.

Sight Distance

The proposed project site plan with new intersections is depicted in **Figure 4.13-11, Site Plan and New Intersections**. As shown and labeled on the figure, the proposed project includes the creation of a roundabout at D Street/Windsor Drive and two new intersections, Windsor Drive/A Street/B Street and D Street/main parking lot driveway. The roundabout was evaluated with a Stopping Sight Distance (SSD) and the two intersections were evaluated with respect to SSD and Corner Sight Distance (CSD). Minimum acceptable SSD and CSD at the new project intersections were obtained from the *Caltrans Highway Design Manual*, 2012 Edition, California Department of Transportation (Caltrans HDM), Tables 201.1 and 405.1A.

SSD is the distance required by a driver, traveling at a given speed, to bring their vehicle to a complete stop after an object on the road becomes visible. In the case of the project intersection at Windsor Drive/A Street/B Street, the SSD is the distance needed for an approaching motorist on Windsor Drive to see a vehicle that turns into the roadway from a minor street and be able to stop safely before making contact with the turning vehicle. In the case of the roundabout at Windsor Drive/D Street, the SSD is the distance needed for a motorist on each entering and exiting approach to see an object on the roadway and be able to stop safely before making contact.

CSD is the distance necessary for the driver on the minor approach to complete the necessary maneuver while an approaching vehicle travels at the assumed design speed of the major roadway. In the case of the intersection at Windsor Drive/A Street/B Street, the CSD is the distance from the minor approach to the oncoming travel lane in each direction.

Per Caltrans HDM, CSD should be provided for all new intersections. However, where restrictive conditions exist, such as limited right-of-way, building removal, extensive excavation, or immitigable environmental impacts, the SSD for a given approach would govern and is considered acceptable sight distance.

The design speeds used for this analysis were assumed to be 5 mph over the posted speed limit. A discussion of the proposed new intersection (Windsor Drive/A Street/B Street) and the proposed access to

the Putnam Park Extension Project component main parking lot on D Street and the minimum sight distances for each intersection follows.

Windsor Drive/A Street/B Street is a new four-leg intersection that would provide access to 28 single-family homes via two dead-end (cul-de-sac) streets. The new intersection would be located on Windsor Drive approximately 1,200 feet west of the intersection of Windsor Drive/D Street. The posted speed on Windsor Drive at the new intersection is 30 mph.

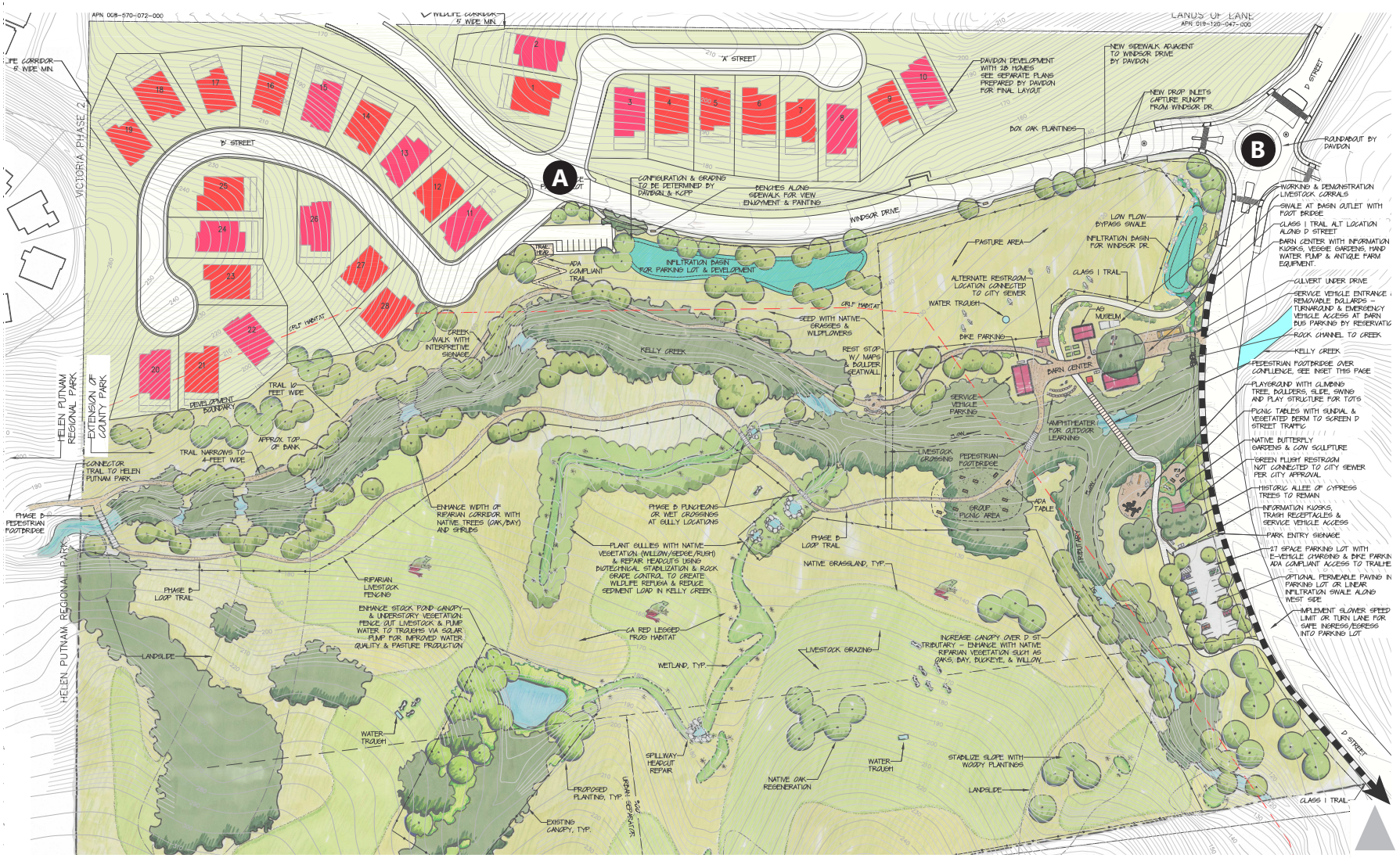
D Street/main parking lot driveway would be a "T" intersection on D Street, approximately 550 feet south of the intersection of D Street/Windsor Drive. The posted speed limit on D Street at this intersection is 40 mph.

