

4.10 TRAFFIC AND CIRCULATION

The following analysis is based on the Transportation Impact Study for the Zone 2 Landslide Moratorium – Portuguese Bend Project, prepared by Linscott, Law and Greenspan, Engineers (LLG) and dated January 18, 2019. The full transportation study is included as Appendix G of this EIR.

4.10.1 Setting

a. Existing Street System. Access to the existing Portuguese Bend community of Rancho Palos Verdes is provided via Narcissa Drive and Peppertree Drive. All streets in the Portuguese Bend community are private and the community itself is gated. The gates restricting access to the community on Narcissa Drive and Peppertree Drive are set back approximately 190 and 90 feet from Palos Verdes Drive South, respectively. The following lane configurations are provided at the existing access locations for the community:

- *Narcissa Drive/Palos Verdes Drive South*
 - Eastbound Approach: One left-turn lane and one shared through/right-turn lane
 - Westbound Approach: One left-turn lane, one through lane and one right-turn lane
 - Southbound Approach: One shared left-turn/through lane and one right-turn lane
- *Peppertree Drive/Palos Verdes Drive South*
 - Eastbound Approach: One left-turn lane and one through lane
 - Westbound Approach: One through lane and one right-turn lane
 - Southbound Approach: One left-turn lane and one right-turn lane

The streets in the vicinity of the project area are divided into several functional classifications. Each type of street provides for a general level of traffic movement through the City. There are four categories in the roadway hierarchy, ranging from freeways with the highest capacity to two-lane undivided roadways with the lowest capacity. Freeways are limited-access and high-speed travel ways that carry regional through-traffic. Access is provided by interchanges with typical spacing of one mile or greater. Arterial roadways carry the majority of traffic entering and traveling through the City and are generally developed as commercial corridors. Arterials are generally designed with two to six travel lanes and their major intersections are signalized. This roadway type is divided into two categories: principal and minor arterials. Principal arterials are typically four-or-more lane roadways that serve both local and regional through-traffic. Minor arterials are typically two to four lane streets that service local and commute traffic. Collector roadways are intended to provide for the movement of traffic between arterials and neighborhoods. Collector roadways are typically designed with two through travel lanes that may accommodate on-street parking. Local roadways distribute traffic within a neighborhood, or similar adjacent neighborhoods, and are not intended for use as a through-street or a link between higher capacity facilities such as collector or arterial roadways. Local streets are fronted by residential uses and do not typically serve commercial uses.



The following roadways are located in the project vicinity and are described in detail in the Transportation Impact Study:

- *Palos Verdes Drive South (arterial)*
- *Barkentine Road (local street)*
- *Forrestal Drive (local street)*
- *Hawthorne Boulevard (arterial)*
- *Narcissa Drive (private roadway)*
- *Palos Verdes Drive East (arterial)*
- *Peppertree Drive (private roadway)*
- *Seahill Drive (local street)*
- *Tramonto Drive (local street)*
- *Via Rivera (local street)*

b. Existing Traffic Volumes and Level of Service. Consistent with City of Rancho Palos Verdes guidelines for traffic impact analyses, traffic conditions in the vicinity of the project area were analyzed using the delay-based Highway Capacity Manual (HCM) method for stop-controlled intersections to determine level of service (LOS). The HCM method measures average control delay (in seconds per vehicle) experienced at intersections. - Table 4.10-1 describes the six qualitative categories of LOS for stop-controlled intersections, along with the corresponding HCM control delay value range.

Table 4.10-1
Level of Service Criteria for Unsignalized
Intersections (HCM Methodology)

Level of Service (LOS)	Highway Capacity Manual Delay Value (sec/veh)	Level of Service Description
A	≤ 10.0	Little or no delay
B	> 10.0 and ≤ 15.0	Short traffic delays
C	> 15.0 and ≤ 25.0	Average traffic delays
D	> 25.0 and ≤ 35.0	Long traffic delays
E	> 35.0 and ≤ 50.0	Very long traffic delays
F	> 50.0	Severe congestion

A total of seven intersections were chosen for the project's traffic impact analysis. The analysis did not analyze the number of active construction sites in the project area because the project area is located in a gated community and survey personnel did not have access to the project area. All seven study intersections selected for analysis are controlled by stop signs with the stop signs facing the minor street approaches. The study analyzed the following seven intersections:

1. *Via Rivera/Hawthorne Boulevard*
2. *Seahill Drive-Tramonto Drive/Palos Verdes Drive South*
3. *Barkentine Road/Palos Verdes Drive South*
4. *Narcissa Drive/Palos Verdes Drive South*
5. *Peppertree Drive/Palos Verdes Drive South*
6. *Forrestal Drive/Palos Verdes Drive South*
7. *Palos Verdes Drive East/Palos Verdes Drive South*



The intersection of Palos Verdes Drive West/Hawthorne Boulevard/Via Vicente was not selected for analysis because no operational deficiencies are known to exist and based on recent analyses the project would not contribute significantly to the critical movements at that intersection.

Weekday morning (AM) and afternoon (PM) traffic count data for four of the seven study intersections were obtained from the City of Rancho Palos Verdes General Plan Update Traffic Impact Analysis (2017). The available 2016 traffic count data from this report were adjusted by 0.6 percent (0.6%) per year to reflect existing conditions. For those locations where no data were available, new manual counts of vehicular turning movements were conducted in November 2018 during the weekday AM, School PM and commuter PM periods to determine the peak hour traffic volumes. The manual counts were conducted by traffic count subconsultants at the study intersections from 7:00 to 9:00 AM to determine the weekday AM peak commuter hour, 2:00 to 4:00 PM to determine the School PM peak hour, and from 4:00 to 6:00 PM to determine the weekday PM peak commuter hour. Traffic volumes at the seven study intersections show the weekday morning and afternoon peak periods typically associated with peak hours in the metropolitan area.

The existing weekday AM, School PM, and PM peak hour LOS at the seven study intersections are summarized in Table 4.10-2. The existing traffic volumes at the study intersections during the weekday AM, School PM, and PM peak hours are shown in Figures 4.10-1, 4.10-2, and 4.10-3, respectively.

Table 4.10-2
Existing Intersection Levels of Service Summary

Key Intersection	Time Period	Control Type	Delay (sec/veh)	LOS
1. Via Rivera/ Hawthorne Boulevard	AM School PM PM	Two-Way Stop	77.5 189.0 40.7	F F E
2. Seahill Drive-Tramonto Drive/ Palos Verdes Drive South	AM School PM PM	Two-Way Stop	32.6 58.9 31.1	D F D
3. Barkentine Road/ Palos Verdes Drive South	AM School PM PM	Two-Way Stop	23.3 31.4 26.5	C D D
4. Narcissa Drive/ Palos Verdes Drive South	AM School PM PM	Two-Way Stop	46.6 52.1 42.4	E F E
5. Peppertree Drive/ Palos Verdes Drive South	AM School PM PM	Two-Way Stop	30.3 31.9 24.5	D D C
6. Forrestal Drive/ Palos Verdes Drive South	AM School PM PM	Two-Way Stop	62.3 107.7 52.5	F F F
7. Palos Verdes Drive East/ Palos Verdes Drive South	AM School PM PM	Two-Way Stop	30.3 47.0 25.0	D E C

Source: Linscott, Law and Greenspan, 2019



As shown in Table 4.10-2, two of the seven study intersections are currently operating at acceptable LOS (i.e., LOS D or better) during the weekday AM, School PM, and PM peak hours.

In addition to studying intersections in the project vicinity, the Transportation Impact Study analyzed the roadway level of service for the following two street segments:

1. *Palos Verdes Drive South west of Narcissa Drive*
2. *Palos Verdes Drive South east of Narcissa Drive*

