4.8 TRANSPORTATION & TRAFFIC

4.8.1 ENVIRONMENTAL SETTING

IN THIS SECTION:

- Existing Road & Intersection Traffic Conditions
- Other Transportation Modes
- Regulatory Setting

The following section is based on the a traffic impact study prepared for the project by Whitlock & Weinberger Transportation in 2012, follow-up reviews in 2013, and an independent review of the proposed emergency vehicle access (EVA) conducted for the City by Holmes Fire in 2011 and in 2013. The traffic study and reviews are included in Technical Appendix C-7 and the EVA reviews are included in Technical Appendix C-8. Both appendices are available on the DEIR CD, on the City of Petaluma website at http://cityofpetaluma.net/cdd/riverfront.html, and on file for review at the City of Petaluma Community Development Department, Planning Division, located at 11 English Street in Petaluma, on Monday through Thursday between the hours of Hours: 8 AM to 12 PM and 1 PM to 5 PM. The section also draws from analyses contained in the City of Petaluma *General Plan 2025* Environmental Impact Report (EIR) that was certified on May 19, 2008. The City's General Plan and EIR are also available for review at the Planning Division office and online at: http://cityofpetaluma.net/cdd/plan-general-plan.html.

EXISTING ROAD & INTERSECTION TRAFFIC CONDITIONS

City Streets and Intersections

Access to the project site is provided from Hopper Street, primarily from its intersection with Caulfield Lane. The project site is located at 500 Hopper Street, which is south of Lakeville Street, and west of U.S. Highway 101 near the Lakeville Highway interchange. The site is bounded by a rail corridor on the north and U.S. Highway 101 on the east.

The traffic study includes five signalized intersections along Lakeville Street-Lakeville Highway between East Washington Street and U.S. Highway 101 northbound ramps, the Hopper Street/Caulfield Lane intersection, and six new intersections created within the project site. Operating conditions were analyzed during the weekday AM and PM peak periods. The morning peak hour occurs between 7:00 a.m. and 9:00 a.m. and reflects conditions during the home to work or school commute, while the p.m. peak hour occurs between 4:00 p.m. and 6:00

p.m. and typically reflects the highest level of congestion during the homeward bound commute.

The existing intersections analyzed in the traffic study are summarized below. The traffic study in Appendix B-8 provides a full description of existing intersection configurations. The location and configuration of the intersections are shown on Figure 4.8-1.[1]

1. *Lakeville Street/East Washington Street* is a four-legged signalized intersection. The Sonoma-Marin Area Rail Transit (SMART)/Northwest Pacific Railroad (NWP) tracks run parallel to and along the west side of Lakeville Street and pass through the western leg of the intersection. Railroad signal infrastructure and crossing arms are located across the western leg of the intersection. Marked crosswalks and pedestrian signals are provided across all four legs, with a median island/pedestrian refuge on the western leg of the intersection.

2. *Lakeville Street/D Street* is a four-legged signalized intersection. The SMART/NWP railroad tracks run parallel to and along the southwest side of Lakeville Street and pass through the western leg of the intersection. Railroad signal infrastructure and crossing arms are located across the intersection's eastern and western legs. Marked crosswalks and pedestrian signals are provided for all four legs of the intersection.

3. *Lakeville Street/Caulfield Lane* is a four-legged signalized intersection. Pedestrian crosswalks and signals are provided on the north, south, and west legs of the intersection.

   In 2011, an at-grade mainline railroad crossing was relocated from Hopper Street, just south of Lakeville Highway, to Caulfield Lane, just north of Hopper Street to improve vehicular access, pedestrian and traffic safety, and traffic circulation for the area in accordance with the City's adopted Central Petaluma Specific Plan. At its existing point of crossing, Caulfield Lane is a four-lane street with Class II bicycle lanes in both directions.

4. *Lakeville Highway/US 101 South Ramps* is a four-legged signalized intersection. Pedestrian crossings and signals are provided on the north, south, and west intersection legs.

5. *Lakeville Highway/US 101 North Ramps* is a three-legged signalized intersection. A crosswalk and associated pedestrian signal heads exist on the west leg of the intersection.

[1] All figures are included at the end of the document in Section 7.0 for ease of reference as some figures are referenced in several sections.

6. *Hopper Street/Caulfield Lane* is a four-legged intersection with stop controls on the eastbound and westbound Hopper Street approaches as well as on the Petaluma Water Pollution Control Plant driveway, which forms the southern or fourth leg of the intersection opposite Caulfield Lane. The SMART/Northwest Pacific Railroad tracks run parallel to and along the north side of Hopper Street and pass through the northern leg of the intersection. Pedestrian crosswalks and curb ramps exist on both Hopper Lane approaches.

   Approximately 200 feet south of the Lakeville Street/Caulfield Lane intersection, two sets of SMART railroad tracks run across Caulfield Lane. The crossing is designed to allow a third set of railroad tracks in the future. The existing warning and safety devices on the southwest side of the crossing include two entry gates with flashers to block traffic from Hopper Street into eastbound Caulfield Lane. Existing warning and safety devices on the northeast side of the crossing include one entry gate with flashers, a cantilevered section with flashers, and a landscaped median approximately 100 feet long[2].

Traffic volume data for all study area intersections along the Lakeville Street-Lakeville Highway corridor were collected in 2011 while schools were in session as part of the City's signal optimization project. Supplemental counts were obtained in September 2011 at the intersection of Caulfield Lane/Hopper Street specifically for the Riverfront project Traffic analysis. The existing traffic volumes are shown in Figure 4.8-2.

The project traffic consultant reviewed the traffic data and assumptions contained in the original 2012 Traffic Report, and determined that they remain valid. Based on the consultant's professional experience in obtaining and analyzing traffic count data throughout the North Bay on an ongoing basis, they have observed stability in traffic volumes since 2011 except in cases where significant changes in local development have occurred. There are no such significant changes in the vicinity of the Riverfront project site that would substantially alter existing traffic volumes.

Intersection Levels of Service

Level of Service (LOS) is used to rank traffic operations on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, Level of Service A represents free flow conditions and Level of Service F represents forced flow or breakdown conditions. A unit of measure that indicates a level of delay generally accompanies the LOS designation. The traffic study intersections, both signalized

[2] "Authorization for Continued Use and Modification of an At-Grade Highway-Rail Crossing Across Caulfield Lane," Issued by the Public Utilities Commission of the State of California, July 12, 2013.

and unsignalized, were analyzed using methodologies published in the *Highway Capacity Manual* (HCM), Transportation Research Board, 2000. (See Appendix B-8 for further details.)

