3.13 TRANSPORTATION AND TRAFFIC

This section describes transportation facilities and operations and analyzes the potential environmental effects of the Project on transportation as defined by CEQA and City regulations and policies. This analysis summarizes the Traffic Impact Study (TIS) for the Project, which considers transportation services and infrastructure that may be affected by Project implementation, referred to as the study area.

3.13.1 Environmental Setting

The Project site lies at the western edge of urban development within the City and is bound by LOVR to the east, Calle Joaquin and Mountainbrook Church to the south, Irish Hills Plaza to the north, and Irish Hills Natural Reserve to the west. The Project site's location at the urban edge and the configuration of existing development and open space provides relatively little connectivity with the surrounding roadway system. Given existing development patterns, wetlands, and drainage and roadway configuration, direct access to the Project site is limited to a single driveway off LOVR.

The Project's main entrance would be installed on LOVR at Auto Park Way and LOVR improvements would include sidewalks, a new signalized intersection, and a new transit stop.

Roads immediately adjacent to the Project site include LOVR and Calle Joaquin. LOVR has approximately 1,700 feet of frontage along the eastern site boundary. LOVR is a four-lane roadway with a center median/turning lane and provides Class II bicycle lanes in both directions. The northbound (NB) side of LOVR is striped for parallel parking and provides a 10-foot-wide sidewalk. The southbound (SB) side of LOVR along the Project site frontage does not provide parking or a sidewalk and is curbed adjacent to an open drainage ditch that supports large stands of willow riparian vegetation that runs the length of the Project site.

Calle Joaquin runs through the southeastern corner of the Project site but is generally separated from much of the Project site by the Calle Joaquin wetlands and four existing hotels. Calle Joaquin is a two-lane roadway that extends south from LOVR for approximately 2,400 feet along the southern boundary of the Specific Plan area, providing

access to four hotels, Mountainbrook Church, and the KSBY offices and transmitter before terminating at Filipponi Ranch almost 1 mile south of LOVR. From LOVR and along the segment adjacent to the hotels, Calle Joaquin is bordered with sidewalks and planter strips on both sides. From the hotels to KSBY, Calle Joaquin is a two-lane rural road with unimproved shoulders along either side. Calle Joaquin does not provide access to the Project site.

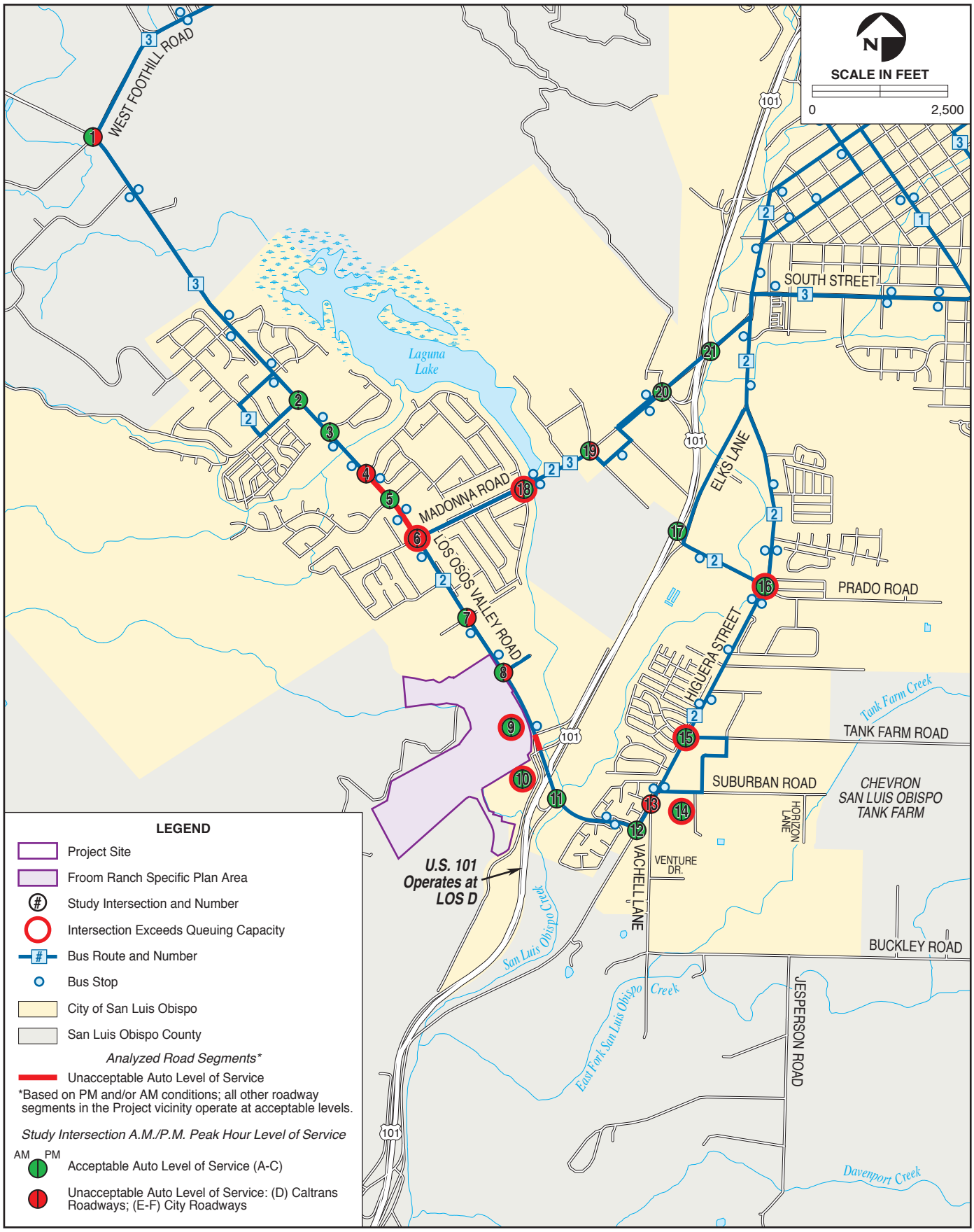
3.13.1.1 Existing Roadway Network

The existing driveway to the Project site would be improved to provide access to both Madonna Froom Ranch and Villaggio.

Roadway facilities in the vicinity include regional freeways and highways managed by Caltrans and local-serving roads and arterials managed by either the City or the County (Figure 3.13-1). U.S. 101 is located approximately 0.15 mile east of the Project site. Regional motor vehicle access to the Project site is provided via U.S. 101 at an interchange with LOVR. Local access to the vicinity is provided via LOVR, South Higuera Street, and Madonna Road. Direct access to the Project site is provided from a single dirt driveway located approximately 150 feet south of the edge of Irish Hills Plaza and 225 feet north of the intersection of LOVR and Auto Park Way. Roadways that provide access to the Project site and vicinity are further described below. Roadways are functionally classified in the City General Plan CE depending on their existing or planned configuration and role in the transportation network.

U.S. 101 is a north-south, four-lane freeway through the City. Outside of the City, U.S. 101 provides access to the City of Paso Robles to the north and the Five Cities area to the south. U.S. 101 is functionally classified as an Urban Principal Arterial and is part of the National Truck Network. It is a primary route for all vehicular traffic leaving from and coming to the City.

LOVR is a north-south arterial street that extends from South Higuera Street in the City to Pecho Valley Road in the City of Los Osos. This roadway provides motor vehicle access to U.S. 101 approximately 0.5 mile west of South Higuera Street and is functionally classified as an Arterial or a Parkway Arterial. LOVR provides four-to-six lanes with Class II bike lanes and sidewalks on both sides for the majority of



wood.

Existing Traffic Conditions

FIGURE 3.13-1

the study area, although sidewalks are lacking along the Project site frontage. Since 2014, improvements associated with the LOVR/U.S. 101 Interchange Traffic Relief Project have been constructed. Completed improvements to the interchange include widening LOVR to four lanes from south of Calle Joaquin Road to approximately 500 feet west of South Higuera Street as well as constructing sidewalks and Class II bike lanes along both sides of LOVR.

Calle Joaquin is a two-lane east-west roadway that runs through the southern corner of the Project site to connect LOVR with the four hotels adjacent to the site and Mountainbrook Church uphill from the site to the west. Calle Joaquin has sidewalks on the westbound (WB) side between LOVR and the existing hotels, but sidewalks terminate west of the existing hotels.

Calle Joaquin presents a frontage to the proposed stormwater detention basin area, with potential secondary access alongside Froom Creek.

Madonna Road is an east-west roadway that extends from Devaul Ranch Road west of LOVR to across U.S. 101 to Higuera Street to the east. Madonna Road is functionally classified as a Local roadway west of LOVR, and as an Arterial street east of LOVR. Throughout its span, Madonna Road provides two, four or six travel lanes, and Class II bike lanes with sidewalks on one or both sides. This roadway also provides motor vehicle access to U.S. 101 approximately 1 mile east of LOVR and 0.5 mile west of Higuera Street.

Froom Ranch Way is an east-west roadway that connects LOVR to the Prefumo Creek Shopping Center to the east and the Irish Hills Plaza to the west. Froom Ranch Way is four lanes west of LOVR and two lanes east of LOVR with sidewalks on both sides and Class II bicycle lanes on the east side. Planned improvements to Froom Ranch Way as part of the San Luis Ranch Specific Plan include construction of a bridge across Prefumo Creek and extension of the roadway through the San Luis Ranch site as a two-lane collector street with Class II bike lanes and a Class I multi-use path on the north side from LOVR for approximately 0.5 mile east to

Dalidio Drive. Improvements to Froom Ranch Way are required as part of the pending San Luis Ranch Specific Plan.

South Higuera Street is a north-south arterial located south of U.S. 101 within the vicinity of the Project site. Higuera Street connects to downtown to the north and U.S. 101 to the south. South of Madonna Road, it provides a four-lane roadway with Class II bike lanes and continuous sidewalks immediately adjacent to LOVR.

Prado Road is an east-west two-lane road that extends eastward from the U.S. 101 NB Ramps to South Higuera Street. Prado Road is functionally classified as a Highway/Regional Route. Prado Road is a two-lane roadway with sidewalks on both sides and on-street parking at various locations. Planned improvements to Prado Road include:

- Replacement of the Prado Road Bridge over San Luis Obispo Creek just west of South Higuera Street;
- Traffic capacity and pedestrian/bicycle crossing improvements at the Prado Road/South Higuera Street intersection;
- Construction of a grade-separated interchange across U.S. 101;
- Extension of Prado Road as a four-lane roadway 700 feet west from U.S. 101 to Dalidio Drive through the pending San Luis Ranch Specific Plan development, and 3,000 feet east to Broad Street through undeveloped land as a four-lane roadway with Class II bike lanes, a center median/left-turn lane, and Class I multi-use paths on one or both sides.

Improvements to Prado Road west of U.S. 101 are required as part of the pending San Luis Ranch Specific Plan. The U.S. 101 overpass/interchange project is programmed and funded through a combination of direct developer contributions, Traffic Impact Fees and local funds. The Prado Road extension east to Broad Street is planned and funds are being collected incrementally through the City's Traffic Impact Fee program.

Tank Farm Road is an east-west roadway that connects South Higuera Street to Broad Street to the east, and continues as Orcutt Road east of the Orcutt Area. In the vicinity of the Project site, Tank Farm Road is a four-lane roadway with Class II bike lanes and sidewalks on both sides.

3.13.1.2 Existing Pedestrian Facilities

Pedestrian facilities include sidewalks, paths, crosswalks, and pedestrian signals at signalized intersections that are generally managed by the City, except at freeway interchanges such as LOVR/U.S. 101, which are managed by Caltrans. In the vicinity of the Project site, sidewalks are discontinuous on portions of both sides of LOVR. There are no sidewalks along the Project frontage on LOVR. Continuous sidewalks are provided on Auto Park Way, and Froom Ranch Way and Calle Joaquin from 2,000 feet south of LOVR to Motel 6, after which the road becomes a narrow two-lane rural road with no sidewalks. All of the signalized intersections along LOVR are equipped with marked crosswalks and pedestrian signals. Informal pedestrian access currently exists between the Project site and the Irish Hills Plaza shopping center through the center's parking lot.

The Irish Hills Natural Reserve supports an extensive off-road network of multi-use trails immediately west of the Project site, with the Neil Havlik Way and Froom Creek Connector trails bordering the Project site; the nearest formal trailhead is the Froom Creek trailhead located immediately adjacent to the northwestern corner of the Project site.

3.13.1.3 Existing Bicycle Facilities

Bicycle facilities in the Project vicinity include on- and off-road bicycle paths, lanes, and routes. Class I bicycle paths are paved pathways separated from roadways. Class II bicycle lanes are lanes adjacent to the road shoulder outside vehicle travel lanes, with lane markings, pavement legends, and signage. Class III bicycle routes are generally located on low-traffic-volume streets. These facilities are designed for bicycle use, but have no separated bicycle right-of-way or lane striping, but may in some instances be signed or have "sharrow "markings on the roadway. A Class IV separated bikeway, often referred to as a cycle track or protected bike lane, is for the exclusive use of bicycles, physically separated from motor traffic with a vertical feature. Bicycle facilities provide routes for recreational, commuter, and in some cases school children cyclists.

Within the Project vicinity, Class I bicycle paths include the current southern terminus of the Bob Jones Trail, a regional bike path that currently connects to the north side of LOVR at the intersection with the U.S. 101 NB ramps. Within the City, the trail currently extends for approximately 1.1 miles from LOVR north to Prado Road, with another segment within the County of roughly 3 miles extending from Ontario Road near the Avila Beach Drive interchange with U.S. 101 to Avila Beach. Future plans call for extending the trail from downtown San Luis Obispo to this existing Avila Beach segment. Class II bicycle lanes

are provided in both directions on portions of LOVR and South Higuera Street within the Project vicinity, as well as the WB direction of Madonna Road from Oceanaire Drive to about 600 feet east of LOVR. The South Higuera Street bicycle lanes are provided between LOVR and Madonna Road, except for a gap in the NB direction near South Street. The LOVR bicycle lanes are provided from the western City limit to South Higuera Street. Class III bicycle routes are designated along portions of Oceanaire Drive, Atascadero Street, Elks Lane, Calle Joaquin, and Dalidio Drive within Laguna Lake Park.

In addition, as noted above, an extensive multi-use off-road recreational trail system is also located adjacent to the Project site within the Irish Hills Natural Reserve, including designated mountain biking trails, as well as within the Laguna Lake Open Space to the east.

3.13.1.4 Existing Transit Facilities

Public transit service to the Project vicinity is provided by the City of San Luis Obispo Transit Division (SLO Transit) via bus routes 2A and 2B, which provide service to and from the Downtown Transit Center located on Osos Street. Route 2A operates in a clockwise loop with 60-minute headways (frequency of service) from 6:15 AM to 10:00 PM and stops near the Project site on the east side of LOVR, north of the Auto Park Way intersection. This stop is within a roughly five- to eight-minute walk from the Project site. Currently, signalized pedestrian crossings on LOVR in the Project vicinity are limited to those at Froom Ranch Way and Calle Joaquin, a distance of over 0.5 mile; no marked or controlled pedestrian crossings on LOVR currently exist at the intersection of LOVR/Auto Park Way. Route 2B operates in a counterclockwise loop with 60-minute headways from 6:45 AM to 6:35 PM and stops near the Project site on the west side of LOVR, south of the Froom Ranch Way intersection. This stop is within a two- to five-minute walk from the Project entry at LOVR/Auto Park Way. Transit service is relatively infrequent to the Project vicinity with headways of roughly 60 minutes. This compares to industry standards of ideal peak hour headways of 10 to 15 minutes required to attract non-transit-dependent users and provide reasonable commute times.

3.13.1.5 Existing Collision History

Documented collisions along the selected study locations were obtained from the City for a period of three years from January 2014 to December 2016. Most recent statewide collision averages for 2015 were obtained from Caltrans. Quantitative review of collision

history for the selected roadway segments and the study intersections are summarized in Appendix J.

LOVR between Froom Ranch Way and Calle Joaquin

During the three-year study period, there were a total of 29 collisions reported for LOVR between Froom Ranch way and Calle Joaquin and a total of 17 injuries. During the study period, no crashes involving pedestrians were reported, and one collision involving a bicyclist was reported. Fatal-plus-Injury rate for this study segment is higher when compared to the statewide average rate for similar facilities. Further, this segment has been identified as being a high-collision-rate location compared to similar arterial streets in the City's most recent Annual Traffic Safety Report (2017).

South Higuera Street between LOVR and Clover Ridge Lane

During the study period, there were a total of ten collisions reported for the study segment of South Higuera Street between LOVR and Clover Ridge Lane and a total of six injuries were reported. During the study period no crashes involving pedestrians and bicyclists were reported. One fatal injury was reported at Higuera Street and Clover Ridge Lane due to improper turning. Fatal-plus-Injury rate for this study segment is higher when compared to the statewide average rate for similar facilities. This segment is located within the County and has not been studied as part of the City's Annual Traffic Safety Report (2017).

3.13.1.6 Multi-Modal Transportation System Operations

Multi-modal transportation system operations include vehicular traffic characteristics and congestion, adequacy of pedestrian and bicycle facilities to safety accommodate demand, and transit operations including headways and facilities such as bus stops. In order to evaluate existing operational characteristics of the transportation system, recent traffic volume data was obtained (automobiles, pedestrians, bicycles, transit ridership), and study area transportation facilities were observed, including intersections, roadway segments, sidewalks, bike paths, transit routes and stops. For vehicular traffic, intersection turning movement volumes for weekday AM and PM peak periods and roadway segment volumes collected during February 2016 and March 2016 were obtained from the City. For the intersection of Foothill Boulevard and LOVR, turning movement volumes collected in September 2014 were obtained from the County. Volumes at this intersection were adjusted to reflect growth through 2016. For freeway mainline and ramp traffic analysis, AM and PM peak period traffic volumes were obtained from 2017 PeMS data. All traffic data was collected during typical weekday conditions when schools were in session.

Detailed traffic flow analyses focus on operating conditions of critical intersections and segments during peak travel periods, which are typically the weekday AM and PM peak hours. The AM peak hour is defined as the highest one-hour of traffic flow counted between 7:00 AM and 9:00 AM on a typical weekday, the PM peak hour is defined as the highest one-hour of traffic flow counted between 4:00 PM and 6:00 PM on a typical weekday. .

Pedestrian and bicycle volume data was obtained from the City based on recent counts during this same time period. This was supplemented by field observations of these facilities. For transit operations, SLO Transit was contacted to obtain relevant transit line ridership data and for information on any planned improvements.

The study intersections and roadway segments were evaluated according to the methodology required by the City's Traffic Impact Analysis (TIA) Guidelines. The operation of intersections and roadway segments was evaluated based on methodologies established in the Transportation Research Board's 2016 Highway Capacity Manual 6th (HCM 6th) Edition Multi-modal Level of Service (LOS) criteria. LOS is a qualitative measure of traffic operating conditions ranging from LOS A to LOS F, with LOS A being the highest functioning and LOS F being the lowest functioning.

Automobile Intersection LOS Methodology

In terms of operations and deficiencies for automobiles, intersection LOS is based on the estimated control delay per vehicle, and can be affected by factors such as turn lane capacity, the number of vehicle lanes, and traffic control device characteristics, such as traffic signal phasing/timings. In rating intersection operations, LOS A indicates free-flow operations and LOS F indicates congested operations (see Table 3.13-1). Table 3.13-2 and Table 3.13-3 summarize the HCM 6th Edition automobile segment LOS and the freeway segment LOS methodologies, respectively.

Table 3.13-1. LOS Criteria for Signalized and Unsignalized Intersections

LOS	Description	Control Delay Per Vehicle (seconds)	
		Signalized	Unsignalized
A	Uncongested operations; all vehicles clear in a single cycle.	≤ 10	≤ 10
B	Uncongested operations; all vehicles clear in a single cycle.	10.1 – 20	10.1 – 15
C	Light congestion; occasional backups on critical approaches.	20.1 – 35	15.1 – 25
D	Congestion on critical approaches, but intersection functional. Vehicles wait through more than one cycle during short peaks. No long-standing lines formed.	35.1 – 55	25.1 – 35
E	Severe congestion with some long-standing lines on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements.	55.1 – 80	35.1 – 50
F	Total breakdown with stop-and-go operations.	> 80	> 50

Source: TRB 2010.

Table 3.13-2. Automobile Segment LOS Methodology

LOS	Travel Speed Threshold by Base Free-Flow Speed (mph)							V/C Ratioa
	55	50	45	40	35	30	25	≤1.0
A	>44	>40	>36	>32	>28	>24	>20	
B	>37	>34	>30	>27	>23	>20	>17	
C	>28	>25	>23	>20	>18	>15	>13	
D	>22	>20	>18	>16	>14	>12	>10	
E	>17	>15	>14	>12	>11	>9	>8	
F	≤17	≤15	≤14	≤12	≤11	≤9	≤8	
F	Any							>1.0

Source: HCM 6th Edition 2016.
mph – miles per hour
Notes: [a] The critical volume-to-capacity (V/C) ratio is based on consideration of the through movement V/C ratio at each boundary intersection in the subject direction of travel. The critical V/C ratio is the largest ratio of those considered.

Table 3.13-3. Freeway Segments LOS Methodology

Segment Type	Freeway Facility Density (pc/mi/h)1
A	≤11
B	>11-18
C	>18-26
D	>26-35
E	>35-45
F	>45 or any component segment V/C >1.00

Source: HCM 6th Edition 2016.
[1]Density is a measurement of the passenger car flow rate, as pc/mi/h, or passenger cars per mile per hour.

Bicycle, Pedestrian, and Transit Operations

Bicycle, transit, and pedestrian LOS can be affected by a lack of or incomplete bicycle lanes, infrequent or inaccessible transit service, or poor continuity of sidewalks or crossing facilities. The City General Plan CE defines LOS for bicycle, pedestrian, and transit facilities and services using a LOS rating system similar to roadway LOS criteria but based on conditions described in Table 3.13-4. Bicycle, pedestrian, and transit facilities are evaluated using the HCM 6th Edition 2016 methodology and multi-modal thresholds established in the City's General Plan CE. Table 3.13-5 and Table 3.13-6 summarize HCM 6th Pedestrian and Bike/Transit LOS Standards.

Table 3.13-4. LOS Criteria for Bicycle, Pedestrian, and Transit Facilities/Services

Facility Description			
LOS*	**Bicycle Links**	**Pedestrian Links**	**Transit Segments**
A	- Bike lane with ample width - Excellent pavement condition - Separation from vehicle traffic - Low vehicle volumes/speeds - Low heavy truck mix - No on-street parking	- Wide walkways allowing side-by-side walking and easy passing - Buffer from vehicle traffic (landscaping, parking, bike lanes) - Low vehicle volumes/speeds	- 15-minute or less headways - Higher transit travel speeds - High quality walkways to transit stops - Numerous transit stops with benches, shelters, trash cans, transit maps - Easy availability of seats onboard
B	- Narrower bike lane width - On-street parking allowed	- One-way street allows higher vehicle volumes/ speeds - Less buffer between sidewalk and vehicle traffic	- Fewer transit stops or stop amenities - Narrower walkways close to vehicle traffic
C	- Higher vehicle volumes/ speeds adjacent to bike lane	- Less distance between sidewalk and vehicle traffic - Higher vehicle volumes/ speeds adjacent to sidewalk	- Less frequent or reliable transit service - Lower travel speeds
D	- Higher vehicle volumes/ speeds adjacent to bike lane - Higher heavy truck mix	- Higher vehicle volumes/ speeds adjacent to sidewalk	- Less frequent or reliable transit service - Lower travel speeds - Fewer transit stops or stop amenities
E	- No bike lane - Narrow roadway shoulder width	- No sidewalk - Bike lane serves as roadway shoulder - Higher vehicle volumes/ speeds adjacent to sidewalk	- Infrequent or unreliable transit service - Unattractive or inaccessible stops

Table 3.13-4. LOS Criteria for Bicycle, Pedestrian, and Transit Facilities/Services (Continued)

Facility Description			
LOS*	**Bicycle Links**	**Pedestrian Links**	**Transit Segments**
F	- No bike lane - Poor pavement condition - High vehicle volumes/speeds - Higher heavy truck mix - High on-street parking	- No walkway or roadway shoulder - No buffer between pedestrians and vehicle traffic - High vehicle volumes/ speeds adjacent to sidewalk	- No transit service

* Each LOS description is compared to the LOS immediately above (e.g., LOS B is described compared to LOS A).
Source: City of San Luis Obispo 2014a, General Plan CE, Appendix B.

Table 3.13-5. Pedestrian Segment LOS Methodology

Pedestrian LOS Score	LOS by Average Pedestrian Space (sf/p)					
	>60	**>40-60**	**>24-40**	**>15-24**	**>8.0-15[a]**	**≤8.0[a]**
≤2.00	A	B	C	D	E	F
>2.00-2.75	A	B	C	D	E	F
>2.75-3.50	A	B	C	D	E	F
>3.50-4.25	A	B	C	D	E	F
>4.25-5.00	A	B	C	D	E	F
>5.00	A	B	C	D	E	F

Source: HCM 6th Edition 2016.
[a] In cross-flow situations, the LOS E/F threshold is 13 sf/person (sf/p).

Table 3.13-6. Bicycle and Transit Segment LOS Methodology

LOS	LOS Score
A	≤2.00
B	>2.00-2.75
C	>2.75-3.50
D	>3.50-4.25
E	>4.25-5.00
F	>5.00

Source: HCM 6th Edition 2016.

