

4.11 TRANSPORTATION/CIRCULATION

This section was developed using information from a Traffic Analysis Report prepared for the project by OEG, Inc. (2010), the Paradiso del Mare Ocean and Inland Estates Draft EIR (County of Santa Barbara, 2009), the Santa Barbara Ranch EIR (County of Santa Barbara, 2008a), review of the Comprehensive Plan Circulation Element, and consultation with Caltrans and County Public Works staff.

4.11.1 ENVIRONMENTAL SETTING

The project site is located within the Gaviota Coast region of Santa Barbara County. The project site is divided by U.S. Highway 101 which runs through the ranch in a general east-west direction. U.S. Highway 101 operates as a four-lane divided highway in the area of the project site, and serves as the main coastal route between Los Angeles and San Francisco. The highway connects Goleta, Santa Barbara and other south coast communities to the south/east with Buellton, Santa Maria and other inland communities to the north.

The project site is served by U.S. Highway 101 via an at-grade interchange at Las Varas Ranch Road. No stop signs or traffic signals are used at the interchange; movement in and out of the project site is provided by acceleration/deceleration lanes composed of a combination of dedicated turning lanes and shoulders, as indicated in **Figure 4.11-1**. To the south of U.S. Highway 101, Naples Access Road is accessible from the entrance to Las Varas Ranch and consists of a two-lane frontage road that provides access between the eastern boundary of Las Varas Ranch and Dos Pueblos Ranch to the east. To the north of the highway, the access drive picks up a segment of Calle Real, which runs from the southern edge of proposed Parcel 6 east to the adjacent property before terminating. Ranch roads, both dirt and paved, have been established to provide access throughout Las Varas Ranch.

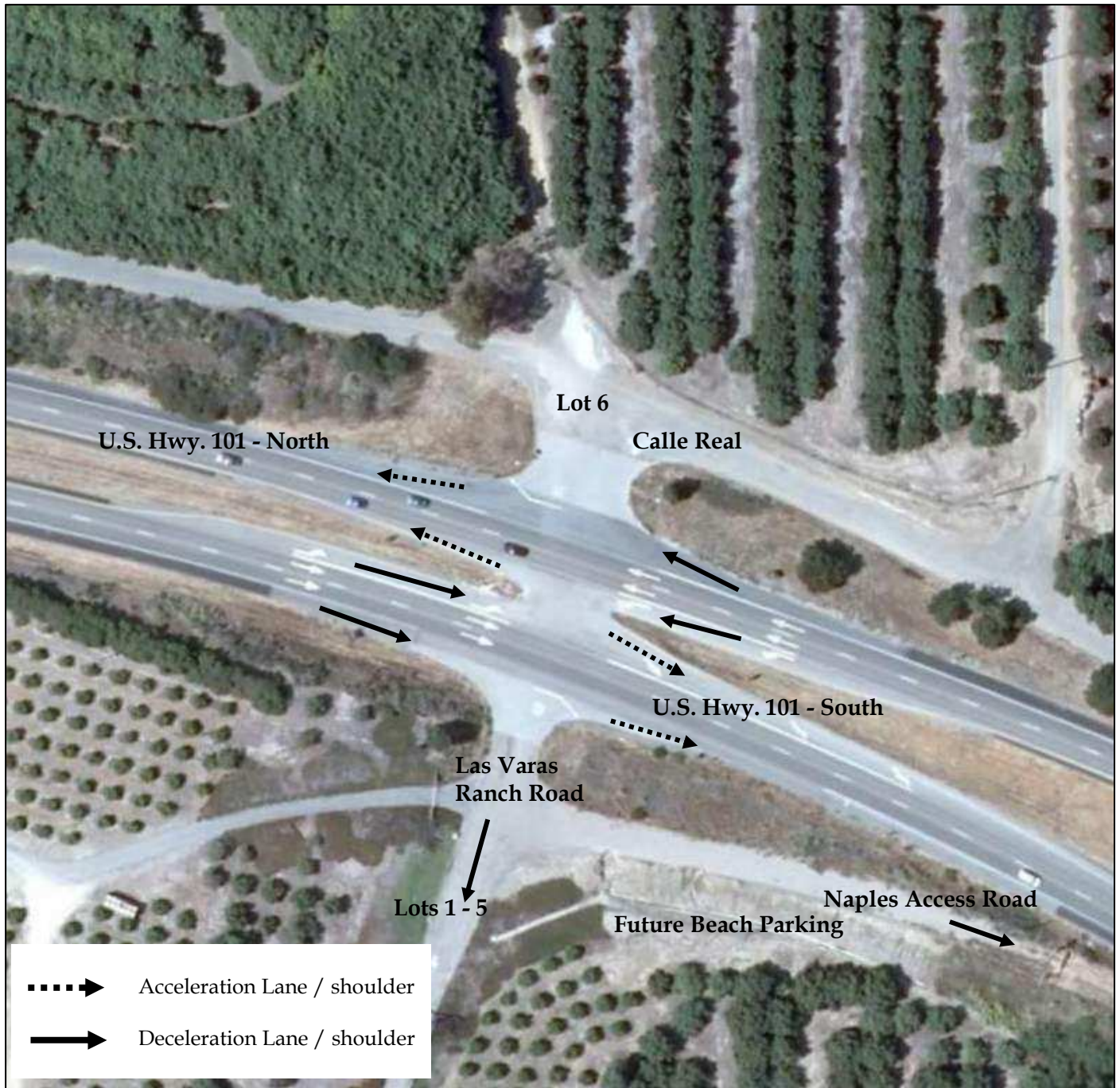
From northbound U.S. Highway 101, access to the coastal portion of the site is provided by a left turn deceleration lane of approximately 290 feet. Drivers accessing the inland portion of the site must use the shoulder, which is widened for approximately 200 feet before making a right turn into the project site. For southbound U.S. Highway 101, access to the site is the inverse of the northbound direction, with the inland portion accessed by a dedicated deceleration left turn lane and the coastal portion accessed by use of the extended shoulder. Entrance on to the highway from the project site is provided by a combination of the use of shoulders and acceleration lanes, as shown on **Figure 4.11-1**, depending on the direction of travel and the inland or coastal portion of the site.