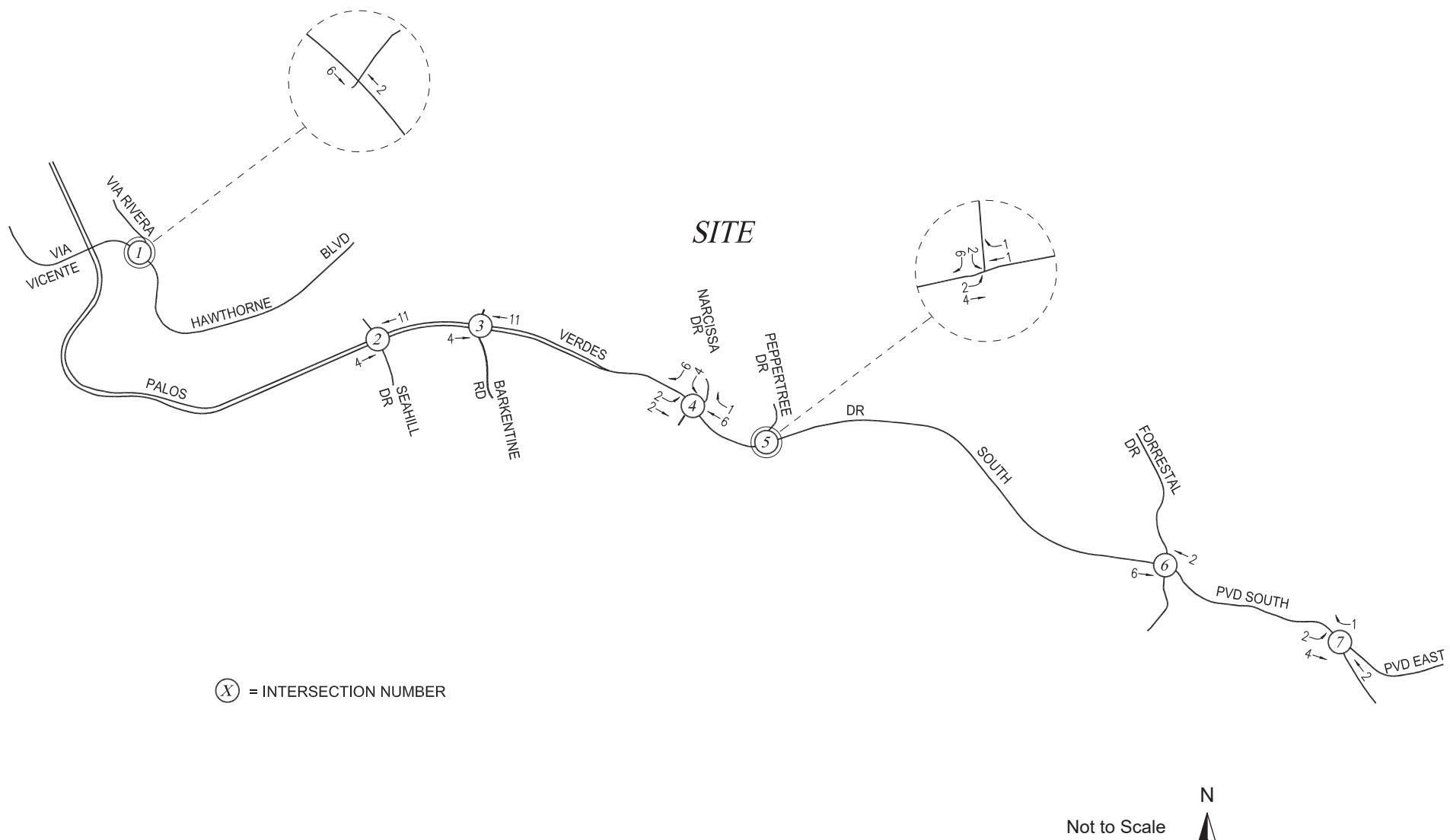
Automatic 24-hour machine traffic counts were obtained from the City of Rancho Palos Verdes General Plan Update Traffic Impact Analysis (2017). The 2016 traffic count data from this report were adjusted by 0.6 percent per year to reflect existing conditions.

Consistent with the City's General Plan, the analysis of traffic operations on roadway segments was conducted by comparing the daily traffic volumes to the maximum roadway capacity of each facility type. The roadway daily capacities were developed consistent with the HCM, which provides a methodology for developing generalized daily service volumes. Table 4.10-4 shows the existing traffic conditions on the two analyzed street segments. As shown in Table 4.10-3, Palos Verdes Drive South currently operates at LOS A west of Narcissa Drive and at LOS D east of Narcissa Drive.

Table 4.10-3
Existing Roadway Segment Level of Service Summary

Roadway Segment	Total Capacity	Existing Traffic Conditions		
		Daily Volume	V/C	LOS
1. Palos Verdes Drive South west of Narcissa Drive (4-Lane Divided Arterial)	36,100	14,112	0.391	A
2. Palos Verdes Drive South east of Narcissa Drive (2-Lane Divided Arterial)	17,900	15,360	0.858	D

Source: Linscott, Law and Greenspan, 2019.

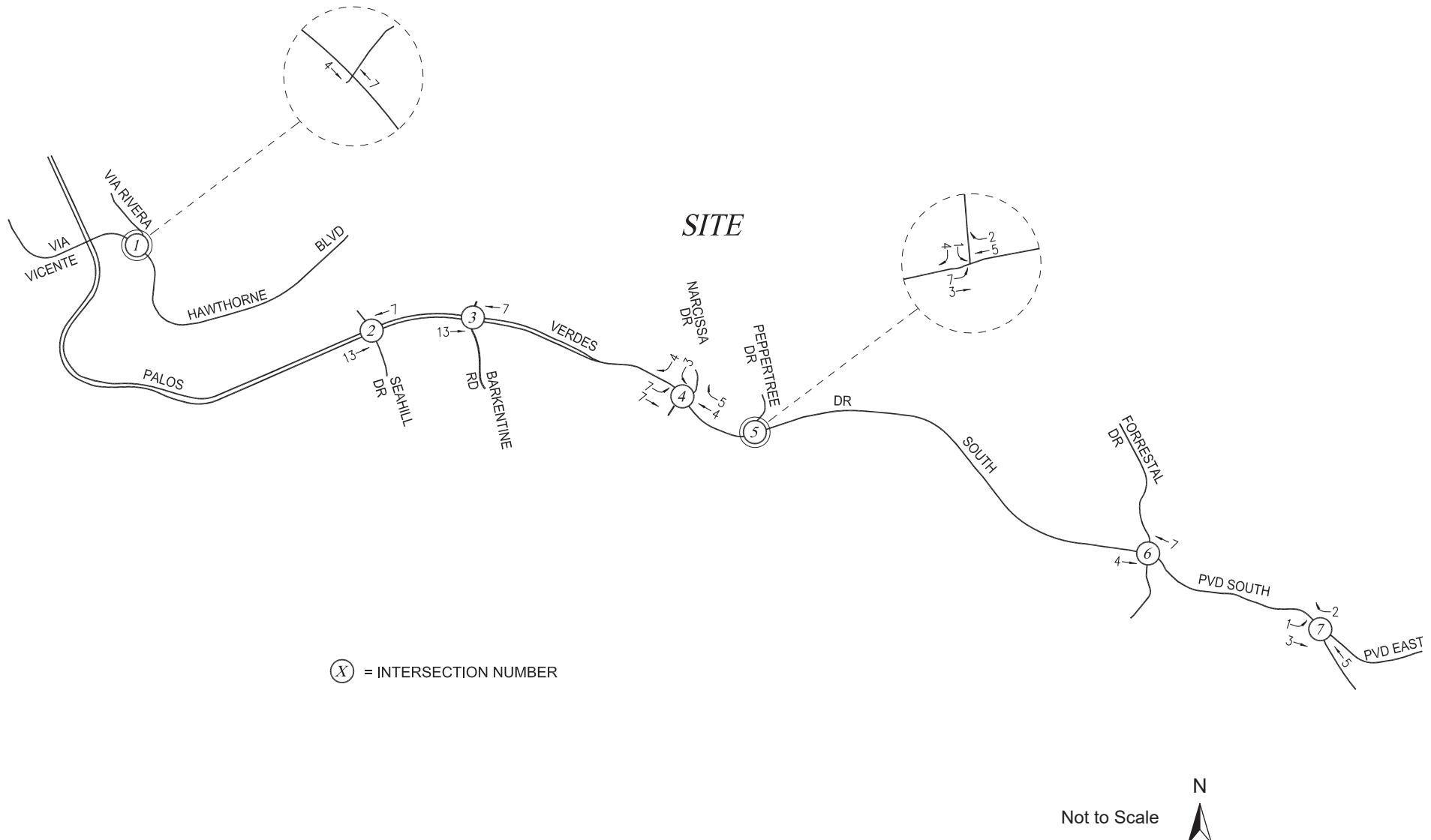


Project Traffic Volumes
Weekday AM Peak Hour

Source: Linscott, Law & Greenspan Engineers, May 2019.