Study Facilities

Study Intersections

Multi-modal operations were evaluated at the following 24 study intersections:

1. LOVR / Foothill Boulevard*
2. LOVR / Prefumo Canyon Road

3. LOVR / Laguna Lane
4. LOVR / Oceanaire Drive
5. LOVR / Royal Way
6. LOVR / Madonna Road
7. LOVR / Froom Ranch Way
8. LOVR / Auto Park Way (Project Driveway)
9. LOVR / Calle Joaquin
10. LOVR / U.S. 101 SB Ramps**
11. LOVR / U.S. 101 NB**
12. LOVR / South Higuera Street
13. South Higuera Street / Vachell Lane
14. South Higuera Street / Suburban Road
15. South Higuera Street / Tank Farm Road
16. Prado Road / South Higuera Street
17. Prado Road – Elks Lane / U.S. 101 NB Ramps**
18. Madonna Road / Oceanaire Drive
19. Madonna Road / Dalidio Drive
20. Madonna Road / U.S. 101 SB Ramps**
21. Madonna Road / U.S. 101 NB Ramps**
22. Dalidio Drive / Froom Ranch Way (future intersection)
23. Prado Road / U.S. 101 SB Ramps (future intersection)**
24. Collector "A" / Collector "B" (onsite) (future intersection)

**Under County jurisdiction*

***Under Caltrans jurisdiction*

Study Roadway Segments

Multi-modal operations were evaluated on the following 13 study roadway segments:

1. LOVR (Prefumo Canyon Road to Oceanaire Drive)
2. LOVR (Oceanaire Drive to Madonna Road)
3. LOVR (Madonna Road to Froom Ranch Way)
4. LOVR (Froom Ranch Way to Calle Joaquin)
5. LOVR (U.S. 101 SB Ramps to U.S. 101 NB Ramps)
6. LOVR (U.S. 101 NB Ramps to South Higuera Street)
7. South Higuera Street (City Limit south to U.S. 101/Clover Ridge Lane)
8. South Higuera Street (LOVR to Tank Farm Road)

9. South Higuera Street (Tank Farm Road to Prado Road)
10. Tank Farm (South Higuera Street to Broad Street)*
11. Madonna Road (LOVR to Dalidio Drive)
12. Froom Ranch Way (LOVR to Dalidio Drive) [future extension]
13. Commercial Collector "A" (LOVR to Commercial Collector "B") [onsite, future roadway]

**Portion of segment under County jurisdiction*

U.S. 101 Study Segments

Traffic operations were evaluated on the following six Caltrans facilities, consisting of three U.S. 101 mainline roadway segments and three U.S. 101 intersection on-ramps and off-ramps:

1. U.S. 101 Mainline (NB / SB) – from South Higuera Street to LOVR
2. U.S. 101 Mainline (NB / SB) – from LOVR to Dalidio Drive/Prado Road
3. U.S. 101 Mainline (NB / SB) – from Prado Road to Madonna Road
4. U.S. 101 On- / Off-Ramps (NB / SB) at LOVR
5. U.S. 101 On- / Off-Ramps (NB) at Prado Road (SB future)
6. U.S. 101 On- / Off-Ramps (NB / SB) at Madonna Road

Existing Conditions LOS

Automobile Intersection LOS

Provided in Section 3.13.3.1, *Thresholds of Significance,* is a summary of the City's LOS objectives and standards for operation of automobile, bicycle, pedestrian, and transit facilities (see Table 3.13-3). Under existing conditions, three intersections are currently exceeding the applicable City minimum acceptable automobile LOS threshold. The following three unsignalized intersections — all with side-street stop-control — were found to operate at unacceptable LOS (see Appendix J; Table 3.13-7):

- LOVR and Oceanaire Drive, which operates at LOS F (Delay 52.5) during AM and LOS E (Delay 42.2) during PM peak hours
- LOVR and Auto Park Way, which operates at LOS E (Delay 37.1) during PM peak hour
- South Higuera Street and Vachell Lane, which operates at LOS F (Delay 67.8) during AM and LOS E (Delay 43.8) during PM peak hours

Table 3.13-7. Existing Intersection LOS – Automobile

ID	Study Intersections	Control	LOS Target	Peak Hour	Existing Conditions Delay1	LOS2	V/C3
1	LOVR / Foothill Boulevard	Signal	D	AM	23.9	C	
				PM	37.0	D	
2	LOVR / Prefumo Canyon Road	TWSC[4]	D	AM	18.7	C	
				PM	20.9	C	
3	LOVR / Laguna Lane	Signal	D	AM	13.7	B	
				PM	8.2	A	
4	LOVR / Oceanaire Drive	TWSC[4]	D	AM	**52.5**	**F**	**0.57**
				PM	**42.2**	**E**	**0.42**
5	LOVR / Royal Way	Signal	D	AM	34.8	C	
				PM	17.6	B	
6	LOVR / Madonna Road	Signal	D	AM	37.4	D	
				PM	37.7	D	
7	LOVR / Froom Ranch Way	Signal	D	AM	19.5	B	
				PM	35.3	D	
8	LOVR / Auto Park Way	TWSC[4]	D	AM	14.6	B	
				PM	**37.1**	**E**	**0.52**
9	LOVR / Calle Joaquin	Signal	D	AM	5.3	A	
				PM	7.0	A	
10	LOVR /U.S. 101 SB Ramps	Signal	C	AM	12.2	B	
				PM	12.9	B	
11	LOVR /U.S. 101 NB Ramps	Signal	C	AM	23.4	C	
				PM	23.5	C	
12	LOVR / South Higuera Street	Signal	D	AM	13.5	B	
				PM	14.4	B	
13	South Higuera Street / Vachell Lane	TWSC	D	AM	**67.8**	**F**	**0.84**
				PM	**43.8**	**E**	**0.84**
14	South Higuera Street / Suburban Road	Signal	D	AM	5.9	A	
				PM	11.2	B	
15	South Higuera Street / Tank Farm Road	Signal	D	AM	22.2	C	
				PM	27.7	C	
16	South Higuera Street / Prado Road	Signal	D	AM	18.5	B	
				PM	28.9	C	
17	Prado Road/U.S. 101 NB Ramps / Elks Lane	AWSC[5]	C	AM	9.1	A	
				PM	13.5	B	
18	Madonna Road / Oceanaire Drive[6]	Signal	D	AM	39.3	D	
				PM	27.2	C	
19	Madonna Road / Dalidio Drive	Signal	D	AM	19.9	B	
				PM	53.2	D	
20	Madonna Road / U.S. 101 SB Ramps/Madonna Inn	Signal	C	AM	30.7	C	
				PM	31.7	C	
21	Madonna Road / U.S. 101 NB Ramps	Signal	C	AM	14.7	B	
				PM	32.4	C	

[1]Delay – Whole intersection weighted average control delay expressed in seconds per vehicle for signalized and all-way stop controlled intersections. Total control delay for the worst movement is presented for side-street stop-controlled intersections.
[2]LOS – Level of Service
[3] V/C ratio reported for worst movement, for locations with unacceptable LOS only.
[4]TWSC – Two-way-stop controlled intersection.
[5]AWSC – All-way stop controlled intersection.
[6]HCM 6th Methodology does not support intersections with more than four approaches. Hence HCM 2000 methodology used for Intersection 18.

Table 3.13-7. Existing Intersection LOS – Automobile (Continued)

Bold indicates unacceptable operations.
Delay and LOS results for Intersections 22, 23 and 24 are excluded from existing conditions analysis as these intersections are evaluated in Near-Term and Cumulative Scenarios.
Source: TIS; see Appendix J.

Pedestrian Intersection LOS

Under existing conditions, the following intersections are currently exceeding the City's minimum pedestrian LOS threshold, all of which represent locations with uncontrolled crossings of multi-lane arterial streets (see Section 3.13.3.1 below and Appendix J; refer to Table 3.13-8):

- LOVR and Prefumo Canyon Road NB and SB directions, which operate at LOS F during AM and PM peak hours
- LOVR and Oceanaire Drive NB direction, which operates at LOS F during AM and during PM peak hours
- LOVR and Auto Park Way NB and SB directions, which operate at LOS F during AM and PM peak hours
- South Higuera Street and Vachell Lane NB and SB directions, which operate at LOS F during AM and PM peak hours

Table 3.13-8. Existing Intersection LOS – Pedestrian

ID	Study Intersections	Approach	Target LOS	AM Peak Hour Ped. Crosswalk Score	AM Peak Hour LOS	PM Peak Hour Ped. Crosswalk Score	PM Peak Hour LOS
1	LOVR / Foothill Boulevard	EB	C	1.75	B	1.75	B
		WB	C	2.45	B	2.39	B
		NB	C	2.70	C	2.75	C
		SB	C	2.74	C	2.87	C
2	LOVR / Prefumo Canyon Road[1]	EB	C	N/A			
		WB	C				
		NB	C	**>5**	**F**	**>5**	**F**
		SB	C	**>5**	**F**	**>5**	**F**
3	LOVR / Laguna Lane	EB	C	n/a			
		WB	C	2.39	B	2.22	B
		NB	C	2.82	C	2.79	C
		SB	C	2.87	C	2.98	C
4	LOVR / Oceanaire Drive[1]	EB	C	N/A			
		WB	C				
		NB	C	**>5**	**F**	**>5**	**F**
		SB	C	N/A			
5	LOVR / Royal Way	EB	C	2.01	B	2.01	B
		WB	C	2.00	B	1.98	B
		NB	C	3.09	C	3.11	C
		SB	C	3.09	C	3.11	C

Table 3.13-8. Existing Intersection LOS – Pedestrian (Continued)

ID	Study Intersections	Approach	Target LOS	AM Peak Hour Ped. Crosswalk Score	AM Peak Hour LOS	PM Peak Hour Ped. Crosswalk Score	PM Peak Hour LOS
6	LOVR / Madonna Road	EB	C	2.13	B	2.13	B
		WB	C	2.97	C	3.05	C
		NB	C	2.98	C	3.16	C
		SB	C	3.36	C	3.40	C
7	LOVR / Froom Ranch Way	EB	C	2.50	C	2.64	C
		WB	C	2.39	B	2.44	B
		NB	C	3.08	C	3.22	C
		SB	C	3.07	C	3.21	C
8	LOVR / Auto Park Way[1]	EB	C	N/A			
		WB	C				
		NB	C	**>5**	**F**	**>5**	**F**
		SB	C	**>5**	**F**	**>5**	**F**
9	LOVR / Calle Joaquin	EB	C	2.48	B	2.48	B
		WB	C	2.09	B	2.09	B
		NB	C	3.09	C	3.34	C
		SB	C	2.96	C	3.21	C
10	LOVR / U.S. 101 SB Ramps	EB	C	1.90	B	2.21	B
		WB	C	2.25	B	2.21	B
		NB	C	2.89	C	3.02	C
		SB	C	2.94	C	3.26	C
11	LOVR / U.S. 101 NB Ramps	EB	C	2.45	B	2.54	C
		WB	C	1.43	A	1.43	A
		NB	C	2.78	C	2.80	C
		SB	C	2.89	C	3.00	C
12	LOVR / South Higuera Street	EB	C	2.70	C	2.73	C
		WB	C	n/a			
		NB	C	2.30	B	2.36	B
		SB	C	2.76	C	2.82	C
13	South Higuera Street / Vachell Lane[1]	EB	C	N/A			
		WB	C				
		NB	C	**>5**	**F**	**>5**	**F**
		SB	C	**>5**	**F**	**>5**	**F**
14	South Higuera Street / Suburban Road	EB	C	N/A			
		WB	C	2.18	B	2.25	B
		NB	C	2.92	C	3.05	C
		SB	C	2.71	C	2.83	C
15	South Higuera Street / Tank Farm Road	EB	C	2.03	B	2.04	B
		WB	C	2.94	C	3.03	C
		NB	C	3.29	C	3.47	C
		SB	C	2.67	C	2.96	C
16	South Higuera Street / Prado Road	EB	C	2.46	B	2.58	C
		WB	C	2.38	B	2.45	B
		NB	C	2.71	C	2.96	C
		SB	C	2.75	C	2.89	C
17	Prado Road/U.S. 101 NB Ramps / Elks Lane	EB	C	N/A			
		WB	C				
		NB	C				

Table 3.13-8. Existing Intersection LOS – Pedestrian (Continued)

ID	Study Intersections	Approach	Target LOS	AM Peak Hour Ped. Crosswalk Score	LOS	PM Peak Hour Ped. Crosswalk Score	LOS
		SB	C				
18	Madonna Road / Oceanaire Drive	EB	C	2.75	C	2.90	C
		WB	C	3.21	C	3.30	C
		NB	C	2.01	B	2.02	B
		SB	C	2.04	B	1.97	B
		SE	C	1.75	B	1.75	B
		NE	C	1.77	B	1.75	B
19	Madonna Road / Dalidio Drive	EB	C	2.99	C	3.13	C
		WB	C	3.02	C	3.11	C
		NB	C	2.07	B	2.13	B
		SB	C	1.99	B	2.00	B
20	Madonna Road / U.S. 101 SB Ramps/Madonna Inn	EB	C	2.96	C	3.11	C
		WB	C	3.00	C	3.03	C
		NB	C	2.81	C	2.84	C
		SB	C	2.17	B	2.19	B
21	Madonna Road / U.S. 101 NB Ramps	EB	C	2.96	C	2.98	C
		WB	C	2.79	C	2.79	C
		NB	C	2.00	B	2.02	B
		SB	C	2.09	B	2.13	B

Notes: N/A - Pedestrian intersection LOS methodology excludes crossings of stop-sign controlled approaches.
[1]For unsignalized AWSC intersections, pedestrian delay is reported as pedestrian LOS and methodology is not supported for crosswalks that intersect stop-sign controlled approaches. For unsignalized TWSC intersections, pedestrian LOS methodology is limited to the uncontrolled crossings.
NB – northbound
SB – southbound
WB – westbound
EB - eastbound
Source: TIS; see Appendix J.

Bicycle Intersection LOS

Under existing conditions, the following intersection is currently exceeding the City's minimum bicycle LOS threshold (see Section 3.13.3.1 below and Appendix J; refer to Table 3.13-9):

- South Higuera Street and Tank Farm Road, which operates at LOS E (Bicycle LOS Score 4.56) in the WB direction during PM peak hour, reflecting the lack of a WB bicycle lane at the intersection approach. An existing WB bicycle lane on Tank Farm Road terminates east of the intersection.

Table 3.13-9. Existing Intersection LOS – Bicycle

ID	Study Intersections	Approach	Target LOS	AM Peak Hour Bicycle LOS Score	AM Peak Hour Bicycle LOS	PM Peak Hour Bicycle LOS Score	PM Peak Hour Bicycle LOS
1	LOVR / Foothill Boulevard	EB	D	2.71	C	2.71	C
		WB	D	3.27	C	3.92	D
		NB	D	2.77	C	3.03	C
		SB	D	2.56	C	1.89	B
3	LOVR / Laguna Lane	EB	D	N/A			
		WB	D	3.26	C	2.80	C
		NB	D	1.90	B	2.22	B
		SB	D	1.44	A	1.28	A
5	LOVR / Royal Way	EB	D	3.13	C	2.96	C
		WB	D	3.30	C	2.94	C
		NB	D	2.67	C	3.01	C
		SB	D	2.20	B	1.87	B
6	LOVR / Madonna Road	EB	D	3.38	C	3.21	C
		WB	D	3.62	D	4.28	D
		NB	D	1.66	B	2.08	B
		SB	D	2.79	C	2.47	B
7	LOVR / Froom Ranch Way	EB	D	3.43	C	4.28	D
		WB	D	2.04	B	2.34	B
		NB	D	1.77	B	2.09	B
		SB	D	1.72	B	1.76	B
8	LOVR / Auto Park Way	EB	D	N/A			
		WB	D				
		NB	D				
		SB	D				
9	LOVR / Calle Joaquin	EB	D	3.07	C	3.01	C
		WB	D	3.13	C	3.21	C
		NB	D	1.57	B	1.96	B
		SB	D	1.77	B	0.71	A
10	LOVR /U.S. 101 SB Ramps	EB	D	N/A			
		WB	D	2.72	C	2.57	C
		NB	D	1.66	B	2.12	B
		SB	D	1.52	B	1.86	B
11	LOVR /U.S. 101 NB Ramps	EB	D	3.74	D	3.77	D
		WB	D	1.39	A	1.39	A
		NB	D	1.73	B	2.05	B
		SB	D	2.22	B	2.18	B
12	LOVR / South Higuera Street	EB	D	1.86	B	1.62	B
		WB	D	N/A			
		NB	D	1.97	B	1.75	B
		SB	D	2.21	B	3.22	C
14	South Higuera Street / Suburban Road	EB	D	N/A			
		WB	D	1.21	A	1.93	B
		NB	D	2.20	B	1.91	B
		SB	D	1.95	B	2.35	B

Table 3.13-9. Existing Intersection LOS – Bicycle (Continued)

ID	Study Intersections	Approach	Target LOS	AM Peak Hour Bicycle LOS Score	AM Peak Hour Bicycle LOS	PM Peak Hour Bicycle LOS Score	PM Peak Hour Bicycle LOS
15	South Higuera Street / Tank Farm Road	EB	D	2.71	C	2.71	C
		WB	D	3.64	D	**4.56**	**E**
		NB	D	2.00	B	2.12	B
		SB	D	1.76	B	2.17	B
16	South Higuera Street / Prado Road	EB	D	2.48	B	2.34	B
		WB	D	2.84	C	3.50	D
		NB	D	1.65	B	2.32	B
		SB	D	1.94	B	1.89	B
18	Madonna Road / Oceanaire Drive	EB	D	2.77	C	2.82	C
		WB	D	1.26	A	1.76	B
		NB	D	2.82	C	2.79	C
		SB	D	2.70	C	2.22	B
		SE	D	2.62	C	2.62	C
		NE	D	2.20	B	2.20	B
19	Madonna Road / Dalidio Drive	EB	D	2.15	B	2.04	B
		WB	D	1.58	B	1.94	B
		NB	D	3.05	C	3.28	C
		SB	D	2.87	C	2.95	C
20	Madonna Road / U.S. 101 SB Ramps/Madonna Inn	EB	D	1.94	B	2.00	B
		WB	D	1.62	B	1.91	B
		NB	D	3.70	D	3.66	D
		SB	D	2.94	C	2.99	C
21	Madonna Road / U.S. 101 NB Ramps	EB	D	2.71	C	2.30	B
		WB	D	1.58	B	2.05	B
		NB	D	2.25	B	2.33	B
		SB	D	N/A			

Notes: Bicycle LOS summary excludes unsignalized intersections and locations where no bicycle facilities are provided as HCM 6th Bike LOS Methodology do not model segments bounded by unsignalized intersections.
Source: TIS; see Appendix J.

Vehicle Queuing Analysis

Intersection LOS alone may not fully represent traffic operations at congested intersections, which can be affected by queuing vehicles backing up and blocking access to the intersection, increasing vehicular delay. For analysis of turn pocket operations, vehicle queues are typically evaluated based on the calculated 95th-percentile queue, which is defined as the queue length that has only a 5 percent probability of being exceeded during the analysis time period. Several intersections in the Project vicinity experience 95th-percentile queues that are estimated to exceed the available turn pocket storage. Under existing conditions, the following seven intersections have vehicle queues that exceed turn pocket capacity during AM or PM peak hours (see Appendix J; refer to Table 3.13-10):

Table 3.13-10. Existing Conditions – 95th-Percentile Queuing

ID	Study Intersections	Lane Group	Storage Length Per Lane (ft)	Peak Hour	Existing Conditions
1	LOVR/Foothill Boulevard	WBR	180	AM	0
				PM	0
		NBL	120	AM	0
				PM	5
		NBR	370	AM	35
				PM	120
		SBL	490	AM	#485
				PM	#248
3	LOVR/Laguna Lane	WBL	Trap Lane	AM	90
				PM	40
		WBR	Trap Lane	AM	0
				PM	0
		NBR	80	AM	10
				PM	35
		SBL	120	AM	45
				PM	25
5	LOVR/Royal Way	EBR	70	AM	10
				PM	0
		WBR	70	AM	0
				PM	0
		NBL	110	AM	25
				PM	60
		SBL	160	AM	15
				PM	15
		SBR	50	AM	0
				PM	0
6	LOVR/Madonna Road	EBL	230	AM	**#255**
				PM	#145
		WBL	Trap Lane	AM	70
				PM	190
		WBR	170	AM	45
				PM	75
		NBL	200	AM	70
				PM	140
		NBR	175	AM	35
				PM	50
		SBL	350	AM	#330
				PM	185
7	LOVR/Froom Ranch Way	EBL	250	AM	60
				PM	#240
		WBL	295	AM	75
				PM	195
		WBR	50	AM	0
				PM	45
		NBL	300	AM	110
				PM	255
		SBL	160	AM	30
				PM	100

Table 3.13-10. Existing Conditions – 95th-Percentile Queuing (Continued)

ID	Study Intersections	Lane Group	Storage Length Per Lane (ft)	Peak Hour	Existing Conditions
8	LOVR/Auto Park Way (Project Driveway)	EBL	100	AM	-
				PM	-
		EBR	100	AM	-
				PM	-
		WBL	Trap Lane	AM	-
				PM	-
		WBR	175	AM	-
				PM	-
		NBL	200	AM	-
				PM	-
		SBL	100	AM	-
				PM	-
		SBR	100	AM	-
				PM	-
9	LOVR/Calle Joaquin	EBL	260	AM	25
				PM	35
		EBR	260	AM	10
				PM	10
		WBL	100	AM	50
				PM	**105**
		NBL	130	AM	10
				PM	m5
		NBR	130	AM	20
				PM	m5
		SBL	120	AM	20
				PM	10
		SBR	120	AM	0
				PM	5
10	LOVR/U.S. 101 SB Ramps	WBR	190	AM	110
				PM	**245**
		NBL	220	AM	m25
				PM	m60
		SBR	120	AM	50
				PM	**#220**
11	LOVR/U.S. 101 NB Ramps	EBL	610	AM	290
				PM	#330
		NBL	400	AM	75
				PM	120
		SBR	133	AM	m0
				PM	0
12	LOVR/South Higuera Street	EBL	Trap Lane	AM	#315
				PM	215
		EBR	100	AM	40
				PM	40
		NBL	200	AM	15
				PM	20
		SBR	Trap Lane	AM	65
				PM	200

Table 3.13-10. Existing Conditions – 95th-Percentile Queuing (Continued)

ID	Study Intersections	Lane Group	Storage Length Per Lane (ft)	Peak Hour	Existing Conditions
14	South Higuera Street/Suburban Road	WBL	170	AM	80
				PM	**270**
		WBR	Trap Lane	AM	30
				PM	70
		SBL	170	AM	25
				PM	25
15	South Higuera Street/Tank Farm Road	EBR	Trap Lane	AM	0
				PM	0
		WBL	Trap Lane	AM	165
				PM	340
		WBR	250	AM	55
				PM	180
		NBL	140	AM	40
				PM	55
		NBR	100	AM	85
				PM	30
		SBL	165	AM	**#410**
				PM	**#760**
16	South Higuera Street/ Prado Road	EBL	Trap Lane	AM	60
				PM	75
		EBR	100	AM	15
				PM	20
		WBL	105	AM	70
				PM	120
		WBR	200	AM	0
				PM	15
		NBL	100	AM	**195**
				PM	**#525**
		SBL	200	AM	**#210**
				PM	110
18	Madonna Road/Oceanaire Drive	EBL	115	AM	40
				PM	40
		WBL	115	AM	#55
				PM	**#155**
		WBR	100	AM	0
				PM	0
		NBR	50	AM	0
				PM	0
19	Madonna Road/Dalidio Drive	EBL	120	AM	40
				PM	55
		WBL	280	AM	70
				PM	150
		NBR	150	AM	10
				PM	45
		SBR	50	AM	0
				PM	0
20	Madonna Road / U.S. 101 SB Ramps/Madonna Inn	EBL	100	AM	50
				PM	55

Table 3.13-10. Existing Conditions – 95th-Percentile Queuing (Continued)

ID	Study Intersections	Lane Group	Storage Length Per Lane (ft)	Peak Hour	Existing Conditions
		WBL	260	AM	145
				PM	m#215
		NBL	Trap Lane	AM	185
				PM	#425
		NBR	275	AM	125
				PM	25
		SBL	Trap Lane	AM	20
				PM	30
		SBR	100	AM	0
				PM	0
21	Madonna Road/U.S. 101 NB Ramps	EBL	435	AM	125
				PM	#295
		NBL	185	AM	90
				PM	180

Notes: Queue length rounded to nearest 5 feet. Queuing analysis is reported for signalized intersections only.
Bold: 95th-percentile volume exceeds capacity.
m queue is metered by upstream intersection.
95th-percentile queue exceeds capacity.
Trap - denotes design where the thru-lane terminates in a turn lane.
ft – feet
- = no data available
Westbound thru-lane (WBL); westbound right-turn lane (WBR); eastbound thru-lane (EBL); northbound thru-lane (NBL); northbound right-turn lane (NBR); northbound trap (NBT); southbound thru-lane (SBL); southbound trap (SBT); southbound right-turn lane (SBR); eastbound right-turn lane (EBR).
Source: TIS; see Appendix J.

- LOVR and Madonna Road (eastbound thru-lane [EBL] during AM peak hour)
- LOVR and Calle Joaquin (westbound thru-lane [WBL] during PM peak hour)
- LOVR and U.S. 101 SB Ramps (southbound right-turn lane [SBR] and westbound right-turn lane [WBR] during PM peak hour)
- South Higuera Street and Suburban Road (WBL during PM peak hours)
- South Higuera Street and Tank Farm Road (southbound thru-lane [SBL] during both the AM and PM peak hour)
- South Higuera Street and Prado Road (northbound thru-lane [NBL] during both the AM and PM peak hour and SBL during AM peak hour)
- Madonna Road and Oceanaire Drive (WBL during PM peak hour)

Automobile Roadway Segment LOS

Under existing conditions, the following roadway segments currently exceed the applicable minimum automobile LOS threshold (see Section 3.13.3.1 below and Appendix J; refer to Table 3.13-11):

- LOVR from Oceanaire Drive to Madonna Road operates at LOS F during AM and PM peak hour in the SB direction
- LOVR from U.S. 101 SB Ramps to U.S. 101 NB Ramps operates at LOS E during PM peak hour in the SB direction
- South Higuera Street from LOVR to Tank Farm Road operates at LOS E during PM peak hour in the NB direction

Pedestrian Roadway Segments LOS

Under existing conditions, the following roadway segments exceed the City's minimum pedestrian LOS threshold, largely due to sidewalk gaps or minimal buffer between pedestrians and heavy vehicular traffic lanes (see Section 3.13.3.1 below and Appendix J; refer to Table 3.13-12):

- LOVR from Prefumo Canyon Road to Oceanaire Drive operates at LOS D during AM peak hour in the SB direction and LOS D during PM peak hour in the NB direction.
- LOVR from Oceanaire Drive to Madonna Road operates at LOS D during AM peak hour in the SB direction.
- LOVR from Madonna Road to Froom Ranch Way operates at LOS F during AM peak hour and at LOS D during PM peak hour in the NB direction.
- LOVR from Froom Ranch Way to Calle Joaquin operates at LOS D during AM and PM peak hours in the SB direction.
- LOVR from U.S. 101 SB Ramps to U.S. 101 NB Ramps operates at LOS D during AM peak hour in the SB direction and operates at LOS D during PM peak hour in the NB direction.
- LOVR from U.S. 101 NB Ramps to South Higuera Street operates at LOS D during AM and PM peak hours in the SB direction and operates at LOS D during AM peak hour in the NB direction.
- South Higuera Street from LOVR to Tank Farm Road operates at LOS D during PM peak hour in the SB direction.
- South Higuera Street from Tank Farm Road to Prado Road operates at LOS F during AM and PM peak hours in the SB direction.
- Madonna Road from LOVR to Dalidio Drive operates at LOS F during AM peak hour in the eastbound (EB) direction and operates at LOS F during AM peak hour in the WB direction and at LOS D during PM peak hour in the WB direction.

Bicycle Roadway Segment LOS

Under existing conditions, none of the studied roadway segments exceed the City's minimum bicycle LOS thresholds (see Section 3.13.3.1 below and Appendix J; refer to Table 3.13-13).

Transit Roadway Segment LOS

Transit service headways or frequency of service to the Project vicinity is approximately 60 minutes. Under existing conditions, none of the studied roadway segments exceed the City's minimum transit LOS thresholds (see Section 3.13.3.1 below and Appendix J; refer to Table 3.13-14).

U.S. 101 Roadway Segments and On-/Off-Ramp Intersections

Under existing conditions, the following freeway segments currently exceed Caltrans minimum LOS thresholds (see Section 3.13.3.1 below and Appendix J; refer to Table 3.13-15):

- U.S. 101 SB, north of South Higuera Street operates at LOS D during PM peak hour
- U.S. 101 NB, south of Madonna Road operates at LOS D during PM peak hour
- U.S. 101 NB, Madonna Road Off-amp operates at LOS D during AM and PM peak hour
- U.S. 101 SB Madonna Road On-Ramp operates at LOS D during PM peak hour

Table 3.13-11. Existing Segment LOS – Automobile

ID	Roadway Segment	Direction	LOS Threshold	AM Peak				PM Peak			
				Travel Speed (mph)	BFFS (mph)	Travel Speed/ BFFS (%)	LOS	Travel Speed (mph)	BFFS (mph)	Travel Speed/BFFS (%)	LOS
1	LOVR from Prefumo Canyon Road to Oceanaire Drive	SB	D	31.91	45.67	69.87	B	23.56	45.73	51.5	C
		NB	D	34.47	45.97	74.98	B	30.82	45.77	67.3	B
2	LOVR from Oceanaire Drive to Madonna Road	SB	D	**11.22**	**42.64**	26.31	**F**	**11.61**	**42.64**	27.2	**F**
		NB	D	23.25	45.68	50.90	C	23.03	45.68	50.4	C
3	LOVR from Madonna Road to Froom Ranch Way	SB	D	27.17	44.82	60.62	C	19.51	44.83	43.5	D
		NB	D	20.84	44.82	46.50	D	20.85	44.82	46.5	D
4	LOVR from Froom Ranch Way to Calle Joaquin	SB	D	39.24	44.80	87.59	A	35.99	44.80	80.3	A
		NB	D	33.43	45.22	73.93	B	28.47	45.22	63.0	C
5	LOVR from U.S. 101 SB Ramps toU.S. 101 NB Ramps	SB	D	22.43	46.41	48.33	D	**17.79**	**45.33**	39.2	**E**
		NB	D	21.41	46.42	46.12	D	23.07	45.36	50.9	C
6	LOVR from U.S. 101 NB Ramps to South Higuera Street	SB	D	22.51	40.64	55.39	C	24.06	40.78	59.0	C
		NB	D	27.58	41.19	66.96	C	32.02	45.77	70.0	B
7	South Higuera Street from City Limit south to U.S. 101/Clover Ridge Lane	SB	D	44.67	45.72	97.70	A	44.02	45.72	96.3	A
		NB	D	40.60	45.73	88.78	A	42.49	45.73	92.9	A
8	South Higuera Street from LOVR to Tank Farm Road	SB	D	24.76	45.33	54.62	C	23.36	45.34	51.5	C
		NB	D	20.23	45.68	44.29	D	**15.04**	**45.69**	**32.9**	**E**
9	South Higuera Street from Tank Farm Road to Prado Road	SB	D	32.70	45.21	72.33	B	25.66	45.23	56.7	C
		NB	D	29.99	45.21	66.33	C	28.19	45.24	62.3	C
10	Tank Farm Road from South Higuera Street to Broad Street	EB	D	34.11	43.15	79.05	B	34.37	43.15	79.7	B
		WB	D	33.95	42.40	80.07	A	34.66	42.38	81.8	A
11	Madonna Road from LOVR to Dalidio Drive	EB	D	25.85	38.92	66.42	C	26.36	39.14	67.3	B
		WB	D	21.51	38.84	55.38	C	21.21	39.15	54.2	C

Bold indicates unacceptable operations
mph – miles per hour
BFFS – base free-flow speed
Source: TIS; see Appendix J.