4.11.1.1 Existing Traffic Volumes and Intersection Delays

The existing average daily trips (ADTs) and Peak Hour Trips (PHTs) for the busiest month of the year for U.S. Highway 101 in the vicinity of the project site are 31,000 and 3,100, respectively (Caltrans, 2008). The highway operates at Level of Service (LOS) A (southbound) and B (northbound) during the P.M. peak period (Chris Shaeffer, Caltrans, pers. comm.). This is above the Santa Barbara County Circulation Element's minimum acceptable level (LOS C) and the Caltrans minimum acceptable level (LOS C-D). Based on OEG field observations of peak hour turning traffic on November 17, 2009, the unsignalized intersection of Las Varas Ranch

Road (south of the highway) and U.S. Highway 101 currently operates at LOS B with 12.0 seconds of delay per vehicle (OEG, 2010).

Figure 4.11-1. Existing Traffic Flows and Site Access for Future Development



A safety analysis was conducted for the at-grade crossing using the last four years of crash data provided by Caltrans (OEG, 2010). Since January 2004, there have been 18 total crashes within one-quarter mile in each direction of the Las Varas Ranch Road intersection. The actual crash

rate for this portion of the highway is 0.78 accidents per million vehicle miles (acc/MVM). For similar type segments of highway elsewhere in the state, Caltrans has documented an average crash rate of 0.72 acc/MVM. While slightly higher than the average, the crash data does not indicate a significant crash pattern. The rate of actual injury-related accidents was 0.22 acc/MVM, which is substantially lower than the statewide average of 0.33 acc/MVM for similar type facilities. The crash pattern does not show that the at-grade intersection is the potential cause of the crash. The majority of the crashes involved a single vehicle, with running off of the road being the primary cause.