A summary of the suggested CSD, minimum SSD, and provided CSD and SSD is included in **Table 4.13-11.**

Table 4.13-11
Summary of Corner Sight Distance and Stopping Sight Distance

Intersection	Major Street Characteristics: Posted Speed Limit (mph)	Major Street Characteristics: Design Speed[1]	Approach	Direction	Preferred CSD (ft)	Provided CSD (ft)	Adequate CSD Provided	Minimum SSD Provided
Windsor Drive / A Street / B Street	30	35	Southbound	Westerly	385	340	No [2]	Yes
				Easterly	385	250	No [3]	Yes
			Northbound	Westerly	385	385	Yes	Yes
				Easterly	385	440	Yes	Yes
D Street / Main Parking Lot	40[4]	45	Eastbound	Northerly	550	600	Yes	Yes
				Southerly	500	500	Yes	Yes

Source: Fehr & Peers, 2019.
Notes:
[1] *Design speeds used in Sight Distance calculations were 5 mph above the posted speed limit.*
[2] *Although preferred CSD would not be provided, minimum SSD of 250 ft for this approach would be provided.*
[3] *Although preferred CSD would not be provided, minimum SSD of 250 ft for this approach would be provided.*
[4] *Based on speed survey's conducted by the City of Petaluma dated March 5, 2020, the 85th percentile speed was 45 mph on this roadway segment and the posted speed limit was adjusted to 40 mph.*



SOURCE: Fehr & Peers, 2019

FIGURE **4.13-11**

IMPACT SCIENCES

Site Plan and New Intersections

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As shown in **Table 4.13-11**, the project intersections would provide adequate CSD at four of the six approach maneuvers evaluated. Of the two approach maneuvers where adequate CSD would not be provided, the minimum SSD would be provided. Therefore, project-related impacts associated with sight distance would be less than significant.

Left-Turn Ingress at Main Parking Lot (Lower Parking Lot)

The proposed Scott Ranch project would create a new parking lot with access location on D Street, approximately 550 feet south of Windsor Drive. As noted in the above **Sight Distance** subsection, the SSD provided for northbound traffic on D Street approaching the proposed driveway was found to be approximately 500 feet, which meets the minimum SSD and CSD for a roadway with a design speed of up to 45 mph. Therefore, project-related impacts associated with sight distance would be less than significant.

However, since the driveway is located at the rural-urban interface, the need for a new left-turn lane for northbound traffic on D Street to enter the D Street parking lot was evaluated. According to *A Policy on Geometric Design of Highways and Streets*, Fifth Edition, American Association of State Highway and Transportation Officials (AASHTO), 2004, considerations for determining if a left turn lane is warranted include the left turn volumes, opposing and advancing traffic volumes, and site specific conditions including grades, curves, and sight distance.