Table 3.13-12. Existing Segment LOS – Pedestrian

ID	Roadway Segment	Direction	LOS Threshold	AM Peak		PM Peak	
				Segment Score	LOS	Segment Score	LOS
1	LOVR from Prefumo Canyon Road to Oceanaire Drive	SB	C	**3.54**	**D**	3.13	C
		NB	C	3.22	C	**4.05**	**D**
2	LOVR from Oceanaire Drive to Madonna Road	SB	C	**3.65**	**D**	3.13	C
		NB	C	2.74	B	3.32	B
3	LOVR from Madonna Road to Froom Ranch Way	SB	C	3.29	C	3.34	C
		NB	C	**3.12**	**F**	**3.51**	**D**
4	LOVR from Froom Ranch Way to Calle Joaquin	SB	C	**4.03**	**D**	**4.17**	**D**
		NB	C	3.30	C	3.36	C
5	LOVR from U.S. 101 SB Ramps to U.S. 101 NB Ramps	SB	C	**3.61**	**D**	3.43	C
		NB	C	3.45	C	**3.65**	**D**
6	LOVR from U.S. 101 NB Ramps to South Higuera Street	SB	C	**4.18**	**D**	**3.62**	**D**
		NB	C	**3.51**	**D**	3.17	C
7	South Higuera Street from City Limit south to U.S. 101/Clover Ridge Lane	SB	C	-	-	-	-
		NB	C	-	-	-	-
8	South Higuera Street from LOVR to Tank Farm Road	SB	C	3.10	C	**3.66**	**D**
		NB	C	2.71	C	2.81	C
9	South Higuera Street from Tank Farm Road to Prado Road	SB	C	**3.32**	**F**	**4.41**	**F**
		NB	C	2.45	C	3.19	C
10	Tank Farm Road from South Higuera Street to Broad Street	EB	C	-	-	-	-
		WB	C	-	-	-	-
11	Madonna Road from LOVR to Dalidio Drive	EB	C	**4.17**	**F**	3.05	C
		WB	C	**3.58**	**F**	**3.93**	**D**

Bold indicates unacceptable operations.
Source: TIS; see Appendix J.

Table 3.13-13. Existing Segment LOS – Bicycle

ID	Roadway Segment	Direction	LOS Threshold	AM Peak		PM Peak	
				Segment Score	LOS	Segment Score	LOS
1	LOVR from Prefumo Canyon Road to Oceanaire Drive	SB	D	2.10	B	2.13	B
		NB	D	1.72	A	2.23	B
2	LOVR from Oceanaire Drive to Madonna Road	SB	D	2.37	C	2.20	B
		NB	D	1.57	A	1.76	A
3	LOVR from Madonna Road to Froom Ranch Way	SB	D	2.60	C	2.61	C
		NB	D	1.41	A	1.77	A
4	LOVR from Froom Ranch Way to Calle Joaquin	SB	D	2.39	C	3.34	C
		NB	D	1.84	A	1.55	A
5	LOVR from U.S. 101 SB Ramps to U.S. 101 NB Ramps	SB	D	2.80	C	2.69	C
		NB	D	2.58	C	2.87	C
6	LOVR from U.S. 101 NB Ramps to South Higuera Street	SB	D	2.36	C	2.29	C
		NB	D	1.80	A	1.84	A
7	South Higuera Street from City Limit south to U.S. 101/Clover Ridge Lane	SB	D	1.49	A	1.72	A
		NB	D	1.60	A	1.48	A
8	South Higuera Street from LOVR to Tank Farm Road	SB	D	2.49	C	2.85	C
		NB	D	2.82	C	2.84	C
9	South Higuera Street from Tank Farm Road to Prado Road	SB	D	2.38	C	2.65	C
		NB	D	1.98	A	2.36	C
10	Tank Farm Road from South Higuera Street to Broad Street	EB	D	2.67	C	2.64	C
		WB	D	2.90	C	2.94	C
11	Madonna Road from LOVR to Dalidio Drive	EB	D	3.04	C	2.97	C
		WB	D	2.16	B	2.45	C

Bold indicates unacceptable operations.
Source: TIS; see Appendix J.

Table 3.13-14. Existing Segment LOS – Transit

ID	Roadway Segment	Direction	LOS Threshold	AM Peak		PM Peak	
				Segment Score	LOS	Segment Score	LOS
1	LOVR from Prefumo Canyon Road to Oceanaire Drive	SB	D	4.12	D	3.06	C
		NB	D	3.07	C	3.09	C
2	LOVR from Oceanaire Drive to Madonna Road	SB	D	3.76	D	2.43	C
		NB	D	2.43	B	2.86	C
3	LOVR from Madonna Road to Froom Ranch Way	SB	D	3.53	D	3.74	C
		NB	D	2.34	B	2.12	B
4	LOVR from Froom Ranch Way to Calle Joaquin	SB	D	2.95	C	3.05	C
		NB	D	3.21	C	3.37	C
6	LOVR from U.S. 101 NB Ramps to South Higuera Street	SB	D	3.86	D	3.34	C
		NB	D	3.59	D	3.29	C
8	South Higuera Street from LOVR to Tank Farm Road	SB	D	3.13	C	3.96	D
		NB	D	4.06	D	4.14	D
9	South Higuera Street from Tank Farm Road to Prado Road	SB	D	3.51	D	3.96	D
		NB	D	3.21	C	4.14	D
11	Madonna Road from LOVR to Dalidio Drive	EB	D	3.21	C	3.13	C
		WB	D	3.29	C	3.35	C

Segments with no transit stops are excluded from the analysis.
Source: TIS; see Appendix J.

Table 3.13-15. Existing Segment LOS – Freeway Mainline, Ramps and Weaving Sections

Interchange Location	Target LOS	Segment Type	Lanes	AM Peak Hour			PM Peak Hour		
				Volume	Density (pc/mi/h)	LOS	Volume	Density (pc/mi/h)	LOS
U.S. 101 NB									
U.S. 101 NB, south of South Higuera Street	C	Freeway	2	2,336	19.8	C	2,374	20.2	C
U.S. 101 NB, south of LOVR	C	Freeway	2	2,601	22.1	C	1,991	16.9	B
U.S. 101 NB LOVR Off-Ramp	C	Diverge	1	546	26.8	C	634	20.6	C
U.S. 101 NB LOVR On-Ramp	C	Merge	1	215	26.9	C	392	22.5	C
U.S. 101 NB, north of Prado Road	C	Freeway	2	2,311	19.6	C	2,224	18.9	C
U.S. 101 NB Prado Road Off-Ramp	C	Diverge	1	225	23.5	C	145	22.5	B
U.S. 101 NB Prado Road On-Ramp	C	Merge	1	250	24.4	C	495	26.1	C
U.S. 101 NB, south of Madonna Road	C	Freeway	2	2,843	24.3	C	3,097	**26.9**	**D**
U.S. 101 NB, Madonna Road Off-Ramp	C	Diverge	1	279	**28.9**	**D**	349	**31.6**	**D**
U.S. 101 SB									
U.S. 101 SB, north of Madonna Road	C	Freeway	2	1,968	20.4	C	2,926	25.1	C
U.S. 101 SB Madonna Road On-Ramp	C	Merge	1	179	22.0	C	348	**32.4**	**D**
U.S. 101 SB, north of Prado Road	C	Freeway	2	1,828	15.5	B	2,976	25.6	C
U.S. 101 SB, south of LOVR	C	Freeway	2	1,213	14.8	B	2,211	18.8	C
U.S. 101 SB LOVR Off-Ramp	C	Diverge	1	587	12.5	B	557	22.7	C
U.S. 101 SB LOVR On-Ramp	C	Merge	1	359	17.4	B	667	27.0	C
U.S. 101 SB, north of South Higuera Street	C	Freeway	2	2,177	18.5	C	3,519	**31.9**	**D**

Bold indicates unacceptable operations.
pc/mi/h - passenger cars per mile per hour
Source: TIS; see Appendix J.

Near-Term (2025) Conditions LOS

Near-Term conditions represent conditions with approved and pending developments and roadway improvement projects in place. For the purposes of the TIS, this is estimated at roughly Year 2025, the year when the Project would be fully operational. This includes approved/pending land development projects, such as buildout of the San Luis Ranch and Avila Ranch Specific Plan, transportation infrastructure, improvement projects, as well as pro-rated regional growth increments consistent with the City's model forecasts. Based on the list of approved, pending, and reasonably foreseeable projects, future transportation demands were estimated (see Table 3.0-1 and Appendix J). It should be noted that for the purposes of providing a comprehensive analysis, two potential scenarios are considered in the TIS for Near-Term Conditions: one with completion of the U.S. 101/Prado Interchange Project (Scenario 1), and one without (Scenario 2). For the purposes of evaluating potential project impacts, results from Scenario 2 are presented below to provide a conservative analysis of conditions in the case that the Prado Interchange project is not yet completed within the Near-Term planning horizon. Table 3.13-16 provides a summary of those Near-Term transportation projects assumed in the analysis.

Table 3.13-16. Near-Term Transportation Project List

#	Project	Description
1	Prado Road Bridge Replacement	Replace existing bridge over San Luis Obispo Creek; widen to four thru-lanes plus center turn lane. Includes width for bike lanes and sidewalk-level Class I Path on both sides of Prado Road.
2	Prado Road/South Higuera Street Improvements	Install second NB left-turn lane.
		EB approach to remain as exists now (one left, one through, one right).
		Extend WB right-turn storage.
		Additional bicycle/pedestrian safety improvements include protected intersection at northwest and southwest corners, bike box at WB approach and two-stage left-turn box for NB to WB movement.
3	Prado Road Interchange and Dalidio Drive/Prado Road Widening	Two Near-Term Scenarios considered for FRSP analysis: • Scenario 1: New interchange with overcrossing at U.S. 101/Prado Road with NB Ramps • Scenario 2: No overcrossing or modifications to Prado Road/U.S. 101 NB Ramps
		Interchange Improvements include: • Widen Dalidio Drive/Prado Road to four lanes with center turn lane/median from Madonna Road to South Higuera Street, including bike lanes and Class I Paths on both sides of Prado Road.
		For Near-Term, assume Class II bike lanes only between U.S. 101/NB Ramps and San Luis Obispo Creek Bridge.
		Elks Lane to be realigned approximately 700 feet to the southeast.
4	Froom Ranch Way Extension	Extend Froom Ranch Way from LOVR to Dalidio Drive as two-lane collector with bike lanes and Class I Bike Path from Perfumo Creek to Dalidio Drive.

Table 3.13-16. Near-Term Transportation Project List (Continued)

#	Project	Description
5	LOVR/Froom Ranch Way Improvements	Install dedicated EBR.
		Extend storage of WBR.
		Install second WB left-turn lane.
		Construct protected intersection for bicycle/pedestrian safety.
6	Froom Ranch Way/Dalidio Drive Roundabout	Construct two-lane roundabout at Froom Ranch Way/Dalidio Drive.
7	Madonna Road/Dalidio Drive Improvements	Extend WB left-turn storage
		Install second WB left-turn lane.
		Install EBR.
		Install split phasing for NB/SB and optimize timing.
		Install second NB left-turn lane.
8	LOVR/South Higuera Street	Extend EB right-turn storage.
9	South Higuera Street/Vachell Lane	Restrict Vachell Lane access to right-in/right-out only.
10	South Higuera Street/ Suburban Road	Restripe WB approach to provide left-turn lane and shared left/right-turn lane.
11	Buckley Road Extension	Extend Buckley Road west to new signalized intersection with South Higuera Street.

EBR – eastbound right-turn lane
WBR – westbound right-turn lane
Source: TIS; see Appendix J.

Automobile Intersection LOS

Under Near-Term conditions, 18 intersections meet the adopted intersection LOS threshold for automobiles (vehicle queuing or backup is discussed below), the following three intersections are projected to exceed the adopted minimum automobile LOS threshold (see Section 3.13.3.1 below and Appendix J; Table 3.13-17):

- LOVR and Oceanaire Drive, which is projected to operate at LOS F (Delay 129.6) during AM and LOS F (Delay 104.0) during PM peak hours
- Madonna Road and U.S. 101 SB Ramps, which is projected to operate at LOS D (Delay 43.6) during PM peak hour
- Madonna Road and U.S. 101 NB Ramps, which is projected to operate at LOS D (Delay 54.4) during PM peak hour

Table 3.13-17. Near-Term Scenario 2 Intersection LOS – Automobile

ID	Study Intersections	Control	LOS Target	Peak Hour	Delay[1]	LOS[2]	V/C[3]
1	LOVR / Foothill Boulevard	Signal	D	AM	32.7	C	
				PM	55.0	D	
2	LOVR / Prefumo Canyon Road	TWSC	D	AM	21.9	C	
				PM	29.6	D	

Table 3.13-17. Near-Term Scenario 2 Intersection LOS – Automobile (Continued)

ID	Study Intersections	Control	LOS Target	Peak Hour	Delay[1]	LOS[2]	V/C[3]
3	LOVR / Laguna Lane	Signal	D	AM	14.1	B	
				PM	8.9	A	
4	LOVR / Oceanaire Drive	TWSC	D	AM	**129.6**	**F**	**1.08**
				PM	**104.0**	**F**	**0.94**
5	LOVR / Royal Way	Signal	D	AM	41.6	D	
				PM	19.3	B	
6	LOVR / Madonna Road	Signal	D	AM	34.6	C	
				PM	46.6	D	
7	LOVR / Froom Ranch Way	Signal	D	AM	20.8	C	
				PM	37.3	D	
8	LOVR / Auto Park Way	Signal	D	AM	6.5	A	
				PM	9.4	A	
9	LOVR / Calle Joaquin	Signal	D	AM	5.9	A	
				PM	9.5	A	
10	LOVR /U.S. 101 SB Ramps	Signal	C	AM	16.3	B	
				PM	21.4	C	
11	LOVR /U.S. 101 NB Ramps	Signal	C	AM	23.8	C	
				PM	29.1	C	
12	LOVR / South Higuera Street	Signal	D	AM	19.4	B	
				PM	34.3	C	
13	South Higuera Street / Vachell Lane	TWSC	D	AM	22.6	C	
				PM	16.1	C	
14	South Higuera Street / Suburban Road[6]	Signal	D	AM	9.2	A	
				PM	14.4	B	
15	South Higuera Street / Tank Farm Road	Signal	D	AM	29.9	C	
				PM	47.9	D	
16	South Higuera Street / Prado Road	Signal	D	AM	27.5	C	
				PM	43.9	D	
17	Prado Road/U.S. 101 NB Ramps / Elks Lane	AWSC	C	AM	12.0	B	
				PM	22.9	C	
18	Madonna Road / Oceanaire Drive[6]	Signal	D	AM	45.8	D	
				PM	34.4	C	
19	Madonna Road / Dalidio Drive	Signal	D	AM	21.6	C	
				PM	28.8	C	
20	Madonna Road / U.S. 101 SB Ramps/Madonna Inn	Signal	C	AM	33.2	C	
				PM	**43.6**	**D**	**1.21**
21	Madonna Road / U.S. 101 NB Ramps	Signal	C	AM	17.8	B	
				PM	**54.4**	**D**	**1.15**
22	Dalidio Drive / Froom Ranch Way	Roundabout	D	AM	3.3	A	
				PM	3.5	A	

[1]Delay – Whole intersection weighted average control delay expressed in seconds per vehicle for signalized and all-way stop controlled intersections. Total control delay for the worst movement is presented for side-street stop-controlled intersections.
[2]LOS – Level of Service
[3] V/C ratio reported for worst movement only.
[4]TWSC – Two-way-stop controlled intersection.
[5]AWSC – All-way stop controlled intersection.
[6]HCM 6th Methodology does not support intersections with more than four approaches. Hence HCM 2000 Methodology used for intersections 14 and 18.
Bold indicates unacceptable operations.
Source: TIS; see Appendix J.

Pedestrian Intersection LOS

Under Near-Term conditions, the following intersections are projected to exceed the City's minimum pedestrian LOS threshold (see Section 3.13.3.1 below and TIS Appendix J; Table 3.13-18):

- LOVR and Prefumo Canyon Road NB and SB directions, which is projected to operate at LOS F during AM and PM peak hours
- LOVR and Oceanaire Drive NB direction, which is projected to operate at LOS F during AM and during PM peak hours
- LOVR and Madonna Road in the SB direction, which is projected to operate at LOS D during the PM peak hour
- South Higuera Street and Tank Farm Road in the NB direction, which is projected to operate at LOS D during the PM peak hour

Table 3.13-18. Near-Term Scenario 2 Intersection LOS - Pedestrian

ID	Study Intersections	Approach	Target LOS	AM Peak Hour		PM Peak Hour	
				Ped. Crosswalk Score	LOS	Ped. Crosswalk Score	LOS
1	LOVR / Foothill Boulevard	EB	C	1.75	B	1.75	B
		WB	C	2.50	C	2.44	B
		NB	C	2.76	C	2.82	C
		SB	C	2.83	C	2.97	C
2	LOVR / Prefumo Canyon Road	EB	C	N/A			
		WB	C				
		NB	C	**>5.0**	**F**	**>5.0**	**F**
		SB	C	**>5.0**	**F**	**>5.0**	**F**
3	LOVR / Laguna Lane	EB	C	N/A			
		WB	C	2.40	B	2.22	B
		NB	C	2.87	C	2.86	C
		SB	C	2.93	C	3.08	C
4	LOVR / Oceanaire Drive	EB	C	N/A			
		WB	C				
		NB	C	**>5.0**	**F**	**>5.0**	**F**
		SB	C	**>5.0**	**F**	**>5.0**	**F**
5	LOVR / Royal Way	EB	C	2.02	B	2.02	B
		WB	C	2.00	B	1.99	B
		NB	C	3.16	C	3.22	C
		SB	C	3.14	C	3.19	C
6	LOVR / Madonna Road	EB	C	2.14	B	2.15	B
		WB	C	3.00	C	3.13	C
		NB	C	3.04	C	3.28	C
		SB	C	3.41	C	**3.53**	**D**
7	LOVR / Froom Ranch Way	EB	C	2.63	C	2.75	C
		WB	C	2.55	C	2.59	C
		NB	C	3.15	C	3.32	C
		SB	C	3.12	C	3.30	C

Table 3.13-18. Near-Term Scenario 2 Intersection LOS – Pedestrian (Continued)

ID	Study Intersections	Approach	Target LOS	AM Peak Hour		PM Peak Hour	
				Ped. Crosswalk Score	LOS	Ped. Crosswalk Score	LOS
8	LOVR / Auto Park Way	EB	C	N/A			
		WB	C	2.02	B	2.04	B
		NB	C	3.03	C	3.47	C
		SB	C	2.99	C	3.38	C
9	LOVR / Calle Joaquin	EB	C	2.49	B	2.49	B
		WB	C	2.10	B	2.11	B
		NB	C	3.18	C	3.46	C
		SB	C	3.05	C	3.22	C
10	LOVR / U.S. 101 SB Ramps	EB	C	1.95	B	2.32	B
		WB	C	2.30	B	2.24	B
		NB	C	3.05	C	3.18	C
		SB	C	3.09	C	3.39	C
11	LOVR / U.S. 101 NB Ramps	EB	C	2.50	C	2.61	C
		WB	C	1.43	A	1.43	A
		NB	C	2.95	C	2.97	C
		SB	C	3.05	C	3.15	C
12	LOVR / South Higuera Street	EB	C	2.88	C	2.98	C
		WB	C	N/A			
		NB	C	2.40	B	2.45	B
		SB	C	2.91	C	3.06	C
13	South Higuera Street / Vachell Lane	EB	C	N/A			
		WB	C				
		NB	C				
		SB	C				
14	South Higuera Street / Suburban Road	EB	C	N/A			
		WB	C	2.20	B	2.30	B
		NB	C	3.05	C	3.28	C
		SB	C	2.81	C	3.02	C
15	South Higuera Street / Tank Farm Road	EB	C	2.04	B	2.05	B
		WB	C	3.01	C	3.16	C
		NB	C	3.39	C	**3.65**	**D**
		SB	C	2.73	C	3.08	C
16	South Higuera Street / Prado Road	EB	C	2.61	C	2.73	C
		WB	C	2.48	B	2.57	C
		NB	C	2.86	C	3.11	C
		SB	C	2.82	C	3.00	C
17	Prado Road/U.S. 101 NB Ramps	EB	C	N/A			
		WB	C				
		NB	C				
		SB	C				
18	Madonna Road / Oceanaire Drive	EB	C	2.78	C	2.95	C
		WB	C	3.29	C	3.44	C
		NB	C	2.01	B	2.02	B
		SB	C	2.04	B	1.98	B
		SE	C	1.82	B	1.86	B
		NE	C	1.78	B	1.79	B

Table 3.13-18. Near-Term Scenario 2 Intersection LOS – Pedestrian (Continued)

ID	Study Intersections	Approach	Target LOS	AM Peak Hour		PM Peak Hour	
				Ped. Crosswalk Score	LOS	Ped. Crosswalk Score	LOS
19	Madonna Road / Dalidio Drive	EB	C	3.11	C	3.24	C
		WB	C	3.17	C	3.28	C
		NB	C	2.52	C	2.64	C
		SB	C	1.99	B	2.00	B
20	Madonna Road / U.S. 101 SB Ramps/Madonna Inn	EB	C	3.01	C	3.16	C
		WB	C	3.06	C	3.10	C
		NB	C	2.85	C	2.87	C
		SB	C	2.17	B	2.19	B
21	Madonna Road / U.S. 101 NB Ramps	EB	C	3.02	C	3.06	C
		WB	C	2.86	C	2.91	C
		NB	C	2.00	B	2.01	B
		SB	C	2.09	B	2.17	B

[1]For unsignalized AWSC intersections, pedestrian delay is reported as pedestrian LOS methodology is not supported for crosswalks that intersect stop-sign controlled approaches. For unsignalized TWSC intersections, pedestrian LOS methodology is limited to the uncontrolled crossings.
Source: TIS; see Appendix J.

Bicycle Intersections LOS

Under Near-Term conditions, the following intersections are projected to exceed the City's minimum bicycle LOS threshold (see Section 3.13.3.1 below and Appendix J; Table 3.13-19):

- LOVR and Madonna Road in the WB direction, which is projected to operate at LOS E (Bicycle LOS Score 4.60) during PM peak hour
- South Higuera Street and Tank Farm Road in the WB direction, which is projected to operate at LOS E (Bicycle LOS Score 5.16) during PM peak hour

Table 3.13-19. Near-Term Scenario 2 Intersection LOS - Bicycle

ID	Study Intersections	Approach	Target LOS	AM Peak Hour		PM Peak Hour	
				Bicycle LOS Score	LOS	Bicycle LOS Score	LOS
1	LOVR / Foothill Boulevard	EB	D	2.71	C	2.71	C
		WB	D	3.34	C	4.05	D
		NB	D	2.92	C	3.22	C
		SB	D	2.73	C	2.00	B
3	LOVR / Laguna Lane	EB	D	N/A			
		WB	D	3.26	C	2.82	C
		NB	D	1.99	B	2.36	B
		SB	D	1.54	B	1.45	A
5	LOVR / Royal Way	EB	D	3.17	C	2.99	C
		WB	D	3.30	C	2.96	C
		NB	D	2.73	C	3.13	C
		SB	D	2.32	B	2.05	B

Table 3.13-19. Near-Term Scenario 2 Intersection LOS - Bicycle (Continued)

ID	Study Intersections	Approach	Target LOS	AM Peak Hour		PM Peak Hour	
				Bicycle LOS Score	LOS	Bicycle LOS Score	LOS
6	LOVR / Madonna Road	EB	D	3.42	C	3.26	C
		WB	D	3.68	D	**4.60**	**E**
		NB	D	1.72	B	2.25	B
		SB	D	2.92	C	2.67	C
7	LOVR / Froom Ranch Way	EB	D	3.49	C	4.33	D
		WB	D	2.25	B	2.49	B
		NB	D	1.89	B	2.45	B
		SB	D	1.79	B	1.91	B
8	LOVR / Auto Park Way	EB	D	N/A			
		WB	D	2.61	C	2.76	C
		NB	D	3.12	C	3.73	D
		SB	D	3.45	C	3.80	D
9	LOVR / Calle Joaquin	EB	D	3.11	C	3.09	C
		WB	D	3.16	C	3.32	C
		NB	D	1.71	B	2.17	B
		SB	D	1.92	B	0.87	A
10	LOVR / U.S. 101 SB Ramps	EB	D	N/A			
		WB	D	2.90	C	2.69	C
		NB	D	1.89	B	2.38	B
		SB	D	1.71	B	2.02	B
11	LOVR / U.S. 101 NB Ramps	EB	D	3.94	D	3.93	D
		WB	D	1.39	A	1.39	A
		NB	D	1.94	B	2.31	B
		SB	D	2.43	B	2.38	B
12	LOVR / South Higuera Street	EB	D	2.07	B	1.88	B
		WB	D	N/A			
		NB	D	2.23	B	1.87	B
		SB	D	2.48	B	3.92	D
14	South Higuera Street / Suburban Road	EB	D	N/A			
		WB	D	1.17	A	1.57	B
		NB	D	2.44	B	2.19	B
		SB	D	2.09	B	2.69	C
15	South Higuera Street / Tank Farm Road	EB	D	2.73	C	2.74	C
		WB	D	3.88	D	**5.16**	**E**
		NB	D	2.25	B	2.43	B
		SB	D	1.81	B	2.37	B
16	South Higuera Street / Prado Road	EB	D	2.14	B	1.98	B
		WB	D	2.07	B	3.00	C
		NB	D	1.77	B	2.51	C
		SB	D	2.30	B	2.23	B
18	Madonna Road / Oceanaire Drive	EB	D	2.78	C	2.84	C
		WB	D	1.54	B	2.22	B
		NB	D	2.87	C	2.86	C
		SB	D	2.73	C	2.31	B
		SE	D	2.62	C	2.62	C
		NE	D	2.20	B	2.20	B

Table 3.13-19. Near-Term Scenario 2 Intersection LOS - Bicycle (Continued)

ID	Study Intersections	Approach	Target LOS	AM Peak Hour		PM Peak Hour	
				Bicycle LOS Score	LOS	Bicycle LOS Score	LOS
19	Madonna Road / Dalidio Drive	EB	D	2.18	B	2.24	B
		WB	D	1.73	B	2.14	B
		NB	D	2.02	B	2.63	C
		SB	D	1.59	B	1.94	B
20	Madonna Road / U.S. 101 SB Ramps/Madonna Inn	EB	D	2.00	B	2.07	B
		WB	D	1.73	B	2.05	B
		NB	D	3.86	D	3.78	D
		SB	D	2.94	C	2.99	C
21	Madonna Road / U.S. 101 NB Ramps	EB	D	2.81	C	2.44	B
		WB	D	1.77	B	2.30	B
		NB	D	2.27	B	2.32	B
		SB	D	N/A			

Bicycle LOS summary excludes unsignalized intersections and locations where no bicycle facilities are provided as HCM 6th Bike LOS Methodology do not model segments bounded by unsignalized intersections.
Source: TIS; see Appendix J.