The Petaluma *General Plan 2025* was adopted in May 2008 and specifies a Level of Service (LOS) standard for streets wherein the minimum acceptable operation is LOS D. Policy 5-P-10 states:

> "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 D or better for motor vehicles due to traffic from any development project."

The policy also indicates that 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 principles that preserve Petaluma's historic character, provide a range of transportation alternatives, and enhance the Downtown.

Under existing conditions, all six existing study area intersections are operating acceptably at LOS D or better as shown on Table 4.8-1. Level of Service calculations are provided in Appendix C-7.

Highway Operations & Level of Service

The project traffic analysis also evaluated operations on U.S. Highway 101 between Lakeville Highway and adjacent interchanges to the north and south. The segments of Highway 101 to the north and south of the Lakeville Highway (State Route 116) interchange currently include two mixed-flow lanes in each direction.

The freeway analysis methodology contained in Chapter 23 of the HCM, "Basic Freeway Segments," was used to determine levels of service on U.S. Highway 101. The method uses variables such as traffic volumes, geometric configuration of the freeway (i.e., number of lanes, widths of lanes and shoulders), topography, the percentage of heavy vehicles, and free-flow speeds to determine LOS criteria including the "service flow rate." Service flow rates are indicative of the travel demand on a freeway facility and are measured in the number of passenger cars per hour per lane. The ranges of service flow rates associated with the various Levels of Service are presented below in Table 4.8-2.

TABLE 4.8-1
Existing Peak Hour Intersection Levels of Service

Study Intersection *Approach*	Existing Conditions			
	AM Peak		PM Peak	
	Delay	LOS	Delay	LOS
1. Lakeville St/E Washington St	36.9	D	40.9	D
2. Lakeville St/D St	34.8	C	38.5	D
3. Lakeville St/Caulfield Ln	23.0	C	24.3	C
4. Lakeville Hwy/US 101 N Ramps	32.1	C	32.8	C
5. Lakeville Hwy/US 101 N Ramps	11.8	B	25.0	C
6. Hopper St/Caulfield Ln[1]	4.9	A	5.1	A
Eastbound Approach	*9.1*	*A*	*8.9*	*A*
Westbound Approach	*8.7*	*A*	*8.6*	*A*

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service Results for minor approaches to two-way stop-controlled intersections are indicated in *italics.*
SOURCE: Whitlock & Weinberger Transportation, March 2012

TABLE 4.8-2
Freeway Levels of Service Criteria

Level of Service	Maximum Service Flow Rate
A	710 pc/h/ln
B	1,170 pc/h/ln
C	1,680 pc/h/ln
D	2,090 pc/h/ln
E	2,350 pc/h/ln
F	Greater than 2,350 pc/h/ln

Notes: pc/h/ln = passenger cars per hour per lane
Criteria are for a freeway with 65 mph free-flow speed
SOURCE: Whitlock & Weinberger Transportation, March 2012 (*Guide for the Preparation of Traffic Impact Studies*, California Department of Transportation, 2002)

Caltrans maintains a target LOS at the transition between LOS C and LOS D for freeway facilities, which translates to a service flow rate of approximately 1,680 passenger cars per hour per lane. Where an existing freeway is operating below the LOS C/D threshold an existing "measure of effectiveness" should be maintained. In determining whether a project would create an adverse impact to a freeway facility already operating at LOS E or F, the forecast service flow rate was compared to ideal freeway capacity to establish a theoretical volume-to-capacity (v/c) ratio. A significant cumulative impact is considered to occur if a project would increase the freeway v/c ratio on a facility already operating at LOS E or F by 0.01 or more.

U.S. Highway 101 currently operates in the LOS E/F range in the northbound direction of both study area segments in the project vicinity during the PM peak hour and at LOS C on both segments in the southbound direction. In the future, even with the addition of HOV lanes, the freeway is anticipated to operate at LOS E/F in the northbound direction and LOS E in the southbound direction between East Washington Street and Lakeville Highway. The California Department of Transportation (Caltrans) is in the process of constructing the Marin-Sonoma Narrows (MSN) HOV Widening Project, which consists of widening Highway 101 along an approximately 16-mile segment between northern Marin County and southern Sonoma County. The project includes the addition of High Occupancy Vehicle (HOV) lanes and replacing the bridge over the Petaluma River to the east of the project site.

OTHER TRANSPORTATION MODES

Pedestrian Facilities

Pedestrian facilities in the project study area include sidewalks, crosswalks, pedestrian signal phases, curb ramps, curb extensions, and various streetscape amenities such as lighting and benches. In general, pedestrian facilities are built-out along the Lakeville Street and Caulfield Lane corridors. Existing facilities to the north of the SMART rail corridor provide access to nearby commercial destinations and transit stops, as well as destinations in the downtown area and on the east side of US 101.

Continuous sidewalks are provided along both sides of Lakeville Street-Lakeville Highway between Washington Street and the US 101 South Ramps; sidewalks extend under U.S. Highway 101 on the north side of Lakeville Highway. Continuous sidewalks are provided along both sides of Caulfield Lane between Hopper Street and Payran Street, and sidewalks extend over US 101 on the north side of the Caulfield Lane overpass. Intermittent sidewalk coverage is provided along the frontage of improved properties on Hopper Street. Near the northern end of Hopper Street, a multi-use pathway connects Hopper Street to D Street and the Copeland Transit Mall/SMART station area. Street lights are provided on Lakeville Street-Highway and Caulfield Lane. Sidewalks in the study area generally range between four and

eight feet wide. Crosswalks and curb ramps are provided at most intersections in the study area. Pedestrian signals are provided at signalized intersections, and many crosswalks are marked with high-visibility treatments.

Bicycle Facilities

In the project area, Class II bike lanes will be constructed on Caulfield Lane and on Lakeville Street to the west of US 101. The City obtained funding from One Bay Area Grant program to install bike lanes on this segment of Lakeville Street. The Class II bike lanes will be designed in 2014 and constructed in 2015. To the east of US 101 on Lakeville Highway, which is a Caltrans facility (SR 116), striped shoulders that provide a space for bicyclists to travel are provided, though the facility is not marked and signed as a bike lane. Bicyclists ride in the roadway and/or on sidewalks along all other streets within the project study area. Table 4.8-3 summarizes the existing and planned bicycle facilities in the project vicinity, as contained in the City of Petaluma *2008 Bicycle and Pedestrian Master Plan*.