At the proposed D Street/main parking lot driveway intersection, PM peak hour volumes on D Street would be 125 vehicles per hour (vph) in the southbound direction and 879 vph in the northbound direction under Existing Plus Project conditions. Under Pipeline Plus Project conditions, PM peak hour volumes on D Street would be approximately 162 vph in the southbound direction and 934 vph in the northbound direction. The proposed project trip generation forecasts indicate that the Putnam Park Extension Project component would be expected to generate three PM peak hour inbound trips. Based on the trip distribution assumption that 15 percent of peak hour trips would come from south of the project site, there would be approximately one left turn from northbound D Street into the main parking lot during the PM peak hour. As noted in Project Traffic Estimates (**Section 4.13.4.2**), the combination of the Putnam Park Extension Project component and regional park trail improvements (related project) may cause some existing drivers to shift to the proposed parking lots. Assuming that half of existing park visitors shift to this driveway, this would result in an additional vehicle turning left into the main parking lot during the PM peak hour.[21] The left turns would represent less than one percent of the northbound traffic on D Street during the PM peak hour under both Existing Plus Project and Pipeline Plus Project conditions. As stated, the opposing

[21] Applying the PM inbound trip generation rate presented in **Table 4.13-4** results in seven vehicle trips shifting from other parking lots. With 15 percent of people coming from the south, this would result in one vehicle trip entering at D Street.

(southbound) volume would be 125 vph under Existing Plus Project conditions and 162 vph under Pipeline Plus Project conditions. Under these volume conditions, AASHTO recommends that a left turn lane would not be warranted (*A Policy on Geometric Design of Highways and Streets*, Exhibit 9-75).

While a turn pocket is not required to meet AASHTO standards based on the PM peak hour volumes, the proposed new intersection is along a curve on D Street where northbound drivers transition from a rural roadway and cross into the Petaluma City limits and southbound drivers are accelerating as they transition into rural Sonoma County. Additionally, the SSD just meets the minimum requirements, and future vegetation growth could reduce the SSD. As a measure to further reduce the less than significant impact, the following improvement measure is identified below to reduce the collision potential for people driving on D Street.

Mitigation Measures: No mitigation measures are required.

Improvement Measures:

IM TRANS-2 During the SPAR process, at the City engineers' discretion, the project Applicants shall fund the following measures: striping of a northbound left turn lane at the parking lot access on D Street, trimming or removing any landscaping that may grow in such a manner that could obstruct the line of sight between motorists exiting the driveway and traveling along D Street, and installing flashing warning lights, signage, and striping to warn drivers about the driveway and roundabout. The installation of this northbound left turn pocket would provide adequate space for a northbound motorist to decelerate into the turn lane prior to waiting for a gap in the southbound direction and making a turn into the project site. The length of the storage of the turn pocket and bay taper should be 100 feet and 120 feet, respectively, and should be verified during the development of final design documents.

Significance after Improvement Measure: Implementation of **Improvement Measure TRANS-2** would further reduce the project's less than significant impact.

Pedestrians, Bicycles, and Public Transit

The proposed project would have a significant impact to alternate transportation programs for pedestrian, bicycle, and transit facilities and services if an element of the proposed project would conflict with existing or planned pedestrian, bicycle, and transit services, or if the proposed project would create hazardous conditions for pedestrians or bicyclists that currently do not exist.

Impact TRANS-3: **Development of the proposed project would not impact access to transit facilities. (*Less than Significant*)**

Public Transit Service

The nearest transit stop to the project site for non-school routes is served by Petaluma Transit Routes 10 and 11. The stop is located on 4th Street west of C Street, more than a mile walking distance from the project site. Additionally, Route 501 provides school service and picks up at the corner of El Rose and B Street, which is approximately one-half mile to the north of the project site. The project site is also within the Petaluma Paratransit service area. The City of Petaluma does not have plans to extend transit service closer to the project site due to the low density and other design characteristics of the surrounding community that would not be expected to support a viable fixed transit service. However, the project does not propose elements that would impact access to transit facilities or affect current transit service. Therefore, the proposed project would have a less than significant impact on transit facilities and access.

Mitigation Measures: No mitigation measures are required. **Improvement Measure TRANS-1** would improve transit access in Petaluma, which would further reduce the project's less than significant impact.

Impact TRANS-4: **Development of the proposed project would not impact pedestrian and bicycle facilities or create hazardous conditions for pedestrians or bicyclists that currently do not exist. (*Less than Significant*)**

Implementation of the proposed project would increase pedestrian and bicycle traffic in the proposed project vicinity. This increase would be due largely to the recreational activities of residents, users of the amenities within the Putnam Park Extension Project component, and the proposed regional park trail project (related project). Windsor Drive and D Street currently lack sidewalks adjacent to the project site, although sidewalks start at the western edge of the project site and a narrow sidewalk is present on the east side of D Street north of Windsor Drive. Class II bicycle lanes are currently provided on D Street (between downtown Petaluma and Sunnyslope Road) and on Windsor Drive (between D Street and Windsor Court). Additionally, B Street provides a lower-stress connection to downtown than D Street due to the lower traffic volumes via the off-street path north of the project site. The southbound section of D Street between Sunnyslope Road and Windsor Drive does not have a bicycle lane and instead functions as a Class III

bicycle route. No additional pedestrian and bicycle facilities are planned in the area, other than those proposed by the project.

The existing bicycle facilities adjacent to the project site on D Street and Windsor Drive connect to the City's established bicycle network and would adequately accommodate future bicycle demand. In addition, the proposed project would develop a Class I bicycle route along the project frontage of D Street. Therefore, the proposed project would have a less than significant impact on existing or planned bicycle facilities.