4.11.2 REGULATORY FRAMEWORK

4.11.2.1 State Regulations and Administering Agencies

California Department of Transportation (Caltrans)

Caltrans administers the California highway system, including U.S. Highway 101 that traverses through the project site. Improvements within the state right-of-way require an encroachment permit from Caltrans. The Caltrans *Highway Design Manual* (HDM) provides standards for roadway design and use. The following topics and chapters are applicable to the proposed project:

- **Chapter 200, Topic 201 - Sight Distance Standards:** Corner sight distance is based on a 7.5 second criteria for drivers crossing a roadway being able to see approaching traffic for a period of 7.5 seconds. Caltrans has determined that this is sufficient time for vehicles to see and evaluate the approaching vehicles and safely complete the roadway crossing. Stopping sight distance is provided for drivers approaching crossing traffic or objects in the roadway. At design speeds of 65 miles per hour (mph), the sight distance standard for stopping is 660 feet; 750 feet at 70 mph; 840 feet at 75 mph; and 930 feet at 80 mph.
- **Chapter 200, Topic 205.1 - Access Openings on Expressways:** Access openings are used only on expressways. The term *access opening* applies to openings through the right-of-way line which serve abutting land ownerships whose remaining access rights have been acquired by the State. The following Caltrans requirements for location, width, surfacing, and sight distance shall be adhered to:
 1. *Criteria for Location.* Access openings should not be spaced closer than one-half mile to an adjacent public road intersection or to another private access opening that is wider than 30 feet. When several access openings are closely spaced, a frontage road should be considered. To discourage wrong-way movements, access openings should be located directly opposite or at least 300 feet from a median opening. Sight distance equivalent to that required for public road intersections shall be provided.
 2. *Width.* The normal access opening width should be 30 feet. A greater width may result in large savings in right-of-way costs in some instances, but should be considered with caution because of the possibility that public use might develop. Conversion of a private opening into a public road connection requires the consent

- of the California Transportation Commission, which cannot be committed in advance.
3. *Recessed Access Openings.* Recessed access openings, as shown on Figure 205.1 of the HDM, are desirable at all points where private access is permitted and should be provided whenever they can be obtained without requiring alterations to existing adjacent improvements. When recessed openings are required, the opening should be located a minimum distance of 75 feet from the nearest edge of the traveled way.
 4. *Joint Openings.* A joint access opening serving two or more parcels of land is desirable whenever feasible. If the property line is not normal to the right-of-way line, care should be taken in designing the joint opening so that both owners are adequately served.
 5. *Surfacing.* All points of private access should be surfaced with adequate width and depth of pavement to serve the anticipated traffic. The surfacing should extend from the edge of the traveled way to the right-of-way line.
 6. *Shoulder Width.* For expressways, the roadway shoulder to the right of the travel lane should have a minimum width of 10 feet.

4.11.2.2 Local Regulations and Policies

The Circulation Element of the County Comprehensive Plan provides specific policies related to the traffic and transportation implications of proposed development. U.S. Highway 101 in the vicinity of the proposed project is classified as a four-lane rural freeway with less than 44,000 ADT. The Circulation Element limits expansion on roadways that exceed capacity; the proposed project is located along a segment of U.S. Highway 101 that is currently operating with 31,000 ADTs, well below capacity. The following policies of the Circulation Element are relevant to the proposed project:

- ***Policy B-a, Roadway Standards:*** *A project that would contribute ADTs to a roadway where the Estimated Future Volume does not exceed the policy capacity would be considered consistent with this section of the Circulation Element.*
- ***Policy D-1, Intersection Standards:*** *Projects contributing PHTs (peak hour trips) to intersections that operate at an Estimated Future Level of Service that is better than LOS C shall be found consistent with this section of this Element unless the project results in a change in V/C (volume/capacity) ratio greater than 0.20 for an intersection operating at LOS A or 0.15 for an intersection operating at LOS B.*
- ***Policy V-A, Circulation Element Policies:*** *The roadway classifications, intersection levels of service, and capacity levels adopted in this Element shall apply to all roadways and intersections within the unincorporated area of the County, with the exception of those roadways and intersections located within an area included in an adopted community or area plan. Roadway classifications, intersection levels of service, and capacity levels adopted as part of any community or area plan subsequent to the adoption of this Element shall supersede any standards included as part of this Element.*

- **Policy V-E, Circulation Element Policies:** A determination of project consistency with the standards and policies of this Element shall constitute a determination of project consistency with the Land Use Element's Land Use Development Policy #4 with regard to roadway and intersection capacity.