TABLE 4.8-3: Bicycle Facility Summary

Facility	Class	Length (miles)	Begin Point	End Point
Existing				
Lakeville St	II	0. 90	SB US 101 Ramps	Washington St
Caulfield Ln	II	1.42	Ely Blvd S	Hopper St
Planned				
Petaluma River Trail (North side of River)	I	1.40	Hopper Ave/Jefferson St	SMART/NWP Rail Line "Haystack" Bridge
Petaluma River Trail (South side of River)	I	0.40	Chetwood Dr	SMART/NWP Rail Line "Haystack" Bridge
SMART Multi-Use Pathway	I	1.00	Hopper/Jefferson St	Baywood Dr
River Trail Connector 1 (along western project boundary)	I	0.30	SMART Path	Petaluma River Trail
River Trail Connector 2 (along eastern project boundary)	I	0.30	SMART Path	Petaluma River Trail
Caulfield Lane Extension	II	0.60	Hopper Ave	Petaluma Blvd S

SOURCE: Whitlock & Weinberger Transportation from *City of Petaluma Bicycle and Pedestrian Plan*

Transit and Rail Service

Petaluma Transit provides fixed-route bus service in the City of Petaluma. Route 24 provides loop service to destinations throughout the southern and eastern parts of the City including stops on Lakeville Street at Caulfield Lane in the vicinity of the proposed project, and service to the Copeland Transit Mall. Route 24 operates weekdays from approximately 7:00 AM to 6:00 PM with one-hour headways. Transit stops are located in the vicinity of the project on Lakeville Street adjacent to Caulfield Lane.

Sonoma County Transit (SCT) provides intercity service between Petaluma and outlying communities. SCT Route 40 provides weekday service between Petaluma and the City of Sonoma during the morning and evening commute periods with approximately 90-minute headways. SCT Route 40 stops on Lakeville Street adjacent to Caulfield Lane in the vicinity of the proposed project, as well as at the Lakeville Highway Park and Ride lot and the Copeland Transit Mall.

Golden Gate Transit (GGT) provides regional service between Petaluma and San Francisco. GGT Route 76 provides weekday service along US 101 during the morning and evening commute periods with approximately 30-minute headways. In the vicinity of the proposed project, GGT Route 76 stops at various locations along Lakeville Highway including the Lakeville Highway Park and Ride Lot.

SMART Commuter Rail Service. The project site is bordered on the north by the Sonoma-Marin Area Rail Transit (SMART) Corridor. In 2003, the Sonoma-Marin Area Rail Transit (SMART) District was established to oversee the development and implementation of passenger rail service on the Northwestern Pacific Railroad corridor that generally parallels US Highway 101. The SMART District is charged with planning, engineering, evaluating and implementing passenger train service along a 70-mile corridor from Cloverdale to Larkspur near the Larkspur Ferry Terminal that provides ferry service to San Francisco. Commuter rail service and a multi-use pathway are planned within the corridor. Rail service is expected to begin sometime in 2016. The Copeland Transit Mall and SMART Rail platform are located approximately 0.75 miles west of the project site on Lakeville Street and will be accessible by bicycle, on foot via existing on-street facilities or by a planned multi-use pathway along the SMART corridor that is included in the City's Bicycle and Pedestrian Plan and are proposed as part of the SMART project.

REGULATORY SETTING

The City of Petaluma has established a development impact fee program for new development. The purpose of the Traffic Development Impact Fee is to provide funding to achieve the City's goal of maintaining existing traffic service levels and to provide traffic facilities to mitigate the traffic impacts of new development within the City, consistent with

the land use and transportation polices of the General Plan, by developing an overall transportation system that will accommodate the City's expected future traffic demand and needs generated by future development. The fee is based upon a study identifying improvements and anticipated future development. The future extension of Caulfield Lane is included in the list of improvements that the fee is based upon. The fee is charged at the final inspection or issuance of the certificate of occupancy for residential development and upon issuance of a building permit for non-residential development.

4.8.2 IMPACTS AND MITIGATION MEASURES

CRITERIA FOR DETERMINING SIGNIFICANCE ANALYSIS

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines (including Appendix G), City of Petaluma plans, policies and/or guidelines, and agency and professional standards, a project impact to noise would be considered significant if the project would result in:

8a Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;

8b Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;

8c Substantially increase hazards due to a design feature (for example, sharp curves or dangerous intersections) or incompatible uses (for example, farm equipment);

8d Result in inadequate emergency access; or

8e Conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities or otherwise decrease the performance or safety of such facilities.

The current General Plan policy is to maintain at least an intersection Level of Service D for motor vehicles that ensures efficient traffic flow and supports multi-modal mobility goals. A multimodal analysis takes into consideration the overall mobility and conditions for non-auto road users (i.e., bicycles and pedestrians). The General Plan includes a policy (5-P-8) to develop and adopt multi-modal level of service (LOS) standards that examine all modes. Such a standard has not yet been developed or adopted by the City.

IMPACT ANALYSIS

Based on the analyses in the Revised Initial Study (Appendix A of this DEIR), the project site would not conflict with an applicable congestion management as none exist in the area (8b). The following impact analyses address impacts to City streets, intersections and state highways (8a), the potential to substantially increase hazards (8c) or result in inadequate emergency access (8d). Potential project conflicts with adopted policies, plans or programs regarding public transit, bicycle or pedestrian facilities (8e) are addressed in subsection 3.4 of the PROJECT DESCRIPTION (Chapter 3.0) section of this EIR.

Introduction

The project as proposed includes construction of a mix of uses including 60,000 square feet of office space; a 120-room hotel; 30,000 square feet of mixed use commercial development with 100 apartment units; 134 single family residential units; 39 townhouse units (four units are designated as live/work spaces); and approximately 6.2 acres of parks, including a 0.38-acre central green, a 2.27-acre active park, and a 3.5-acre river park.

A series of future roadway connections may be provided in the future via the extension of Caulfield Lane and/or a southern crossing of the Petaluma River. The project includes one primary north-south street and several minor north-south connections. A "central green" is proposed in the mixed-use core of the site, featuring a one-way loop along the axis of the primary north-south street. Another minor north-south street would connect Hopper Street to the future Caulfield extension (west of the central green) as described below, serving parking areas for the hotel and office portions of the project, referred to in the traffic analysis as the Hotel North-South Street. Additional grid-pattern streets would serve the single-family residential areas in the southern portion of the site, including one street running parallel to the north bank of the Petaluma River, referred to herein as River Street. Figure 4.8-3 illustrates intersection configurations with the project street system in place. In order to maintain efficient traffic operation at the offsite Caulfield Lane/Hopper Lane intersection, the project will construct a 50-foot long westbound right turn lane plus taper.