Pedestrian circulation would be accommodated through a network of sidewalks through the project site that connect to existing sidewalks on Windsor Drive and D Street. Primary pedestrian access to the project would be via the existing sidewalks on Windsor Drive and B Street, which is accessible via the cul-de-sac just west of the project site. The proposed project would provide sidewalks along both new streets constructed as part of the proposed project and along the project frontages of Windsor Drive and D Street, as required by City of Petaluma Subdivision Standards and street sidewalk design, and consistent with General Plan Policy 5-P-23. No sidewalk would be provided on the north side of Windsor or east side of D Street, although pedestrian desire lines between destinations along Windsor Drive would be accommodated via the crosswalk at the intersection of the proposed A and B Streets. As noted in Table 5.2-1 of the General Plan, local and collector streets such as Windsor Drive and the proposed A and B Streets typically should have five to eight feet width in addition to a planter strip. Although the proposed sidewalks don't meet these recommended designs, they meet the City's minimum standards and would not conflict with existing policies. The proposed project would also replace the existing asphalt off-site sidewalk along the east side of D Street from Windsor Street to Sunnyslope Avenue for approximately 800 feet with a concrete sidewalk that meets City standards, consistent with the City of Petaluma General Plan Policies 5-P-4 and 5-P-22 B.

In addition to the Class I bicycle route along the site frontage of D Street and pedestrian sidewalks throughout the project site, the proposed project would include a multi-use loop trail along both north and south sides of Kelly Creek, connecting the existing barn complex on the east of the site to the existing Helen Putnam Regional Park on the west, as depicted in **Figure 4.13-11, Site Plan and New Intersections**. The multi-use trail would connect to a new trail section (regional park trail analyzed in this document as a related project) in Helen Putnam Regional Park, which would link the project site multi-use loop trail to the regional park's existing Ridge trail. The project site trail system would also connect to sidewalks on both Windsor Drive and D Street. The proposed project would not interfere with connectivity to existing bicycle paths and the proposed bicycle and pedestrian trail (multi-use trail) along Kelly Creek would be consistent with Policies 5-P-20, 5-P-25, and 5-P-26. Therefore, the proposed project would have a less-than-significant impact on pedestrian and bicycle access.

Due to the construction of the new sidewalk connection on the east side of D Street and an overall increase in recreational activities of residents and trail users, the proposed project would create increased demand for pedestrian crossings at the intersection of D Street and Windsor Drive. At this location, D Street is a three-lane roadway with a posted speed limit of 40 mph. It is legal for pedestrians to cross the intersection of D Street and Windsor Drive, but the intersection lacks basic pedestrian amenities, including crosswalks. Given high vehicle speeds on D Street and the horizontal curve at the intersection, crossing the intersection of D Street and Windsor Drive could be undesirable for pedestrians. In addition, marked crosswalks alone are considered inadequate pedestrian safety treatments under these circumstances, according to *Table 11 of Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations* (Federal Highway Administration 2005). The proposed project would construct a new roundabout at the intersection of D Street and Windsor Drive. The roundabout and associated pedestrian improvements would slow vehicle speeds and provide an adequate marked crossing for pedestrians at this location. As seen in **Figure 3.0-3,** the roundabout would be designed to include single-lane approaches to slow traffic along this portion of D Street and minimize pedestrian crossing distances. The roundabout would provide crosswalks on all approaches with Rectangular Rapid Flash Beacons (RRFB). Since the proposed project would include improvements to pedestrian facilities and adequately accommodate increase demand for pedestrian crossings at this intersection, the proposed project would have a less than significant impact on pedestrian access and pedestrian facilities conditions. To further reduce the less than significant impact on pedestrian and bicycle facilities, the proposed project could enhance the design of pedestrian facilities in manner consistent with the recommended features in the General Plan (see **Improvement Measure Trans-4**). Additionally, **Improvement Measure TRANS-2**, would provide a warning to northbound drivers on D Street about the approaching roundabout to slow vehicles entering Petaluma from rural Sonoma County. This measure would further reduce less than significant hazards for pedestrians crossing D Street at the roundabout at Windsor Drive.

Mitigation Measures: No mitigation measures are required.

Improvement Measure:

IM TRANS-4: During the SPAR process, at the City engineers' discretion, the proposed project shall enhance the design of pedestrian facilities in manner consistent with the recommended features in the General Plan. This may include the following:

a) Sidewalk on the north side of Windsor Drive;

b) Wider sidewalks with planter strips;

c) Directional curb ramps, ADA-compliant cross slopes, and tighter curb radii;

d) Crosswalks on all intersection legs; and

e) Intersection crossing measures such as RRFB's and bulb-outs at the proposed crosswalk, in a manner consistent with MUTCD recommendations.

Significance after Improvement Measure: Implementation of **Improvement Measure TRANS-4** and **Improvement Measure TRANS-2** would further reduce the project's less than significant impact.