Figure 4.10-1

City of Rancho Palos Verdes

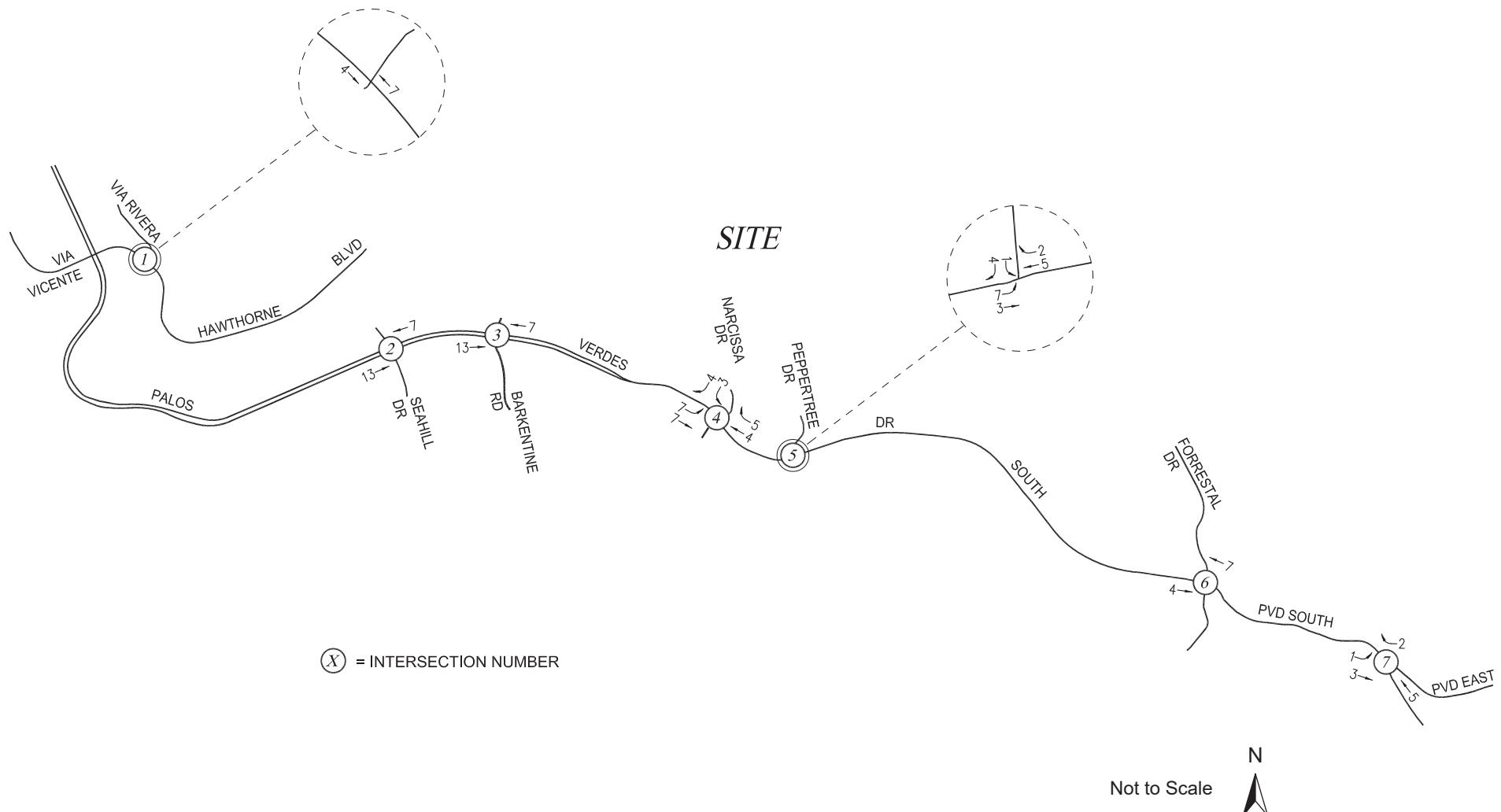


Project Traffic Volumes
Weekday School PM Peak Hour

Source: Linscott, Law & Greenspan Engineers, May 2019.

Figure 4.10-2

City of Rancho Palos Verdes



Project Traffic Volumes
Weekday PM Peak Hour

Source: Linscott, Law & Greenspan Engineers, May 2019.

Figure 4.10-3

City of Rancho Palos Verdes

d. Existing Public Bus Transit Service. Public bus transit service within the Zone 2 project study area is currently provided by the Los Angeles County Metropolitan Transportation Authority (Metro) and the Palos Verdes Peninsula Transit Authority. (PVPTA). A summary of the existing transit service, including the transit route, destinations and peak hour headways is presented in Table 4.10-4.

Table 4.10-4
Existing Transit Near the Project Area

Route	Destinations	Roadways Near Project Area	No. of Buses During Peak Hour		
			Direction	AM	PM
Metro 344	Rancho Palos Verdes to Harbor Gateway (via Torrance)	Palos Verdes Drive West, Palos Verdes Drive South, Hawthorne Boulevard	NB SB	2 4	3 2
PVPTA 226	Palos Verdes Estates	Palos Verdes Drive West, Hawthorne Boulevard	NB SB	0 2	1 0
PVPTA Blue Line	Rancho Palos Estates to Rancho Palos Verdes (School Days)	Palos Verdes Drive West, Hawthorne Boulevard	Inbound Outbound	1 1	1 1
PVPTA Gold Line	Rancho Palos Verdes to Rolling Hills (School Days)	Tramonto Drive, Seahill Drive, Narcissa Drive, Pepper Tree Drive, Trump National Drive, Palos Verdes Drive South	Inbound Outbound	1 1	1 1
PVPTA Orange Line	Rancho Palos Estates to Rolling Hills via Rancho Palos Verdes (School Days)	Tramonto Drive, Seahill Drive, Narcissa Drive, Pepper Tree Drive, Trump National Drive, Palos Verdes Drive South	Inbound Outbound	0 1	1 0

Source: Linscott, Law and Greenspan, 2019.

e. Regulatory Setting

State Highway Analysis. The purpose of the Caltrans *Guide for the Preparation of Traffic Impact Studies* (State of California Department of Transportation, December 2002) is to provide a safe and efficient State transportation system, provide consistency and uniformity in the identification of traffic impacts generated by local land use proposals, and consistency and equity in the identification of measures to mitigate the traffic impacts generated by land use proposals. The Caltrans traffic studies guide identifies review of substantial individual projects, which might impact the CMP State Highway transportation system.

County of Los Angeles Congestion Management Program. The purpose of the Congestion Management Program (CMP) is to develop a coordinated approach to managing and decreasing traffic congestion by linking the various transportation, land use and air quality planning programs throughout the County. The program is consistent with the Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) and SCAG's Regional Transportation Improvement Program. The CMP program requires review of substantial individual projects, which might on their own impact the CMP transportation system.



City of Rancho Palos Verdes General Plan. The General Plan Circulation Element (2018), provides a plan for the transportation system and infrastructure needed to serve proposed development in the City, as defined in the Land Use Element. The system ranges from sidewalks to roadways to trails, all providing for the safe, efficient, and sometimes recreational movement of people through the City. The Circulation Element presents a plan to ensure that utilities and transportation, including public transportation services, are constantly available to permit orderly growth and to promote the public health, safety, and welfare. The Circulation Element policies that are relevant to the proposed project include the following:

- *Design public access into residential areas to control non-local traffic.*
- *Require any new developments or redevelopment to provide streets wide enough to support the City's future traffic needs and to address potential impacts to nearby intersections resulting from such developments.*
- *Ensure that future residential developments provide direct access to roadways other than arterials.*
- *Require that all new developments, where appropriate, establish paths and trails.*
- *Require adequate off-street parking for all existing and future development.*

City of Rancho Palos Verdes Zoning Code. According to the RPV Zoning Map, the Portuguese Bend area is located within the Single Family Residential District, including both RS-1 (one-acre minimum lot size) and RS-2 (20,000 square-foot minimum lot size) zoned lots. The following general standards (Code Section 17.02.030, *Development Standards*) relevant to traffic and circulation apply to the Single Family Residential District:

E. Parking/Driveway Standards.

1. *A minimum of two enclosed parking spaces shall be provided and maintained in a garage, and a minimum of two unenclosed parking spaces shall be provided and maintained as a driveway, on the property of each single-family dwelling unit containing less than five thousand square feet of habitable space, as determined by the director.*
2. *A minimum of three enclosed parking spaces shall be provided and maintained in a garage, and a minimum of three unenclosed parking spaces shall be provided and maintained as a driveway, on the property of each single-family dwelling unit containing five thousand square feet or more of habitable space, as determined by the director.*
3. *A garage with a direct access driveway from the street of access shall not be located less than twenty feet from the front or street-side property line, whichever is the street of access.*
4. *In addition to the parking requirements for the primary single-family residence on a property, parking for city-approved second units shall be provided in accordance with Chapter 17.10 (Second Unit Development Standards).*
5. *An enclosed parking space shall have an unobstructed ground space of no less than nine feet in width by twenty feet in depth, with a minimum of seven feet of vertical clearance over the space. An unenclosed parking space shall have an unobstructed ground space of no less than nine feet in width by twenty feet in depth.*

6. *The following minimum driveway widths and turning radii shall be provided for all driveways leading from the street of access to a garage or other parking area on a residential parcel:*
 - a. *A driveway shall be a minimum width of ten feet; and*
 - b. *A paved twenty-five-foot turning radius shall be provided between the garage or other parking area and the street of access for driveways which have an average slope of ten percent or more, and which are fifty feet or more in length.*
7. *Driveways shall take into account the driveway standards required by the department of public works for driveway entrances located in the public right-of-way.*
8. *A driveway that is located adjacent to a side property line shall provide a minimum eighteen-inch-wide landscaped area between the side property line and the adjacent driveway, unless such buffer would reduce the minimum width of the driveway to less than ten feet, in which case the width of the landscape buffer may be narrowed or eliminated at the discretion of the director.*
9. *All driveways shall be built and maintained in accordance with the specifications of the Los Angeles County fire department. If there is any inconsistency between the standards imposed by this chapter and the standards imposed by the Los Angeles County fire department, the stricter shall apply.*
10. *Unless otherwise expressly permitted elsewhere in this title, enclosed tandem parking spaces may only be used for parking spaces in excess of the minimum requirements of subsections (1) and (2) of this section, provided that each space meets the minimum dimensions specified in subsection (5) of this section.*