To the south of the central green (called "Caulfield Circle" for the purposes of the traffic analysis), Caulfield Lane would eventually extend over the Petaluma River to Petaluma Boulevard South as identified in the City's *General Plan 2025*. An extension of Hopper Street, north of the central green, would create the northern portion of the primary north-south street. In the future, Caulfield Lane would extend from its current terminus at Hopper Street through the City's former water treatment facility, shifting to an east-west alignment and intersecting with the west side of the central green.

Impacts to Circulation System

Impact 4.8-1 – *Circulation System Impacts*: The project will result in an increase in daily and peak hour trips, but would not cause existing or planned intersections to operate at an unacceptable Level of Service (LOS) and would not adversely affect non-auto modes of transportation. This is a *less-than-significant impact*.

INTERSECTION OPERATIONS

Project Trip Generation. The proposed project is expected to generate an average of 4,958 new trips on a daily basis, including 373 during the morning peak hour and 430 during the evening peak hour. The project's trip generation is summarized on Table 4.8-4, and was estimated using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation*, 8th Edition, 2008 as fully described in Appendix C-8.

The estimated project trip generation accounts for some internal onsite trips that are expected to occur at mixed-use developments as residents, employees, and hotel guests would patronize adjacent retail and restaurant uses. The majority of these trips would be pedestrian trips, and the few that would be made by automobile would utilize only the on-site roadways, and would not affect the adjacent street network. Through application of the internal capture methodologies, it is estimated that the Riverfront project will generate 7% fewer AM peak hour trips and 12% percent fewer PM peak hour trips than would be expected through direct application of ITE's standard trip generation rates.

It is noted that the residential unit count has changed slightly since preparation of the traffic impact study. The current proposal includes 35 townhomes (not 31), four live/work townhomes (not six), and 134 single-family homes (not 135 homes). Based on the current proposal and trip generation rates on Table 4.8-4, the project would result in approximately five fewer trips than accounted for in the traffic analysis.

The project includes future development of a boathouse in the southeastern corner of the site that would be constructed by an entity other than the project applicant. The boathouse, which could be up to 15,000 square feet, would primarily be used for boat storage, though a small area for meetings and/or an office may also be included. Review by the project transportation consultant indicates that activities at the boathouse would primarily occur on weekends and between 5:00 AM and 7:00 AM on weekdays, falling outside of the weekday peak hour periods that represent worst-case traffic operation on surrounding streets that were evaluated in the traffic study.

TABLE 4.8-4: Project Trip Generation

Land Use	Units	Daily		AM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Office	60 ksf	11.01	661	1.55	93	82	11	1.49	89	15	74
Townhouse	31 du	5.81	180	0.44	14	2	12	0.52	16	11	5
Hotel	120 rms	8.17	980	0.56	67	41	26	0.59	71	38	33
Specialty Retail [1]	30 ksf	44.32	1330	1.00	30	18	12	2.71	81	36	45
Apartments	100 du	6.65	665	0.51	51	10	41	0.62	62	40	22
Single Family Housing	135 du	9.57	1292	0.75	101	25	76	1.01	136	86	50
Live/Work Units (custom rate)	6 du	9.95	60	0.86	5	3	2	0.94	6	2	4
City Park (SANDAG)	6.2 ac	50	310	6.50	40	20	20	4.50	28	14	14
SUBTOTAL			*5478*		*401*	*201*	*200*		*489*	*242*	*247*
Internal Capture		*-9.5%*[2]	*-520*	*-7%*	*-28*	*-14*	*-14*	*-12%*	*-59*	*-29*	*-30*
Net Trip Generation			**4,958**		**373**	**187**	**186**		**430**	**213**	**217**

Notes: ksf = 1,000 square feet; du = dwelling units; rms = rooms; ac = acres

[1] AM rate from LU #820 (Shopping Center).

[2] Methodology does not produce daily rates; assumed to be average between AM and PM rates.

SOURCE: Whitlock & Weinberger Transportation, March 2012

Additionally, the Riverfront traffic impact study includes traffic associated with a 6.2-acre park. Trip generation rates for this use are unavailable from ITE so rates published by the San Diego Association of Governments (SANDAG) were instead used. The SANDAG rates are based on actual usage in the San Diego area at active urban parks, and the diverse mix of recreational uses on which the rates are based includes water-based recreational activities. The Riverfront traffic analysis assumptions include an average of 40 weekday a.m. peak hour trips and 28 p.m. peak hour park-related trips generated by the recreational uses, which should adequately capture activity associated with the project's sports field, passive park areas, and boathouse uses.

Project Trip Distribution. The pattern used to allocate new commercial and residential project trips to the street network was based on a review of turning movement counts and distribution assumptions in the certified East Washington Place EIR. The applied distribution assumptions are shown in Table 4.8-5.

TABLE 4.8-5: Trip Distribution Assumptions

Route	Commercial Distribution	Residential Distribution
W Petaluma and Downtown (via D St, E St Washington St, and N Lakeville St)	35%	35%
E Petaluma (via Caulfield Lane and Lakeville Hwy)	30%	20%
US 101 North	15%	15%
US 101 South	10%	10%
Lakeville Hwy (east of Petaluma city limits)	5%	10%
Central Petaluma (area bounded by Petaluma River, E Washington St, and US 101)	5%	10%
TOTAL	**100%**	**100%**

SOURCE: Whitlock & Weinberger Transportation, March 2012

Intersection Operations with Project. The traffic analyses found that the all existing study area intersections are currently operating at acceptable levels of service D or better during both the AM and PM peak hours. (The Lakeville Street intersections with Washington Street and D Street currently operate at LOS D.) With the addition of project traffic, these intersections would continue to operate at acceptable levels of service, although delays would slightly increase, and the LOS at the Lakeville Street/Caulfield Lane intersection would decrease from C to D. However, all intersections would continue to operate at acceptable levels as summarized in Table 4.8-6. Figure 4.8-4 illustrates intersection traffic volumes with the addition of the trips generated by the Riverfront project.