Temporary Construction Impacts

Impact TRANS-5: **The proposed project would cause temporary disruption to the transportation network due to construction. (*Potentially Significant; Less than Significant with Mitigation*)**

Site clearing, grading, and trenching for the Davidon (28-Lot) Residential Project component is anticipated to last for nine months, while construction of the residences is expected to take about 21 months, for an overall construction period of approximately 30 months. Construction of the Putnam Park Extension Project component would occur over three phases. The first phase, which includes the lower parking lot, grading of the upper parking lot, and amenities described in **Chapter 3.0, Project Description**, would extend for three to four months and is expected to be completed by the end of the construction period for the Davidon (28-Lot) Residential Project component. The timing for construction of the remaining two phases of the Putnam Park Extension Project component would occur after completion of the Davidon (28-Lot) Residential Project component and would depend on the availability of funding and other priorities of Sonoma County Regional Parks. Construction activities of both project components would be required to comply with applicable City construction standards. The proposed project would not import or export any soil (other than the import of a small amount of engineered fill that might be needed to stabilize landslide areas), and cut and fill would be balanced on the project site, eliminating truck haul-trips on regional roads. Furthermore, traffic generated by construction workers and trucks would occur primarily during off-peak times, and the City and emergency services would be notified of any roadway restrictions, alternative emergency routes, and detours due to construction. Nonetheless, additional heavy vehicle traffic would be added to the street network in the vicinity of the project site, and the proposed project would have the potential to result in potentially significant temporary impacts on the transportation network during construction, such as the effect of slow moving trucks and lane closures on disrupting emergency access or accessibility for people traveling on the surrounding roadway network, or damage to road pavement from truck movement. Mitigation Measures are set forth below to reduce this potentially significant impact to a less than significant level.

Mitigation Measures:

TRANS-5 A construction management plan shall be prepared for review and approval by the City of Petaluma Public Works Department. The plan shall include at least the following items:

a) Development of a construction truck route that would appear on all construction plans to limit truck and auto traffic on nearby streets.

b) Comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, detour signs if required, lane closure procedures if required, sidewalk closure procedures if required, cones for drivers, and designated construction access routes.

c) Evaluation of the need to provide flaggers or temporary traffic control at key intersections along the truck route(s).

d) Notification procedures for adjacent property owners and public safety personnel regarding schedules when major deliveries, detours, and lane closures would occur.

e) Location of construction staging areas for materials, equipment, and vehicles if there is insufficient staging area within the work zone of the proposed project.

f) Identification of truck routes for movement of construction vehicles that would minimize impacts on vehicular and pedestrian traffic, circulation and safety; provision for monitoring surface streets used for truck movement so that any damage and debris attributable to the proposed project's construction trucks can be identified and corrected by the proposed project applicant.

g) A process for responding to and tracking complaints pertaining to construction activity, including identification of an on-site complaint manager.

h) Documentation of road pavement conditions for all routes that would be used by construction vehicles both before and after proposed project construction. Roads found to have been damaged by construction vehicles shall be repaired to the level at which they existed prior to construction of the proposed project.

Significance after Mitigation: Implementation of **Mitigation Measure TRANS-6** would reduce the temporary construction impacts of the proposed project to a less-than-significant level.

4.13.4.4 Regional Park Trail Impacts and Mitigation Measures

Environmental Setting

There are no existing roadways or intersections on the regional park trail site as the area is a designated regional park. The nearest roadways to the trail alignment are Oxford Court, Windsor Drive, and D Street. The remaining environmental setting as it applies to the regional park trail is described in **Section 4.13.2.**

Impacts and Mitigation Measures

RPT Impact TRANS-1: Implementation of the proposed regional park trail project would not conflict with any applicable plans, ordinances or policies establishing measures of effectiveness for the performance of the traffic circulation system; increase traffic hazards; or result in inadequate emergency access. (*Less than Significant*)

Conflict with Applicable Plans or Programs

No vehicular roadways or traffic improvements would be constructed as part of the proposed regional park trail project. The proposed regional park trail project would not construct any parking lots and would only allow for pedestrian access. Parking would be provided via the two parking lots under the Scott Ranch project (one adjacent to Windsor Drive [upper parking lot] and one adjacent to D Street (main parking lot]) as well as existing park parking lots off Chileno Valley Drive and Windsor Drive just east of Western Avenue and street parking on Oxford Court. The parking lots would be constructed to serve the multi-use loop trail along Kelly Creek within the project site. The potential impacts from the parking lots are analyzed above for the proposed Scott Ranch project. Trips generated by the construction and operation of the regional park trail would be minimal as the trail would not change the size or characteristics of the existing regional park. As presented in **Section 4.13.4.2, Project Trip Generation,** the Putnam Park Extension Project component would generate additional visitors (approximately new 40 daily trips and five new PM peak hour trips) and potentially change existing visitor travel patterns. These impacts of these trips are evaluated as a part of the Scott Ranch project in **Section 4.13.4.2**. Thus, the additional impacts due to the proposed regional park trail project to any congestion management plan or plans establishing measures of effectiveness for the performance of the traffic circulation system would be less than significant. Furthermore, the regional park trail project would not conflict with adopted policies regarding public transit, bicycle, or pedestrian facilities and impacts would be less than significant. As noted in **Section 4.11**, the regional park trail project would benefit the Helen Putnam Regional Park by connecting the proposed

Putnam Park Extension Project component to the rest of the park and by potentially reducing demand at the residential Oxford Court entrance.