4.10.2 Impact Analysis

a. Methodology and Significance Thresholds. The following traffic scenarios were analyzed in the traffic study:

1. **Existing Conditions** – *The analysis of existing AM, School PM, and PM weekday peak hour traffic conditions provides a basis for the assessment of future traffic conditions. The existing conditions analysis includes a description of key area streets and highways, traffic volumes, and current intersection and roadway operating conditions.*
2. **Existing with Project Conditions** – *This scenario identifies the incremental impacts of the proposed project on the existing AM, School PM, and PM weekday peak hour traffic conditions by adding the traffic expected to be generated by the project to the existing traffic forecasts.*
3. **Year 2030 Future Pre-project Conditions** – *This scenario projects the future traffic growth and intersection operating conditions that could be expected from regional growth and known related projects in the vicinity of the project area. These analyses provide the future baseline conditions against which project specific impacts are evaluated.*

4. **Year 2030 Future with Project Conditions** – This analysis identifies the incremental impacts of the proposed project on future traffic operating conditions by adding the traffic expected to be generated by the project conditions to the year 2030 pre-project traffic forecasts.

Traffic Forecasting Methodology. In order to estimate the traffic impact characteristics of the proposed project, a multi-step process was utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the project development tabulation. The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area. The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

Project Trip Generation. Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Traffic volumes to be generated by the proposed project were forecast for the weekday AM and PM peak hours, and over a 24-hour period. The resource typically used by traffic engineers (including the City of Rancho Palos Verdes) to forecast trip generation for development projects is the Institute of Transportation Engineers' (ITE) Trip Generation manual. ITE Land Use Code 210 (Single-Family Detached Housing) trip generation average rates were used to forecast traffic volumes for the proposed project. As shown on Table 4.10-5, the proposed project is expected to generate 293 new daily trips, including approximately 23 vehicle trips (6 inbound trips and 17 outbound trips) during the weekday AM peak hour. During both the weekday school and PM peak hours, the proposed project is expected to generate 31 vehicle trips (20 inbound trips and 11 outbound trips).

Table 4.10-5
Project Trip Generation Summary

Land Use	Size	Net New Daily Trips	AM Peak Hour Trips			School PM Peak Hour Trips			PM Peak Hour Trips		
			IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
Single Family Housing	31 units	293	6	17	23	20	11	31	20	11	31

Source: Linscott, Law and Greenspan, 2019.
ITE Land Use Code 210 (Single-Family Detached Housing) trip generation average rates.

Project Traffic Distribution and Assignment. The directional traffic distribution pattern for the proposed project is presented in Figure 4.10-4. Project traffic volumes both entering and exiting the project area have been distributed and assigned to the adjacent street system based on the following considerations:

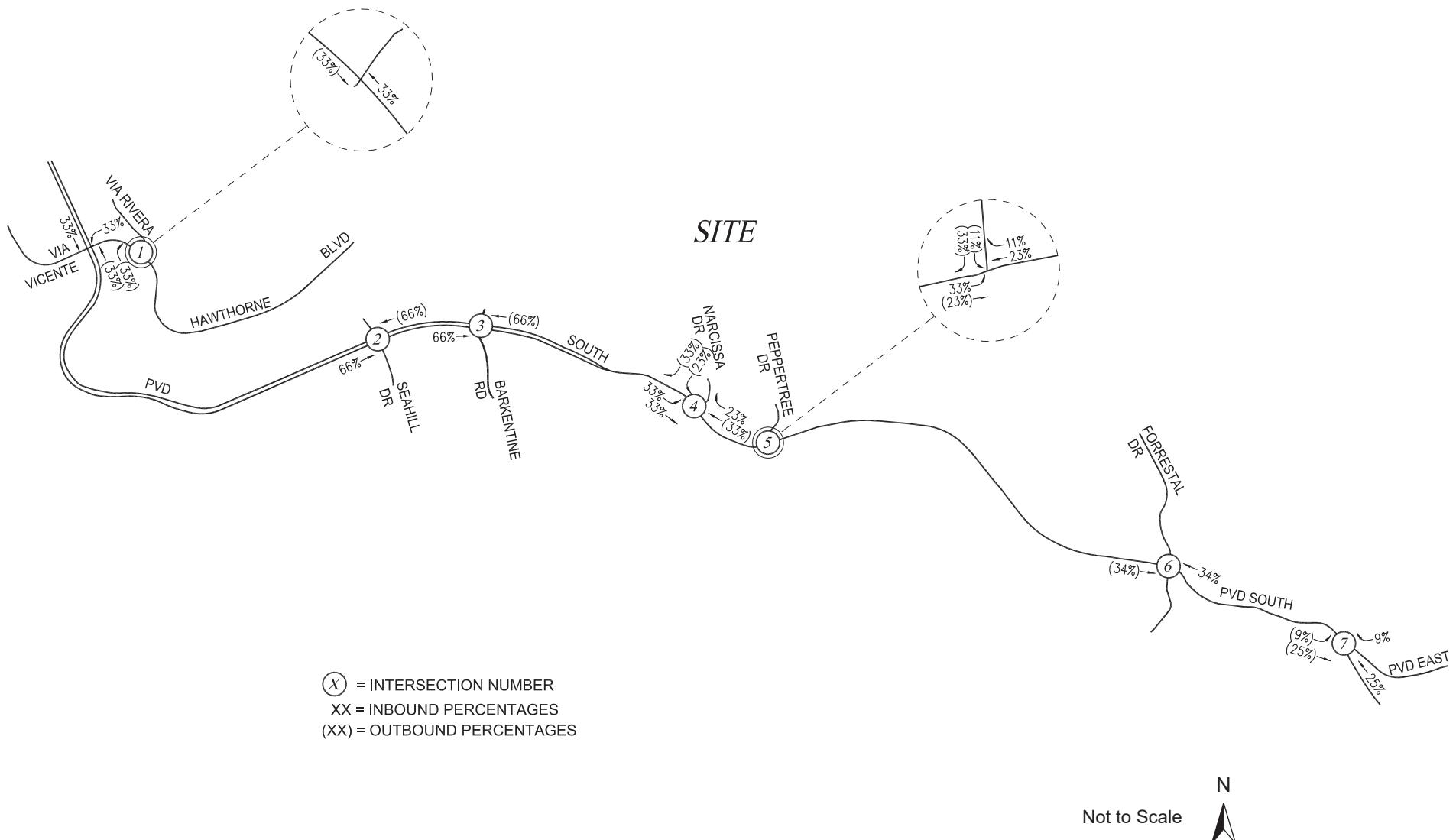
- *The project area's proximity to major traffic corridors (i.e., Palos Verdes Drive South),*
- *Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals,*
- *Existing intersection traffic volumes,*
- *Ingress/egress availability at the project area, and*
- *Input from City staff*

The traffic volume assignments reflect the traffic distribution characteristics shown in Figure 4.10-4 and the project traffic generation forecasts presented in Table 4.10-5.

Highway Capacity Manual Method of Analysis (Unsignalized Intersections). The AM, School PM, and PM peak hour operating conditions for the seven key study intersections were evaluated using the HCM methodology for unsignalized intersections. The HCM method determines the average control delay experienced at unsignalized intersections. This methodology estimates the average control delay for each of the subject movements and determines the LOS for each constrained movement. Average control delay for any particular movement is a function of the capacity of the approach and the degree of saturation. The overall average control delay is measured in seconds per vehicle and includes delay due to deceleration to a stop at the back of the queue from free-flow speed, move-up time within the queue, stopped delay at the front of the queue, and delay due to acceleration back to free-flow speed. The six qualitative categories of Level of Service have been defined along with the corresponding HCM control delay value range, as shown in Table 4.10-1. The LOS of an unsignalized intersection ranges LOS A (free-flow conditions) to F (severely congested conditions), based on delay experienced per vehicle.

Traffic Impact Criteria for Intersections and Segments. The relative impact of the added project traffic volumes generated by the proposed project during the AM, School PM, and PM peak hours was evaluated based on analysis of future operating conditions at the seven study intersections, without, then with, the proposed project. The previously discussed capacity analysis procedures were utilized to investigate the future volume-to-capacity relationships and service level characteristics at each study intersection. The significance of potential project impacts at each key intersection was then evaluated using the City's traffic impact criteria. The City of Rancho Palos Verdes' target for peak hour intersection operation is LOS D or better.





Source: Linscott, Law & Greenspan Engineers, May 2019.