Since, the study area intersections are expected to continue operating acceptably at the same levels of service with the addition of project-generated traffic, and project traffic would not result in unacceptable levels of service at study area intersections, and increased traffic impacts to intersection operations are less than significant. The CPSP EIR includes Mitigation Measure 11-2 that would require office developments greater than 10,000 square feet (approximately 25 employees) to prepare and implement a Transportation System Management (TSM) program to include measures such as provision of secure bicycle parking, preferential parking for carpools, and shower locker provisions for employees bicycling or walking to work. Such programs will be considered when permit applications for office uses are submitted to the City for review as part of the project development phases.

ALTERNATE TRANSPORTATION MODES

The project includes a network of pedestrian facilities that is consistent with the Central Petaluma Specific Plan (CPSP) and City requirements, and would effectively tie into the regional pedestrian network. Street and sidewalk sections proposed in the project site plan have been developed in accordance with the standards defined in the CPSP. Sidewalks and/or pathways ranging in width between five and seventeen feet are proposed along all streets within the project site except for alleys. Multi-use pathways are proposed along the northern, western, eastern, and southern edges of the project. The pathway along the southern edge of the project would be a segment of the Petaluma River Trail, and the pathways along the eastern and western edges of the project would connect to the path adjacent to the SMART right-of-way with the River Trail. Sidewalks and pedestrian improvements currently exist on Caulfield Lane leading to the project site.

Through provision of a network of new minor streets and connections to the existing and planned regional bicycle network, the project site effectively accommodates and supports bicycle travel. Bicycling will be an attractive travel mode given the project site's proximity to downtown Petaluma (approximately 2 miles) and the downtown SMART commuter rail station (approximately 1 mile). Bicycle parking and bike lockers shall be incorporated into the retail, employment, and mixed-use areas of the project as development plans are generated, as required by the SmartCode.

The multi-use paths described above will serve bicyclists as well as pedestrians. In addition to these paths, the project includes on-street (Class II) bicycle lanes on all segments of Caulfield Lane through the project site, consistent with the City's Bicycle and Pedestrian Plan. Offsite improvements along Hopper Street as well as the EVA from East D Street will provide for pedestrian and bicycle connectivity from the project site. Existing bicycle facilities, including bike lanes on adjacent streets, together with shared use of minor streets, and the proposed pathway improvements identified in the conceptual site plan provide adequate access to and from the project site for bicyclists. The project is at the tentative map stage, so currently does not identify the provision of bicycle parking or bicycle storage facilities.

The project site is accessible to transit services, including good pedestrian and bicycle connections to existing and future bus and rail facilities. The project traffic impact study indicates that existing transit routes are adequate to accommodate project-generated transit trips. Existing stops for local, regional, and interregional transit services are located within approximately one-half mile or less of the project site, which is generally considered an acceptable walking distance. The project site is also located approximately one mile east of the future SMART commuter rail station in downtown Petaluma. Good pedestrian and bicycle linkages to the station will be provided within Hopper Street and the proposed EVA, supporting the use of rail transit by project employees, visitors, and residents. Upon completion of the planned Caulfield Lane extension across the Petaluma River, opportunities will exist for Petaluma Transit (and potentially regional services including Sonoma County

Transit and Golden Gate Transit) to efficiently serve the project area through rerouting of existing bus lines.

TABLE 4.8-6
Existing Peak Hour Intersection Level of Service Calculations With Project

Study Intersection *Approach*	Existing Conditions				Existing plus Project			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Lakeville St/E Washington St	36.9	D	40.9	D	38.8	D	44.9	D
2. Lakeville St/D St	34.8	C	38.5	D	35.0	C	40.7	D
3. Lakeville St/Caulfield Ln	23.0	C	24.3	C	27.8	C	36.9	D
4. Lakeville Hwy/US 101 N Ramps	32.1	C	32.8	C	39.3	D	34.1	C
5. Lakeville Hwy/US 101 N Ramps	11.8	B	25.0	C	13.1	B	25.3	C
6. Hopper St/Caulfield Ln[1]	4.9	A	5.1	A	8.5	A	8.7	A
Eastbound Approach	*9.1*	*A*	*8.9*	*A*	*17.2*	*C*	*18.0*	*C*
Westbound Approach	*8.7*	*A*	*8.6*	*A*	*9.2*	*A*	*9.4*	*A*
7. Hopper St/Hotel N-S St		‡		‡	1.3	A	2.4	A
Northbound Approach					*10.3*	*B*	*11.1*	*B*
8. Hopper St/Caulfield Cir		‡		‡	2.7	A	4.7	A
Southbound Approach					*8.6*	*A*	*8.9*	*A*
9. Caulfield Ln (North)/Hotel N-S St		‡		‡	0.0	A	0.0	A
Southbound Approach					*0.0*	*A*	*0.0*	*A*
10. Caulfield Ln (North)/Caulfield Cir		‡		‡	1.1	A	1.1	A
Eastbound Approach					*8.5*	*A*	*8.8*	*A*
11. Caulfield Ln (South)/Caulfield Cir		‡		‡	5.5	A	2.5	A
Northbound Approach					*8.7*	*A*	*8.8*	*A*
12. Caulfield Ln (South)/River St		‡		‡	7.0	A	4.9	A
Eastbound Approach					*8.6*	*A*	*8.7*	*A*
Westbound Approach					*8.3*	*A*	*8.3*	*A*

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service
Results for minor approaches to two-way stop-controlled intersections are indicated in *italic*
[1] Includes project-constructed westbound right turn lane in "plus project" scenario
‡ Future intersection

SOURCE: Whitlock & Weinberger Transportation, March 2012

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Impact 4.8-2 – *US Highway 101 Impacts*: The project will result in an increase in daily and peak hour trips, but would not cause a substantial decrease in the volume-to-capacity ratio on Highway 101. This is a *less-than-significant impact*.

The segments of U.S. Highway 101 to the north and south of Lakeville Highway (State Route 116) currently operate at LOS E/F on the northbound segments and LOS C on the southbound segments during the PM peak hour and would continue to do so with the addition of the project traffic. The traffic thresholds of significance indicate that an impact would be significant if a project would increase the freeway v/c ratio on a facility already operating at LOS E or F by 0.01 or more. Even though the existing LOS exceeds Caltrans' standards (C/D), traffic from the proposed project would result in changes to the volume-to-capacity ratio of less than 0.01, as shown on Table 4.8-7, which is considered a less-than-significant impact.