4.11.3 THRESHOLDS OF SIGNIFICANCE

The significance of the potential impacts of the proposed project as it relates to transportation and circulation are based on the criteria established in the *County of Santa Barbara's Environmental Thresholds and Guidelines Manual*, October 2008. According to the County's threshold criteria, a significant adverse traffic impact occurs when:

- The addition of project traffic to an intersection increases the volume to capacity (V/C) ratio by the value provided below or sends at least 5, 10 or 15 trips to at LOS F, E or D.

| LEVEL OF SERVICE (including project) | INCREASE IN V/C GREATER THAN |
|---|---------------------------------|
| A | 0.20 |
| B | 0.15 |
| C | 0.10 |
| | Or The Addition Of: |
| D | 15 trips |
| E | 10 trips |
| F | 5 trips |

- Project access to a major road or arterial road would require a driveway that would create an unsafe situation or a new traffic signal or major revisions to an existing traffic signal.
- Project adds traffic to a roadway that has design features (e.g., narrow width, road side ditches, sharp curves, poor sight distance, inadequate pavement structure) or receives use which would be incompatible with substantial increases in traffic (e.g., rural roads with use by farm equipment, livestock, horseback riding, or residential roads with heavy pedestrian or recreational use, etc.) that will become potential safety problems with the addition of project or cumulative traffic. Exceedance of the roadways designated Circulation Element Capacity may indicate the potential for the occurrence of the above impacts.
- Project traffic would utilize a substantial portion of an intersection(s) capacity where the intersection is currently operating at acceptable levels of service (A-C) but with cumulative traffic would degrade to or approach LOS D (V/C 0.81) or lower. Substantial is defined as a minimum change of 0.03 for intersections which would operate from 0.80 to 0.85 and a change of 0.02 for intersections which would operate from 0.86 to 0.90, and 0.01 for intersections operating at anything lower.

4.11.4 PROJECT IMPACTS AND MITIGATION

4.11.4.1 Project Trip Generation and Distribution

Future residential development within each of the proposed parcels would result in a small increase in average daily trips and peak hour trips relative to existing levels. Trip generation estimates for the new single family residential units were based on rates established for Residential Estates in the San Diego Association of Governments (SANDAG) Traffic Generators Manual (2002), which was selected as the best fit for the proposed project since it accounts for additional vehicular trips associated with service personnel (e.g. house cleaners, landscapers, etc.) typical of estate-style residences. The project would result in the future development of primary single family residences within the designated development envelopes in addition to the residences that already exist. Since proposed Parcel 5 already contains a principal residence that generates traffic, the project would result in a net increase of six principal residences for the purposes of estimating residential traffic increases. A net increase of six residential units would result in an increase of up to 72 ADTs and 8 peak hour trips (PHTs) during the PM peak hour. The majority of these trips would use the Las Varas Ranch Road interchange, though trips associated with proposed Parcel 7 (12 ADTs and 1 PHT) would utilize the El Capitan Ranch Road grade—separated interchange to the west of the project site.

Trip generation estimates for the future 30-space beach parking area were also estimated based on rates established in the SANDAG manual, rates contained in the Institute of Transportation Engineers Trip Generation Manual, and rates developed for other local projects that include beach access/trail uses. Rates of 3.26 ADTs and 0.26 PHTs per parking space were applied to the project, resulting in an estimated 98 ADTs and 8 PHTs during the PM peak hour.