Project Traffic Distribution Pattern

Figure 4.10-4

City of Rancho Palos Verdes

The City of Rancho Palos Verdes has established the following thresholds of significance for unsignalized intersections:

- *A significant impact would occur at an unsignalized intersection when the addition of project-generated trips causes the peak hour level of service of the intersection to change from acceptable operation (LOS D or better) to deficient operation (LOS E or F); or*
- *A significant impact would occur at an unsignalized intersection if the peak hour level of service of the intersection is LOS E or F and the addition of project-generated trips changes the delay by 2.0 seconds or more.*

In addition to studying intersections in the project vicinity, the roadway LOS for two street segments was also analyzed: Palos Verdes Drive South west of Narcissa Drive and Palos Verdes Drive South east of Narcissa Drive. The analysis of traffic operations on roadway segments was conducted by comparing the daily traffic volumes to the maximum roadway capacity of each facility type. The roadway daily capacities were developed consistent with the HCM, which provides a methodology for developing generalized daily service volumes. As noted previously, the acceptable level of service for the City of Rancho Palos Verdes is LOS D.

Congestion Management Plan (CMP) Traffic Impact Criteria. The Congestion Management Program (CMP) is a state-mandated program that was enacted by the State Legislature with the passage of Proposition 111 in 1990. The program is intended to address the impact of local growth on the regional transportation system.

As required by the *2010 Congestion Management Program for Los Angeles County*, a Traffic Impact Assessment (TIA) has been prepared to determine the potential impacts on designated monitoring locations on the CMP highway system. The analysis has been prepared in accordance with procedures outlined in the *2010 Congestion Management Program for Los Angeles County*, County of Los Angeles Metropolitan Transportation Authority, October 2010.

Future Traffic Volume and Distribution. Horizon year (Year 2030), background traffic growth estimates have been calculated by using an ambient traffic growth factor. The ambient traffic growth factor is intended to include unknown related projects in the study area and account for typical growth in traffic volumes due to the development of projects outside the study area. The future growth in traffic volumes has been calculated at 0.6 percent (0.6%) per year. The ambient growth factor was based on review of the background traffic growth estimates for the Palos Verdes area published in the *2010 Congestion Management Program for Los Angeles County*, which indicate that existing traffic volumes would be expected to increase at an annual rate of approximately 0.51 percent (0.51% per year) between years 2010 and 2030. However, in order to provide a conservative analysis, the higher ambient growth factor of 0.60 percent (0.60% per year) contained in the *2004 Congestion Management Program for Los Angeles County* was utilized in this analysis. Application of the ambient traffic growth factor to existing traffic volumes results in a 6.0 percent (6.0%) increase in existing traffic volumes to horizon Year 2030.

In order to make a realistic estimate of future on-street conditions prior to adoption of and potential development under the proposed project, the status of other known development projects (related projects) in the area has been researched at the cities of Rancho Palos Verdes,



Rolling Hills Estates, Los Angeles, and Torrance. With this information, the potential impact of the proposed project can be evaluated within the context of the cumulative impact of all ongoing development. Based on current research, 22 related projects are located in the project area vicinity that have either been built, but are not yet fully occupied, or are being processed for approval (see Table 3-1 in Section 3.0, *Environmental Setting*). These 22 related projects have been included as part of the cumulative background setting in Year 2030.

Traffic volumes expected to be generated by the related projects were calculated using rates provided in the ITE Trip Generation manual. The resulting peak hour LOS at the seven study intersections for the Year 2030 horizon year are summarized in Table 4.10-6, which shows the summary of the projected Year 2030 future pre-project traffic conditions based on future intersection geometry, where applicable, existing traffic volumes with the addition of ambient growth, and related projects traffic volumes.

Table 4.10-6
Year 2030 Future Pre-Project Conditions Summary

#	Key Intersection	Time Period	Future Background Year 2030	
			Delay	LOS
1	Via Rivera/Hawthorne Boulevard	AM School PM PM	167.2 419.5 73.7	F F F
2	Seahill Drive-Tramonto Drive/ Palos Verdes Drive South	AM School PM PM	50.4 126.7 46.7	F F D
3	Barkentine Road/ Palos Verdes Drive South	AM School PM PM	28.1 43.5 35.4	D E E
4	Narcissa Drive/ Palos Verdes Drive South	AM School PM PM	64.4 78.7 61.6	F F F
5	Peppertree Drive/ Palos Verdes Drive South	AM School PM PM	37.6 42.2 30.7	E E D
6	Forrestal Drive/ Palos Verdes Drive South	AM School PM PM	106.3 227.3 95.1	F F F
7	Palos Verdes Drive East/ Palos Verdes Drive South	AM School PM PM	41.7 85.4 34.8	E F D

Source: Linscott, Law and Greenspan, 2019.



Based on the CEQA Guidelines (Appendix G), impacts related to traffic and circulation would be considered significant if the project would exceed the capacity of the existing circulation system, based on an applicable measure of effectiveness (as designated in a general plan policy, ordinance, etc.), taking into account all relevant components of the circulation system, including but not limited to:

- *Intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit*
- *Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways*
- *Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks*
- *Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)*
- *Result in inadequate emergency access*
- *Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)*

As discussed in the Initial Study (Appendix A), the project, by its nature as single family residences, would not result in a change in air traffic patterns by increasing traffic levels or a change in location that results in substantial safety risks. Therefore, as discussed in the Initial Study, no impact to air traffic patterns would occur. Therefore, the following discussion focuses on traffic on the street system, level of service standards established by the City and the county congestion management agency, hazards due to design features, emergency access, and alternative transportation.

b. Project Impacts and Mitigation Measures.

Impact T-1 The potential increase in vehicles traveling on the surrounding roadway network from buildout under the proposed ordinance revisions would result in significant impacts at four of the study area intersections under existing plus project conditions. In addition, the increase in vehicle trips under cumulative conditions would result in significant impacts at five of the study area intersections. Mitigation Measures T-1(a) through T-1(d) would reduce impacts to a less than significant level at four of the five intersections that would experience significant impacts. However, because feasible mitigation is not available at the Via Rivera/Hawthorne Boulevard intersection, the impact at that location would be Class I, significant and unavoidable.

Table 4.10-7 shows the change in delay from existing conditions (see Table 4.10-2) to the existing plus project scenario.



Under existing plus project conditions, the proposed project would result in significant impacts at the following four intersections:

- *Via Rivera/Hawthorne Boulevard*
- *Seahill Drive-Tramonto Drive/Palos Verdes Drive South*
- *Narcissa Drive/Palos Verdes Drive South*
- *Forrestal Drive/Palos Verdes Drive South*

Figures 4.10-5, 4.10-6, and 4.10-7 show traffic conditions under Year 2030 Future with Project conditions. Table 4.10-8 shows the change in delay from the Year 2030 Future Pre-project Conditions scenario (see Table 4.10-5) to the Year 2030 Future with Project scenario.

Under cumulative conditions in 2030, the proposed project would result in significant impacts at the following five intersections:

- *Via Rivera/Hawthorne Boulevard*
- *Seahill Drive-Tramonto Drive/Palos Verdes Drive South*
- *Narcissa Drive/Palos Verdes Drive South*
- *Forrestal Drive/Palos Verdes Drive South*
- *Palos Verdes Drive East/Palos Verdes Drive South*

Table 4.10-7
Existing Plus Project Intersection Impacts

#	Intersection	Time Period	Change in Delay	Significant Impact?
1	Via Rivera/ Hawthorne Boulevard	AM	2.0	YES
		School PM	6.9	YES
		PM	1.1	NO
2	Seahill Drive-Tramonto Drive/ Palos Verdes Drive South	AM	0.9	NO
		School PM	3.1	YES
		PM	1.2	NO
3	Barkentine Road/ Palos Verdes Drive South	AM	0.2	NO
		School PM	1.0	NO
		PM	0.7	NO
4	Narcissa Drive/ Palos Verdes Drive South	AM	3.1	YES
		School PM	5.4	YES
		PM	3.4	YES
5	Peppertree Drive/ Palos Verdes Drive South	AM	0.0	NO
		School PM	0.0	NO
		PM	0.0	NO
6	Forrestal Drive/ Palos Verdes Drive South	AM	2.2	YES
		School PM	6.3	YES
		PM	1.7	NO
7	Palos Verdes Drive East/ Palos Verdes Drive South	AM	0.4	NO
		School PM	0.5	NO
		PM	0.2	NO

Source: Linscott, Law and Greenspan, 2019.