Table 4.8-7: PM Peak Hour Changes to Freeway V/C With Project Traffic

US 101 Freeway Segment	V/C Without Project		V/C With Project		Change to V/C Ratio	
	NB	SB	NB	SB	NB	SB
Existing						
Petaluma Blvd S to Lakeville Hwy	0.909	0.560	0.913	0.566	0.004	0.006
Lakeville Hwy to E Washington St	1.027	0.677	1.034	0.684	0.007	0.007
Near Term						
Petaluma Blvd S to Lakeville Hwy	0.928	0.587	0.933	0.592	0.005	0.005
Lakeville Hwy to E Washington St	1.047	0.704	1.055	0.712	0.008	0.008
Future (2035)						
Petaluma Blvd S to Lakeville Hwy	0.989	0.768	0.994	0.773	0.005	0.005
Lakeville Hwy to E Washington St	1.111	0.936	1.118	0.943	0.007	0.007

Notes: V/C = volume to capacity ratio; NB = Northbound; SB = Southbound
Ideal freeway capacity assumed to be 2,300 vehicles per hour per lane within study area

SOURCE: Whitlock & Weinberger Transportation, March 2012

The potential for westbound vehicle queues at Lakeville Street/Caulfield Lane to affect operation at the adjacent intersection of Lakeville Highway/US 101 South Ramps was also assessed. If westbound queues originating at the Caulfield Lane intersection were to extend through the upstream US 101 South Ramps intersection, there would be a potential for spillback queues to then occur on the off-ramp, and potentially extend onto the mainline freeway. The two intersections are separated by approximately 650 feet, with approximately 540 feet of available storage between crosswalks (Whitlock & Weinberger Transportation, Inc., November 2013).

The projected westbound queue lengths at Lakeville Street/Caulfield Lane were evaluated by the project traffic engineer with the assumption that the westbound left-turn lane at the Lakeville Street/Caulfield Lane intersection would be extended to at least 250 feet by the Riverfront project in accordance with mitigation measures outlined in the traffic report for cumulative traffic impacts. (See subsection 5.3 of this EIR for further discussion.) The resulting 95th percentile westbound queues are projected to extend 304 feet in the AM peak hour and 565 feet in the PM peak hour. While the AM peak hour 95th percentile queues are projected to remain well within the available storage, the PM peak hour 95th percentile queue would extend approximately 25 feet beyond the 540 feet of available storage, or about one vehicle length (Whitlock & Weinberger Transportation, Inc., November 2013). Such occurrences would be infrequent and short in duration, given that these queues represent the 95th percentile lengths, and the projection that *average* queue lengths are expected to be much shorter at 358 feet (Ibid.). A brief queue spillback of one vehicle into the Lakeville Highway/US 101 South Ramps intersection would also have minimal impact to queuing on the offramp itself, as only drivers in the offramp's right turn lane would be affected. Such conditions are typical at freeway interchanges during peak hours (Ibid.). Thus, the potential for queuing at Lakeville Street/Caulfield Lane to adversely affect the US 101 Southbound Ramps intersection and mainline freeway is considered to be a less-than-significant impact (Ibid.).

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Access and Hazards

Impact 4.8-3 – *Circulation*: The project will not result in creation of hazards due to design of the circulation system or incompatible uses. This is a *less-than-significant impact*.

Access to the project site is provided from Hopper Street, primarily from its intersection with Caulfield Lane. As part of the proposed project, Hopper Street, from Caulfield Lane to the project site, would be widened to 45 feet to accommodate two travel lanes, landscaping, and

pedestrian/bicycle access. A second point of access from East D Street is proposed to provide connectivity via Hopper Street through installation of a short two-way road segment south of Old Lakeville Street that would connect East D Street to Hopper Street (See Figure 1-7). The existing access point at Old Lakeville and East D Streets would be closed. The connector would accommodate both public and emergency vehicle access. Hopper Street would be widened from 14 feet to 20 feet to accommodate two-way public access between East D Street and Caulfield Lane (Also see Emergency Access discussion below).

The project plans also provide an internal network of streets that consists of one primary north-south street and several minor north-south connections. Most onsite streets will provide onstreet parking. The primary north-south street through the project site will provide for the future extension of Caulfield Lane through the site to Petaluma Boulevard South to the south of the Petaluma River as set forth in the City's General Plan.

The project traffic study found that the onsite vehicular circulation network is projected to operate acceptably into the future. All project streets have been designed in accordance with the street standards adopted by the *Central Petaluma Specific Plan*. Adequate intersection sight distances are provided. The one-way counterclockwise loop street located within the core of the proposed mixed-use area would be expected to function acceptably as along as stop controls are located on entering side streets (rather than on approaches within the circle itself). The proposed tentative map does not identify traffic control configurations (i.e., stop sign locations) on internal streets. The traffic report recommends stop controls for some of the internal intersections, as well, which will be further reviewed by City staff and conditioned accordingly at the design level stage. Preliminary analysis indicates that internal streets and recommended stop sign controls are consistent with CPSP standards and would be expected to provide for sufficient operation.

As part of the traffic impact study, vehicle queuing was assessed on the northbound Caulfield Lane approach at Lakeville Street due to the proximity of the SMART rail tracks to the south. The rail crossing is located 500 feet south of Lakeville Street, and so any vehicular queues extending beyond this length at the Lakeville Street/Caulfield Lane signal would present safety concerns. The projected vehicle queues were determined using Simtraffic, which is a traffic simulation extension of the Synchro application that is used to determine intersection operation and levels of service. Vehicle queues on the subject segment of Caulfield Lane are projected to remain well within the 500 feet of available storage under existing conditions both without and with the Riverfront project, and thus, would not extend beyond the rail crossing.

The traffic study also reviewed sight distances. While specific information regarding future building and landscaping placement is not included in the project's tentative map, it is possible to evaluate whether adequate sight distance will be achievable at internal intersections given the roadway geometries and recommended traffic controls. Based on a review of these factors, the traffic study concluded that sufficient sight distances will be achievable at all internal intersections including those surrounding Caulfield Circle given

street geometries. Intersection sight distance requirements will also be reconfirmed during the design of buildings and landscaping within the development in future development phases. Additionally, improvements along Hopper Street will require that existing access and driveways be maintained.

Therefore, the project and its proposed circulation system and designs would not result in design hazards.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Impact 4.8-4 – *Rail Crossing*: The project will result in an increase in daily and peak hour trips, but would not substantially increase hazards due to conflicts between motorists, pedestrians, bicyclists and rail operations. However, if supplemental safety measures to be implemented as part of the SMART rail service are not in place before project completion, potential hazards could result. This is a *potentially significant impact*.