Increase in Traffic Hazards

The proposed regional park trail project would not construct any vehicular roadways or traffic improvements. No impact would occur.

Inadequate Emergency Access

Construction and operation of the regional park trail would not impede emergency access to the regional park or surrounding residential areas. No impact would occur.

Mitigation Measures: No mitigation measures are required.

4.13.4.5 Cumulative Impacts and Mitigation Measures

Vehicular Traffic

This section includes the evaluation of the cumulative impact on VMT. The cumulative intersection operations are presented in **Section 4.13.5, Vehicle Delay and Parking Informational Topics** for informational purposes only.

Cumulative Impact TRANS-1: Development of the proposed project and the regional park trail would generate VMT per capita greater than the project threshold under cumulative conditions. (*Significant; Significant and Unavoidable*)

As documented above, under cumulative conditions the TAZ containing the site of the proposed project would generate 16.1 VMT per capita, which is greater than the significance threshold of 13.9 VMT per capita based on the significance criteria of 15 percent below the City average under cumulative conditions. Therefore, the project would have a significant impact on VMT under the cumulative condition. **Mitigation Measure TRANS-1** is set forth above to address this significant impact. However, with mitigation, this impact would remain significant and unavoidable.

Mitigation Measures: The project shall implement **Mitigation Measure TRANS-1**, which requires funding for transit infrastructure, such as transit shelters, to address existing capital needs.

Significance after Mitigation: Implementation of **Mitigation Measure TRANS-1** would improve the attractiveness of transit service in Petaluma; however, the effect of this measure on reducing Citywide VMT is unknown. Therefore, since this mitigation measure cannot guarantee that the impact of the proposed project on VMT would be reduced to a less-than-significant level, this cumulative impact would be significant and unavoidable.

Hazards and Emergency Access

Cumulative Impact TRANS-2: Development of the proposed project and the regional park trail would not result in cumulative impacts related to the internal circulation system, substantially increase hazards due to a geometric design feature, nor substantially impact emergency access. (*Less than Significant*)

Emergency Access

Emergency vehicle access to the project site would be provided by driveways and nearby roadways consistent with **Section 4.13.4.3**. As described in **Section 4.13.4.3**, new driveways within the project sites would be designed and constructed in accordance with City regulations to ensure visibility and safety of all users and adequate access for emergency and fire vehicles. The proposed access and on-site circulation is adequate to serve the proposed project. The proposed regional park trail would not contribute to impacts associated with emergency access. Therefore, the proposed project and the regional park trail project would have a less-than-significant cumulative impact related to inadequate emergency access.

Hazards

The proposed project would be constructed consistent with the design standards described in **Section 4.13.4.3**. As described in **Section 4.13.4.3**, the project would provide adequate CSD at four of the six approach maneuvers evaluated. Of the two approach maneuvers where adequate CSD would not be provided, the minimum SSD would be provided. Therefore, the proposed project's contribution to cumulative impacts associated with sight distance would be less than significant.

Mitigation Measures: No mitigation measures are required. The project shall fund the measures outlined in **Improvement Measure TRANS-2** at the City engineers' discretion to further reduce the project's less than significant impact.

Pedestrians, Bicycles, and Public Transit

The proposed project would have a cumulatively considerable impact to alternate transportation programs for pedestrian, bicycle, and transit facilities and services if an element of the proposed project, in combination with other cumulative development, would conflict with existing or planned pedestrian, bicycle, and transit services, or if the proposed project would create hazardous conditions for pedestrians or bicyclists.

Cumulative Impact TRANS-3: Cumulative development, including the proposed project and the regional park trail, would not result in cumulative impacts to public transit facilities. (*Less than Significant*)

Public Transit Service

There are no proposed changes to transit service in the study area under cumulative conditions. Similar to existing conditions, the nearest transit stop to the project site for non-school routes is served by Petaluma Transit Routes 10 and 11. The stop is located on 4th Street west of C Street, more than a mile walking distance from the project site. Additionally, Route 501 provides school service and picks up at the corner of El Rose and B Street, which is approximately one-half mile to the north of the project site. Additionally, the project site is within the Petaluma Paratransit service area. The City of Petaluma does not have plans to extend transit service closer to the project site due to the low density and other design characteristics of the surrounding community that would not be expected to support a viable fixed transit service. The proposed project does not propose elements that would not impact access to transit facilities, and would therefore have a have a less than significant cumulative impact on transit facilities and access.