Table 4.11-1. Project Trip Generation

| Land Use | Size | ADT | | AM Peak Hour | | PM Peak Hour | |
|---------------|-----------|------|------------|--------------|-----------|--------------|-----------|
| | | Rate | Trips | Rate | Trips | Rate | Trips |
| SFD | 6 (net) | 12 | 72 | 0.96 | 6 | 1.2 | 8 |
| Trail Parking | 30 spaces | 3.26 | 98 | 0.13 | 4 | 0.26 | 8 |
| TOTAL | | | 170 | N/A | 10 | N/A | 16 |

Project traffic, including traffic associated with public access to the beach trail, is distributed onto U.S. Highway 101 assuming 80 percent of the trips would be oriented to and from the Goleta-Santa Barbara area to the south and 20 percent of the trips would be oriented to and from Buellton, Lompoc, and other points to the north.

Impact TRANS-1: Long-term Traffic Impacts.

As identified in Section 4.11.2, existing traffic volumes on U.S. Highway 101 in the vicinity of the project site are 31,000 ADTs and 3,100 PHTs and the highway operates at LOS A-B during

the P.M. peak hour. The project would add 136 ADTs and 13 PHTs to southbound U.S. Highway 101 and 34 ADTs and 3 PHTs to northbound U.S. Highway 101. Future residential development on proposed Parcel 7 would utilize the El Capitan Ranch exit north of the project site to access the site, which would keep 12 ADTs and one PHT off of the main Las Varas Ranch Road interchange. This level of traffic generated by future residential development on the project site and public use of the beach access would not significantly impact existing traffic volumes and peak hour trips on U.S. Highway 101 and the Las Varas Ranch Road interchange. Proposed signage directing beach traffic to use the grade separated interchanges east and west of the project site for northbound motorists (Dos Pueblos Road and El Capitan Ranch Road, respectively) in order to avoid cross-traffic left turns in and out of the project site would likely further reduce traffic delays at Las Varas Ranch Road interchange. Based on the low existing traffic volumes using these other interchanges and the high capacity of the design of these grade-separated interchanges, the project would not significantly affect traffic flow at the El Capitan Ranch Road and Dos Pueblos Ranch Road interchanges. Levels of Service would remain within acceptable levels. Impacts to level of service from project-generated traffic increases would therefore be *less than significant (Class III)*.

Mitigation Measures

No mitigation is necessary.

Residual Impacts

The residual impact of TRANS-1 is **less than significant (Class III)** and no mitigation is required.

Impact TRANS-2: Traffic-Related Hazards.

As discussed above, access to the project site would be provided by an uncontrolled intersection at an at-grade interchange. Such access creates concern over potential for increased accidents associated with increased use of the interchange for accessing the proposed public parking lot and beach access trail. Caltrans has various standards and guidelines for the operation and design of State highways. These include standards for sight distance, stopping distances, intersection layout and design, and left-turn channelization. These standards are applied to ensure traffic safety. As seen in **Table 4.11-2** below, the existing Las Varas Ranch Road access to Highway 101 meets the majority of the access design criteria provided by Caltrans. The two areas where the access does not meet the design criteria are in the sight distance to the west of the access road (from the coast side of the highway) and the deceleration length for the left turn lanes at the intersection.

As discussed on page 4.11-3, there are two sight distance criteria related to highway operations: corner sight distance and stopping sight distance. The sight distance for motorists entering the highway from the beach parking area is approximately 700 feet. For highway speeds experienced at this intersection, the 7.5 second criteria for corner sight distance results in minimum distances of 715 feet for 65 mph and 770 feet for 70 mph. Thus, the 700-foot existing sight distance is slightly less than the 715 feet required for vehicles traveling at 65 mph (or 770 feet required for vehicles traveling at 70 mph) for corner sight distances. For stopping sight distance, it is slightly more than the 660 feet required for vehicles traveling at 65 mph, but slightly less than the 750 feet required for vehicles traveling at 70 mph. Since the proposed

project would increase vehicular traffic at this intersection, primarily associated with the public beach parking, future users would be exposed to a potential traffic hazard resulting from sight distances below that which is typically required for safe operation. Impacts are therefore considered *potentially significant but mitigable*.