The project site is located adjacent to the Northwest Pacific (NWP) railroad corridor that borders the project site on the north. The corridor will provide commuter rail service via SMART and freight rail service via the North Coast Rail Authority. Generally, new developments may increase traffic volumes on streets and at intersections, as well as at at-grade crossings, which raises safety concerns as indicated by the California Public Utilities Commission (CPUC) to the City of Petaluma (June 5, 2013). The CPUC indicated that mitigation measures to consider include, but are not limited to, the planning for grade separations for major thoroughfares, improvements to existing at-grade crossings due to increase in traffic volumes and continuous vandal resistant fencing or other appropriate barriers to limit the access of trespassers onto the railroad ROW.

An evaluation of safety concerns including potential passenger-freight conflicts, pedestrian/cyclist safety (both at rail crossings and on the bicycle/pedestrian pathway), and emergency response delays was conducted as part of the SMART 2005 EIR and 2008 Supplemental EIR. Page 3.2-39 through 3.2-42 of the SMART FEIR (2006) identifies low accident rates associated with both commuter rail and freight rail service. As described therein, the Federal Railroad Administration (FRA) reports a five-year fatality average of 1.2 for commuter rail and provides the following comparison table, which shows that commuter rail is far safer transit option relative to bus and motor vehicles.

Summary of Fatality Rates

	Commuter Rail 5 Year Average	Buses 5 Year Average	Motor Vehicle 5 Year Average
Annual Fatalities (2000-2004 average)	1.2	36.6	36,165
Passenger Miles	9,503,250,000	148,120,400,000	4,280,674,000,000
Fatality rate per billion passenger	0.13	0.25	8.45

Page 4-9 of the 2006 FEIR states that in advance of start-up operation, SMART will develop and implement an Emergency Preparedness Plan in consultation with local emergency providers. As part of the project's "Environmental Compliance" measures, the SMART EIR indicates that the rail project will:

> "Adhere to state and federal regulations to promote public safety and discourage trespassing. Standard safety measures include fencing, signage, and other physical impediments at appropriate locations designed to promote safety and minimize pedestrian/train accidents. In addition, appropriate set back for bicycle/pedestrian pathway, safety structure between bicycle/pedestrian pathway and rail tracks and use of heavy DMU vehicles compatible with freight trains.

As previously indicated, in 2011, an at-grade mainline railroad crossing was relocated from Hopper Street, just south of Lakeville Highway, to Caulfield Lane, just north of Hopper Street to improve vehicular access, pedestrian and traffic safety, and traffic circulation for the area in accordance with the City's adopted Central Petaluma Specific Plan. The existing warning and safety devices on the southwest side of the crossing include two entry gates with flashers to block traffic from Hopper Street into eastbound Caulfield Lane. Existing warning and safety devices on the northeast side of the crossing include one entry gate with flashers, a cantilevered section with flashers, and a landscaped median approximately 100 feet long. These improvements were verified by the California Public Utilities Commission on July 12, 2013 through issuance of use authorization for the Caulfield Lane at-grade crossing.[3]

In addition, the Caulfield Lane Railroad Crossing Re-Authorization Initial Study / Mitigated Negative Declaration (IS/MND) (Winzler & Kelly, November 2011) considered safety of the at-grade crossing, including safety hazards associated with increased traffic (both motorized and non-motorized) from the proposed Riverfront Project. The adopted MND indicates that as

[3] "Authorization for Continued Use and Modification of an At-Grade Highway-Rail Crossing Across Caulfield Lane," Issued by the Public Utilities Commission of the State of California, July 12, 2013.

part of the SMART passenger rail service CEQA review, an evaluation of potential passenger-freight conflicts, pedestrian/cyclist safety (both at rail crossings and on the bicycle/pedestrian pathway), and emergency response delays was conducted. Passenger and freight rail service are regulated by federal and state agencies, including the Federal Railroad Administration (FRA) and the CPUC, with respect to public safety. In addition, SMART's implementation of safety measures and the community education program, Operation Lifesaver, would serve to reduce the likelihood of accidents at at-grade crossings for both passenger and freight rail service. Considering regulatory oversight, SMART's proposed safety measures, and the low accident rate associated with both passenger and freight rail service, the cumulative public safety impact was determined to be less than significant (SMART Final Supplemental EIR 2008).

Presently, SMART, in conjunction with the CPUC and local municipalities, including the City, is assessing existing railroad crossings and determining supplemental safety measures necessary for commencement of passenger rail service and establishment of quiet zones. On February 2, 2012 a diagnostic review of the subject crossing was conducted by CPUC, City Staff, and SMART representatives in order to assess necessary upgrades to accommodate high-speed commuter rail. It was determined that supplemental safety measures at the existing Caulfield Lane at-grade crossing would need to include an additional exit gate with vehicle detection loops on the southwest side of the crossing to preclude vehicles from navigating around the entry gates to proceed eastbound on Caulfield Lane. A new exit gate may require re-routing of the existing sidewalk around the gate. Subsequently, SMART will apply for approval of the supplemental safety measures from the CPUC, and will also be responsible for obtaining any permits and approvals needed for the supplemental safety measures and will implement and construct the majority of the improvements.

No supplemental safety measures at the Caulfield crossing are expected to be required for the Riverfront project, beyond those that may be required for SMART. If SMART rail service (and the supplemental safety measures that may be needed for it) is delayed to such an extent that the Riverfront project is built first, then the supplemental safety measures outlined for SMART may need to be implemented by the Riverfront project to avoid significant hazards from the at-grade crossing**.** In this case, potential supplemental safety measures at the existing Caulfield Lane crossing would include an additional exit gate pursuant to Commission Standard 9-E (flashing light signal assembly with automatic gate) on the southwest side of the crossing to preclude vehicles from navigating around the entry gates to proceed eastbound on Caulfield Lane. A new exit gate may require re-routing of the existing sidewalk around the gate (Winzler & Kelly, November 2011). Pursuant to Mitigation Measure TRAF-1 below, the City shall fund such improvement to be installed by SMART's contractors and the Riverfront Project Applicant shall pay for half the cost of improvements.