Vehicle Queueing Conditions

Under Near-Term conditions, the following seven intersections have vehicle queues that are projected to exceed lane capacity during AM or PM peak hours (see Appendix J; Table 3.13-20):

- LOVR and Foothill Boulevard (SBL during AM peak hour)
- LOVR and Froom Ranch Way (EBL and NBL during PM peak hour)
- LOVR and Calle Joaquin (WBL during PM peak hour)
- LOVR and U.S. 101 SB Ramps (SBR and WBR during PM peak hour)
- South Higuera Street and Tank Farm Road (WBR and northbound right-turn lane [NBR] during PM peak hour and SBL during both the AM and PM peak hours)
- South Higuera Street and Prado Road (WBL during both the AM and PM peak hours and SBL during the AM peak hour)
- Madonna Road and Oceanaire Drive (WBL and WBR during both the AM and the PM hours)

Table 3.13-20. Near-Term Scenario 2 Intersection LOS - 95th-Percentile Queuing

ID	Study Intersections	Lane Group	Storage Length Per Lane (ft)	Peak Hour	Near-Term Conditions - Scenario 2
1	LOVR / Foothill Boulevard	WBR	180	AM	0
				PM	0
		NBL	120	AM	0
				PM	15
		NBR	370	AM	30
				PM	150
		SBL	490	AM	**#585**
				PM	#280
3	LOVR / Laguna Lane	WBL	Trap Lane	AM	90
				PM	40
		WBR	Trap Lane	AM	0
				PM	15
		NBR	80	AM	10
				PM	40
		SBL	120	AM	45
				PM	25
5	LOVR/Royal Way	EBR	70	AM	15
				PM	0
		WBR	70	AM	0
				PM	0
		NBL	110	AM	30
				PM	70
		SBL	160	AM	15
				PM	15
		SBR	50	AM	0
				PM	0
6	LOVR / Madonna Road	EBL	230	AM	135
				PM	80
		WBL	Trap Lane	AM	95
				PM	220
		WBR	170	AM	50
				PM	85
		NBL	200	AM	90
				PM	#190
		NBR	175	AM	50
				PM	80
		SBL	350	AM	280
				PM	#240

Table 3.13-20. Near-Term Scenario 2 Intersection LOS - 95th-Percentile Queuing (Continued)

ID	Study Intersections	Lane Group	Storage Length Per Lane (ft)	Peak Hour	Near-Term Conditions - Scenario 2
7	LOVR / Froom Ranch Way	EBL	250	AM	#70
				PM	**#260**
		EBR	250	AM	0
				PM	65
		WBL	295	AM	55
				PM	100
		WBR	50	AM	0
				PM	35
		NBL	300	AM	#125
				PM	**#310**
		SBL	160	AM	35
				PM	#120
8	LOVR/Auto Park Way (Project Driveway)	EBL	100	AM	-
				PM	-
		EBR	100	AM	-
				PM	-
		WBL	Trap Lane	AM	30
				PM	80
		WBR	175	AM	15
				PM	30
		NBL	200	AM	-
				PM	-
		SBL	100	AM	40
				PM	60
		SBR	100	AM	-
				PM	-
9	LOVR/Calle Joaquin	EBL	260	AM	30
				PM	45
		EBR	260	AM	15
				PM	25
		WBL	100	AM	55
				PM	**130**
		NBL	130	AM	m10
				PM	m10
		NBR	130	AM	m15
				PM	m50
		SBL	120	AM	25
				PM	20
		SBR	120	AM	5
				PM	10

Table 3.13-20. Near-Term Scenario 2 Intersection LOS - 95th-Percentile Queuing (Continued)

ID	Study Intersections	Lane Group	Storage Length Per Lane (ft)	Peak Hour	Near-Term Conditions - Scenario 2
10	LOVR / U.S. 101 SB Ramps	WBR	190	AM	125
				PM	**230**
		NBL	220	AM	m50
				PM	m100
		SBR	120	AM	100
				PM	**#375**
11	LOVR / U.S. 101 NB Ramps	EBL	610	AM	#395
				PM	#415
		NBL	400	AM	90
				PM	175
		SBR	133	AM	m0
				PM	0
12	LOVR / South Higuera Street	EBL	Trap Lane	AM	#460
				PM	#470
		EBR	100	AM	45
				PM	50
		NBL	200	AM	55
				PM	30
		SBR	Trap Lane	AM	120
				PM	#585
14	South Higuera Street / Suburban Road	WBL	Trap Lane	AM	50
				PM	185
		SBL	170	AM	#100
				PM	#140
15	South Higuera Street / Tank Farm Road	EBR	Trap Lane	AM	0
				PM	0
		WBL	Trap Lane	AM	230
				PM	540
		WBR	250	AM	55
				PM	**295**
		NBL	140	AM	55
				PM	60
		NBR	100	AM	90
				PM	**140**
		SBL	165	AM	**#570**
				PM	**#860**
16	South Higuera Street / Prado Road	EBL	300	AM	75
				PM	#90
		EBR	300	AM	0
				PM	0

Table 3.13-20. Near-Term Scenario 2 Intersection LOS - 95th-Percentile Queuing (Continued)

ID	Study Intersections	Lane Group	Storage Length Per Lane (ft)	Peak Hour	Near-Term Conditions - Scenario 2
		WBL	105	AM	**#165**
				PM	**#175**
		WBR	410	AM	0
				PM	10
		NBL	300	AM	120
				PM	#250
		SBL	200	AM	**#355**
				PM	#180
18	Madonna Road / Oceanaire Drive	EBL	115	AM	40
				PM	#50
		WBL	115	AM	**#125**
				PM	**#280**
		WBR	100	AM	**205**
				PM	**#505**
		NBR	50	AM	0
				PM	0
19	Madonna Road / Dalidio Drive	EBL	145	AM	40
				PM	#60
		EBR	100	AM	20
				PM	85
		WBL	350	AM	#125
				PM	#240
		NBL	150	AM	40
				PM	135
		NBR	150	AM	10
				PM	60
		SBR	50	AM	0
				PM	0
20	Madonna Road / U.S. 101 SB Ramps/Madonna Inn	EBL	100	AM	#55
				PM	#75
		WBL	260	AM	195
				PM	m185
		NBL	Trap Lane	AM	#210
				PM	#515
		NBR	275	AM	150
				PM	50
		SBL	Trap Lane	AM	20
				PM	30
		SBR	100	AM	0
				PM	0

Table 3.13-20. Near-Term Scenario 2 Intersection LOS - 95th-Percentile Queuing (Continued)

ID	Study Intersections	Lane Group	Storage Length Per Lane (ft)	Peak Hour	Near-Term Conditions - Scenario 2
21	Madonna Road / U.S. 101 NB Ramps	EBL	435	AM	m160
				PM	m#320
		NBL	185	AM	100
				PM	170

Queue length rounded to nearest 5 feet. Queuing analysis is reported for signalized intersections only.
Bold: 95th-percentile volume exceeds capacity.
m queue is metered by upstream intersection.
95th-percentile queue exceeds capacity
Trap - denotes design where the thru-lane terminates in a turn lane.
ft – feet
- data not available
Westbound thru-lane (WBL); westbound right-turn lane (WBR); eastbound thru-lane (EBL); northbound thru-lane (NBL); northbound right-turn lane (NBR); northbound trap (NBT); southbound thru-lane (SBL); southbound trap (SBT); southbound right-turn lane (SBR); eastbound right-turn lane (EBR).
Source: TIS; see Appendix J.

Automobile Roadway Segment LOS

Under Near-Term conditions, the following roadway segments are projected to exceed the City's minimum automobile LOS threshold (see Section 3.13.3.1 below and Appendix J; Table 3.13-21):

- LOVR from Oceanaire Drive to Madonna Road operates at LOS E during AM peak hour and LOS F during PM peak hour in the SB direction.
- LOVR from Madonna Road to Froom Ranch Way operates at LOS E in the NB direction during PM peak hour.
- LOVR from U.S. 101 SB Ramps to U.S. 101 NB Ramps operates at LOS E in the SB direction during PM peak hour.
- South Higuera Street from LOVR to Tank Farm Road operates at LOS E during the PM peak hour in NB direction.

Pedestrian Roadway Segments LOS

Under Near-Term conditions, the following roadway segments are projected to exceed the City's minimum pedestrian LOS threshold, as under existing conditions in which the lack of sidewalks and minimal buffer between pedestrians and heavy vehicular traffic lanes contribute to the LOS exceedance (see Section 3.13.3.1 below and Appendix J; Table 3.13-22):

- LOVR from Prefumo Canyon Road to Oceanaire Drive operates at LOS D during AM and PM peak hour in the SB direction and operates at LOS D during PM peak hour in NB direction.
- LOVR from Madonna Road to Froom Ranch Way operates at LOS F during AM peak hour in the NB direction and operates at LOS D during PM peak hour in the NB and SB direction.
- LOVR from Froom Ranch Way to Calle Joaquin operates at LOS D during PM peak hour in the SB direction.
- LOVR from U.S. 101 SB Ramps to U.S. 101 NB Ramps operates at LOS D in SB direction during AM and PM peak hours and operates at LOS D in NB direction during PM peak hour.
- LOVR from U.S. 101 NB Ramps to South Higuera Street operates at LOS E during AM peak hour and operates at LOS D during AM peak hour in the SB direction and NB direction, the segment is projected to operate at LOS D during the PM peak hour.
- South Higuera Street from LOVR to Tank Farm Road operates at LOS D during PM peak hour in the SB direction.
- South Higuera Street from Tank Farm Road to Prado Road operates at LOS F during AM and PM peak hours in the SB direction.
- Madonna Road from LOVR to Dalidio Drive operates at LOS F in EB direction during AM peak hour and in the WB direction, the segment is projected to operate at LOS F during AM peak hour and at LOS D during PM peak hour.

Bicycle Roadway Segment LOS

Under Near-Term conditions, none of the studied roadway segments exceed the City's minimum bicycle LOS thresholds (see Section 3.13.3.1 below and Appendix J; Table 3.13-23).

Transit Roadway Segment LOS

Under Near-Term conditions, none of the studied roadway segments exceed the City's minimum transit LOS thresholds (see Section 3.13.3.1 below and Appendix J; Table 3.13-24).

U.S. 101 Roadway Segments and On-/Off-Ramp Intersections

Under Near-Term Conditions, the following freeway segments are projected to exceed Caltrans minimum LOS thresholds (see Section 3.13.3.1 below and Appendix J; Table 3.13-25):

Table 3.13-21. Near-Term Scenario 2 Segment Level of Service – Automobile

ID	Roadway Segment	Direction	LOS Threshold	AM Peak				PM Peak			
				Travel Speed (mph)	BFFS (mph)	Travel Speed/BFFS (%)	LOS	Travel Speed (mph)	BFFS (mph)	Travel Speed/BFFS (%)	LOS
1	LOVR from Prefumo Canyon Road to Oceanaire Drive	SB	D	31.83	45.46	70.02	B	33.38	45.46	73.4	B
		NB	D	28.93	45.45	63.65	C	27.79	45.45	61.1	C
2	LOVR from Oceanaire Drive to Madonna Road	SB	D	**13.33**	**42.64**	**31.26**	**E**	**9.70**	**42.64**	**22.7**	**F**
		NB	D	24.01	45.68	52.56	C	22.08	45.68	48.3	D
3	LOVR from Madonna Road to Froom Ranch Way	SB	D	26.48	44.82	59.08	C	19.37	44.83	43.2	D
		NB	D	19.87	44.83	44.32	D	**16.93**	**44.82**	**37.8**	**E**
4	LOVR from Froom Ranch Way to Calle Joaquin	SB	D	36.56	44.80	81.61	A	33.98	44.80	75.8	B
		NB	D	32.56	45.22	72.00	B	28.03	45.22	62.0	C
5	LOVR from U.S. 101 SB Ramps to U.S. 101 NB Ramps	SB	D	19.66	45.33	43.37	D	**17.83**	**45.33**	**39.3**	**E**
		NB	D	19.54	40.66	48.06	D	24.03	45.36	53.0	C
6	LOVR from U.S. 101 NB Ramps to South Higuera Street	SB	D	21.59	4,064.00	0.53	C	22.32	40.78	54.7	C
		NB	D	27.45	41.19	66.64	C	31.07	45.77	67.9	B
7	South Higuera Street from City Limit south to U.S. 101/Clover Ridge Lane	SB	D	45.53	45.72	99.58	A	43.72	45.72	95.6	A
		NB	D	40.74	45.73	89.09	A	45.27	45.73	99.0	A
8	South Higuera Street from LOVR to Tank Farm Road	SB	D	23.63	45.33	52.13	C	20.47	45.34	45.1	D
		NB	D	19.83	45.68	43.40	D	**14.99**	**45.69**	**30.2**	**E**
9	South Higuera Street from Tank Farm Road to Prado Road	SB	D	31.44	45.21	69.54	B	24.58	45.23	54.3	C
		NB	D	27.80	45.21	61.49	C	25.87	45.24	57.2	C
10	Tank Farm Road from South Higuera Street to Broad Street	EB	D	34.08	43.15	78.98	B	34.15	43.15	79.1	B
		WB	D	33.87	42.40	79.88	B	33.74	42.38	79.6	B
11	Madonna Road from LOVR to Dalidio Drive	EB	D	22.96	38.92	58.99	C	21.33	39.14	54.5	C
		WB	D	21.02	38.84	54.12	C	20.21	39.15	51.6	C
12	Froom Ranch Way from LOVR to Dalidio Drive	EB	D	39.55	41.09	96.25	A	38.09	41.09	92.7	B
		WB	D	31.11	41.08	75.73	B	28.18	41.08	68.6	B

Bold indicates deficient LOS
BFFS - Base Free-Flow Speed
mph – miles per hour
Source: TIS; see Appendix J.

Table 3.13-22. Near-Term Scenario 2 Segment Level of Service – Pedestrian

ID	Roadway Segment	Direction	LOS Threshold	AM Peak		PM Peak	
				Segment Score	LOS	Segment Score	LOS
1	LOVR from Prefumo Canyon Road to Oceanaire Drive	SB	C	**3.67**	**D**	**3.54**	**D**
		NB	C	3.29	C	**4.11**	**D**
2	LOVR from Oceanaire Drive to Madonna Road	SB	C	3.36	C	3.25	C
		NB	C	2.84	C	3.25	C
3	LOVR from Madonna Road to Froom Ranch Way	SB	C	3.38	C	**3.50**	**D**
		NB	C	**3.23**	**F**	**3.70**	**D**
4	LOVR from Froom Ranch Way to Calle Joaquin	SB	C	3.45	C	**3.67**	**D**
		NB	C	3.41	C	3.49	C
5	LOVR from U.S. 101 SB Ramps to U.S. 101 NB Ramps	SB	C	**3.85**	**D**	**3.60**	**D**
		NB	C	3.48	C	**3.84**	**D**
6	LOVR from U.S. 101 NB Ramps to South Higuera Street	SB	C	**4.56**	**E**	**3.93**	**D**
		NB	C	**3.55**	**D**	3.39	C
8	South Higuera Street from LOVR to Tank Farm Road	SB	C	3.25	C	**3.89**	**D**
		NB	C	2.87	C	3.05	C
9	South Higuera Street from Tank Farm Road to Prado Road	SB	C	**3.45**	**F**	**4.31**	**F**
		NB	C	2.57	C	3.33	C
11	Madonna Road from LOVR to Dalidio Drive	EB	C	**4.26**	**F**	3.14	C
		WB	C	**3.78**	**F**	**4.14**	**D**
12	Froom Ranch Way from LOVR to Dalidio Drive	EB	C	2.48	C	2.50	C
		WB	C	2.84	C	2.77	C

Bold indicates deficient LOS.
Source: TIS; see Appendix J.

Table 3.13-23. Near-Term Scenario 2 Segment LOS – Bicycle

ID	Roadway Segment	Direction	LOS Threshold	AM Peak		PM Peak	
				Segment Score	LOS	Segment Score	LOS
1	LOVR from Prefumo Canyon Road to Oceanaire Drive	SB	D	2.04	B	1.99	A
		NB	D	1.61	A	1.89	A
2	LOVR from Oceanaire Drive to Madonna Road	SB	D	2.32	C	2.26	C
		NB	D	1.57	A	1.82	A
3	LOVR from Madonna Road to Froom Ranch Way	SB	D	2.67	C	2.66	C
		NB	D	1.49	A	1.84	A
4	LOVR from Froom Ranch Way to Calle Joaquin	SB	D	2.52	C	2.64	C
		NB	D	1.87	A	2.05	B
5	LOVR from U.S. 101 SB Ramps toU.S. 101 NB Ramps	SB	D	2.86	C	2.82	C
		NB	D	2.59	C	2.96	C
6	LOVR from U.S. 101 NB Ramps to South Higuera Street	SB	D	2.44	C	2.45	C
		NB	D	1.83	A	1.99	A
7	South Higuera Street from City Limit south to U.S. 101/Clover Ridge Lane	SB	D	1.56	A	1.78	A
		NB	D	1.60	A	1.48	A
8	South Higuera Street from LOVR to Tank Farm Road	SB	D	2.55	C	2.95	C
		NB	D	2.90	C	2.95	C
9	South Higuera Street from Tank Farm Road to Prado Road	SB	D	2.46	C	2.72	C
		NB	D	2.06	B	2.41	C
10	Tank Farm Road from South Higuera Street to Broad Street	EB	D	2.74	C	2.71	C
		WB	D	2.90	C	2.99	C
11	Madonna Road from LOVR to Dalidio Drive	EB	D	3.07	C	3.01	C
		WB	D	2.23	C	2.52	C
12	Froom Ranch Way from LOVR to Dalidio Drive	EB	D	0.63	A	0.65	A
		WB	D	0.89	A	0.43	A

Bold indicates deficient LOS.
Source: TIS; see Appendix J.

Table 3.13-24. Near-Term Scenario 2 Segment LOS – Transit

ID	Roadway Segment	Direction	LOS Threshold	AM Peak		PM Peak	
				Segment Score	LOS	Segment Score	LOS
1	LOVR from Prefumo Canyon Road to Oceanaire Drive	SB	D	2.91	C	2.88	C
		NB	D	1.75	A	1.96	A
2	LOVR from Oceanaire Drive to Madonna Road	SB	D	2.49	C	2.61	C
		NB	D	2.78	C	2.92	C
3	LOVR from Madonna Road to Froom Ranch Way	SB	D	3.56	D	3.77	D
		NB	D	2.06	B	2.16	B
4	LOVR from Froom Ranch Way to Calle Joaquin	SB	D	3.04	C	3.14	C
		NB	D	3.24	C	3.41	C
6	LOVR from U.S. 101 NB Ramps to South Higuera Street	SB	D	3.98	D	3.51	D
		NB	D	3.61	D	3.36	C
8	South Higuera Street from LOVR to Tank Farm Road	SB	D	4.13	D	4.17	D
		NB	D	3.25	C	4.07	C
9	South Higuera Street from Tank Farm Road to Prado Road	SB	D	3.57	D	4.02	D
		NB	D	3.27	C	4.18	D
11	Madonna Road from LOVR to Dalidio Drive	EB	D	3.29	C	3.45	C
		WB	D	3.35	C	3.28	C
12	Froom Ranch Way from LOVR to Dalidio Drive	EB	D	0.33	A	0.28	A
		WB	D	0.82	A	0.96	A

Segments with no transit stops are excluded from the analysis.
Source: TIS; see Appendix J.

Table 3.13-25. Near-Term Scenario 2 Segment LOS – Freeway Mainline, Ramps and Weaving Sections

Interchange Location	Target LOS	Segment Type	Lanes	AM Peak Hour			PM Peak Hour		
				Volume	Density (pc/mi/h)	LOS	Volume	Density (pc/mi/h)	LOS
U.S. 101 NB									
U.S. 101 NB, south of South Higuera Street	C	Freeway	2	2,530	21.5	C	2,571	21.8	C
U.S. 101 NB, south of LOVR	C	Freeway	2	2,817	24.0	C	2,156	18.3	C
U.S. 101 NB LOVR Off-Ramp	C	Diverge	1	688	**29.0**	**D**	724	22.3	C
U.S. 101 NB LOVR On-Ramp	C	Merge	1	179	28.9	C	496	25.2	C
U.S. 101 NB, north of Prado Road	C	Freeway	2	2,491	21.1	C	2,564	21.8	C
U.S. 101 NB Prado Road Off-Ramp	C	Diverge	1	312	25.4	C	143	25.9	C
U.S. 101 NB Prado Road On-Ramp	C	Merge	1	323	27.1	C	552	**30.4**	**D**
U.S. 101 NB, south of Madonna Road	C	Freeway	2	3,062	**26.5**	**D**	3,427	**30.7**	**D**
U.S. 101 NB, Madonna Road Off-Ramp	C	Diverge	1	293	**31.2**	**D**	341	**34.9**	**E**
U.S. 101 SB									
U.S. 101 SB, north of Madonna Road	C	Freeway	2	2,131	18.1	C	3,168	**27.6**	**D**
U.S. 101 SB Madonna Road On-Ramp	C	Merge	1	259	22.9	C	386	**35.9**	**D**
U.S. 101 SB, north of Prado Road	C	Freeway	2	2,048	17.4	B	3,331	**29.5**	**D**
U.S. 101 SB, south of LOVR	C	Freeway	2	1,314	11.2	B	2,394	20.3	C
U.S. 101 SB LOVR Off-Ramp	C	Diverge	1	672	13.6	B	619	24.7	C
U.S. 101 SB LOVR On-Ramp	C	Merge	1	404	16.2	B	755	**30.8**	**D**
U.S. 101 SB, north of South Higuera Street	C	Freeway	2	2,369	20.1	C	3,858	**37.0**	**E**

Source: TIS; see Appendix J.
pc/mi/h - passenger cars per mile per hour

- U.S. 101 NB, LOVR Off-Ramp operates at LOS D during AM peak hour
- U.S. 101 NB, Prado Road On-Ramp operates at LOS D during PM peak hour
- U.S. 101 NB, south of Madonna Road operates at LOS D during AM peak hour and PM peak hour
- U.S. 101 NB, Madonna Road Off-Ramp operates at LOS D during AM peak hour and operates at LOS E during the PM peak hour
- U.S. 101 SB, north of Madonna Road operates at LOS D during PM peak hour
- U.S. 101 SB, Madonna Road On-Ramp operates at LOS D during PM peak hour
- U.S. 101 SB, north of Prado Road operates at LOS D during PM peak hour
- U.S. 101 SB, LOVR On-Ramp operates at LOS D during AM peak hour
- U.S. 101 SB, north of South Higuera Street operates at LOS E during PM peak hour

3.13.2 Regulatory Setting

Transportation is governed primarily by federal, state, and local laws that would apply to future development under the Project. Federal, state, and local regulations that are directly relevant to the Project are summarized below.

3.13.2.1 Federal

Americans with Disabilities Act (1990)

Title III of the Americans with Disabilities Act (ADA) (codified in Title 42 of the USC), prohibits discrimination on the basis of disability in places of public accommodation (i.e., businesses and non-profit agencies that serve the public) and commercial facilities (i.e., other businesses). This regulation includes Appendix A to Part 36, Standards for Accessible Design, which establishes minimum standards for ensuring accessibility when designing and constructing a new facility or altering an existing facility. Examples of key guidelines include detectable warning for pedestrians entering traffic where there is no curb, a clear zone of 48 inches for the pedestrian travel way, and a vibration-free zone for pedestrians.

3.13.2.2 State

California Department of Transportation

Caltrans manages the operation of state highways, including the U.S. 101 and State Route 277 (Golden State Highway), which pass through the San Luis Obispo area and the Project vicinity.

Senate Bill 743

To further the State's commitment to the goals of SB 375, AB 32, and AB 1358, SB 743 adds Chapter 2.7, Modernization of Transportation Analysis for Transit-Oriented Infill Projects, to Division 13 (Section 21099) of the PRC. Key provisions of SB 743 include reforming aesthetics and parking impact analysis under CEQA for urban infill projects. SB 743 would also replace the measurement of automobile delay (LOS analysis) with VMT as a metric for measuring environmental impacts. Under SB 743, the focus of the environmental impacts of transportation shift from driver delay to VMT analysis, reduction of GHG emissions, creation of multi-modal networks, and promotion of a compact balanced mix of land uses to reduce vehicular travel and increase walking, biking, and use of transit. Local agencies would retain the option to employ LOS standards as local policy standards, but not for use as a CEQA threshold.

VMT analysis is not mandatory for CEQA until July 1st, 2020. Currently, official measures and local significance thresholds for VMT analysis are still being developed, but have not been adopted. Therefore, automobile LOS is still used as a significance threshold for CEQA review, consistent with the City TIA Guidelines and General Plan CE. The TIS prepared for the Project analyzes Project VMT for reference purposes; however, in the absence of official significance thresholds, no findings in regarding to VMT are made at this time. (see Appendix J, Table 3.1-102)

San Luis Obispo Council of Governments 2019 Draft Regional Transportation Plan

To prepare for future growth, SLOCOG has developed a draft Regional Transportation Plan (RTP), which outlines key principles guiding regional growth, including integrated land use, active transportation, and green regions. In general, SLOCOG has established policies that focus on promoting growth in existing and emerging centers and along major transportation corridors; creating significant areas of mixed-use development and walkable communities; targeting growth around existing and planned transit stations; and preserving existing open space and stable residential areas.

The RTP strives to provide a regional investment framework to address the region's transportation and related challenges, while preserving and enhancing the existing transportation system and integrating land use into transportation planning. The RTP employs a regional approach to accommodate future growth within existing high-quality transit areas to reduce VMT, congestion, and related GHG emissions. This approach to sustainably manage growth and transportation demand reduces the distance and barriers

between new housing, jobs, and services – helping to reduce the demand for single occupancy vehicle travel and to reduce GHG emissions through integrated transportation, land use, housing, and environmental planning.

The RTP/Sustainable Communities Strategy (SCS) outlines SCAG's plan for integrating the transportation network and related strategies with an overall land use pattern that responds to projected growth to attain and exceed the GHG emission-reduction targets set forth by CARB. For instance, Policy 14 of the SLOCOG RTP's policies for highways, streets, and roads is to, "Facilitate transportation projects that improve jobs/housing balance, support sustainable communities, achieve intermodal transportation improvements, and/or reduce regional VMT growth."

3.13.2.3 Local

City of San Luis Obispo General Plan

The City General Plan sets objectives and policies for all City resources. Those associated with the standards of streets and highways incorporated within the City are managed through the CE of the General Plan.

Circulation Element

The City adopted a General Plan CE in 1994, and it was updated and amended in 2014. The following policies are relevant to the Project.

Policy 2.1.1 Multi-level Programs. The City shall support County-wide and community-based efforts aimed at substantially reducing the number of vehicle trips and parking demand.

Policy 2.1.2 Flexible Work Schedules. The City shall support flex time programs and alternative work schedules to reduce peak hour traffic demand.

Policy 2.1.3 Work-based Trip Reduction. The City shall encourage employers within the City limits and work with the County to work with employers outside of the City limits to participate in trip reduction programs.

Policy 2.1.5 Long-term Measure. The City shall support programs that reduce traffic congestion and maintain air quality. If air quality degrades below legal standards or LOS standards are exceeded, the City will pursue more stringent measures to achieve its transportation goals.

Policy 4.1.4 New Development. The City shall require that new development provide bikeways, secure bicycle storage, parking facilities and showers consistent with City plans and development standards. When evaluating transportation impacts, the City shall use a Multi-Modal Level of Service (MMLOS) analysis.

Policy 6.1.1 Complete Streets. The City shall design and operate City streets to enable safe, comfortable, and convenient access and travel for users of all abilities including pedestrians, bicyclists, transit users, and motorists.

Policy 6.1.2 Multi-modal LOS Objectives, Service Standards, and Significance Criteria. The City shall strive to achieve LOS objectives and shall maintain LOS minimums for all four modes of travel; pedestrians, bicyclists, transit, and vehicles.

Policy 6.1.3 Multi-modal Priorities. In addition to maintaining minimum LOS, MMLOS should be prioritized in accordance with the established modal priorities, such that construction, expansion, or alteration for one mode should not degrade the service level of a higher priority mode.

Policy 6.1.4 Defining Significant Circulation Impact. Any degradation of the LOS shall be minimized to the extent feasible in accordance with the modal priorities established. If the LOS degrades below thresholds established in Policy 6.1.2, it shall be determined a significant impact for purposes of environmental review under the CEQA. For roadways already operating below the established MMLOS standards, any further degradation to the MMLOS score will be considered a significant impact under CEQA.

- Where a potential impact is identified, the City in accordance with the modal priorities established, can determine if the modal impact in question is adequately served through other means e.g., another parallel facility or like service. Based on this determination, a finding of no significant impact may be determined by the City.

Policy 6.1.5 Mitigation. For significant impacts, developments shall be responsible for their fair share of any improvements required. Potential improvements for alternative mode may include, but are not limited to:

- Pedestrian: Provision of sidewalk, providing or increasing a buffer from vehicular travel lanes, increased sidewalk clear width, providing a continuous barrier between pedestrians and vehicle traffic, improved crossings, reduced signal delay, traffic calming, no right-turn on red, reducing intersection crossing distance.

- Bicycle: Addition of a bicycle lane, traffic calming, provision of a buffer between bicycle and vehicle traffic, pavement resurfacing, reduced number of access points, or provision of an exclusive bicycle path, reducing intersection crossing distance.
- Transit: For transit-related impacts, developments shall be responsible for their fair share of any infrastructural improvements required. This may involve provision of street furniture at transit stops, transit shelters, and/or transit shelter amenities, pullouts for transit vehicles, transit signal prioritization, provision of additional transit vehicles, or exclusive transit lanes.

Policy 6.1.6 City Review. When new projects impact the existing circulation system, the City shall review the effectiveness and desirability of "direct fix" mitigation improvements to address MMLOS impacts. Where a significant impact is found, alternative system-wide project mitigations may be submitted for consideration to the City in accordance with the modal priorities established in Policy 6.1.2. Exceptions shall be based on the physical conditions of the right-of-way to support additional improvements. If the right-of-way in question cannot address onsite mitigation, appropriate offsite improvements that have direct nexus to and effectively address the specific impacts created by the project may be considered.

Policy 7.1.1 Peak Hour and Daily Traffic. The City shall cooperate with County and State government to institute programs that reduce the levels of peak-hour and daily vehicle traffic.

Policy 7.1.2 Street Network. The City shall manage to the extent feasible the street network so that the standards are not exceeded. This will require new development to mitigate the traffic impacts it causes or the City to limit development that affects streets where congestion levels may be exceeded. The standards may be met by strengthening alternative modes over the single occupant motor vehicle. Where feasible, roundabouts shall be the City's preferred intersection control alternative due to the vehicle speed reduction, safety, and operational benefits of roundabouts.