Table 4.10-8
Year 2030 Future with Project Intersection Impacts

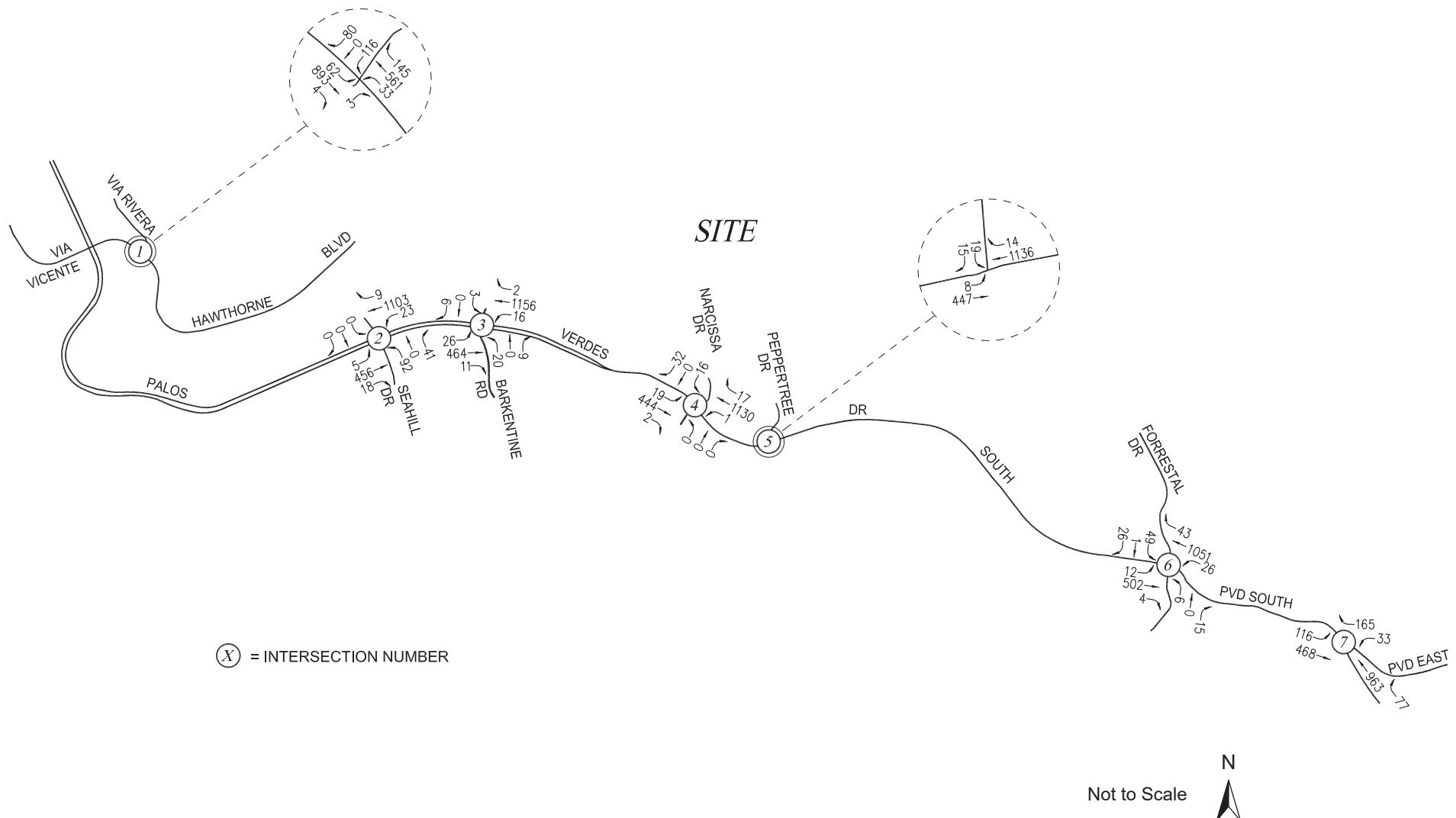
#	Key Intersection	Time Period	Change in Delay	Significant Impact?
1	Via Rivera/ Hawthorne Boulevard	AM	5.2	YES
		School PM	7.8	YES
		PM	2.2	YES
2	Seahill Drive-Tramonto Drive/ Palos Verdes Drive South	AM	1.6	NO
		School PM	5.7	YES
		PM	2.4	YES
3	Barkentine Road/ Palos Verdes Drive South	AM	0.6	NO
		School PM	0.9	NO
		PM	1.1	NO
4	Narcissa Drive/ Palos Verdes Drive South	AM	5.2	YES
		School PM	11.8	YES
		PM	5.8	YES
5	Peppertree Drive/ Palos Verdes Drive South	AM	0.0	NO
		School PM	0.0	NO
		PM	0.0	NO
6	Forrestal Drive/ Palos Verdes Drive South	AM	0.1	NO
		School PM	9.1	YES
		PM	5.3	YES
7	Palos Verdes Drive East / Palos Verdes Drive South	AM	0.8	NO
		School PM	1.7	NO
		PM	0.5	YES

Source: Linscott, Law and Greenspan, 2019.

Because four intersections would exceed thresholds in the existing plus project scenario, and five intersections would exceed thresholds in the Year 2030 Future with Project scenario as identified in Tables 4.10-6 and 4.10-7, impacts would be potentially significant.

Mitigation Measures. As discussed above, the proposed project would result in potentially significant impacts. Mitigation measures T-1(a-d) were designed to reduce impacts at the intersections that would be adversely affected by traffic generated by the project, including Seahill Drive-Tramonto Drive/Palos Verdes Drive South, Narcissa Drive/Palos Verdes Drive South, Forrestal Drive/Palos Verdes Drive South, and Palos Verdes Drive East/Palos Verdes Drive South.

T-1(a) Seahill Drive-Tramonto Drive/Palos Verdes Drive South. The City shall monitor the level of service at this intersection annually and shall provide a two-way left-turn lane on Palos Verdes Drive South when the improvement is determined to be needed within five years of adoption of the Moratorium Ordinance revisions to better facilitate the northbound left-turn movement (i.e., from Seahill Drive) onto westbound Palos Verdes Drive South. (Note that this improvement is listed in the City of Rancho Palos Verdes General Plan Update).

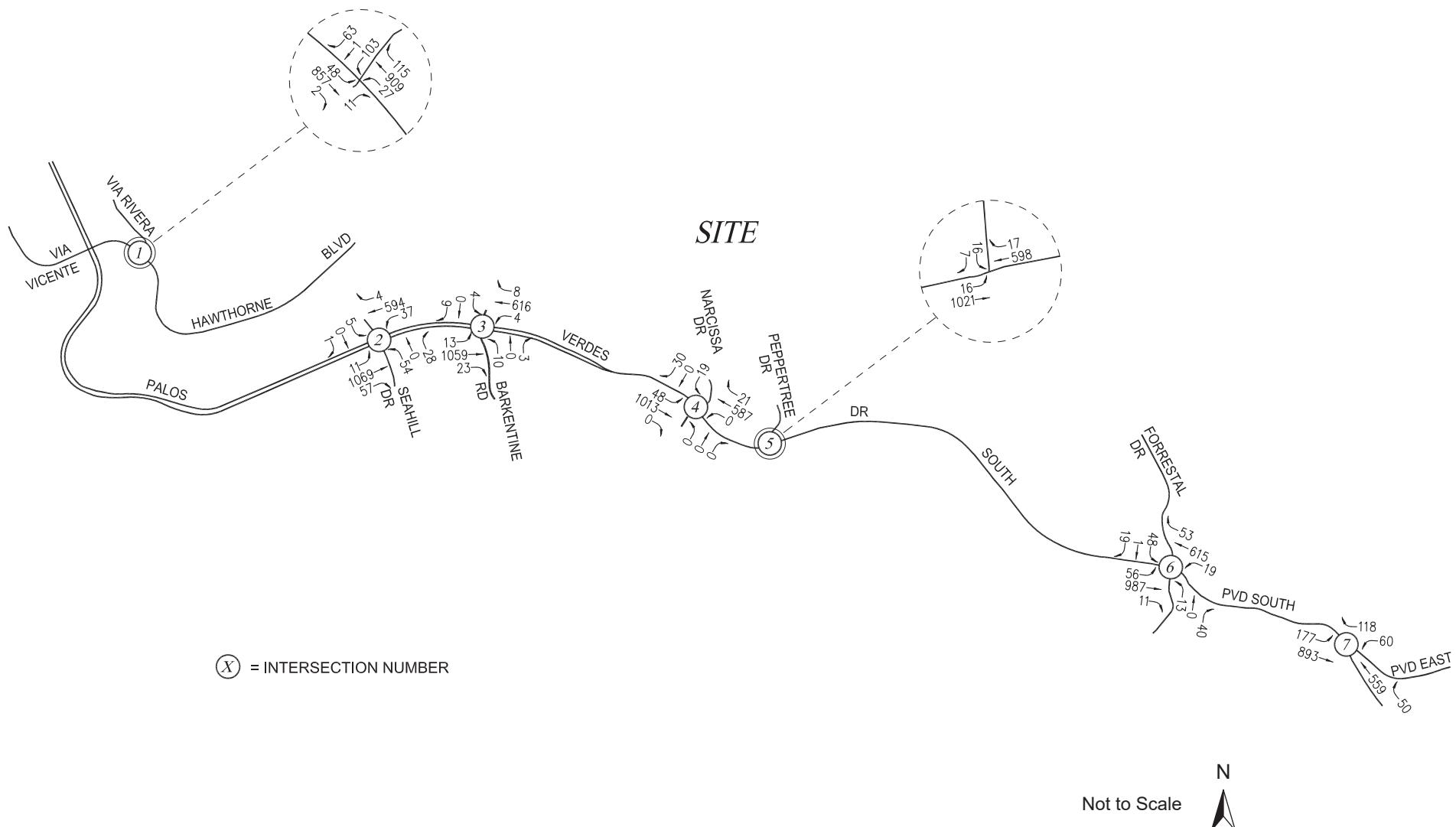


Year 2030 Future with Project Traffic Volumes Weekday AM Peak Hour

Source: Linscott, Law & Greenspan Engineers, May 2019.