Mitigation Measures: No mitigation measures are required. **Improvement Measure TRANS-1** would improve transit access in Petaluma, which would further reduce the project's less than significant cumulative impact.

Cumulative Impact TRANS-4: Cumulative development, including the proposed project and the regional park trail, would not result in cumulative impacts to pedestrian and bicycle facilities. *(Less than Significant)*

Pedestrian and Bicycle Facilities

Construction of the proposed project and the regional park trail, in combination with other cumulative development, would increase pedestrian and bicycle traffic in the proposed project vicinity. This increase would be due largely to the recreational activities of residents and trail users at the Putnam Park Extension Project component and the regional park trail, which has the potential to affect the local pedestrian and bicycle networks. However, the proposed project and the regional park trail would not interfere with

connectivity to existing pedestrian and bicycle paths. Additionally, the project would construct a new bicycle and pedestrian trail (multi-use loop trail) along Kelly Creek, as well as pedestrian improvements along D Street, Windsor Drive, and at the D Street/Windsor Drive intersection described in **Section 4.13.4.3**. Therefore, the proposed project and the regional park trail would have a less than significant cumulative impact on pedestrian and bicycle facilities.

Mitigation Measures: No mitigation measures are required. The project shall fund the measures outlined in **Improvement Measure TRANS-4** at the City engineers' discretion to further reduce the project's less than significant impact.

Temporary Construction Impacts

Cumulative Impact TRANS-5: The proposed project and the regional park trail would not cause temporary disruption to the transportation network due to construction under Cumulative conditions. (*Less than Significant*)

Construction of the proposed project and the regional park trail, in conjunction with the related projects listed in **Table 4.0-1, Approved and Pending Projects in Section 4.0** of this RDEIR, has the potential to affect local transportation systems. However, since timing cannot be predicted, such conflicts are expected to be addressed on a case-by-case basis, and conflicts will be resolved through the proper use of best alternative construction practices as described in **Mitigation Measure TRANS-7**. Therefore, significant cumulative construction conflicts are not anticipated. As previously mentioned, construction for the proposed regional park trail project would occur over a short period of time and would involve a small number of vehicle trips. All cut and fill material would be balanced on site and thus would not result in haul trips. Worker trips would be low and would not cause a disruption to the transportation network. Thus, construction of the regional park trail would not contribute to a temporary disruption to the transportation network that may occur due to other construction projects. The cumulative impact would be less than significant.

Mitigation Measures: No mitigation measures are required. The project shall implement **Mitigation Measure TRANS-5**, which requires a construction management plan to further reduce the project's less than significant impacts.

4.13.5 VEHICLE DELAY AND PARKING INFORMATIONAL TOPICS

As noted in **Section 4.13.4.1**, an assessment of the project's effect on intersection operations and parking supply in relation to City policies are presented for informational purposes and are not used for determining environmental impacts.

Intersection Operations

Petaluma's General Plan Policy 5-P-10 seeks to maintain an intersection LOS standard at Level D or better for motor vehicles. This policy also notes that a lower level of service may be deemed acceptable, by the City, in instances where the City finds that potential vehicular traffic mitigations would conflict with the Guiding Principles of the General Plan, such as multimodal safety and accessibility and maintaining Petaluma's historic character.

As discussed above in **Section 4.13.4.2**, the project would add traffic to D Street/Lakeville Street, which operates at LOS E during the PM peak hour under existing conditions and LOS F under Pipeline and Cumulative conditions. The addition of project traffic would slightly worsen operations at the D Street/Lakeville Street intersection by adding nine vehicle trips during the PM peak hour. This represents a 0.4 percent change to the existing volumes and one new vehicle arriving at this intersection every six to seven minutes.

The addition of any project trips to the intersection, which would already operate at LOS F under Cumulative conditions, would be inconsistent with City thresholds for intersection operations.[22] Potential intersection improvements include changing split phasing to permitted phasing on D Street or adding a left turn pocket on northbound D Street. Changing split phasing to permitted phasing would improve the operations at this location to LOS E or better under Cumulative No Project and Plus Project conditions. However, this mitigation measure would undo the City's recent change in the intersection signal timing to split phasing from permitted phasing to remove potential conflict between left turning vehicles and through vehicles on D Street. Adding a left turn pocket would improve the operations at this location to LOS D or better under Cumulative No Project and Plus Project conditions. However, the left turn pocket would require additional right-of-way and increase the pedestrian crossing distance across D Street. Therefore, City has determined that there are not feasible mitigations to reduce vehicle delay at this location

22 This intersection was the subject of adopted Overriding Considerations by the Petaluma City Council at a programmatic level in the 2025 General Plan EIR, where the proposed project was included as a part of total buildout assumptions. However, the Overriding Considerations covered the condition where this intersection operates at LOS E under cumulative conditions. The deterioration of future traffic conditions from LOS E to LOS F, as compared to the General Plan EIR traffic analysis, is due to the recent implementation of split phasing at this location in response to the SMART rail line that runs through this intersection. The General Plan EIR did not anticipate split phasing at this location under Cumulative conditions.

because installing additional lanes or expanding capacity would conflict with the proposed General Plan goals due to right-of-way constraints, crossing safety requirements, and train signal coordination.