Policy 7.1.3 Growth Management and Roadway Expansion. The City shall manage the expansion of roadways to keep pace with only the level of increased vehicular traffic associated with development planned for in the General Plan LUE and under the City's growth management policies and regional transportation plans.

Policy 7.1.4: Transportation Funding. In order to increase support for non-automobile travel, the City shall strive to allocate transportation funding across various modes approximately proportional to the modal split objectives for 2035.

Policy 7.1.5 Vehicle Speeds. To the extent permitted under the California Vehicle Code (CVC), the City shall endeavor to maintain and reduce speeds where possible in residential neighborhoods.

Policy 7.2.7 Traffic Access Management. The City shall adopt an access management policy to control location, spacing, design and operation of driveways, median openings, crosswalks, interchanges and street connections to a particular roadway including navigation routes to direct traffic in a manner that preserves the safety and efficiency of the transportation system. Navigation routing and other smart access technologies should be considered as part of the update to the Access and Parking Management Plan.

Policy 8.1.1 Through Traffic. The City shall design its circulation network to encourage through traffic to use regional routes, highways, arterials, parkway arterials, and residential arterial streets and to discourage through traffic use of collectors and local streets.

Policy 8.1.2 Residential Streets. The City should not approve commercial development that encourages customers, employees or deliveries to use residential local or residential collector streets.

Policy 8.1.3 Neighborhood Traffic Speeds. To the extent permitted under the CVC, the City shall endeavor to reduce and maintain vehicular speeds in residential neighborhoods.

Policy 8.1.5 Neighborhood Traffic Management Guidelines. The City shall update its Neighborhood Traffic Management Guidelines to address voting, funding, and implementation procedures and develop an outreach program on the availability of the program.

Policy 8.1.6 Non-Infill Development. In new, non-infill developments, dwellings shall be set back from regional routes and highways, parkway arterials, arterials, residential arterials, and collector streets so that interior and exterior noise standards can be met without the use of noise walls.

Program 9.2.2. Prado Road Improvements. The City shall ensure that changes to Prado Road and other related system improvements are implemented in a sequence that satisfies circulation demands caused by area development.

- The sponsors of development projects that contribute to the need for the Prado Road interchange or overpass will be required to prepare or fund the preparation of a Project Study Report for the interchange project. The Project Study Report shall meet the requirements of the California Department of Transportation.

Program 9.2.5. San Luis Ranch/Dalidio Development. As part of any proposal to further develop the Dalidio-Madonna Area, the alignment and design of extensions of Froom Ranch Way connecting with Prado Road (west of U.S. 101) shall be evaluated and established if consistent with the Agricultural Master Plan for Calle Joaquin Reserve.

Policy 11.1.1 Interstate Air Service. The City shall support and encourage expansion of air transportation services, as forecasted in the Airport Master Plan and approved by the Federal Aviation Administration (FAA).

Policy 11.1.2 County Aircraft Operations. The City shall work with the County to continue to address aircraft operations so that noise and safety problems are not created in developed areas or areas targeted for future development by the City's Land Use Element.

Policy 11.1.3 Public Transit Service. The City shall encourage improved public transit service to the County airport soon as practical.

City of San Luis Obispo Bicycle Transportation Plan (2013)

The City Bicycle Transportation Plan (BTP; 2013) was originally prepared and adopted by the City in 1985, and most recently updated in 2013, to improve and encourage bicycle and pedestrian transportation within the City. This plan works to establish a comprehensive design and development of bikeway facilities in compliance with State, County, and City regulations and policies. The City currently in the process of preparing an update to this plan, which will include pedestrian considerations and create the City's first Active Transportation Plan.

3.13.3 Environmental Impact Analysis

3.13.3.1 Thresholds of Significance

The significance criteria for this analysis are based on Appendix G of the CEQA Guidelines and the City's adopted thresholds, as further described below. A transportation impact is considered significant if the project would:

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

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

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

d) Result in inadequate emergency access.

Vehicle Miles Traveled

Impact significance thresholds for VMT have not yet been established by the City or County. VMT is disclosed and assessed in comparison to citywide and countywide averages, but not used as a formal CEQA threshold. This analysis discloses VMT and its relationship to citywide and countywide average VMT, but does not utilize VMT as a formal CEQA threshold of significance for this EIR pending final adoption of appropriate local criteria and thresholds for VMT. This analysis relies on City multi-modal transportation LOS standards, as described below.

City of San Luis Obispo LOS Policies by Mode

The City's General Plan CE includes LOS policies for all transportation modes. The City's stated goal is to maintain the LOS objective. However, if trips generated by a project causes the LOS to exceed the minimum LOS standard, a project is considered to cause an impact. Table 3.13-26 presents the City's LOS objectives and standards, by mode.

Table 3.13-26. LOS Objective and Minimum Standard for Each Transportation Mode

Travel Mode	LOS Objective	Minimum LOS Standard	TIS Impact Threshold
Automobile	C	E (Downtown), D (Citywide)	D
Bicycle	B	D	D
Pedestrian	B	C	C
Transit	C	Baseline LOS or D	Baseline LOS or D

City of San Luis Obispo Multi-modal Impact Significance Thresholds

Consistent with the City's Multi-modal Transportation Impact Study Guidelines, the project impacts will be considered significant if, when comparing "Plus Project" conditions with the base Existing, Near-Term, and Cumulative conditions analyses, the project causes the following to occur:

Automobiles: Intersections

At intersections within City or County jurisdiction, project impacts are potentially significant if:

- Signalized Intersections: Project traffic causes minimum LOS standards to be exceeded or further degrades already exceeded LOS standards and the V/C ratio is increased by 0.01 or more.
- Unsignalized Intersections: Project traffic causes minimum LOS standards to be exceeded or further degrades already exceeded LOS standards, the V/C ratio is increased by 0.01 or more, and a traffic signal warrant analysis is satisfied.
- Project traffic causes or exacerbates 95th-percentile turning movement queues exceeding available turn pocket capacity.
- The project proposes roadway geometry changes that cause minimum LOS standards to be exceeded or further degrades already exceeded LOS standards for the overall intersection or individual lane groups.

Automobiles: Segments

Project impacts are potentially significant if:

- Project traffic causes minimum LOS standards for either direction to be exceeded or further degrades already exceeded LOS standards and the average segment speed decreases by 1 mph or more.
- The project proposes roadway geometry changes that cause minimum LOS standards to be exceeded or further degrades already exceeded LOS standards.

Pedestrian, Bike, and Transit: Intersections and Segments

Project impacts are potentially significant if:

- Project traffic causes minimum LOS standards to be exceeded or further degrades already exceeded LOS standards and there is contextual significance to the impact.
- The project proposes roadway geometry changes that cause minimum LOS standards to be exceeded or further degrades already exceeded LOS standards.

<u>City of San Luis Obispo Modal Priority Impact Criteria</u>

The City's General Plan CE has established priorities for various modes by context areas such that construction, expansion, or alteration of one mode should not degrade the LOS of a higher priority mode. If a project improves a lower priority mode's operation at the expense of a higher priority mode's operations, an impact is created. If a mitigation measure results in the degradation of higher priority mode, it would be considered a residual impact as well. The City's established Modal LOS Priorities by context area are presented in Table 3.13-27. The Project vicinity includes Regional Arterials, Highway Corridors, and Commercial Corridors, as described in Section 3.13.1.1, *Existing Roadway Network*.

Table 3.13-27. City LOS Modal Priority Ranking by Area

Complete Street Area	Minimum LOS Standard	
Downtown and Upper Monterey Street	1. Pedestrians	3. Transit
	2. Bicycles	4. Vehicles
Residential Corridors and Neighborhoods	1. Pedestrians	3. Vehicles
	2. Bicycles	4. Transit
Commercial Corridors and Areas	1. Vehicles	3. Transit
	2. Bicycles	4. Pedestrians
Regional Arterial and Highway Corridors	1. Vehicles	3. Bicycles
	2. Transit	4. Pedestrians

County LOS Standards

The County has established LOS standards to determine project impacts. The County's policy calls for LOS D or better service on roadways in urban areas and LOS C on rural roads. Consistent with County policies, LOS D will be considered the standard acceptable threshold for County facilities. The County does not have adopted standards for bicycle, pedestrian, and transit LOS; as such these modes will not be assessed for LOS at County facilities.

Caltrans Facilities

Caltrans established LOS standards to determine project impacts. Caltrans's policy endeavors to maintain a target LOS at the transition between LOS C and LOS D on state highway facilities. Consistent with Caltrans policies, LOS C is considered the minimum automobile threshold for Caltrans facilities. Caltrans has not adopted standards for bicycle, pedestrian, and transit LOS; as such, these modes will not be assessed for LOS at Caltrans facilities. Based on standard industry practice, the Project is considered to trigger a significant impact to Caltrans facilities if the Project would:

- Result in a facility that will operate at an acceptable LOS in the base (pre-project or no project) condition to deteriorate to an unacceptable LOS in the "Plus Project" condition; or,
- Freeway, Merge and Diverge Segments: Project traffic increases the density by 5 percent or more at a facility that will operate at an unacceptable LOS in a pre-project or no project condition.
- Intersections: Project traffic further degrades already exceeded LOS standards and the V/C ratio is increased by 0.01 or more.

City of San Luis Obispo Safety Impact Analysis Criteria

The Project TIS safety impact analysis includes both a quantitative and qualitative assessment. The safety analysis considers the Project's potential operational and geometric effects on existing infrastructure, including turn pocket queue spillback and a functional area analysis of proposed Project driveways. The safety analysis includes the following significant components, for which the Project impact will be evaluated in the "Plus Project" conditions analyses:

- Queuing evaluation at study intersections and Project driveways;
- Qualitative assessment of safety issues/concerns at the Project site access and within the internal Project circulation system. Review preliminary layout for site access and circulation and provide qualitative assessment of safety issues (i.e., driveway spacing, access control, etc.); and
- Quantitative review of collision history at selected locations:
    - County intersection at LOVR/Foothill Boulevard and County segment on South Higuera south of City limits; and
    - City intersection at LOVR/Auto Park Way and City segment on LOVR from Froom Ranch Way to Calle Joaquin will be included in the collision history analysis.

The collision history analysis compares collision rates for these facilities to rates for comparable facilities. The Project impact will be evaluated based on whether the anticipated Project-generated traffic would affect any identified safety concerns. The Project site access and functional area evaluation will be prepared consistent with the City's Access Management Policy, which is included in the recently adopted 2018 City Engineering Standards.

City of San Luis Obispo Neighborhood Traffic Analysis Criteria

The Project includes new local residential streets and commercial collector streets. The Project TIS includes an evaluation of neighborhood traffic conditions. Project impacts are considered significant if the maximum neighborhood Average Daily Trips (ADT) or speed thresholds established from the City's General Plan CE are exceeded.

The applicable ADT and speed thresholds established in the City's General Plan CE are as follows:

- Local Residential – maximum ADT is 1,500 vehicles per day (vpd) and maximum speed is 25 mph;
- Commercial Collector – maximum ADT is 10,000 vpd and maximum speed is 25 mph.

3.13.3.2 Impact Assessment Methodology

This analysis is based on the TIS prepared by TJKM Transportation Consultants for the Project (see Appendix J; TJKM Transportation Consulting 2019). The scope of the TIS was developed to be in conformance with the standards set forth in the City General Plan CE (2014) and the City's TIA Guidelines. Consideration was given to which intersections, roadway segments, bike paths and other transportation facilities could be substantially impacted by the Project and the likely outer boundary of such impacts.

The Project would develop a new network of on-site roads, bicycle paths, sidewalks, trails, and paths, and integration of this site into the transit network. Off-site road, bicycle, and pedestrian improvements are also included as part of the Project to serve Project transportation demands. In addition, the transportation network in the Project vicinity is planned to undergo major improvements and modifications associated with development of the San Luis Ranch Specific Plan project to the east across LOVR and Prefumo Creek, and the Avila Ranch Specific Plan project south across U.S. 101. For the San Luis Ranch Specific Plan, this would include the extension of Froom Ranch Way northeast to Dalidio Drive, the extension of Dalidio Drive south to U.S. 101 and its eventual connection to a new Prado Road overpass/interchange. The Avila Ranch Specific Plan project would complete or contribute to improvements along South Higuera Street, Suburban Road, and to LOVR south of U.S. 101 (refer to Figure 3.13-2). Multiple bike path and pedestrian facility improvements would also be installed. The timing of completion of these improvements, their coordination with Project phasing, and ability to accommodate increased traffic flows and demand for pedestrian and bike facilities and transit service are key to both successful Project completion and accurate impact analysis.

Based on the City's adopted thresholds and those of other agencies where appropriate, the TIS addressed and analyzed the following scenarios to describe the impacts associated with implementation of the Project (see Appendix J):

- **Existing Conditions** quantifies multi-modal transportation conditions based on current land use and transportation conditions, utilizing current traffic, pedestrian, and bicyle count and transit ridership data, as provided by the City, County, and Caltrans. The TIS includes the quantification of current automobile, bicycle, pedestrian, and transit service levels;

- **Near-Term Conditions (2025)** quantifies conditions in a roughly five-year forecast horizon, representing approximate conditions at the time the Project is anticipated to be fully built and occupied—for the purposes of the TIS, this is approximated as Year 2025. For vehicular traffic, two scenarios were examined as part of the TIS to address this condition, including "Scenario 1" which considers the Near-Term with partial completion of the U.S. 101/Prado Road Overpass/Interchange project (Overcrossing and NB Ramps only) and "Scenario 2" which considers the Near-Term *without* completion of the U.S. 101/Prado Road Overpass/Interchange project. For the purposes of conducting a conservative vehicular traffic impact analysis under the assumption that the U.S. 101/Prado Road Overpass/Interchange project is not yet completed by the time the Project is occupied, "Scenario 2" is used for the purposes of describing Near-Term Conditions and associated impact analysis. For the purposes of assessing pedestrian, bicycle and transit-related impact, the completion of currently funded improvements (as summarized in Table 3.1-19 of the TIS; Appendix J) is assumed. These include those described in Section 3.13.1.6, *Multi-modal Transportation System Operations*, above; and
- **Cumulative Conditions (2035)** quantifies conditions representing buildout of the City's adopted General Plan land uses and transportation infrastructure improvements. The forecast horizon is approximately Year 2035 and includes regional growth representing buildout of surrounding incorporated jurisdictions and unincorporated communities in the County.

The impacts of the Project related to transportation facilities were estimated in the TIS using vehicular trip generation, trip distribution, and trip assignment as well as demands for all modes of transportation. Trip generation estimates the amount of added traffic to the roadway network. Trip distribution estimates the direction of travel to and from the Project site. Trip assignment allocates trips to specific street segments and intersection turning movements. Similarly, as discussed further below, increased demand for pedestrian, bicycle, and transit facilities was calculated based upon standard factors and distributed to the transportation network.

- **Existing plus Project** adds Project-generated traffic to the Near-Term Conditions volumes;
- **Near-Term plus Project** adds Project-generated traffic to the Near-Term Conditions volumes;
- **Cumulative plus Project** represents future traffic conditions reflective of the buildout of land uses in the area, including the Project.

Project Vehicle Trip Generation

The amount of traffic added to the surrounding roadway system by the Project was estimated by preparing a detailed trip generation estimate for the development proposal.

Project trip generation estimates were calculated by TJKM in the TIS based predominantly on data and methods published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition) and Trip Generation Handbook (3rd Edition). In addition to the ITE manual, the San Diego Association of Governments (SANDAG) Brief Guide to Vehicular Traffic Generation Rates manual was also referenced to provide an initial forecast of trip generation for the trailhead park, since the ITE manual lacks data for small parks (See Appendix J).

The trip generation forecasts consider many factors, including internal proximity between complimentary land uses, transportation mode splits, type of land uses proposed, and average vehicle occupancy of automobiles. Because this transportation analysis quantifies impacts for multiple travel modes, the person trip generation by mode was estimated in addition to vehicular trip generation. Based on ITE guidance, the following process was followed to ultimately determine estimated Project trips by mode:

1. Generate baseline vehicle trip estimates;
2. Convert new vehicle trips to person trips;
3. Apply adjustments for internal capture;
4. Generate new external person trip estimates;
5. Apply mode split distribution to estimate new external bike/pedestrian/transit and vehicular person trips;
6. Convert auto person trips to vehicle trips using average vehicle occupancy data; and
7. Apply pass-by/diverted trip adjustments to estimate net new external vehicle trips

Person trips anticipated to be generated by the Project (Step 5 above) are detailed in Table 3.13-28.

Table 3.13-28. Project Person Trips by Mode of Travel

Mode	Share (%)	AM Peak			PM Peak		
		Person Trips			Person Trips		
		In	Out	Total	In	Out	Total
Passenger Auto	88.20	137	167	304	225	195	420
Bicycle	4.60	7	9	16	12	10	22
Pedestrian	5.00	8	9	17	13	11	24
Transit	2.20	3	4	7	6	5	11
Total (All Modes)	**100**	155	189	**343**	256	221	**477**

The Project trip generation estimates include adjustments for internal capture, which represents trips between different uses within a larger mixed-use site that are never distributed to the street network external to the site. For example, trips between a hotel and adjacent retail store within the same site would be considered "internal" to the site, and should be excluded from project traffic generation estimates when analyzing potential impacts to offsite intersections and roadways. For this Project, all residential and commercial uses were considered in the internalization estimate, with the exception of uses within Villaggio such as the assisted living, memory care and skilled nursing components, which are anticipated to have little trip-making interaction with other Project components.

Ultimately, the Project is forecasted to generate 220 AM and 277 PM net new external peak hour vehicle trips on the surrounding road network (see Table 3.13-29). It should be noted that these final external automobile volumes are the basis for the Project's automobile LOS analyses.

Project trip generation was also determined for each of the four construction phases for conducting a sensitivity analysis to identify phasing impacts of the Project at the study intersections and the roadway segments (see also, Section 2.0, *Project Description*):

- **Phase 1** - Installation of Project Infrastructure and Stormwater Management System;
- **Phase 2** - Development of Villaggio Lower Area;
- **Phase 3** - Development of Villaggio Upper Terrace; and
- **Phase 4** - Development of Madonna Froom Ranch.

Table 3.13-29. Net External Vehicle Trip Generation Forecast

Land Use Category		AM Peak			PM Peak		
		Person Trips			Person Trips		
		In	Out	Total	In	Out	Total
External Residential Passenger Auto Person Trips		64	118	181	119	97	217
External Retail Passenger Auto Person Trips		20	12	32	61	51	112
External Hotel Passenger Auto Person Trips		43	27	70	36	37	73
External Park Passenger Auto Person Trips		10	10	20	9	9	18
Total External Passenger Auto Person Trips		*137*	*167*	***303***	*225*	*194*	***419***
Average Vehicle Occupancy (Persons per Car):							**1.38**
Mode	**Share**	**AM Peak**			**PM Peak**		
		Vehicle Trips			**Vehicle Trips**		
Residential Vehicle Trips Generated		45	85	131	86	71	157
Retail Vehicle Trips Generated		15	9	24	44	37	81
	Retail Pass-By Trips				*-15*	*-13*	*-28*
Hotel Vehicle Trips Generated		31	20	51	26	27	53
Park Vehicle Trips Generated		7	7	14	7	7	14
Total Vehicle Trips Generated		**99**	**121**	**220**	**148**	**129**	**277**

As Phase 1 includes only site preparation, grading and infrastructure improvements, the Project would generate only temporary construction-related AM or PM peak hour trips. With development and occupancy of Villaggio's Lower Area, the Project is estimated to generate 66 AM and 87 PM peak hour external vehicle trips. With completion of Villaggio's Upper Terrace, the Project is estimated to generate 74 AM and 99 PM peak hour external vehicle trips. With completion of the Madonna Froom Ranch area, the final phase, the Project is estimated to generate 220 AM and 277 PM total peak hour vehicle trips. Table 3.13-30 summarizes Project trip generation for the four construction phases.

Table 3.13-30. Project Operational Vehicle Trip Generation by Phase

Phase	Trips Applicable to Phase		Cumulative Total for Completed Phases	
	AM	PM	AM	PM
1. Installation of Project Infrastructure and Stormwater Management System (0%)	0	0	0	0
2. Development of Villaggio Lower Area (27%)	66	87	66	87
3. Development of Villaggio Upper Terrace (5%)	8	12	74	99
4. Development of Madonna Froom Ranch (69%)	146	178	220	277

A more detailed discussion of trip generation assumptions and methodology is provided in the Project TIS (see Appendix J).

Project Trip Distribution and Assignment

The Project trip distribution for automobile, pedestrian, bicycle, and transit trips was estimated based on conducting a select zone analysis of the traffic analysis zone (TAZ) representing the Project area in the City's travel demand model. The City's travel demand model land uses for the TAZ were modified to include the specific Project land uses. The Project trip distribution was developed for Existing, Near-Term, and Cumulative analysis scenarios based on transportation infrastructure anticipated to be in place in those scenarios (i.e., Prado Road Interchange, Prado Road Extension to Broad).

New transit trips were assigned to the adjacent transit stops at the LOVR/Auto Mall Drive intersection and at the Irish Hills Plaza shopping center. New bicycle trips were assigned to new and existing bike trails, and adjacent roadway facilities with bicycle lanes. New pedestrian trips were assigned to adjacent sidewalks, crosswalks, and shared-use paths. New vehicular trips were assigned to the street network using the single proposed access point on LOVR and were assigned to routes to reach their destinations based on the shortest logical path (Appendix J).

Intersection and Roadway Segment Automobile Operations

Using vehicle trip generation and distribution data, the TIS analyzed the Project's transportation effects on roadway segments and intersections by evaluating the automobile LOS of each roadway segment and intersection in the study area. Existing conditions were compared with Existing plus Project conditions to determine the degree of change projected for each of the intersections and roadway segments. The Existing plus Project LOS was also compared with City, County, and Caltrans thresholds to determine where and how significant impacts may occur as a result of Project implementation. The same analysis was conducted for Near-Term and Cumulative conditions. Refer to Table 3.13-2 and Table 3.13-3 for a summary of the HCM 6th Edition automobile segment and freeway LOS methodologies utilized for this analysis. The results of Existing plus Project and Near-Term plus Project analysis of intersection and roadway segment automobile operations are summarized in the TIS (Appendix J).

Bicycle, Pedestrian, and Transit Operations

For bicycle and pedestrian facilities, trip generation and distribution calculations were modeled to evaluate the operational conditions. LOS for these facilities was primarily evaluated based on operational conditions, gaps in circulation, safety, and City design criteria. Transit service was analyzed based on the service standards listed in the City's current Short Range Transit Plan, which states that in residential areas, 90 percent of the population should be within 0.25 mile of a bus stop. In accordance with the City's Multi-modal Transportation Guidelines, transit LOS was primarily predicated on the presence of shelters and benches at bus stops, as well as the frequency and on-time performance of each route.

Bicycle and Pedestrian LOS is a measure of comfort based on many different factors. The model used to calculate the LOS score, under certain conditions, can be very sensitive to minor changes that would otherwise not be noticed by pedestrians or cyclists. Professional engineering judgement is used to determine the significance threshold of a bicycle and pedestrian LOS impact based on the context and perceptibility of that impact. Therefore, while a LOS deficiency may be calculated for bicycle or pedestrian LOS, the Project's direct contribution to that deficiency may require qualitative discussions and conclusions.

Vehicle Miles Traveled

A key provision of SB 743, passed in September 2013, is the elimination of vehicle delay and LOS as CEQA significance criterion in urban areas. VMT analysis is not mandatory per CEQA until 7/1/2020. Currently, official measures and local significance thresholds for VMT analysis are being developed but have not been adopted. While the TIS analyzes both multi-modal LOS and VMT, in the absence of official significance thresholds, no CEQA findings of significance in regards to VMT are made at this time. Hence, VMT analysis conducted for the Project is provided for informational and full disclosure purposes only.

The City's Travel Demand Model was used for forecasting County-wide, City-wide and Project-generated VMT. As reported by the City's model, the forecasted 2035 Daily VMT is approximately 12 million miles for the County and 1.5 million for the City sphere of influence. The average VMT per household is 80 miles for the County and 54 miles for areas within the City's sphere of influence.

Project-generated VMT was forecast by adding the proposed land uses to the City's Travel Demand Model. The City's model forecast for the Project is 46,894 daily VMT, an increase

of approximately 3 percent within the City sphere of influence and 0.4 percent within the County. The VMT generated per household for the Project is forecasted at 69 daily VMT per household. Although the Project would have a VMT below the regional average, the VMT per household for the Project is forecasted to be approximately 28 percent higher than the average for the City's sphere of influence (Table 3.13-31).

Table 3.13-31. Average Estimated Year 2035 VMT for the City, County and Project

Descriptions	Daily VMT	VMT per HH[1]
San Luis Obispo County	12,000,000	80
City of San Luis Obispo	1,500,000	54
Project	46,894	69

[1]Reported VMT per household
Source: Project TIS, Appendix J.

School-based Trip Distribution

It is expected that a portion of trips from the Madonna Froom Ranch component would be associated with persons traveling to and from local schools. Due to the Project's proximity to public schools within the area and the availability of bus services to the Project site, for CEQA analysis it is anticipated that the preferred mode of travel for school-based trips would be made by pedestrian and bicycle travel, as well as personal vehicles (see also, Section 3.12, *Public Services and Recreation*). This represents a conservative approach and the Project TIS captured and incorporated these trips in the analysis of Project impacts to local road segments and intersections.

Cumulative Impacts

Cumulative conditions represent future buildout of the land uses and planned transportation infrastructure in the region. Based on the list of approved and reasonably foreseeable projects, future traffic demands were estimated. Cumulative analysis quantifies conditions representing buildout of the City's adopted General Plan land uses and transportation infrastructure improvements. The forecast horizon is Year 2035 and includes regional growth representing buildout of surrounding incorporated jurisdictions and unincorporated communities in the County. Vehicular, pedestrian, bicycle, and transit trip forecasts were prepared utilizing the City's Travel Demand Model and were also developed to be largely consistent with growth increments of the past San Luis Ranch Multi-modal TIS Cumulative plus Project scenario. As such, mitigation required by the San Luis Ranch Specific Plan project, Avila Ranch Specific Plan project, and similar projects may partially or wholly

overlap with mitigation required of this Project, and may be constructed in conjunction with these other projects in the area.

Besides the approved/pending projects identified for inclusion in the Near-Term scenario, the Cumulative scenario also considers a reasonable projection on the remaining vacant and undeveloped land in the City, consistent with the City's General Plan LUE. Regional growth was based on the model growth projections, and Caltrans historical and current counts on mainline facilities would be reviewed to ensure the model forecasts are adequately consistent with past historical growth rates.

Several transportation infrastructure improvement projects were identified by the City for inclusion in the Cumulative analysis scenario. These projects are all consistent with the City's General Plan CE, and are included in the City's impact fee program and capital improvement program. However, it is not anticipated that every project identified in the City's General Plan CE would be funded or constructed by the Year 2035 forecast horizon. Therefore, the Cumulative transportation projects list includes only those that are anticipated to be funded and constructed within that time frame. Cumulative transportation projects included in the analysis are listed below. Notable improvements include:

- Prado Overpass/Interchange (Overcrossing, NB and SB Ramps, NB Auxiliary Lane, and SB Collector-Distributor System)
- Dalidio Drive/Prado Road Widening
- Prado Road Extension to Broad Street
- Intersection improvements at Prado Road and South Higuera Street
- Intersection improvements at South Higuera Street/Tank Farm Road
- Sidewalk, bike lanes, and Class I multi-use path at Froom Ranch Extension east to Dalidio Drive (Near-Term Project)
- Bicycle protected intersection installations at Madonna Road/Dalidio Drive and LOVR/Dalidio Drive (Near-Term Project)
- Extension of Bob Jones Trail south of LOVR to South Higuera Street/Octagon Way (Cumulative Project)Extension of Bob Jones Trail West Spur from Calle Joaquin to Froom Ranch Way (Cumulative Project)

3.13.3.3 Project Impacts and Mitigation Measures

As noted above, this impact analysis is based upon the TIS prepared by TJKM (with the exception of Impacts TRANS-1, and TRANS-4, and TRANS-5). This section briefly summarizes the findings of the TIS; Appendix J contains the Project TIS, which provides

a complete analysis and discussion. The TIS compared Existing, Near-Term, and Cumulative (buildout) traffic conditions to those with the added effects of Project-generated traffic to determine Project-specific and contributing impacts on multi-modal infrastructure within the Project vicinity (Table 3.13-32). All identified impacts would be mitigable to a less than significant level, except for those associated with the construction of the Prado Road Overpass/Interchange project prior to 2025, which are included in the discussion as MM TRANS-2 and MM TRANS-14.