**Table 4.11-2. Las Varas Ranch Road Access Evaluation
Caltrans Expressway Private Road Access Design Criteria**

| Design Element | Requirement | Field Condition | Standard Met |
|---------------------------------------|--|---|---------------------------|
| Sight Distance | | | |
| Corner Sight Distance | 770 feet at 70 MPH | 700 feet (left) More than 800 feet (right) | No (left) Yes (right) |
| Stopping Sight Distance | 750 feet at 70 MPH | 700 feet (left) More than 800 feet (right) | No (left) Yes (right) |
| Intersection Layout and Design | | | |
| Location | Minimum 0.5 mile | More than 0.5 mile | Yes |
| Width | 30-40 feet | 36 feet | Yes |
| Recessed Opening | 75 feet Flared edge of pavement | More than 80 feet Flared edge of pavement | Yes Yes |
| Joint Opening | More than one property | Four parcels | Yes |
| Surfacing | Paved within Right of Way | Paved within Right of Way and beyond | Yes |
| Shoulder Width | 10 feet typical Flared shoulder at access | 10 feet typical Flared shoulder at access | Yes Yes |
| Left Turn Channelization | | | |
| Lane Width | 12 feet | 12 feet | Yes |
| Storage | 50 feet minimum | 140 feet minimum | Yes |
| Bay Taper | 120 feet | 140 feet minimum | Yes |
| Deceleration Distance | 530 feet at 60 MPH | 290 feet minimum | No |
| Acceleration Lane | None required | 200 feet to north 490 feet to south | Yes Yes |
| Crash Experience | | | |
| Statewide Average Total | 0.72 acc/MVM | 0.78 acc/MVM | Yes |
| Statewide Average Injury | 0.33 acc/MVM | 0.22 acc/MVM | Yes |
| Significant Pattern | N/A | None | Yes |
| Level of Service | | | |
| Roadway Segment | LOS D | LOS B | Yes |
| Intersection | LOS D | LOS B | Yes |

Currently, the deceleration distances for the northbound left turn lane on U.S. Highway 101 is approximately 290 feet, while the southbound left turn lane distance is approximately 305 feet. In both instances, the existing left turn deceleration lanes are below the distance required by Caltrans of 530 feet. This shortfall creates a potentially unsafe condition for vehicles utilizing the left turn lanes for entering the project site. To meet the minimum distance of 530 feet, the existing left turn lanes would need to be extended 240 feet (northbound) and 225 feet (southbound). The greatest concern, however, is associated with the interchange as experienced by vehicles entering and exiting the south side of the highway, since that is where the highest levels of use would be experienced. Ingress and egress on the north side of the highway would be limited to agricultural employees (an existing use) and future residents of proposed Parcel 6, which would be minimal. Future residents on Parcel 7 would be expected to use the El Capitan Ranch interchange, which provides more direct access to that parcel. Thus, the addition of one new residence north of the highway would not necessitate an extension of the southbound left turn lane due to the low traffic levels as compared to the existing condition.

In order to encourage the southbound use of the access at the Las Varas Ranch Road intersection and minimize the use of the left turn lane for northbound motorists entering the site, full deceleration and acceleration lanes would be constructed for the southbound U.S. Highway 101 travel lanes. This would ensure that beach goers and residents exiting the site and traveling southbound on the highway (which is the direction most motorists would travel) would have a full acceleration lane, which would reduce potential traffic hazards at that interchange. In addition, "coastal access" signage would be erected to direct northbound motorists to utilize the El Capitan Ranch Road interchange for accessing the beach parking area, which would allow the motorists to exit at that interchange, enter the southbound travel lanes, and exit at Las Varas Ranch without having to utilize the left turn lane and cross the southbound travel lanes (see **Figure 4.11-2** below). However, it is likely that many visitors to the site would ignore that signage and utilize the left turn lane directly at the Las Varas Ranch Road at-grade interchange rather than traveling the extra distance and turning around. Since it is estimated that use of the public parking lot and beach access trail could generate up to 98 ADTs and 8 PM PHTs, and 80% of trips would be oriented to and from the south, the use of this northbound left-turn lane would be moderate. By building the parking area and establishing the coastal access trail, use of this interchange will increase, thereby creating a potentially unsafe traffic hazard. Therefore, absent modifications to increase the northbound left turn lane to meet minimum Caltrans standards and establish an adequate level of safety for motorists entering and exiting the southern portion of the project site through adequate sight visibility and ingress/egress, impacts to public safety from traffic-related hazards are considered *potentially significant but mitigable*.