Figure 4.10-5

City of Rancho Palos Verdes

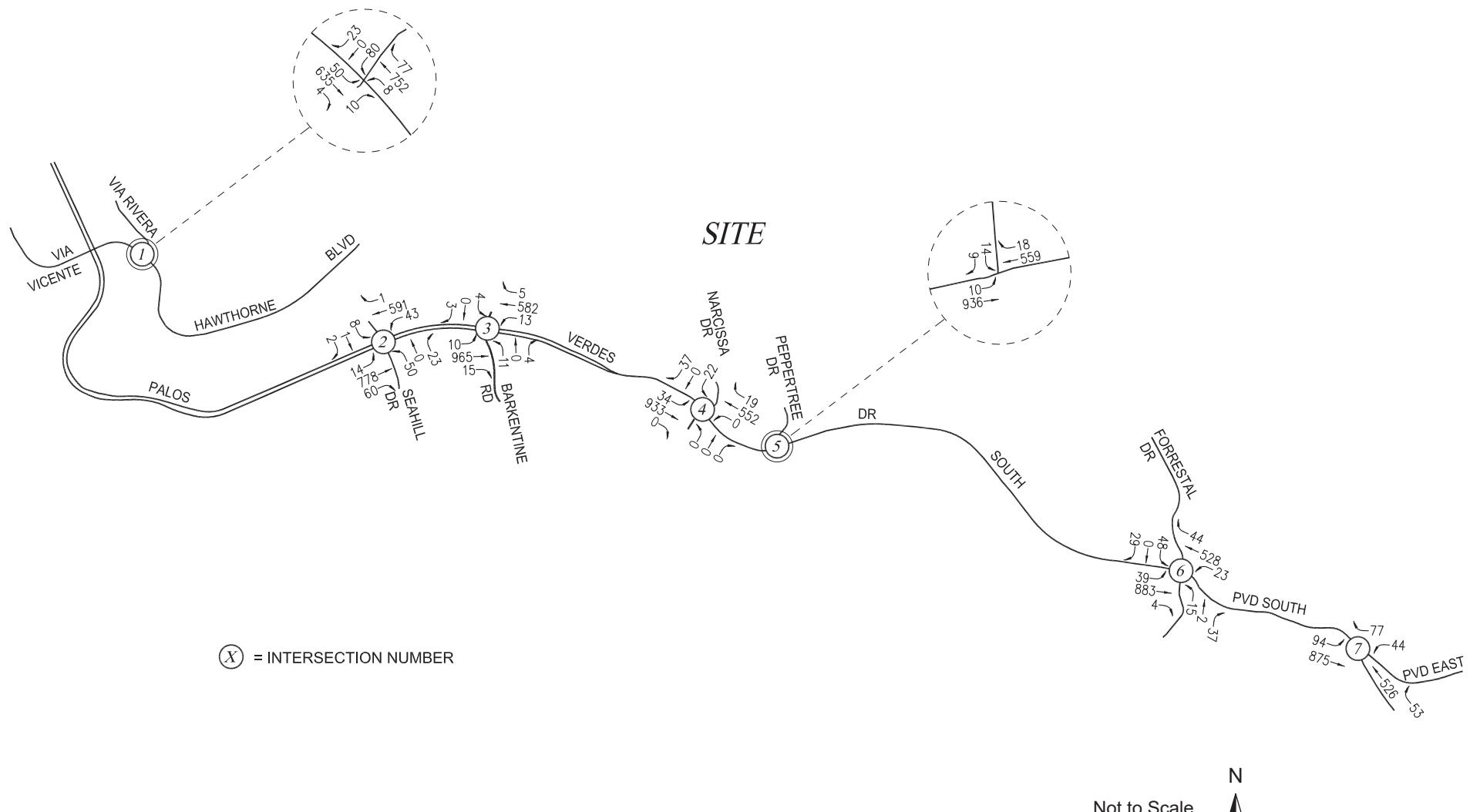


Year 2030 Future with Project Traffic Volumes
 Weekday School PM Peak Hour

Source: Linscott, Law & Greenspan Engineers, May 2019.

Figure 4.10-6

City of Rancho Palos Verdes



Year 2030 Future with Project Traffic Volumes
 Weekday PM Peak Hour

Source: Linscott, Law & Greenspan Engineers, May 2019.

Figure 4.10-7

City of Rancho Palos Verdes

T-1(b) Narcissa Drive/Palos Verdes Drive South. The City shall monitor the level of service at this intersection annually and shall provide a two-way left-turn lane on Palos Verdes Drive South, east of Narcissa Drive, when the improvement is determined to be needed within five years of adoption of the Moratorium Ordinance revisions to better facilitate the southbound left-turn movement (i.e., exiting from Narcissa Drive) onto eastbound Palos Verdes Drive South. The existing westbound left-turn lane at Narcissa Drive (which serves one single family home) shall also be converted to a two-way left-turn lane in order to provide a refuge area for exiting Narcissa Drive motorists to turn into and wait prior to accelerating to merge with the eastbound Palos Verdes Drive South traffic flow.

T-1(c) Forrestal Drive/Palos Verdes Drive South. The City shall monitor the level of service at this intersection annually and shall provide a two-way left-turn lane on Palos Verdes Drive South when the improvement is determined to be needed within five years of adoption of the Moratorium Ordinance revisions to provide a deceleration and storage area for left-turn vehicles traveling in either direction. (Note that this improvement is listed in the City of Rancho Palos Verdes General Plan Update).

T-1(d) Palos Verdes Drive East/Palos Verdes Drive South. The City shall monitor the level of service at this location annually and shall provide a two-way left-turn lane on Palos Verdes Drive South when the improvement is determined to be needed within five years of adoption of the Moratorium Ordinance revisions to provide a deceleration and storage area for left-turn vehicles traveling in either direction. (Note that this improvement is listed in the City of Rancho Palos Verdes General Plan Update).

Mitigation Measures T-1(a) through T-1(d) include monitoring the intersections in order to determine when the improvement would be needed, as it is unlikely that development of the 31 lots would occur simultaneously. Installation of a traffic signal at the Via Rivera/Hawthorne Boulevard intersection could reduce the impact at that location to a less than significant level, as indicated in the Traffic Impact Study in Appendix G. This potential improvement is listed in the City of Rancho Palos Verdes General Plan Update. However, further study would be required to determine when a signal would be needed, how it would be funded, and whether it may have secondary effects that make it undesirable. Consequently, requiring a signal at the Via Rivera/Hawthorne Boulevard intersection is not considered feasible at this time.

Significance After Mitigation. As shown in Tables 4.10-9 and 4.10-10, Mitigation Measure T-1(a-d) would reduce the potentially significant project-related impacts to four of the study intersections to a less than significant level. However, the impact at the Via Rivera/Hawthorne Boulevard intersection would remain significant and unavoidable. A

Statement of Overriding Considerations would be needed for this impact if the City approves the project.

Table 4.10-9
Existing Plus Project Intersection Impacts Plus Mitigated Intersections

#	Intersection	Time Period	Change in Delay	Significant Impact?	Existing with Project Mitigation Change in Delay	Mitigated?
2	Seahill Drive-Tramonto Drive/ Palos Verdes Drive South	AM School PM PM	0.9 3.1 1.2	NO YES NO	--- -32.1 ---	---
3	Barkentine Road/ Palos Verdes Drive South	AM School PM PM	0.2 1.0 0.7	NO NO NO	--- --- ---	---
4	Narcissa Drive/ Palos Verdes Drive South	AM School PM PM	3.1 5.4 3.4	YES YES YES	-22.1 -26.9 -19.8	YES YES YES
5	Peppertree Drive/ Palos Verdes Drive South	AM School PM PM	0.0 0.0 0.0	NO NO NO	--- --- ---	---
6	Forrestal Drive/ Palos Verdes Drive South	AM School PM PM	2.2 6.3 1.7	YES YES NO	-36.6 -74.0 ---	YES YES ---
7	Palos Verdes Drive East/ Palos Verdes Drive South	AM School PM PM	0.4 0.5 0.2	NO NO NO	--- --- ---	---

Source: Linscott, Law and Greenspan, 2019.