Table 3.13-32. Summary of Project Impacts

Transportation Impacts	Mitigation Measures	Residual Significance	TIS Impact (see Appendix J)
TRANS-1. Project construction activities would potentially create traffic impacts due to congestion from construction vehicles (e.g., construction trucks, construction worker vehicles, equipment, etc.) as well as temporary traffic lane and sidewalk closures.	MM TRANS-1	Less than Significant with Mitigation	--
TRANS-2. Under Existing plus Project conditions, the addition of Project traffic would exacerbate existing queuing and peak hour traffic for automobiles, and poor levels of service for pedestrians and bicycle modes of transportation, causing transportation deficiencies in the Project vicinity.	MM TRANS-2 MM TRANS-3 MM TRANS-4 MM TRANS-5 MM TRANS-6 MM TRANS-7 MM TRANS-8 MM TRANS-9 MM TRANS-10 MM TRANS-11 MM AQ-6	Significant and Unavoidable	Existing plus Project Impacts
TRANS-3. Under Near-Term plus Project (Scenario 2) conditions, the addition of Project traffic would exacerbate existing queuing and peak hour traffic for automobiles and poor levels of service for pedestrians and bike modes of transportation, causing transportation deficiencies in the Project vicinity.	MM TRANS-2 MM TRANS-5 MM TRANS-6 MM TRANS-8 MM TRANS-9 MM TRANS-12 MM TRANS-13 MM TRANS-14 MM TRANS-15 MM TRANS-16 MM TRANS-17 MM TRANS-18	Significant and Unavoidable	Near-Term plus Project Impacts
TRANS-4. The Project would result in traffic safety impacts and inadequate emergency access and evacuation options, resulting in potential for structural damage, injuries, or loss of life due to wildland fires or other emergency situations.	MM HAZ-4 MM TRANS-19 MM TRANS-20 MM TRANS-21 MM TRANS-22 MM TRANS-23	Less than Significant with Mitigation	Emergency Vehicle Access Impacts

Table 3.13-32. Summary of Project Impacts (Continued)

Transportation Impacts	Mitigation Measures	Residual Significance	TIS Impact (see Appendix J)
TRANS-5. Onsite circulation would result in safety impacts to pedestrian and bicycle access.	MM TRANS-24	Less than Significant with Mitigation	Access Management Assessment
TRANS-6. Under long-term Cumulative plus Project conditions, Project-generated traffic would result in a cumulatively considerable contribution to traffic for automobiles and poor levels of service for pedestrians and bike modes of transportation, causing transportation deficiencies in the Project vicinity.	MM TRANS-8 MM TRANS-9 MM TRANS-13 MM TRANS-23 MM TRANS-25 MM TRANS-26 MM TRANS-27 MM TRANS-28 MM TRANS-29 MM TRANS-30	Less than Significant with Mitigation	Cumulative plus Project Impacts

Impact TRANS-1 Project construction activities would potentially create traffic impacts due to congestion from construction vehicles (e.g., construction trucks, construction worker vehicles, equipment, etc.) as well as temporary traffic lane and sidewalk closures (Less than Significant with Mitigation).

The location and intensity of construction-related increases in traffic would vary by construction phase (refer to Section 2.6, *Project Construction* for a detailed description of construction activities occurring within each phase); however, each phase would incrementally contribute to road or intersection congestion over the planning horizon. Construction is divided into four phases that range between one to two years each, for a total construction period of approximately five years.

While construction-related traffic would be ongoing for approximately five years, construction traffic could create potentially significant impacts. Increased construction traffic, particularly large haul trucks and other heavy equipment, may disrupt local traffic flows, congest limited turn lane capacities, and generally slow traffic movement. Construction activity during site preparation would include use of heavy haul trucks for import of soil and rock, cement trucks, material and equipment delivery trucks, and worker vehicles.

All excavated soils would be leveled onsite and there would be approximately 222,300 cy of soil, rock, and aggregate import, resulting in roughly 11,100 to 22,200 haul truck trips to the Project site over five years. However, import activities would peak during Phase 1 when the Project site would be graded, and most imported soil and rock would occur to

shape the site and install the stormwater management system. Heavy trucks would add incrementally to congestion and queuing along LOVR and at the LOVR interchanges with U.S. 101. These vehicles would likely use U.S. 101 and LOVR to travel to and from the site. Trucking for the import of materials, from offsite, would be routed from LOVR entering the site at the Auto Park Way intersection. Materials would be distributed based on the proposed phasing of the construction and would utilize the main corridors, Commercial Collectors "A" and "B", to route and distribute to the areas requiring fill material.

The proposed internal road system (installed in Phase 1) would be used to distribute cut material within the Project site boundaries until occupation of Villaggio's Lower Area occurs. The Project proposes to complete Villaggio's Upper Terrace earthwork import prior to occupancy of Villaggio's Lower Area development. Cut material from the portion of Villaggio's Upper Terrace that is above the 150-foot elevation (approximately 30,000 cy) may be exported to Villaggio's Lower Area if Villaggio is not occupied by residents at the time of export. Once occupancy has begun, any remaining material exported from Villaggio's Upper Terrace would be trucked offsite through the Mountainbrook Church driveway to Calle Joaquin and LOVR for use in the Madonna Froom Ranch component of the Project. This transfer of 30,000 cy of fill within the Project site would require approximately 2,143 heavy haul truck trips on local roadways then routed through Auto Park Way and Commercial Collector "A" to Madonna Froom Ranch.

Other potential construction-related impacts include idling, parked, or queued heavy trucks that could potentially obstruct visibility, traffic flows, and interfere with pedestrian and bicycle flows. Construction may also require the temporary or extended closure of traffic lanes on LOVR or Calle Joaquin to accommodate parked vehicles, operation of construction equipment, installation of Project improvements, including trenching for utilities along LOVR and installation of intersection improvements at Auto Park Way. Depending on final construction plan details, such lane and sidewalk closures could extend from a single day to several weeks. The intensity of construction-related traffic issues would vary by phase and would possibly result in periodic road closures for construction of onsite and offsite development, such as during proposed road improvements on LOVR. This would cause vehicle delays and disrupt cyclist and pedestrian flows, requiring travelers to potentially utilize alternative routes. While temporary during construction, these types of delays and disruptions would be substantial and would occur regularly over the five-year implementation of the Project, which would be *potentially significant*.

Mitigation Measure

MM TRANS-1 *The Applicant shall prepare a Construction Transportation Management Plan for all phases of the Project for review and approval by the City prior to issuance of grading or building permits to address and manage traffic during construction. The Plan shall be designed to:*

- *Prevent traffic impacts on the surrounding roadway network;*
- *Restrict construction staging to within the Project site;*
- *Minimize parking impacts both to public parking and access to private parking to the greatest extent practicable;*
- *Ensure safety for both those construction vehicles and works and the surrounding community; and*
- *Prevent substantial truck traffic through residential neighborhoods.*

The Construction Transportation Management Plan shall be subject to review and approval by the Public Works Director to ensure that the Plan has been designed in accordance with this mitigation measure. This review shall occur prior to issuance of grading or building permits. It shall, at a minimum, include the following:

Ongoing Requirements throughout the Duration of Construction:

- *A detailed Construction Transportation Management Plan for work zones shall be maintained. At a minimum, this shall include parking and travel lane configurations; warning, regulatory, guide, and directional signage; and area sidewalks, bicycle lanes, and parking lanes. The Plan shall include specific information regarding the Project's construction activities that may disrupt normal pedestrian and traffic flow and the measures to address these disruptions. Such Plan shall be reviewed and approved by the Community Development Department and implemented in accordance with this approval.*
- *Heavy haul construction vehicles and cement trucks shall not pass through Villaggio's Lower Area access roads once any of the Lower Area residences become occupied, and must utilize access from Calle Joaquin to access the Upper Terrace after that time.*
- *Work within the public right-of-way shall be reviewed and approved by the City on a case-by-case basis based on the magnitude and type of construction activity. Work shall generally be performed between 8:30 AM and 4:00 PM. This work includes dirt hauling and*

construction material delivery. Work within the public right-of-way outside of these hours shall only be allowed after the issuance of an after-hours construction permit administered by the Building and Safety Division. Additional restrictions may be put in place by Public Works Department depending on particular construction activities and conditions.

- *Streets and equipment shall be cleaned in accordance with established Public Works requirements.*
- *Trucks shall only travel on a City-approved construction route. Limited queuing may occur on the construction site itself.*
- *Materials and equipment shall be minimally visible to the public; the preferred location for materials is to be onsite, with a minimum amount of materials within a work area in the public right-of-way, subject to a current Use of Public Property Permit.*
- *Provision of off-street parking for construction workers, which may include the use of a remote location with shuttle transport to the site, if determined necessary by the City.*

Project Coordination Elements That Shall Be Implemented Prior to Commencement of Construction:

- *The traveling public shall be advised of impending construction activities that may substantially affect key roadways or other facilities (e.g., information signs, portable message signs, media listing/notification, and implementation of an approved Construction Impact Mitigation Plan).*
- *A Use of Public Property Permit, Excavation Permit, Sewer Permit, or Oversize Load Permit, as well as any Caltrans permits required for any construction work requiring encroachment into public rights-of-way, detours, or any other work within the public right-of-way shall be obtained.*
- *Timely notification of construction schedules shall be provided to all affected agencies (e.g., Police Department, Fire Department, Public Works Department, and Community Development Department) and to all owners and residential and commercial tenants of property within a radius of 0.25 mile.*
- *Construction work shall be coordinated with affected agencies in advance of start of work. Approvals may take up to two weeks per each submittal.*

- *Public Works Department approval of any haul routes for construction materials and equipment deliveries shall be obtained.*

Plan Requirements and Timing. The Applicant shall submit the Construction Transportation Management Plan to the City for review and approval prior to issuance of grading or building permits. The Construction Transportation Management Plan shall be updated as needed to reflect changing conditions over the Project's five-year construction schedule. The Applicant shall conduct necessary construction employee training prior to the commencement of construction. The City Public Works Department, Community Development Department, Police Department, and Fire Department, and nearby residences and businesses shall be notified of the construction schedule prior to initiation of construction. The Applicant shall submit individual traffic control plans and part of encroachment permits for work within the public right-of-way.

Monitoring. The City shall ensure compliance with the Construction Transportation Management Plan with periodic inspections of the Project site during construction. Complaints related to construction traffic at the site shall be directed to the City Public Works Department.

Residual Impact

Preparation of a Construction Transportation Management Plan as part of MM TRANS-1 would reduce construction-related traffic impacts to the maximum extent feasible by establishing truck routes and parking locations for construction workers. Residual impacts would be *less than significant with mitigation*.

Impact TRANS-2 Under Existing plus Project conditions, the addition of Project traffic would exacerbate existing queuing and peak hour traffic for automobiles, and poor levels of service for pedestrians and bicycle modes of transportation, causing transportation deficiencies in the Project vicinity (Significant and Unavoidable).

Using vehicle, pedestrian, bicycle trip generation and distribution data, the Project's TIS analyzed the potential transportation impacts of the Project on multi-modal facilities and operations, including intersections, roadway segments, bike paths, sidewalks, and transit routes under Existing plus Project conditions. Existing conditions and Existing plus Project conditions were compared to determine the degree of change projected for each of the

transportation facilities potentially impacted by Project trips. The TIS identifies multi-modal AM and PM peak hour LOS for intersection LOS and queuing, roadway segments, bike paths, sidewalks, and transit routes. The Existing plus Project LOS was compared with City thresholds of significance to determine where significant impacts may occur to intersections, roadway segments, pedestrian and bicycle facilities and transit operations as a result of Project implementation. Figures 3.1-12 through 3.1-15 found on pages 153 to 156 of the TIS illustrate the Existing plus Project lane geometries, traffic controls at the study intersections, and the Existing plus Project peak hour traffic volumes at the study intersections.

Potentially significant operational impacts to multi-modal transportation would occur at occupation of Villaggio's Lower Area and subsequently at occupation of Madonna Froom Ranch, including 10 separate intersections and roadway segments due to increased automobile, pedestrian, and bicycle traffic under Existing plus Project conditions. These include automobile impacts at five locations, bicycle and pedestrian related impacts at eight locations, and one impact due to neighborhood traffic management impact. These impacts under Existing plus Project conditions and associated mitigation are summarized below. For a complete description of all intersections, roadway segments, bike paths, sidewalks and transit facilities, see Tables 3.1-48 through 3.1-57 on pages 130 through 149 of the TIS (Appendix J).

wood.

Existing Plus Project Traffic Impacts (2035)

FIGURE 3.13-2

Existing Plus Project Impact Summary

Intersection #10: LOVR and U.S. 101 SB Ramps

Project-added automobile traffic would exacerbate the existing SB right-turn lane vehicular queue and WB right-turn lane queue in the PM peak hour, as it would exacerbate the 95th-percentile turning movement queues and exceed the available turn pocket capacity. This automobile queuing impact would be *potentially significant* and occur at occupation of Madonna Froom Ranch, though it would be reduced to less than significant by the implementation of MM TRANS-2 below.

Intersection #13: South Higuera Street / Vachell Lane

The Vachell Lane side-street stop sign-controlled intersection currently operates at an unacceptable Automobile LOS F during AM peak hours and E during PM peak hours (V/C ratios of 0.84 and 0.81, respectively). Project traffic would increase the V/C ratio by more than 0.01 to a V/C ratio of 0.96 for both peak hour periods, and side-street approach volumes would exceed signal warrant thresholds. This automobile LOS impact would be *potentially significant* and occur at occupancy of Madonna Froom Ranch, though would be reduced to less than significant by the implementation of MM TRANS-3.

Intersection #14: South Higuera Street / Suburban Road

Project-added automobile traffic would impact the existing WB left-turn queue at the Suburban Road side-street stop sign-controlled intersection in the PM peak hour, as it would exacerbate the 95th-percentile turning movement queues and exceed the available turn pocket capacity. This automobile queuing impact would be *potentially significant* and occur at occupation of Madonna Froom Ranch, though would be reduced to less than significant by the implementation of MM TRANS-4.

Intersection #15: South Higuera Street / Tank Farm Road

Project-added bicycle traffic would exacerbate existing unacceptable intersection LOS from LOS D to LOS E, with a LOS score of 4.59, for bicycles approaching the intersection WB due to the lack of bike lane on Tank Farm Road. This bicycle impact would be *potentially significant* and occur at occupancy of Villaggio's Lower Area, though would be reduced to less than significant by the implementation of MM TRANS-5.

Project-added automobile traffic would impact the SB left queue that would exceed capacity in the PM peak hour, as it would exacerbate the 95th-percentile turning movement

queues and exceed the available turn pocket capacity. This automobile queuing impact would be *potentially significant* and occur at occupation of Madonna Froom Ranch, and would remain significant and unavoidable with the implementation of MM TRANS-6.

Intersection #16: South Higuera Street / Prado Road

Project-added automobile traffic would impact the NB left queue and SB left queue in the AM and PM peak hours, as it would exacerbate the 95th-percentile turning movement queues and exceed the available turn pocket capacity. This automobile queuing impact would be *potentially significant* and occur at occupation of Madonna Froom Ranch, though would be reduced to less than significant by the implementation of MM TRANS-7.

Roadway Segments #1 and #2: LOVR from Prefumo Canyon Road to Oceanaire Drive and from Oceanaire Drive to Madonna Road

Roadway segments #1 and #2 on LOVR (the stretch between Prefumo Canyon Road and Madonna Road) currently operate at an unacceptable segment pedestrian LOS of D and F due to lack of adequate buffer between pedestrians and high-speed vehicular traffic. The Project would exacerbate these conditions with additional vehicle and person trips and would further degrade already exceeded LOS standards. This pedestrian impact would be *potentially significant* and occur at occupation of Villaggio's Lower Area, though would be reduced to less than significant by the implementation of MM TRANS-8.

Roadway Segments #3, #4, #5 and #6: LOVR from Madonna Road to South Higuera Street

Roadway segments #3, #4, #5, and #6 on LOVR (the stretch between Madonna Road and South Higuera Street) currently operate at an unacceptable segment pedestrian LOS of D and F due to lack of sidewalks or adequate buffer between pedestrians and high-speed vehicular traffic. The Project would exacerbate these conditions with additional vehicle and person trips and would further degrade already exceeded LOS standards. This pedestrian impact would be *potentially significant* and occur at occupation of Villaggio's Lower Area, though would be reduced to less than significant by the implementation of MM TRANS-9.

Roadway Segment #11: Madonna Road from LOVR to Dalidio Drive

Roadway segment #11 on Madonna Road (from LOVR to Dalidio Drive) currently operates at an unacceptable segment pedestrian LOS of D and F due to lack of limited pedestrian access and insufficient buffer between pedestrians and high-speed vehicular traffic. The Project would exacerbate these conditions with additional vehicle and person

trips and would further degrade already exceeded LOS standards. This pedestrian impact would be *potentially significant* and occur at occupation of Villaggio's Lower Area, though could be reduced to less than significant by the implementation of MM TRANS-10.

Local Road "A" – Neighborhood Traffic Analysis

Based on the trip generation and trip distribution analysis conducted for the internal Project trips, proposed Local Road "A" is estimated to have a daily traffic volume of 250 vpd, well within the City General Plan CE maximum ADT threshold of 1,500 vpd for local streets. While street designs are preliminary at this point, the geometric design (i.e., width and straight alignment) of Local Road "A" includes 12-foot wide travel lanes and lacks features such as street parking, bulb-outs/medians, horizontal curves or other features that are typically required to maintain automobile speeds within the City's established maximum target of 25 mph. This Neighborhood Traffic Management impact would be *potentially significant* and occur at occupation of Madonna Froom Ranch, though would be reduced to less than significant by the implementation of MM TRANS-11.

Public Transit Access

Regarding public transit, one new bus stop is proposed along SB LOVR, just south of the Project's primary access at the proposed intersection of Commercial Collector "A" with LOVR at Auto Park Way. The Applicant would coordinate with SLO Transit to integrate the new stop with existing SLO Transit routes 2A and 2B. Although transit service to Project vicinity is infrequent (i.e., 1-hour headways), the TIS projected that the Madonna Froom Ranch component of the Project would add very few trips to the existing transit services, which could be accommodated by the existing transit capacity. However, residents of Villaggio would also generate additional demand for transit services.

Elderly populations and senior living communities can generate a greater amount of demand for transit services compared to typical residential land uses due to lower percentages of licensed or capable drivers and hindered mobility. Villaggio's Life Community Plan is proposed as a senior living facility intended to accommodate both active and less-abled seniors over the age of 65, including seniors with health conditions and disabilities. Many of these residents may be unable to drive and/or are less likely to utilize more active modes of transportation (e.g., walking, bicycling). As such, the Villaggio component of the Project is anticipated to result in a high demand for transit services. Though the Project proposes a transit stop along an existing bus route at the proposed LOVR/Auto Park Way intersection, this transit stop is located nearly 0.5 mile

from some residential areas within Villaggio. Such a distance can prove inaccessible for many populations, particularly elderly populations with health conditions or disabilities. Due to the high demand for transit and the inaccessibility to the nearest transit facility by Villaggio residents, impacts are considered to be *potentially significant.*

Mitigation Measures

MM AQ-6 shall apply.

MM TRANS-2 *The Project Applicant shall design and construct the extension of the westbound left-turn pocket at the LOVR/U.S. 101 southbound ramps intersection to provide a storage length of 320 feet, and design and construct the extension of the southbound right-turn pocket at the LOVR/U.S. 101 southbound ramps intersection to provide a storage length of 140 feet. In coordination with the Applicant, the City and Caltrans shall also optimize traffic signal timings and coordination between LOVR/Calle Joaquin and LOVR/U.S. 101 southbound ramps. If improvements are constructed sooner by others, the Applicant may be responsible for a fair share contribution towards improvement costs. This mitigation measure requires Caltrans approval and coordination.*

Plan Requirements and Timing. Prior to grading and recordation of the final VTM for development of Madonna Froom Ranch, the Applicant shall submit a Public Street Improvement Plan for roadway improvements and a Traffic Engineering Study for signal timing recommendations for review and approval by the City. Implementation of improvements shall be completed prior to the issuance of a certificate of occupancy or building permits for the Madonna Froom Ranch development. If improvements are completed sooner by others, the Applicant shall make a fair share contribution prior to issuance of building permits for the Madonna Froom Ranch development.

Monitoring. The City shall verify that the Applicant installs the improvements in accordance to the approved phase and design plans or contributes an appropriate fair share as approved by the City.

MM TRANS-3 *The Project Applicant shall design and install measures to restrict left turns at the South Higuera Street/Vachell Lane intersection, extend Buckley Road from Vachell Lane to South Higuera Street, and install a*

traffic signal at Buckley Road/South Higuera Street intersection. If improvements are constructed sooner by others, the Applicant may be responsible for a fair share contribution towards improvement costs. This mitigation measure requires County approval and coordination.

Plan Requirements and Timing. Prior to grading and recordation of the final VTM for development of Madonna Froom Ranch, the Applicant shall submit a Public Street Improvement Plan for review and approval by the City. Implementation shall be completed prior to the issuance of a certificate of occupancy or building permits for the Madonna Froom Ranch development. If improvements are completed sooner by others, the Applicant shall make a fair share contribution prior to issuance of building permits for the Madonna Froom Ranch development.

Monitoring. The City shall verify that the Applicant installs the improvements in accordance to the approved phase and design plans or contributes an appropriate fair share as approved by the City.

MM TRANS-4 *The Project Applicant shall design and install the restriping of the westbound approach of the South Higuera Street/Suburban Road intersection to extend the left- and right-turn pocket storage to 250 feet. If improvements are constructed sooner by others, the Applicant may be responsible for a fair share contribution towards improvement costs.*

Plan Requirements and Timing. Prior to grading and recordation of the final VTM for development of Madonna Froom Ranch, the Applicant shall submit a Public Street Improvement Plan for review and approval by the City. Implementation shall be completed prior to the issuance of a certificate of occupancy or building permits for Madonna Froom Ranch development. If improvements are completed sooner by others, the Applicant may be responsible for making a fair share contribution prior to issuance of building permits for the Madonna Froom Ranch development.

Monitoring. The City shall verify that the Applicant installs the improvements in accordance to the approved phase and design plans or contributes an appropriate fair share as approved by the City.

MM TRANS-5 *The Project Applicant shall extend the westbound bike lane on Tank Farm Road approaching the South Higuera Street/Tank Farm Road intersection to the intersection and install a bike box to facilitate bicycle left-turn movements. If improvements are constructed sooner by others, the Applicant may be responsible for a fair share contribution towards improvement costs.*

Plan Requirements and Timing. Prior to grading and recordation of the final VTM for development of Villaggio's Lower Area, the Applicant shall submit a Public Street Improvement Plan for review and approval by the City. Implementation shall be completed prior to the issuance of a certificate of occupancy or building permits for Villaggio's Lower Area development. If improvements are completed sooner by others, the Applicant may be responsible for a fair share contribution prior to issuance of building permits for Villaggio's Lower Area development.

Monitoring. The City shall verify that the Applicant installs the improvements in accordance to the approved phase and design plans or contributes an appropriate fair share as approved by the City.

MM TRANS-6 *The Project Applicant shall design and install a second southbound left-turn lane at the South Higuera Street/Tank Farm Road intersection. The Project Applicant shall also pay fair share costs for construction of the Prado Road Overpass/Interchange project. If intersection improvements are constructed sooner by others, the Applicant will be responsible for a fair share contribution towards improvement costs through participation in the Citywide Transportation Impact Fee program.*

Plan Requirements and Timing. Prior to grading and recordation of the final VTM for development of Madonna Froom Ranch, the Applicant shall submit a Public Street Improvement Plan for review and approval by the City for the South Higuera/Tank Farm intersection improvements. Implementation of intersection improvements shall be completed prior to the issuance of a certificate of occupancy or building permits for the Madonna Froom Ranch development. Intersection improvement costs exceeding the Project's proportional share may be eligible for fee credits or reimbursements. Participation in the Citywide Transportation Impact Fee program will fulfill the Project's fair share financial obligation

towards the Prado Road Overpass/Interchange project and the South Higuera/Tank Farm Road intersection improvements, if constructed sooner by others. Payment of City Transportation Impact Fees shall be required prior to issuance of building permits for each development phase.

Monitoring. The City shall verify that the Applicant pays fair share costs in accordance to the approved phase and design plans.

MM TRANS-7 *The Project Applicant shall design and install a second northbound left-turn lane at the South Higuera Street/Prado Road intersection, which requires the replacement of the Prado Road Bridge just west of South Higuera. Project is responsible for implementation prior to development of Madonna Froom Ranch, or fair share contribution through participation in the Citywide Transportation Impact Fee program if improvements are constructed sooner by others.*

Plan Requirements and Timing. Prior to grading and recordation of the final VTM for development of Madonna Froom Ranch, the Applicant shall submit a Public Street Improvement Plan for review and approval by the City. Implementation shall be completed prior to the issuance of a certificate of occupancy or building permits for the Madonna Froom Ranch development. Improvement costs exceeding the Project's proportional share may be eligible for fee credits or reimbursements. If improvements are completed sooner by others, the Applicant shall make a fair share contribution through participation in the Citywide Transportation Impact Fee program prior to issuance of building permits for the Madonna Froom Ranch development.

Monitoring. The City shall verify that the Applicant installs the improvements in accordance to the approved phase and design plans or contributes an appropriate fair share as approved by the City.

MM TRANS-8 *The Project Applicant shall design and install Class IV bikeways (protected bike lanes) along LOVR to provide a physical buffer between the sidewalk and vehicular traffic lanes. Improvement extents shall occur in the northbound direction between Laguna Lane and Diablo Drive, and in the southbound direction between Diablo Drive and Madonna Road.*

Project is responsible for fair share contribution towards improvement costs.

Plan Requirements and Timing. Prior to grading and recordation of the final VTM for development of Villaggio's Lower Area, the Applicant shall submit a Public Street Improvement Plan for review and approval by the City. Implementation shall be completed prior to the issuance of a certificate of occupancy or building permits for Villaggio's Lower Area development. Improvement costs exceeding the Project's proportional share may be eligible for fee credits or reimbursements.

Monitoring. The City shall verify that the Applicant installs the improvements in accordance to the approved phase and design plans or contributes an appropriate fair share as approved by the City.

MM TRANS-9 *The Project Applicant shall design and install ADA-compliant curb, gutter and sidewalk along the west side of LOVR to complete the sidewalk connection between the Irish Hills Plaza and Calle Joaquin. The Project Applicant shall also design and install Class IV bikeways (protected bike lanes) along LOVR to provide a physical buffer between the sidewalk and vehicular traffic lanes in the northbound and southbound directions between Madonna Road and South Higuera Street. The Project is responsible for all costs related to construction of sidewalks, curb and gutter, and a fair share contribution towards Class IV bikeway improvements. This mitigation measure requires Caltrans approval and coordination for improvements near LOVR/U.S. 101 interchange.*

Plan Requirements and Timing. Prior to grading and recordation of the final VTM for development of Villaggio's Lower Area, the Applicant shall submit a Public Street Improvement Plan for review and approval by the City. Implementation shall be completed prior to the issuance of a certificate of occupancy or building permits for Villaggio's Lower Area development. Bikeway improvement costs exceeding the Project's proportional share may be eligible for fee credits or reimbursements.

Monitoring. The City shall verify that the Applicant installs the improvements in accordance to the approved phase and design plans or contributes an appropriate fair share as approved by the City.

MM TRANS-10 The Project Applicant shall design and install a Class I Multi-Use Path parallel to Madonna Road between Oceanaire Drive and the U.S. 101 southbound ramps intersection. The Project is responsible for a fair share contribution towards improvements through payment of City Traffic Impact Fees.

Plan Requirements and Timing. Prior to grading and recordation of the final VTM for development of Villaggio's Lower Area, the Applicant shall submit a Public Street Improvement Plan for review and approval by the City. Implementation shall be completed prior to the issuance of a certificate of occupancy or building permits for Villaggio's Lower Area development. Improvement costs exceeding the Project's proportional share may be eligible for fee credits or reimbursements. If improvements are completed sooner by others, the Applicant shall make a fair share contribution through participation in the Citywide Transportation Impact Fee program prior to issuance of building permits for Villaggio's Lower Area development.

Monitoring. The City shall verify that the Applicant installs the improvements in accordance to the approved phase and design plans or contributes an appropriate fair share as approved by the City.

MM TRANS-11 The Project is responsible for incorporating traffic calming measures (e.g., speed humps, bulb-outs, chicanes, etc.) into the design of Local Road "A" prior to development of Villaggio's Lower Area.