Figure 4.11-2. Use of El Capitan Ranch interchange for northbound motorists to turnaround and access Las Varas Ranch without crossing traffic.

Mitigation Measures

TRANS 1: To improve the corner and stopping sight distance, the small cut slope approximately 600 feet north of the Las Varas Ranch Road access on the beach side shall be modified to increase the sight distance. **Plan Requirements and Timing:** The applicant shall submit grading plans to P&D for review and approval prior to approval of the first Coastal Development Permit for future residential development south of the highway or the beach parking lot, whichever comes first. An encroachment permit shall be obtained from Caltrans prior to Grading Permit issuance.

MONITORING: Grading inspector shall site inspect to ensure compliance with approved plans prior to occupancy clearance.

TRANS 2: The existing northbound left turn lane shall be extended approximately 240 feet within the center median to meet the minimum Caltrans distance of 530 feet. **Plan Requirements and Timing:** The applicant shall submit plans to P&D and Public Works for review and approval prior to approval of the first Coastal

Development Permit for future residential development south of the highway or the beach parking lot, whichever comes first. An encroachment shall be obtained from Caltrans prior to construction.

MONITORING: P&D shall site inspect to ensure compliance with approved plans prior to occupancy clearance.

TRANS 3: Full deceleration and acceleration lanes at Las Varas Ranch Road along the southbound shoulder of U.S. Highway 101 shall be constructed to meet minimum Caltrans requirements. **Plan Requirements and Timing:** The applicant shall submit plans to P&D and Public Works for review and approval prior to approval of the first Coastal Development Permit for future residential development south of the highway or the beach parking lot, whichever comes first. An encroachment permit shall be obtained from Caltrans prior to construction.

MONITORING: P&D shall site inspect to ensure compliance with approved plans prior to occupancy clearance.

Residual Impacts

Implementation of the above mitigation measures would enhance traffic safety for future residents and public trail users, reducing impacts to **less than significant (Class II)** levels.

4.11.5 CUMULATIVE IMPACTS

Average daily trips (ADTs) and peak hour trips (PHTs) on U.S. Highway 101 in the vicinity of the project site have been decreasing over the last seven years, from a peak of 4,050 PHTs and 40,500 ADTs in 2002 to 3,100 PHTs and 31,000 ADTs in 2008 (no data is available for 2009). Because the historic traffic growth rate shows a negative trend, a conservative analysis for the future traffic volumes for U.S. Highway 101 in the vicinity of the project site would include no change (increase or decrease) for the next 20 years. As such, the existing plus project impact analysis is representative of a cumulative analysis for traffic conditions in the vicinity of the project site. The list of planned, pending, and recently approved projects included in Section 3.0 would result in an increase in ADTs along various segments of U.S. Highway 101, primarily east of the project site in between the project site and the City of Goleta. Assuming the development of up to 143 new single family dwellings within the segment of U.S. Highway 101 in between the City of Goleta and Gaviota Beach State Park, less than 2,000 ADTs would be generated and these would be distributed along several miles of the highway. Traffic volume on the highway would remain well below capacity and levels of service would remain within acceptable levels of LOS C or better.

The other cumulative projects would not contribute significant numbers of peak hour trips to the project intersection at Las Varas Ranch Road, thus impacts to levels of service associated with intersection capacity would not be significantly affected by other projects and impacts to delays would be minimal. Level of Service would remain within acceptable levels of LOS C or better. Therefore, cumulative traffic impacts would not be significant and the project's contribution to cumulative traffic impacts would *not be cumulatively considerable*.

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