The Riverfront project will be conditioned to adhere to setback, trespassing signage, and right-of-way requirements associated with the railroad tracks along the northern boundary of the subject site. Detailed project fencing, screening, and signage will be specified as part of the Site

Plan and Architectural Review (SPAR) process that is required for each Phase of development. These along with standard adjacency conditions are expected to be sufficient to reduce potential impacts due to design hazards associated with proximity to the railway and the Caulfield Lane at-grade crossing. Therefore, the project will not result in increased safety hazards due to its location adjacent to the rail corridor. However, as indicated above, if SMART rail service (and the supplemental safety measures that may be needed for it) is delayed to such an extent that the Riverfront project is built first, then the supplemental safety measures outlined for SMART may need to be implemented by the Riverfront project to avoid significant hazards from the existing freight train service.

Additionally, as discussed in the "Cumulative Impacts" section (5.3), the project traffic study recommends that the proposed project be responsible for improvements at the Lakeville Street/Caulfield Lane intersection even though the unacceptable LOS is projected to occur in the future without the proposed project (Mitigation CUM-1). The improvements would improve capacity and safety at the intersection by lengthening the westbound left-turn pocket to approximately 250 feet in order to reduce the occurrence of spillover blockages into adjacent through lanes and the installation of a raised median on the westbound approach to physically prohibit illegal left turn movements into and out of adjacent properties, thereby improving safety. The cumulative impact analysis also requires the project to contribute a fair share payment to future signalization of the Hopper Street/Caulfield Lane (Mitigation CUM-2) once Caulfield Lane is extended through the project site and over the Petaluma River to Petaluma Boulevard South.

Mitigation Measures

Implementation of Mitigation Measures TRAF-1 below and Mitigation Measures CUM-1 and CUM-2 (see subsection 5.3) will reduce potential safety hazards due to rail crossing to a less-than-significant level.

> TRAF-1: If SMART rail service (and the supplemental safety measures that may be needed for it) is delayed to such an extent that the Riverfront project is built first, require installation of the supplemental safety measures at the existing Caulfield Lane at-grade crossing to include an additional exit gate on the southwest side of the crossing to preclude vehicles from navigating around the entry gates to proceed eastbound on Caulfield. The exit gate and related items shall be installed by SMART's contractor and funded by the City. The applicant shall contribute funds equal to half the cost of construction.
>
> A new exit gate may require re-routing of the existing sidewalk around the gate (Winzler & Kelly, November 2011). This minor re-routing would not be expected to result in any adverse environmental effects.

Emergency Access

Impact 4.8-5 – *Emergency Access*: The proposed secondary emergency access will be adequate, and the project will not result in provision of inadequate emergency access. This is considered a *less-than-significant impact.*

The proposed project has one access point through the Lakeville Street/Caulfield Lane intersection. An additional access point is planned in the future upon construction of a bridge over the Petaluma River and extension of Caulfield Lane to Petaluma Boulevard South as called for in the City's General Plan. It is not known when this extension will occur.

The project proposes to construct and utilize an emergency vehicle access (EVA) that connects the current one-way southbound portion of Hopper Street to a point on D Street (via Old Lakeview Street) approximately 100 feet west of the railroad tracks. The EVA would be for use only during an emergency or evacuation. At the time the project traffic impact study was prepared, the proposed EVA retained Old Lakeville Street in its current configuration, and a new supplemental gated Emergency Vehicle Access (EVA) connection to East D Street would have been added for use by emergency vehicles only. The EVA was subsequently modified to allow for public access via a joint public and EVA road segment from East D Street, approximately 100 feet south of the Lakeville Street/East D Street intersection that would connect East D Street to Hopper Street. The proposed connector would provide emergency access directly from East D Street to Hopper Street. The current EVA proposal is shown on Figure 1-7.

The subject segment of Old Lakeville Street is currently open and provides one-way access to the Riverfront development and the small commercial development just south of East D Street. Traffic counts obtained during the PM peak hour on March 27, 2012, totaled 16 vehicles on Old Lakeville Street to the south of the existing commercial buildings (near the rail spur crossing), confirming that the street is currently a very low volume roadway (Whitlock & Weinberger Transportation, April 2013). Old Lakeville Street currently connects to East D Street immediately to the west of the Lakeville Street/ East D Street intersection, with the street paralleling the railroad tracks and Lakeville Street, which creates a potentially confusing situation for drivers destined for Old Lakeville Street, as well as a safety concern given the number of conflict points.

A review conducted by the project traffic consultants indicates that relocation of Old Lakeville Street 100 feet to the west would eliminate a confusing situation to drivers due to the existing road proximity to the existing railroad tracks and Lakeville Street (Whitlock & Weinberger Transportation, April 2013). The review considered two scenarios: retain a one-way southbound route or convert to a two-way street. The review found that a new intersection at

East D Street and the relocated segment of Old Lakeville Street could safely and effectively accommodate additional right-turn movements, although westbound left turns from East D Street onto Old Lakeville Street should be prohibited in either scenario. Implementation of either scenario is anticipated to result in negligible shifts in areawide traffic and little change, if any, to LOS analyses conducted for the proposed Riverfront project (Ibid.).

Old Lakeville Street connects to the northern terminus of Hopper Street, providing connectivity to the Caulfield Lane SMART rail crossing one-half mile to the south. This connection allows Old Lakeville Street to operate as a one-way southbound street with connectivity to the Riverfront development. The current physical condition of the northernmost portion of Hopper Street requires drivers to travel at low speeds. As a result, the attractiveness of using Hopper Street and Old Lakeville Street as a through street is quite low, and would be expected to remain low until the road is reconstructed, which may not occur for many years into the future (Whitlock & Weinberger Transportation, April 2013).

A third-party independent review of the proposed EVA (Holmes Fire, 2011) and subsequent modifications (Holmes Fire, 2013) found that the proposed EVA location and design would adequately provide for the emergency scenarios, and is acceptable and consistent with fire codes. The traffic study indicates that the proposed EVA is considered to be an acceptable solution for emergency access until such time that a bridge over the Petaluma River is completed in the future. The emergency access review found that the site is within a 4-minute response time of both Fire Department Stations 1 and 3, which are located on opposite sides of the railway tracks and Petaluma River, and, therefore emergency responders would still be able to access the site via either Hopper Street or Caulfield Lane (Holmes Fire, 2011). The review also considered the potential for a hazardous spill on Highway 101, delays at the train crossing at Caulfield Lane, and potential flooding, all of which were considered to have low probabilities of occurrence.

Adequate emergency access for the project site as part of the proposed EVA and will be retained in future years. Implementation of SMART rail service has the potential to result in slight delays to access the site; however, emergency access vehicle can use the dedicated EVA access, in the event that the at-grade crossing of Caulfield lane is occupied. Therefore, the project would have less than significant impacts in regards to conflicts with emergency access.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.