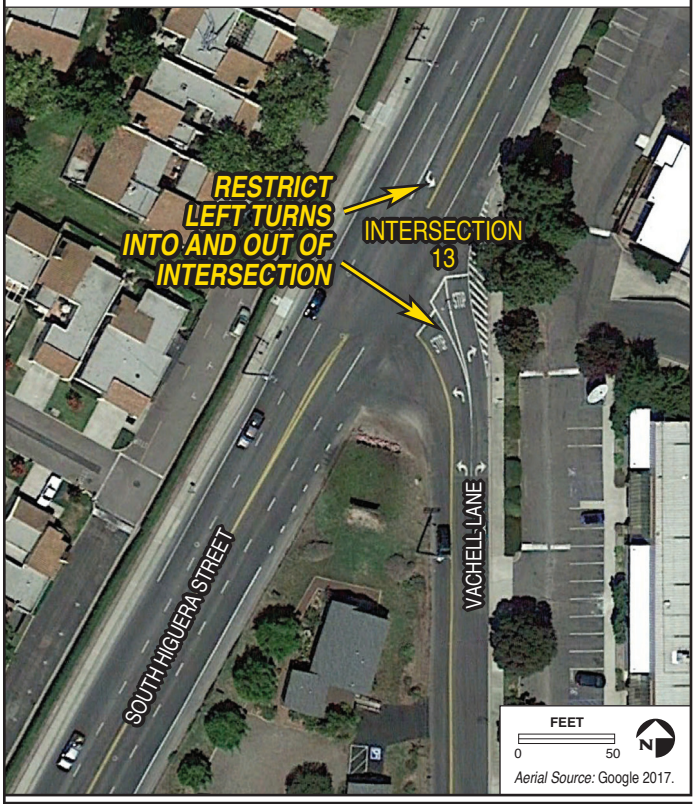
Plan Requirements and Timing. Prior to grading and recordation of the final VTM for development of Villaggio's Lower Area, the Applicant shall submit a Public Street Improvement Plan for review and approval by the City. Implementation shall be completed prior to the issuance of a certificate of occupancy or building permits for development of Villaggio's Lower Area.

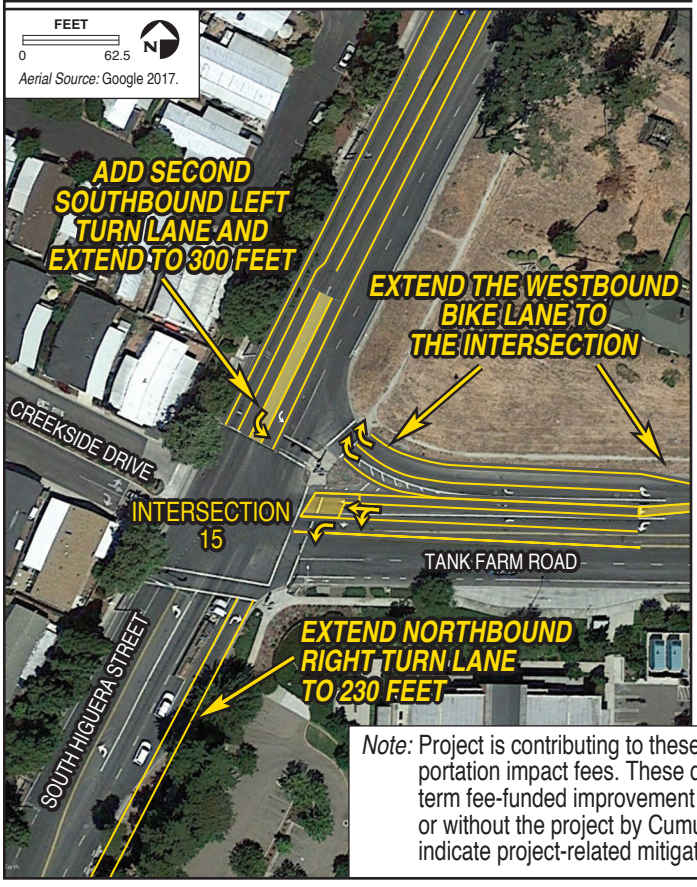
Monitoring. The City shall verify that the Applicant installs the improvements in accordance to the approved phase and design plans.

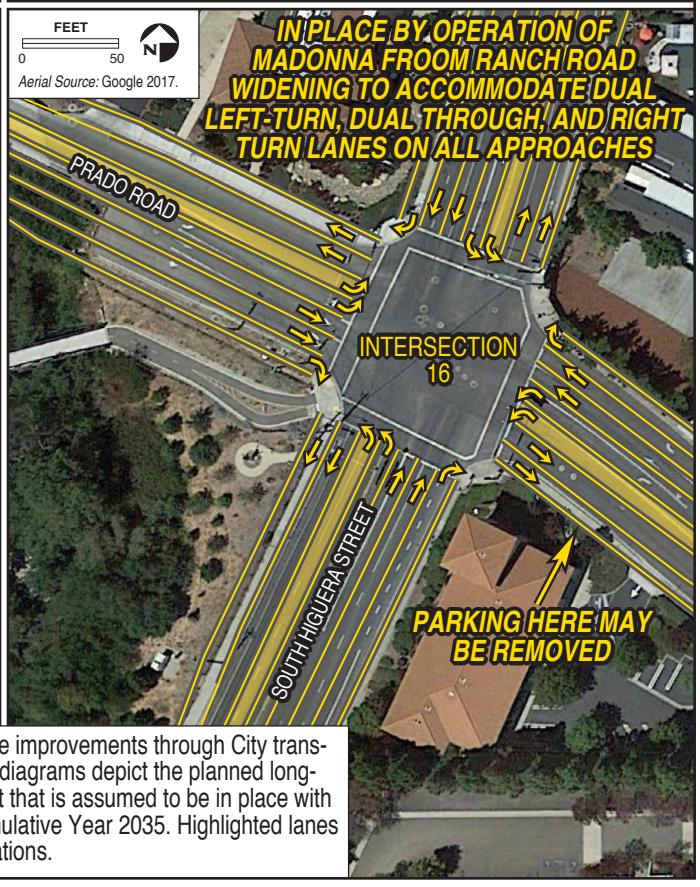
Residual Impacts

Ten of the identified Existing plus Project impacts would be less than significant with mitigation while one impact would be unavoidable and significant (see Table 3.13-33). With implementation of MM TRANS-2 through -5 and MM TRANS-7 through -11, impacts under Existing plus Project conditions would be reduced to a less than significant level with mitigation (Figure 3.13-3). Similarly, implementation of MM AQ-6, requiring the Applicant for the Villaggio Life Community Plan provide shuttle services for residents of Villaggio, would address the demands of the proposed senior resident population on transit facilities and reduce impacts to a less than significant level with mitigation. However, implementation of MM TRANS-6 requires the completion of the Prado Road Overpass/Interchange project, which cannot be ensured by this Project. Therefore, if Prado Road Overpass/Interchange project is not in place by Project occupancy, impacts would be *significant and unavoidable*.

Note: Extension of Buckley Road to South Higuera is part of the overall mitigations strategy for South Higuera/Vachell Lane.







Note: Project is contributing to these improvements through City transportation impact fees. These diagrams depict the planned long-term fee-funded improvement that is assumed to be in place with or without the project by Cumulative Year 2035. Highlighted lanes indicate project-related mitigations.

wood.

Partial List of Applicant Funded City Improvements to Transportation Network – Intersections 13, 14, 15, and 16
[depicted improvements are not representative of final design plans, and may be constructed in conjunction with other projects in the area]

FIGURE 3.13-3

Table 3.13-33. Existing Plus Project Transportation Impact Summary

Location	Trigger	Transportation Mode	Mitigation Measure	Impact
Intersection #10: LOVR / U.S. 101 SB Ramps	Development of Madonna Froom Ranch	Auto (Queue)	TRANS-2	Less than Significant with Mitigation
Intersection #13: South Higuera Street / Vachell Lane	Development of Madonna Froom Ranch	Auto	TRANS-3	Less than Significant with Mitigation
Intersection #14: South Higuera Street / Suburban Road	Development of Madonna Froom Ranch	Auto (Queue)	TRANS-4	Less than Significant with Mitigation
Intersection #15: South Higuera Street / Tank Farm Road	Development of Villaggio Lower Area **Development of Madonna Froom Ranch**	Bicycle **Auto (Queue)**	TRANS-5 **TRANS-6**	Less than Significant with Mitigation **Significant and Unavoidable**
Intersection #16: South Higuera Street / Prado Road	Development of Madonna Froom Ranch	Auto (Queue)	TRANS-7	Less than Significant with Mitigation
Roadway Segments #1 and #2: LOVR from Prefumo Canyon Road to Oceanaire Drive and from Oceanaire Drive to Madonna Road	Development of Villaggio Lower Area	Pedestrian	TRANS-8	Less than Significant with Mitigation
Roadway Segments #3, #4, #5 and #6: LOVR from Madonna Road to South Higuera Street	Development of Villaggio Lower Area	Pedestrian	TRANS-9	Less than Significant with Mitigation
Roadway Segment #11: Madonna Road from LOVR to Dalidio Drive	Development of Villaggio Lower Area	Pedestrian	TRANS-10	Less than Significant with Mitigation
Local Road "A"	Development of Villaggio Lower Area	Neighborhood Traffic Management	TRANS-11	Less than Significant with Mitigation

Source: TIS; see Appendix J. For a complete description of all intersections, roadway segments, bike paths, sidewalks, and transit facilities, see Tables 3.1-48 through 3.1-57 on pages 130 through 149 of the TIS.
Bolded items indicate significant an unavoidable impacts.
Note: MM AQ-6 applies to reduce VMT through trip reduction.

Impact TRANS-3 **Under Near-Term plus Project (Scenario 2) conditions, the addition of Project traffic would exacerbate existing queuing and peak hour traffic for automobiles and poor levels of service for pedestrians and bike modes of transportation, causing**

transportation deficiencies in the Project vicinity (Significant and Unavoidable).

Using vehicle, pedestrian, bicycle trip generation and distribution data, and increased transit demand, the TIS analyzed the potential transportation impacts of the Project on multi-modal facilities and operations, including intersections, roadway segments, bike paths, sidewalks, and transit routes under Near-Term plus Project conditions. As mentioned previously, analysis results for Near-Term Scenario 2, which does not assume completion of the Prado Interchange Project prior to occupancy of the Project, are presented herein as a conservative, worst-case basis for analysis of potential project impacts. Near-Term conditions and Near-Term plus Project conditions were compared to determine the degree of change projected for each of the transportation facilities potentially impacted by Project trips. The TIS identifies multi-modal AM and PM peak hour LOS for intersection LOS and queuing, roadway segments, bike paths, sidewalks, and transit routes. The Near-Term plus Project LOS was compared with City thresholds of significance to determine where significant impacts would occur to intersections, roadway segments, pedestrian and bicycle facilities and transit operations as a result of Project implementation. Figures 3.1-20 through 3.1-23 found on pages 210 to 213 of the TIS illustrate the Near-Term plus Project lane geometries, traffic controls at the study intersections, and the Near-Term plus Project peak hour traffic volumes at the study intersections (Appendix J).

Potentially significant operational impacts to multi-modal transportation would occur at occupation of Villaggio's Lower Area and subsequently at occupation of Madonna Froom Ranch, including 15 separate intersections and roadway segments due to increased automobile, pedestrian, and bicycle traffic under Near-Term plus Project conditions. These include automobile impacts at eight locations, bicycle and pedestrian related impacts at eight locations, and one impact due to neighborhood traffic management impact. These impacts under Near-Term plus Project conditions and associated mitigation are summarized below.

Near-Term Plus Project Impact Summary

Intersection #1: LOVR and Foothill Boulevard

Project-added automobile traffic would exacerbate the SB left-turn lane queue in the AM peak hour, as it would exceed the available turn pocket capacity. This automobile queuing impact would be *potentially significant* and occur at occupancy of Villaggio's Lower Area, though could feasibly be reduced by the implementation of MM TRANS-12. However,

given the LOVR/Foothill Boulevard intersection is County jurisdiction, improvement of this intersection to address Near-Term plus Project traffic would be outside of the City's control. Necessary improvements proposed by the City would need to be accepted by the County, but there is always a possibility that the improvements are not approved by the County, and therefore cannot be implemented. Therefore, impacts are conservatively considered significant and unavoidable due to this possibility.

Intersection #6: LOVR and Madonna Road

Project-added vehicular and pedestrian traffic would exacerbate unacceptable pedestrian intersection LOS for pedestrians crossing LOVR during the PM peak hour from LOS C to LOS D, with a LOS score of 3.53. Project-added vehicular and bicycle traffic would exacerbate Near-term unacceptable intersection LOS for bicycles approaching the intersection WB on Madonna Road from LOS D to LOS E, with a LOS score of 4.63. Project-added traffic would exacerbate existing SB right queue and WB right queue in the PM peak hour. These vehicle, pedestrian, and bicycle impacts would be *potentially significant* and occur at occupancy of Villaggio's Lower Area, and would remain significant and unavoidable with the implementation of MM TRANS-13, MM TRANS-16, and MM TRANS-19.

Intersection #10: LOVR and U.S. 101 SB Ramps

Project-added automobile traffic would impact the SB right-turn lane queue in the PM peak hour, as it would exacerbate the 95th-percentile turning movement queues and exceed the available turn pocket capacity. This automobile queuing impact would be *potentially significant* and occur at occupancy of Madonna Froom Ranch, and would remain significant and unavoidable with the implementation of MM TRANS-2 and MM TRANS-6.

Intersection #15: South Higuera Street / Tank Farm Road

Project-added vehicular and pedestrian traffic would exacerbate unacceptable pedestrian intersection LOS that reflects crossing timing constraint across South Higuera Street during the PM peak hour from LOS C to LOS D, with a LOS score of 3.67. Project-added vehicular and bicycle traffic would exacerbate Near-term unacceptable intersection LOS for bicycles approaching the intersection WB from LOS D to LOS E due to the lack of bike lane on Tank Farm Road, with a LOS score of 5.19. These pedestrian and bicycle impacts would be *potentially significant* and occur at occupancy of Villaggio's Lower Area, though

would be reduced to less than significant by the implementation of MM TRANS-15 and MM TRANS-5.

Project-added automobile traffic would impact the NB right queue during the AM and PM peak hours and the SB left-turn queue in the AM peak hour, as it would exacerbate the 95th-percentile turning movement queues and exceed the available turn pocket capacity. This automobile queuing impact would be *potentially significant* and occur at occupancy of Madonna Froom Ranch, and would remain significant and unavoidable with the implementation of MM TRANS-16 and TRANS-6.

Intersection #16: South Higuera Street / Prado Road

Project-added automobile traffic would impact the SB left-turn queue in the AM peak hour, as it would exacerbate the 95th-percentile turning movement queues and exceed the available turn pocket capacity. This automobile queuing impact would be *potentially significant* and occur at occupancy of Madonna Froom Ranch, though would be reduced to less than significant by the implementation of MM TRANS-17.

Intersection #18: Madonna Road / Oceanaire Drive

Project-added automobile traffic would impact the WB right-turn queue in the AM peak hour, as it would exacerbate the 95th-percentile turning movement queues and exceed the available turn pocket capacity. This automobile queuing impact would be *potentially significant* and occur at occupancy of Madonna Froom Ranch, and would remain significant and unavoidable with the implementation of MM TRANS-6.

Intersection #19: Madonna Road and Dalidio Drive

Project-added automobile traffic would exacerbate the EB right-turn queue during both the AM and PM peak hour, as it would exacerbate the 95th-percentile turning movement queues and exceed the available turn pocket capacity. This automobile queuing impact would be *potentially significant* and occur at occupancy of Madonna Froom Ranch, and would remain significant and unavoidable with the implementation of MM TRANS-20.

Intersections #20 and #21: Madonna Road / U.S. 101 SB Ramps and Madonna Road / U.S. 101 NB Ramps

Project-added automobile traffic would exceed Caltrans standards for the U.S. 101 SB and NB Ramps in the PM peak hour from LOS D to LOS D and LOS D to LOS E respectively, with LOS scores of D (V/C ratio 1.21) and E (V/C ratio 1.17), respectively. This

automobile LOS impact would be *potentially significant* and occur at occupancy of Villaggio's Lower Area, and would remain significant and unavoidable with the implementation of MM TRANS-14.

Roadway Segments #1 and #2: LOVR from Prefumo Canyon Road to Oceanaire Drive and from Oceanaire Drive to Madonna Road

Roadway segments #1 and #2 on LOVR (the stretch between Prefumo Canyon Road and Madonna Road) currently operate at an unacceptable segment pedestrian LOS of D and F due to lack of sufficient buffer area between pedestrians and high-speed vehicular traffic. The Project would exacerbate these conditions with additional vehicle and person trips and would further degrade already exceeded LOS standards. This pedestrian impact would be *potentially significant* and occur at occupancy of Villaggio's Lower Area, though would be reduced to less than significant by the implementation of MM TRANS-8.

Roadway Segments #3, #4, #5 and #6: LOVR from Madonna Road to South Higuera Street

Roadway segments #3, #4, #5, and #6 on LOVR (the stretch between Madonna Road and South Higuera Street) currently operate at an unacceptable segment pedestrian LOS of D and F due to lack of sidewalks or sufficient buffer area between pedestrians and vehicular traffic. The Project would exacerbate these conditions with additional vehicle and person trips and would further degrade already exceeded LOS standards. This pedestrian impact would be *potentially significant* and occur at occupancy of Villaggio's Lower Area, though would be reduced to less than significant by the implementation of MM TRANS-9.

Roadway Segment #5: LOVR from U.S. 101 SB Ramps to U.S. 101 NB Ramps

Project-added automobile traffic would exceed the City's standard in the SB direction during the PM peak hour from LOS D to LOS E. This automobile LOS impact would be *potentially significant* and occur at occupation of Madonna Froom Ranch, though would be reduced to less than significant by the implementation of MM TRANS-18.

Mitigation Measures

MM TRANS-2 shall apply.

MM TRANS-5 shall apply.

MM TRANS-6 shall apply.

MM TRANS-8 shall apply.

MM TRANS-9 shall apply.

MM TRANS-12 *In coordination with the County, the Project Applicant shall coordinate and fund any costs required to optimize the traffic signal timing at the County intersection of LOVR/Foothill Boulevard to reduce queues for the southbound left-turn movement. This mitigation measure requires County approval and coordination.*

Plan Requirements and Timing. Prior to grading and recordation of the final VTM for development of Villaggio's Lower Area, the Applicant shall submit a Traffic Engineering Study identifying recommended signal timing modifications for review and approval by the County. Signal optimization shall be completed to the satisfaction of the County prior to City issuance of a certificate of occupancy or building permits for development of Villaggio's Lower Area.

Monitoring. The City shall verify that the Applicant implements the improvements in accordance to the approved phase and design plans or contributes an appropriate fair share to the satisfaction of the County.

MM TRANS-13 *In coordination with the City, the Project Applicant shall fund any costs required to implement Lead Pedestrian Intervals for each pedestrian crossing phase at the LOVR/Madonna Road intersection.*

Plan Requirements and Timing. Prior to grading and recordation of the final VTM for development of Villaggio's Lower Area, the Applicant shall submit a Traffic Engineering Study identifying recommended signal timing modifications for review and approval by the City. The proposed Lead Pedestrian Intervals shall be installed prior to the issuance of a certificate of occupancy or building permits for Villaggio's Lower Area development.

Monitoring. The City shall verify that the Applicant installs the improvements in accordance to the approved phase and design plans or contributes an appropriate fair share as approved by the City.

MM TRANS-14 *The Project Applicant shall pay fair share costs for construction of the Prado Road Overpass/Interchange project and northbound U.S. 101*

ramps through participation in the Citywide Transportation Impact Fee program.

Plan Requirements and Timing. Participation in the Citywide Transportation Impact Fee program will fulfill the Project's fair share financial obligation towards the Prado Road Overpass/Interchange project. Payment of City Transportation Impact Fees shall be required prior to issuance of building permits for each development phase.

Monitoring. The City shall verify that the Applicant contributes an appropriate fair share as approved by the City.

MM TRANS-15 *In coordination with the City, the Project Applicant shall fund any costs required to implement Lead Pedestrian Intervals for each pedestrian crossing phase at the South Higuera Street/Tank Farm Road intersection.*

Plan Requirements and Timing. Prior to grading and recordation of the final VTM for development of Villaggio's Lower Area, the Applicant shall submit a Traffic Engineering Study identifying recommended signal timing modifications for review and approval by the City. The proposed Lead Pedestrian Intervals shall be installed prior to the issuance of an occupancy or building permit for Villaggio's Lower Area development.

Monitoring. The City shall verify that the Applicant installs the improvements in accordance to the approved phase and design plans or contributes an appropriate fair share as approved by the City.

MM TRANS-16 *The Project Applicant shall design and install improvements to extend the northbound right-turn pocket storage at the South Higuera Street/Tank Farm Road intersection to 230 feet. If improvements are constructed sooner by others, the Applicant may be responsible for a fair share contribution towards improvement costs.*

Plan Requirements and Timing. Prior to grading and recordation of the final VTM for development of Madonna Froom Ranch, the Applicant shall submit a Public Street Improvement Plan for review and approval by the City. The proposed improvements shall be completed

prior to the issuance of an occupancy or building permit for Madonna Froom Ranch development. Improvement costs exceeding the Project's proportional share may be eligible for fee credits or reimbursements. If constructed sooner by others, participation in the Citywide Transportation Impact Fee program will fulfill the Project's fair share financial obligation. Payment of City Transportation Impact Fees shall be required prior to issuance of building permits for each development phase.

Monitoring. The City shall verify that the Applicant installs the improvements in accordance to the approved phase and design plans or contributes an appropriate fair share as approved by the City.

MM TRANS-17 *The Project Applicant shall design and install restriping modifications at the South Higuera Street/Prado Road intersection to accommodate a second southbound left-turn lane and second eastbound through lane. This requires striping modifications, potential street parking removal on the eastern leg of the intersection, and potential traffic signal modifications to accommodate the modified intersection configuration. If intersection improvements are constructed sooner by others, the Applicant will be responsible for a fair share contribution towards improvement costs.*

Plan Requirements and Timing. Prior to grading and recordation of the final VTM for development of Madonna Froom Ranch, the Applicant shall submit a Public Street Improvement Plan for review and approval by the City. Implementation shall be completed prior to the issuance of an occupancy or building permit for the Madonna Froom Ranch development. Improvement costs exceeding the Project's proportional share may be eligible for fee credits or reimbursements. If constructed sooner by others, participation in the Citywide Transportation Impact Fee program will fulfill the Project's fair share financial obligation. Payment of City Transportation Impact Fees shall be required prior to issuance of building permits for each development phase.

Monitoring. The City shall verify that the Applicant installs the improvements in accordance to the approved phase and design plans or contributes an appropriate fair share as approved by the City.

MM TRANS-18 *In coordination with the City and Caltrans, the Project Applicant shall fund any costs required to optimize traffic signal timings at three intersections along LOVR between Calle Joaquin and the U.S. 101 northbound ramps to improve traffic coordination and operations along this roadway segment. These intersections include LOVR/Calle Joaquin, LOVR/U.S. 101 southbound ramps, and LOVR/U.S. 101 northbound ramps. This requires coordination with Caltrans.*

Plan Requirements and Timing. Prior to grading and recordation of the final VTM for development of Madonna Froom Ranch, the Applicant shall submit a Traffic Engineering Study identifying recommended signal timing modifications for review and approval by the City and Caltrans. Signal optimization shall be completed to the satisfaction of the City and Caltrans prior to City issuance of a certificate of occupancy or building permits for Madonna Froom Ranch development.

Monitoring. The City shall verify that the Applicant installs the improvements in accordance to the approved phase and design plans or contributes an appropriate fair share as approved by the City.

MM TRANS-19 *The Project Applicant shall design and install restriping modifications at the LOVR/Madonna Road intersection to increase turn pocket storage to 365 feet and optimize signal timings to improve operations and reduce queuing at the SB left-turn lane. If intersection improvements are constructed sooner by others, the Applicant will be responsible for a fair share contribution towards improvement costs.*

Plan Requirements and Timing. Prior to grading and recordation of the final VTM for development of Madonna Froom Ranch, the Applicant shall submit a Public Street Improvement Plan for review and approval by the City. Implementation shall be completed prior to the issuance of an occupancy or building permit for the Madonna Froom Ranch development. Improvement costs exceeding the Project's

proportional share may be eligible for fee credits or reimbursements. If constructed sooner by others, participation in the Citywide Transportation Impact Fee program will fulfill the Project's fair share financial obligation. Payment of City Transportation Impact Fees shall be required prior to issuance of building permits for each development phase.

Monitoring. The City shall verify that the Applicant installs the improvements in accordance to the approved phase and design plans or contributes an appropriate fair share as approved by the City.

MM TRANS-20 *The Project Applicant shall modify the traffic signal at the Madonna Road/Dalidio Drive intersection to provide EB right-turn overlap phase concurrent with NB left-turn phase. If intersection improvements are constructed sooner by others, the Applicant will be responsible for a fair share contribution towards improvement costs.*

Plan Requirements and Timing. Prior to grading and recordation of the final VTM for development of Madonna Froom Ranch, the Applicant shall submit a Public Street Improvement Plan for review and approval by the City. Implementation shall be completed prior to the issuance of an occupancy or building permit for the Madonna Froom Ranch development. Improvement costs exceeding the Project's proportional share may be eligible for fee credits or reimbursements. If constructed sooner by others, participation in the Citywide Transportation Impact Fee program will fulfill the Project's fair share financial obligation. Payment of City Transportation Impact Fees shall be required prior to issuance of building permits for each development phase.

Monitoring. The City shall verify that the Applicant installs the improvements in accordance to the approved phase and design plans or contributes an appropriate fair share as approved by the City.

Residual Impacts

Six of the identified impacts would be less than significant with mitigation while six impacts would be unavoidable and significant (see Table 3.13-34). With implementation of MM TRANS-2, -5, -8, -9, -13, and -15 through -20, impacts under Near-Term plus

Project conditions would be reduced to a less than significant level with mitigation. However, MM TRANS-12 involves improvement of an intersection that is within County jurisdiction and MM TRANS-18 requires approval by Caltrans for improvements to U.S. 101 facilities. Implementation of these improvements would be outside of the City's control and cannot be ensured. If these improvements could not be agreed to with the County or Caltrans or could not be implemented, impacts would be *significant and unavoidable*.

Similarly, implementation of MM TRANS-6, -14, -19, and -20 require the completion of the Prado Road Overpass/Interchange project, which cannot be ensured by this Project. While MM TRANS-6 and -20 require completion of the Prado Road Overpass/Interchange project by development of Madonna Froom Ranch (Phase 4), MM TRANS-14 and -19 requires completion of the Prado Road Overpass/Interchange project by development of Villaggio's Lower Area (Phase 2) due to additional contributions towards operational deficiencies at several intersections and roadway segments by traffic generated by other development projects already planned and approved, but not yet occupied. Therefore, if the Prado Road Overpass/Interchange is not in place by Project occupancy under Near-Term plus Project conditions, impacts would be *significant and unavoidable*.

Table 3.13-34. Near-Term Plus Project Transportation Impact Summary

Location	Trigger	Transportation Mode	Mitigation Measure	Impact
Intersection #1: LOVR / Foothill Boulevard	**Development of Villaggio Lower Area**	**Auto (Queue)**	**TRANS-12**	**Significant and Unavoidable.**
Intersection #6: LOVR / Madonna Road	**Development of Villaggio Lower Area**	**Pedestrian**	**TRANS-14**	**Significant and Unavoidable**
	Development of Villaggio Lower Area	**Bicycle**	**TRANS-15**	**Significant and Unavoidable**
	Development of Villaggio Lower Area	**Vehicle**	**TRANS-19**	**Significant and Unavoidable**
Intersection #10: LOVR / U.S. 101 SB Ramps	**Development of Madonna Froom Ranch**	**Auto (Queue)**	**TRANS-2 TRANS-6**	**Significant and Unavoidable**

Table 3.13-34. Near-Term Plus Project Transportation Impact Summary (Continued)

Location	Trigger	Transportation Mode	Mitigation Measure	Impact
Intersection #15: South Higuera Street / Tank Farm Road	Development of Villaggio Lower Area	Pedestrian	TRANS-15	Less than Significant with Mitigation
	Development of Villaggio Lower Area	Bicycle	TRANS-5	Less than Significant with Mitigation
	Development of Madonna Froom Ranch	**Auto (Queue)**	**TRANS-16 TRANS-6**	**Significant and Unavoidable**
Intersection #16: South Higuera Street / Prado Road	Development of Madonna Froom Ranch	Auto (Queue)	TRANS-17	Less than Significant with Mitigation
Intersection #18: South Higuera Street / Prado Road	**Development of Madonna Froom Ranch**	**Auto (Queue)**	**TRANS-6**	**Significant and Unavoidable**
Intersection #19: Madonna Road / Dalidio Drive	**Development of Madonna Froom Ranch**	**Auto (Queue)**	**TRANS-20**	**Significant and Unavoidable**
Intersection #20 and #21: South Higuera Street / Prado Road	**Development of Madonna Froom Ranch**	**Auto (Queue)**	**TRANS-14**	**Significant and Unavoidable**
Roadway Segments #1 and #2: LOVR from Prefumo Canyon Road to Oceanaire Drive and from Oceanaire Drive to Madonna Road	Development of Villaggio Lower Area	Pedestrian	TRANS-8	Less than Significant with Mitigation
Roadway Segments #3, #4, #5 and #6: LOVR from Madonna Road to South Higuera Street	Development of Villaggio Lower Area	Pedestrian	TRANS-9	Less than Significant with Mitigation
Roadway Segment #5: LOVR from U.S. 101 SB Ramps to U.S. 101 NB Ramps	Development of Madonna Froom Ranch	Auto	TRANS-18	Less than Significant with Mitigation

Source: TIS; see Appendix J. For a complete description of all intersections, roadway segments, bike paths, sidewalks and transit facilities, see Tables 3.1-48 through 3.1-57 on pages 130 through 149 of the TIS.
Bolded items indicate significant an unavoidable impacts.
Note: MM AQ-6 also applies to reduce VMT and trips.