The addition of project traffic would worsen LOS E and LOS F operations at the D Street/8th Street intersection by adding 25 vehicle trips during the PM peak hour under Pipeline Plus Project and Cumulative Plus Project conditions, respectively. This includes 16 vehicles at the southbound through movement (operates at LOS B) and nine vehicles at the northbound through movement (operates at LOS F). Overall, this represents a two percent change to the existing volumes at the intersection and one new vehicle arriving at this intersection every two to three minutes.

As noted in **Section 4.12.2.2**, existing northbound traffic volumes on D Street were adjusted to reflect the "worst case" Friday evening condition from the Spring of 2019, which included northbound weekend tourist traffic bypassing highway congestion on northbound US-101 during the Friday PM peak period at the US-101 Marin-Sonoma Narrows. Under these "worst case" conditions, the intersection does not meet the California MUTCD Peak Hour Signal Warrant under Pipeline Plus Project or Cumulative Plus Project conditions and geometric roadway changes would not help address the primary issue, which is northbound through traffic. Whether this Friday evening traffic pattern returns during the Pipeline Plus Project or Cumulative Plus Project conditions will depend on the timing of a post-COVID-19 pandemic economic recovery and completion of the US-101 Marin-Sonoma Narrows.[23] As an example of how traffic conditions could look in the future if this pattern does not return, with typical pre-pandemic mid-week traffic conditions, this location operates at LOS D or better under all scenarios.

The project would construct a new roundabout per City of Petaluma and CA-MUTCD standards at the intersection of D Street and Windsor Drive. A roundabout at this location would improve traffic operations from unacceptable LOS F to acceptable LOS B under all conditions. It would therefore represent an improvement to the performance of the traffic circulation system. The remaining intersections would operate at an acceptable level (LOS D or better) under Existing Plus Project, Pipeline Plus Project, and Cumulative Plus Project conditions.

While traffic operations at D Street/Lakeville Street and D Street/8th Street would conflict with Petaluma's General Plan Policy 5-P-10, through the proposed multi-modal circulation improvements, the contribution of City of Petaluma Development Impact Fees, and **Mitigation Measure TRANS-1**, the proposed project will contribute to improvements to improving citywide circulation. These improvements would be

[23] While the US-101 Marin-Sonoma Narrows project is expected to be in place under Cumulative Conditions, the existing Friday evening traffic growth was included in this scenario for conservative purposes to disclose the potential effects if this traffic pattern returns after completion of the US-101 Marin-Sonoma Narrows project.

consistent with the General Plan overall Mobility Framework Goal 5-G-1 to improve Petaluma's mobility system to increase efficiency for all modes of travel.

Parking Capacity

Table 3.0-2, Residential Parking shows the number of parking spaces and configuration of parking proposed at the project site. As shown in the table, a total of 222 parking spaces would be provided as part of the Davidon (28-Lot) Residential Project component. The Davidon (28-Lot) Residential Project component would include two-car garages and two or more driveway parking spaces for each single-family home on the project site and at least one on-street guest parking space per housing unit, as required by the City of Petaluma. All parking demand generated by the Davidon (28-Lot) Residential Project component would be served by on-site parking and would adhere to City guidelines for on-site parking requirements. Parking facilities would be subject to Site Plan and Architecture Review by the Planning Commission.

In addition to parking for the proposed residences, two off-street surface public parking lots would be provided to the south of Windsor Drive and to the west of D Street, as part of the Putnam Park Extension Project component, with capacity for ten and 27 vehicles, respectively. These surface parking lots would be used for public access to the park extension portion of the proposed project and would supplement public access to the Helen Putnam Regional Park, located to the west of the project site. Primary access to the regional park would continue to be on Chileno Valley Road and at the Windsor Drive parking lot at Western Avenue. The proposed parking areas would serve as a secondary access point to the park and absorb some of the parking demand that currently parallel parks on Oxford Court and on Windsor Drive west of Oxford Court. Based on the trip generation analysis and regional park comparison presented in **Section 4.13.4.2**, approximately 30-40 vehicle trips per weekday, or five during the PM peak period, would be forecasted to use the proposed parking lots in addition to people who shift to these parking lots from parking lots elsewhere to access the park. The net effect of the proposed parking lots will be to increase the overall supply of parking for Helen Putnam Regional Park. Therefore, the parking space supply of the proposed parking lots would adequately accommodate the additional parking demand generated by the park extension component and would increase Helen Putnam Regional Park parking supply to accommodate the existing demand. Therefore, the proposed project would not conflict with City policies related to parking supply.

4.13.6 REFERENCES

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