Impact TRANS-4. The Project would result in traffic safety impacts and inadequate emergency access and evacuation options, resulting in potential for structural damage, injuries, or loss of life due to wildland fires or other emergency situations (Less than Significant with Mitigation).

Traffic Safety

The segment of LOVR between Froom Ranch Way and Calle Joaquin has been identified as being a high-collision rate location and the design of this segment is not consistent with City access management or design standards for a Parkway Arterial Street. Implementation of the Project would add traffic to this segment, exacerbating these existing deficiencies. Impacts of the Project on this segment are therefore considered *potentially significant,* though could be reduced to less than significant by implementation of MM TRANS-21.

The County segment of South Higuera Street between LOVR and Clover Ridge Lane was also identified as having a higher Fatal-plus-Injury rate compared to statewide averages for similar facilities. However, as detailed in the TIS, implementation of the Project would add a nominal amount of traffic to this roadway segment, and is not considered to exacerbate these existing trends. Impacts of the Project on traffic safety at this roadway segment is considered *less than significant.*

Emergency Evacuation

The Project would substantially increase the total number of people in the area that may be subject to evacuation during a wildland fire or other natural hazard event. During periods of maximum occupancy, 1,231 residents and employees could be onsite within the proposed residential and commercial areas. In addition, residents of the health care unit, which includes skilled nursing and memory care, may require special evacuation, as well as family members visiting residents of Villaggio who may also be onsite. The Project includes a new road at the intersection of LOVR and Auto Park Way as the primary ingress and egress route to the site for private vehicles and first responders. The Project also includes a gated emergency access from the Upper Terrace of Villaggio to the parking lot of Mountainbrook Church uphill from the Project site, which would connect to Calle Joaquin. Emergency access would also be possible from the Irish Hills Plaza parking lot.

During major wildfire events, residents, employees, hotel guests, and visitors may attempt or be required to evacuate the site, which would potentially lead to hundreds of vehicles attempting to leave the Project site in a short period under emergency conditions. As

currently proposed, evacuation routes would either funnel evacuees from Villaggio's Lower Area and Madonna Froom Ranch through a proposed roundabout to the proposed intersection with LOVR, or lead evacuees uphill toward the western boundary of the Project site near the Irish Hills Natural Reserve. Such congested emergency evacuation conditions could be exacerbated by vans or ambulances carrying assisted living and/or memory care patients requiring additional care, as well as the need for emergency vehicles and firefighting personnel and equipment to access the site concurrently with the evacuees.

While the Project includes an emergency access route via the Mountainbrook Church, this access extends uphill toward the Irish Hills and the potential path of any wildfire, thereby decreasing its utility as a safe emergency evacuation route. Residents, workers, and guests of the Project may also evacuate through the Home Depot parking lot. Because the emergency access route via Mountainbrook Church could potentially take evacuees closer to a potential hazard or wildfire, it is assumed that the majority of Project site occupants will evacuate through the site's main entrance. Therefore, evacuating vehicles would be funneled towards and contribute to congestion on the Project site's main access route (Commercial Collector "A") to LOVR. This could result in a potentially significant impact given probable evacuation-related congestion, potential road closures, and exposure of evacuees to smoke, flames, ash and embers, downed power lines and trees or traffic-related hazards during evacuation.

Further, Villaggio contains only one road that connects the Upper Terrace and Lower Area of Villaggio, so the Upper Terrace would lose access to lower portions of the site and only have access through Mountainbrook Church in the event Local Road "C" becomes blocked. During emergency conditions when a wildland fire is imminent, it may prove difficult for the healthcare center to marshal panicked individuals, particularly patients in assisted living such as those on hospice or with dementia, to fire meeting points and shelter-in-place locations, especially if site conditions quickly change. Some residents and visitors may resist or flee, creating chaotic, unmanageable conditions.

This hazardous impact would be *potentially significant*.

Emergency Access to the Vicinity

The Project includes four emergency access points that would be available for emergency vehicles and fire suppression crews to access the site. These include the primary access roadway at LOVR/Auto Park Way; the emergency access gate at Mountainbrook Church, which would provide access through the Upper Terrace; the Irish Hills Plaza parking lot

emergency access, which would provide access to Madonna Froom Ranch; and an internal emergency access road through the proposed public park, which travels through the proposed public park in the Madonna Froom Ranch portion of the Project site adjacent to the Irish Hills (see Figure 2-9).

The Project proposes internal fire access roads around the developed areas that would include spurs to facilitate access to interior structures, as well as turn-around points to accommodate the needs of fire engines or other emergency vehicles. The SLOFD is required to review the Draft FRSP for compliance with SLOFD requirements which include access, roads, and turn-around locations within the Project site.

With regard to emergency vehicle access associated with wildfire emergencies, access to the adjacent slopes of the Irish Hills Natural Reserve under the Project would be limited. Villaggio's Lower Area includes 13 detached units along the boundary directly adjacent to the Reserve that wildland fires coming from the hillsides could affect, and there is no through vehicular access proposed behind these residences to the Irish Hills to allow protection of these structures. Firefighters would have to secure access between buildings and would be inhibited by retaining walls and perimeter fencing. In addition, Madonna Froom Ranch provides the only access road to the Irish Hills, so firefighting vehicles attempting to access the site perimeter through this proposed medium-density multi-family neighborhood may conflict with evacuating private vehicles. Access to the wildland perimeter in this neighborhood would also be impeded by retaining walls and perimeter fencing (see Figure 2-8).

Proposed fencing and retaining walls along the western edge of the Project site would reduce access to wildfire areas and the existing unpaved utility access roads (e.g., Neil Havlik Way) for the purposes of fire suppression and protection of proposed development within the site. Impacts to emergency access would therefore be *potentially significant*.

Mitigation Measures

MM HAZ-4 shall apply.

MM TRANS-21 *The Project shall include a landscaped median along LOVR from the terminus of the existing median at northern Project frontage to Calle Joaquin. Project is responsible for construction of median improvements prior to occupancy of the Lower Area of Villaggio, or fair-share contribution if constructed by others sooner.*

Plan Requirements and Timing. The final FRSP shall be amended to incorporate the above median improvement prior to adoption and submitted to the City for review and approval. The median shall be integrated to the final VTM prior to approval of development plans.

Monitoring. The City shall ensure the above measure is incorporated into the final FRSP prior to Project approval.

MM TRANS-22 *The Project shall include an emergency access point from Villaggio's Lower Area to the Irish Hills Natural Reserve to provide access to the existing dirt road network to fight fires in Irish Hills, specifically to Neil Havlik Way which connects to the four utility power line structures at the top of the ridgeline. This access point may be gated to ensure site security in consultation with SLOFD.*

Plan Requirements and Timing. The final FRSP shall be amended to incorporate the above emergency access connection prior to adoption and submitted to the City and SLOFD for review and approval. The above access road shall be integrated to the final VTM prior to approval of development plans.

Monitoring. The City shall ensure the above measure is incorporated into the final FRSP prior to Project approval.

MM TRANS-23 *The Project shall integrate access to the Project site perimeters for defending the Project site development. Specifically, these measures should address access to the wildland area immediately abutting the western boundary of Villaggio's Lower Area. This measure shall include access from the proposed Local Road "C" to the Irish Hills, which may include use of space between proposed buildings for firefighting vehicle access, ramps up proposed retaining walls, and similar vehicle infrastructure to maintain access to the base of the Irish Hills.*

Plan Requirements and Timing. The final FRSP shall be amended to incorporate the above emergency access connection along the Irish Hills prior to adoption, and submitted to the City and SLOFD for review and approval. The above access road shall be integrated to the final VTM prior to approval of development plans.

Monitoring. The City shall ensure the above measure is incorporated into the final FRSP prior to Project approval.

Residual Impact

Implementation of MM TRANS-21, requiring installation of a landscaped median along LOVR, would reduce traffic safety impacts of the Project by reducing potential for vehicle collision along this existing identified high-collision segment. Installation of emergency access improvements as part of MM TRANS-22 and MM TRANS-23 would reduce emergency access and evacuation-related transportation impacts by establishing access routes for firefighting capabilities along the urban-rural interface at the western boundary of the Project site and for evacuation in the case of an emergency. The potential installation of access to the Irish Hills and associated annual route maintenance for the implementation of MM TRANS-22 and MM TRANS-23 could cause additional secondary biological resource impacts within the Irish Hills, including native serpentine bunchgrass grassland habitat which corresponds to the *Nassella pulchra* Herbaceous Alliance sensitive natural community, as well as state protected rare plant species such as Eastwood's larkspur and San Luis Obispo owl's-clover (see Section 4.4, *Biological Resources*). Implementation of MM HAZ-4 would further reduce impacts via the creation and implementation of a site-specific Evacuation Plan. With implementation of MM TRANS-21 through -23 and MM HAZ-4, residual impacts would be *less than significant with mitigation*.

Impact TRANS-5 Onsite circulation would result in safety impacts to pedestrian and bicycle access (Less than Significant with Mitigation).

While the specific locations and design of onsite access driveways have not been developed at a level necessary to conduct detailed review as part of the TIS, future connections to proposed private and public roadways would be designed per City Engineering Standards and Access Management Policies. Overall, the Project is anticipated to generate approximately 2,700 vpd. The volume of traffic on internal commercial collector streets would be less than the City's adopted 10,000 vpd threshold, while traffic dispersed on to internal local streets would be less than 1,000 vpd. Therefore, based on review of preliminary plans, the proposed onsite vehicle circulation was determined to be adequate by the Project TIS and the Project would not result in any significant automobile impacts on Project site streets.

Regarding onsite pedestrian access, the proposed pathways would need to meet the unique needs of elderly people, some children that would occupy the Project site, and other persons

with mobility challenges. Sidewalks are proposed along LOVR from the new transit stop location north to Irish Hills Plaza, and along Commercial Collectors "A" and "B" and Local Roads "A" and "B". These proposed sidewalks would include lighting, paving, bulb-outs at intersections, and landscaping. While Local Road "C" within Villaggio would not include sidewalks, a network of private walking trails separated from vehicle roadways would be provided for Villaggio residents to provide internal access. However, the following items comprise *potentially significant* safety issues associated with onsite pedestrian circulation:

- At the Project's LOVR/Auto Park Way entry intersection, children and the elderly may not be able to safely cross the intersection due to the crosswalk's length and timing between light cycles;
- Within the site, signage and limited lines of sight from driveways may cause pedestrian safety impacts to the Project's potential population; and
- The Project currently does not adhere with the existing City standards for sidewalks or ADA requirements for a comfortable walking environment.

Regarding onsite bicycle access, the Project includes a proposed bicycle network that would connect with existing bicycle lanes along LOVR, designed with Class II bike lanes along Commercial Collector A, and Class III bike routes with shared lane markings ("sharrows") along Local Road A and Commercial Collector B. Bicycle parking would be provided for commercial, recreational, and residential uses within Madonna Froom Ranch consistent with City Zoning Regulations. However, with regard to bicycle circulation deficiencies, the following items comprise *potentially significant* safety issues associated with onsite bicycle circulation:

- Within the Project site, signage and limited lines of sight from driveways may cause bicycle safety impacts to the Project's potential population; and
- The Project does not provide consistency with City-adopted best practices for high-quality bicycle facility design.

Mitigation Measures

MM TRANS-24 *To address pedestrian and bicycle circulation safety issues, the following modifications to the preliminary Project concept designs throughout the Project site are recommended based on design guidance*

published by National Association of City Transportation Officials and the Federal Highway Administration:

- *Install pedestrian refuges within center medians at north and south legs of the LOVR/Auto Park Way intersection;*
- *Install a single northbound left-turn lane at the LOVR/Auto Park Way intersection in lieu of dual left-turn lanes, as currently proposed, to shorten pedestrian crossing distance at the south leg of the intersection.*
- *Install a bulb-out at the southwest corner of the intersection to shorten pedestrian crossing distance at the south leg of the LOVR/Auto Park Way intersection;*
- *Install Lead Pedestrian Intervals at all pedestrian crossings at the LOVR/Auto Park Way intersection;*
- *Install protected bicycle intersection features as part of signalization and intersection improvements at the LOVR/Auto Park Way intersection, consistent with planned improvements at the nearby LOVR/Froom Ranch Way and Madonna Road/Dalidio Drive intersections;*
- *Provide physically protected bicycle lanes (Class IV bikeway) along LOVR approaching/departing the Auto Park Way intersection and along Commercial Collector "A". The Class IV bikeways shall be installed on-street with a physical barrier between cyclists and vehicular traffic or by constructing raised bicycle facilities at the sidewalk level adjacent to pedestrian sidewalks;*
- *Sidewalks shall be provided within the Madonna Froom Ranch development area of the Project site as per City standards; and*
- *Sidewalk design shall meet ADA requirements for a comfortable walking environment.*

Plan Requirements and Timing. The final FRSP shall be amended to incorporate the above improvements prior to adoption and submitted to the City and SLOFD for review and approval. The above improvements shall be integrated to the final VTM prior to approval of development plans.

Monitoring. The City shall ensure the above measure is incorporated into the final FRSP prior to Project approval.

Residual Impact

With the implementation of MM TRANS-24, Project site circulation and access would safely accommodate all users of the street system and provide a complete and connected pedestrian facility between the Project site circulation system and nearby land uses. Widening or adjustments to pedestrian or bicycle circulation infrastructure may result in secondary impacts on biological resources (see Section 3.4, *Biological Resources*). Ultimately, residual impacts to onsite circulation for automobiles, pedestrians, and bicyclists would be *less than significant with mitigation*.

Cumulative Impacts

Impact TRANS-6 Under long-term Cumulative plus Project conditions, Project-generated traffic would result in a cumulatively considerable contribution to traffic for automobiles and poor levels of service for pedestrians and bike modes of transportation, causing transportation deficiencies in the Project vicinity (Less than Significant with Mitigation).

Using vehicle, pedestrian, bicycle trip generation and distribution data, and increased transit demand, the TIS analyzed the potential transportation impacts of the Project on multi-modal facilities and operations, including intersections, roadway segments, bike paths, sidewalks, and transit routes under Cumulative plus Project conditions. Cumulative conditions and Cumulative plus Project conditions were compared to determine the degree of change projected for each of the transportation facilities potentially impacted by Project trips. The TIS identifies multi-modal AM and PM peak hour LOS for intersection LOS and queuing, roadway segments, bike paths, sidewalks, and transit routes. The Cumulative plus Project LOS was compared with City thresholds of significance to determine where significant impacts would occur to intersections, roadway segments, pedestrian and bicycle facilities and transit operations as a result of Project implementation. Figures 3.1-24 through 3.1-29 found on pages 259 to 264 of the TIS illustrate the Cumulative plus Project lane geometries, traffic controls at the study intersections, and the Cumulative plus Project peak hour traffic volumes at the study intersections (Appendix J).

Potentially significant operational impacts to multi-modal transportation would occur at occupation of Madonna Froom Ranch, including 14 separate intersections and roadway

segments due to increased automobile, pedestrian, and bicycle traffic under Cumulative plus Project conditions. These include automobile impacts at six locations, bicycle and pedestrian related impacts at nine locations. No cumulative impacts to transit facilities or services were identified. These impacts under Cumulative plus Project conditions and associated mitigation are summarized below.

Cumulative Plus Project Impact Summary

Intersection #1: LOVR and Foothill Boulevard

Project-added automobile traffic would exacerbate the unacceptable intersection LOS for automobiles by increasing the V/C ratio by 0.01 during the PM peak hour. This automobile LOS impact would be *potentially significant* and occur after development of Madonna Froom Ranch, though would be reduced to less than significant by the implementation of MM TRANS-25.

Intersection #5: LOVR / Royal Way

Project-added automobile traffic would exacerbate the NB left-turn queue in the PM peak hour, as it would exceed the available turn pocket capacity. This automobile queuing impact would be *potentially significant* and occur after development of Madonna Froom Ranch, though would be reduced to less than significant by the implementation of MM TRANS-26.

Intersection #6: LOVR and Madonna Road

Project-added vehicular and pedestrian traffic would exacerbate unacceptable pedestrian intersection LOS for pedestrians crossing LOVR during the PM peak hour with LOS D, with a LOS score increasing from 3.53 to 3.54. This pedestrian impact would be *potentially significant* and occur after development of Madonna Froom Ranch, though would be reduced to less than significant by the implementation of MM TRANS-13.

Intersection #9: LOVR and Calle Joaquin

Project-added pedestrian traffic would exacerbate unacceptable pedestrian intersection LOS for pedestrians crossing LOVR during the PM peak hour with LOS D, with a LOS score increasing from 3.50 to 3.54, which reflects the lengthy crossing distance across LOVR and the 45 mph travel speeds by vehicles traveling on LOVR. This pedestrian impact would be *potentially significant* and occur after development of Madonna Froom

Ranch, though would be reduced to less than significant by the implementation of MM TRANS-27.

Intersection #10: LOVR and U.S. 101 SB Ramps

Project-added automobile traffic would impact the SB right-turn lane queue in the PM peak hour, as it would exacerbate the 95th-percentile turning movement queues and exceed the available turn pocket capacity. This automobile queuing impact would be *potentially significant* and occur after development of Madonna Froom Ranch, though would be reduced to less than significant by the implementation of MM TRANS-26.

Intersection #15: South Higuera Street / Tank Farm Road

Project-added vehicular and pedestrian traffic would exacerbate unacceptable pedestrian intersection LOS crossing South Higuera Street during the PM peak hour with LOS D, with a LOS score increasing from 3.52 to 3.53. This pedestrian impact would be *potentially significant* and occur after development of Madonna Froom Ranch, though would be reduced to less than significant by the implementation of MM TRANS-13.

Project-added automobile traffic would exacerbate the SB left-turn queue in the AM peak hour, as it would exceed the available turn pocket capacity. This automobile queuing impact would be *potentially significant* and occur after development of Madonna Froom Ranch, though would be reduced to less than significant by the implementation of MM TRANS-28.

Intersection #18: Madonna Road / Oceanaire Drive

Project-added automobile traffic would impact the WB left-turn queue in the AM peak hour and the WB right-turn queue in the PM peak hour, as it would exacerbate the 95th-percentile turning movement queues and exceed the available turn pocket capacity. This automobile queuing impact would be *potentially significant* and occur after development of Madonna Froom Ranch, though would be reduced to less than significant by the implementation of MM TRANS-29.

Intersection #19: Madonna Road / Dalidio Drive

Project-added automobile traffic would impact the EB right-turn queue during the AM and PM peak hours, as it would exacerbate the 95th-percentile turning movement queues and exceed the available turn pocket capacity. This automobile queuing impact would be

potentially significant and occur after development of Madonna Froom Ranch, though would be reduced to less than significant by the implementation of MM TRANS-30.

Roadway Segments #1 and #2: LOVR from Prefumo Canyon Road to Oceanaire Drive and from Oceanaire Drive to Madonna Road

Roadway segments #1 and #2 on LOVR (the stretch between Prefumo Canyon Road and Madonna Road) currently operate at an unacceptable segment pedestrian LOS of D and F due to lack of an adequate buffer area between pedestrians and vehicular traffic. The Project would exacerbate these conditions with additional vehicle and person trips and would further degrade already exceeded LOS standards. This pedestrian impact would be *potentially significant* and occur after development of Madonna Froom Ranch, though could be reduced to less than significant by the implementation of MM TRANS-8.

Roadway Segments #3, #4, #5 and #6: LOVR from Madonna Road to South Higuera Street

Roadway segments #3, #4, #5, and #6 on LOVR (the stretch between Madonna Road and South Higuera Street) currently operate at an unacceptable segment pedestrian LOS of D and F due to lack of sidewalks or adequate buffer area between pedestrians and vehicular traffic. The Project would exacerbate these conditions with additional vehicular and person trips and would further degrade already exceeded LOS standards. This pedestrian impact would be *potentially significant* and occur after development of Madonna Froom Ranch, though could be reduced to less than significant by the implementation of MM TRANS-9.

U.S. 101 Mainline

Several segments of the NB and SB U.S. 101 mainline currently operate at an unacceptable LOS of D. Under cumulative conditions, the Project-related traffic would exacerbate unacceptable LOS conditions for SB U.S. 101 mainline segments with additional vehicular traffic and person trips. Implementation of the Project would contribute towards further degradation of already exceeded LOS standards, and would contribute towards exceedance of LOS standards for additional mainline segments. This impact would be reduced to less than significant through payment of Project fair share contributions towards planned U.S. 101 mainline operational improvements, which include:

- Installation of ramp metering at U.S. 101 SB on-ramp at LOVR;
- Installation of ramp metering at U.S. 101 SB at on-ramp at South Higuera Street;
- Installation of U.S. 101 NB auxiliary lane planned as part of the Prado Interchange Phase 1; and

- Installation of U.S. 101 SB improvements planned with Prado Interchange SB ramps, which include proposed SB collector-distributor system.

The Project's fair share contribution towards LOVR SB ramp metering improvements and NB/SB mainline improvements are satisfied through payment of City Traffic Impact Fees. The Project's cumulative contribution to impacts on U.S. 101 mainline facilities would be *less than significant.*

Mitigation Measures

MM TRANS-8 shall apply.

MM TRANS-9 shall apply.

MM TRANS-13 shall apply.

MM TRANS-25 *In coordination with the County, the Project Applicant shall pay its fair share fees to fund modifications to the northbound approach at the LOVR/Foothill Boulevard intersection to provide one left-turn, two through, and one right-turn lane, or similar operational improvements to the satisfaction of the County Public Works Director. Additional minor traffic signal, striping, and signage modifications may be required for implementation of these improvements. This mitigation measure requires County approval and coordination.*

Plan Requirements and Timing. Prior to grading and recordation of the final VTM for development of Madonna Froom Ranch, the Applicant shall submit a Public Street Improvement Plan and Engineer's Estimate of Probable Cost for review and approval by the County. The Applicant shall pay its fair share fees to the County prior to the issuance of an occupancy or building permit for Madonna Froom Ranch development to fund implementation of the future intersection improvements.

Monitoring. The City shall verify that the Applicant provides the required design plans and contributes an appropriate fair share as approved by the County in accordance to the approved development phase.

MM TRANS-26 *The Project Applicant shall pay its fair share fees to fund striping modifications to extend the northbound left-turn pocket at the LOVR/Royal Way intersection to 150 feet, and to optimize the traffic signal timings along the LOVR corridor between Descanso Street and South Higuera Street. This mitigation measure requires Caltrans approval and coordination.*

Plan Requirements and Timing. Prior to issuance of an occupancy or building permit for Madonna Froom Ranch, the Applicant shall pay its fair share fees to the City.

Monitoring. The City shall verify that the Applicant contributes an appropriate fair share as approved by the City and that adequate funding is collected to implement these improvements.

MM TRANS-27 *In coordination with the City, the Project Applicant shall pay its fair share fees to fund the implementation of Lead Pedestrian Intervals for each pedestrian crossing phase at the LOVR/Calle Joaquin intersection.*

Plan Requirements and Timing. Prior to issuance of an occupancy or building permit for Madonna Froom Ranch, the Applicant shall pay its fair share fees to the City.

Monitoring. The City shall verify that the Applicant contributes an appropriate fair share as approved by the City and that adequate funding is collected to implement these improvements.

MM TRANS-28 *The Project Applicant shall pay its fair share fees to fund the extension of the southbound left-turn pocket storage at the South Higuera Street/Tank Farm Road intersection to 300 feet.*

Plan Requirements and Timing. Prior to issuance of an occupancy or building permit for Madonna Froom Ranch, the Applicant shall pay its fair share fees to the City.

Monitoring. The City shall verify that the Applicant contributes an appropriate fair share as approved by the City and that adequate funding is collected to implement these improvements.

MM TRANS-29 *The Project Applicant shall pay its fair share fee to the City to fund the extension of the westbound right-turn pocket storage at the Madonna Road/Oceanaire Drive intersection to 200 feet. This may require replacement of the existing culvert on Madonna Road east of Oceanaire Drive.*

Plan Requirements and Timing. Prior to issuance of an occupancy or building permit for Madonna Froom Ranch, the Applicant shall pay its fair share fees to the City.

Monitoring. The City shall verify that the Applicant contributes an appropriate fair share as approved by the City and that adequate funding is collected to implement these improvements.

MM TRANS-30 *The Project Applicant shall coordinate and fund the City to modify the traffic signal phasing and timing plans at the Madonna Road/Dalidio Drive intersection to provide an eastbound right-turn overlap phase concurrent with the northbound left-turn phase. The Applicant shall be responsible for implementation prior to development of Madonna Froom Ranch or fair share contribution if constructed sooner by others.*

Plan Requirements and Timing. Prior to grading and recordation of the final VTM for development of Madonna Froom Ranch, the Applicant shall submit a Public Street Improvement Plan for review and approval by the City. The proposed improvements shall be completed prior to the issuance of an occupancy permit for Madonna Froom Ranch development.

Monitoring. The City shall verify that the Applicant installs the improvements in accordance to the approved phase and design plans or contributes an appropriate fair share as approved by the City.

Residual Impacts

All of the identified impacts under cumulative conditions would be *less than significant with mitigation* (see Table 3.13-35). Implementation of mitigation measures that require payment of fair share contributions to fund offsite improvements would generally not result in significant residual impacts, as these improvements would occur within existing roadway rights-of-way, or within urbanized paved/landscaped areas immediately adjacent

to existing roadway rights-of-way. The Project's fair share contribution has been identified for all intersections and improvements in the TIS (Appendix J). The Project's equitable share is calculated using the method for calculating equitable mitigation measures outlined in the Caltrans Guide for the Preparation of Traffic Impact Studies (Caltrans 2002).

Table 3.13-35. Cumulative Plus Project Transportation Impact Summary

Location	Trigger	Transportation Mode	Mitigation Measure	Impact
Intersection #1: LOVR / Foothill Boulevard	Post Development of Madonna Froom Ranch	Auto	TRANS-25	Less than Significant with Mitigation
Intersection #5: LOVR / Royal Way	Post Development of Madonna Froom Ranch	Auto (Queue)	TRANS-26	Less than Significant with Mitigation
Intersection #6: LOVR / Madonna Road	Post Development of Madonna Froom Ranch	Pedestrian	TRANS-13	Less than Significant with Mitigation
Intersection #9: LOVR / Calle Joaquin	Post Development of Madonna Froom Ranch	Pedestrian	TRANS-27	Less than Significant with Mitigation
Intersection #10: LOVR / U.S. 101 SB Ramps	Post Development of Madonna Froom Ranch	Auto (Queue)	TRANS-26	Less than Significant with Mitigation
Intersection #15: South Higuera Street / Tank Farm Road	Post Development of Madonna Froom Ranch	Pedestrian Auto (Queue)	TRANS-13 TRANS-28	Less than Significant with Mitigation Less than Significant with Mitigation
Intersection #18: Madonna Road / Oceanaire	Post Development of Madonna Froom Ranch	Auto (Queue)	TRANS-29	Less than Significant with Mitigation
Intersection #18: Madonna Road / Dalidio Drive	Post Development of Madonna Froom Ranch	Auto (Queue)	TRANS-30	Less than Significant with Mitigation
Roadway Segments #1 and #2: LOVR from Prefumo Canyon Road to Oceanaire Drive and from Oceanaire Drive to Madonna Road	Post Development of Madonna Froom Ranch	Pedestrian	TRANS-8	Less than Significant with Mitigation

Table 3.13-35. Cumulative Plus Project Transportation Impact Summary (Continued)

Location	Trigger	Transportation Mode	Mitigation Measure	Impact
Roadway Segments #3, #4, #5 and #6: LOVR from Madonna Road to South Higuera Street	Post Development of Madonna Froom Ranch	Pedestrian	TRANS-9	Less than Significant with Mitigation
U.S. 101 Mainline	Post Development of Villaggio Lower Area	Auto	--	Less than Significant

Source: TIS; see Appendix J. For a complete description of all intersections, roadway segments, bike paths, sidewalks and transit facilities, see Tables 3.1-91 through 3.1-100 on pages 235 through 255 of the TIS.
-- Not applicable
Bolded items indicate significant an unavoidable impacts.