Table 4.10-10
Year 2030 Future with Project Intersection Impacts Plus Mitigated Intersections

#	Key Intersection	Time Period	Change in Delay	Significant Impact?	Future with Project Mitigation Change in Delay	Mitigated?
2	Seahill Drive-Tramonto Drive/ Palos Verdes Drive South	AM School PM PM	1.6 5.7 2.4	NO YES YES	--- -90.7 -23.5	--- YES YES
3	Barkentine Road/ Palos Verdes Drive South	AM School PM PM	0.6 0.9 1.1	NO NO NO	--- --- ---	---
4	Narcissa Drive/ Palos Verdes Drive South	AM School PM PM	5.2 11.8 5.8	YES YES YES	-35.8 -48.4 -34.9	YES YES YES
5	Peppertree Drive/ Palos Verdes Drive South	AM School PM PM	0.0 0.0 0.0	NO NO NO	--- --- ---	---
6	Forrestal Drive/ Palos Verdes Drive South	AM School PM PM	0.1 9.1 5.3	NO YES YES	--- -178.8 -65.3	--- YES YES
7	Palos Verdes Drive East / Palos Verdes Drive South	AM School PM PM	0.8 1.7 0.5	NO NO YES	--- --- -14.5	---

Source: Linscott, Law and Greenspan, 2019.

Impact T-2 The proposed project would increase traffic levels along roadways in the vicinity of the project area and result in a significant impact at one of two study roadway segments under cumulative conditions. Although Mitigation Measure T-2 would reduce impacts to a less than significant level, this measure may be infeasible. Therefore, the impact to this roadway segment would remain Class I, significant and unavoidable.

The forecast traffic conditions at the analyzed street segments for existing, Year 2030 future pre-project (i.e., existing traffic volumes, ambient traffic growth and related projects traffic volumes) and Year 2030 future with project analysis scenarios are summarized in Table 4.10-11. As shown in Table 4.10-11, the Palos Verdes Drive South east of Narcissa Drive segment would not meet the City's minimum LOS D standard under the Year 2030 future pre-project and Year 2030 future with project conditions. The impact at this location would be potentially significant.

Table 4.10-11
Roadway Segments Impacts

#	Roadway Segment	Total Capacity	Existing Traffic Conditions			Year 2030 with Related Projects Traffic Conditions			Year 2030 with Related Projects and Proposed Project Traffic Conditions		
			Daily Volume	V/C	LOS	Daily Volume	V/C	LOS	Daily Volume	V/C	LOS
1	Palos Verdes Drive South west of Narcissa Drive (4-Lane Divided Arterial)	36,100	14,112	0.391	A	16,134	0.447	A	16,328	0.452	A
2	Palos Verdes Drive South east of Narcissa Drive (2-Lane Divided Arterial)	17,900	15,360	0.858	D	17,216	0.962	E	17,316	0.967	E

Source: Linscott, Law and Greenspan, 2019.

Mitigation Measure. Mitigation Measure T-2 is designed to reduce impacts to the segment of Palos Verdes Drive South east of Narcissa Drive.

T-2 Palos Verdes Drive South east of Narcissa Drive. Palos Verdes Drive South shall be converted from a 2-lane divided arterial to a 4-lane divided arterial. (Note that this improvement is listed in the City of Rancho Palos Verdes General Plan Update).

This measure would require elimination of the existing bicycle lanes along Palos Verdes Drive South, which may not be feasible.

Significance After Mitigation. Mitigation Measure T-2 would reduce the potentially significant impact to a less than significant level. However, as noted above, elimination of existing bicycle lanes may not be feasible. Assuming that elimination of bicycle lanes is not feasible, the impact at this intersection would remain significant and unavoidable. A Statement of Overriding Considerations would be needed for this impact if the City approves the project.

Impact T-3 Based on Los Angeles County CMP criteria, impacts to CMP identified freeway monitoring segments and arterial intersections as a result of buildout under the proposed project would be Class III, less than significant.

The CMP is a state-mandated program that was enacted by the State Legislature with the passage of Proposition 111 in 1990. The program is intended to address the impact of local growth on the regional transportation system.

Freeway monitoring locations. The CMP Traffic Impact Assessment (TIA) guidelines require that a traffic impact assessment must be prepared if the proposed project adds 150 or more trips (in either direction) during either the AM or PM weekday peak periods. The proposed project would not add 150 or more trips (in either direction) during either the AM or PM weekday peak hours to the CMP freeway monitoring location. Therefore, no further review of potential impacts to CMP freeway monitoring locations is required.

Intersection monitoring locations. The following CMP intersection monitoring locations have been identified in the project vicinity:

<u>CMP Station</u>	<u>Intersection</u>
Int. No. 58	Pacific Coast Highway at Western Avenue
Int. No. 84	Western Avenue at 9th Street
Int. No. 128	Western Avenue at Toscanini Drive
Int. No. 151	Pacific Coast Highway at Crenshaw Boulevard
Int. No. 152	Pacific Coast Highway at Hawthorne Boulevard
Int. No. 153	Pacific Coast Highway at Palos Verdes Boulevard

The CMP TIA guidelines require that intersection monitoring locations must be examined if the proposed project would add 50 or more trips during either the AM or PM weekday peak periods. The proposed project would not add 50 or more trips during the AM or PM peak hours at the CMP monitoring intersection. As such, no further review of potential impacts to intersection monitoring locations that are part of the CMP highway system is required.

Transit Service. As required by the *2010 Congestion Management Program for Los Angeles County*, a review has been made of the CMP transit service. Existing transit service is provided in the vicinity of the proposed project. The project trip generation, as shown in Table 4-10-5-2, was adjusted by values set forth in the CMP (i.e., person trips equal 1.4 times vehicle trips, and transit trips equal 3.5 percent of the total person trips) to estimate transit trip generation. Pursuant to the CMP guidelines, the proposed project is forecast to generate demand for two (2) transit trips during the weekday AM peak hour, two (2) transit trips during the weekday PM peak hour, and 15 daily transit trips during the weekday. The calculations are as follows:

- *Weekday AM Peak Hour = $23 \times 1.4 \times 0.035 = 2$ Transit Trips*
- *Weekday PM Peak Hour = $31 \times 1.4 \times 0.035 = 2$ Transit Trips*
- *Weekday Daily Trips = $293 \times 1.4 \times 0.035 = 15$ Transit Trips*

Five bus transit lines and routes are provided adjacent to or in close proximity to the project area, with two of these transit lines and routes directly serving the Portuguese Bend community. A total of two different bus transit providers provide service within the study area. These five transit lines provide service for an average (i.e., an average of the directional number of buses during the peak hours) of approximately 13 buses during the AM peak hour and roughly 11 buses during the PM peak hour. Therefore, based on the above calculated peak hour transit trips, this would correspond to less than one transit rider per bus. Given the low number of generated transit trips per bus, impacts on existing or future transit services in the project area would not be significant.

Mitigation Measures. Mitigation is not required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Impact T-4 *Access to the project area during construction activity and during the operational phase of the project would be provided via Palos Verdes Drive South. Although construction traffic would be temporary, it could potentially exceed City significance thresholds during peak construction periods. Mitigation would reduce, but not avoid this potential. Therefore, temporary construction impacts related to access and circulation would be Class I, significant and unavoidable.*

Vehicular access to the project area during construction, during the operational phase of the project and during an emergency evacuation would be provided via the existing access gates at Narcissa Drive and Peppertree Drive. All streets in the Portuguese Bend community are private, and the community itself is gated. The gates restricting access to the community on Narcissa Drive and Peppertree Drive are set back approximately 190 and 90 feet from Palos Verdes Drive South, respectively. The lane configurations, as described above in the *Setting*, would remain the same as currently exists.

Construction Traffic. During peak building construction activities (using the highly conservative assumption that all 31 lots would be under construction concurrently), construction worker vehicles and trucks would generate up to approximately 468 passenger car equivalents (PCE) (220 daily worker trips and 248 daily PCE truck trips). The inbound and outbound construction worker trips are anticipated to occur primarily outside of the AM and PM commuter peak hours. Haul trucks and delivery trucks would access the project area via Palos Verdes Drive South. PBCA Architectural Standards ban construction traffic on Narcissa Drive; therefore, construction-related oversize vehicles would need to use Peppertree Drive. Based on these facts and again assuming that all 31 lots are under construction concurrently, a total of six material delivery trucks per hour are anticipated to be generated to/from the project area during peak construction activities. Given that the proposed project upon operation is expected to generate 23 and 31 vehicle trips during the weekday AM and PM peak hours, respectively, resulting in significant traffic impacts at five locations, it can be concluded based on a comparative review of trip generation that on a temporary basis construction activities would also result in significant impacts during this peak phase. Construction activities would

be temporary in nature and it is unlikely that construction of all 31 units would occur simultaneously. Nevertheless, construction-related impacts would be significant.

Some neighbors have expressed concern that construction vehicles may cause damage to project area roads and driveways. Substantial road damage from construction vehicles used for existing homes in the area has not been reported as a result of other construction in the vicinity and construction of the 31 individual homes that could be built as part of the proposed project would not be expected to involve larger or heavier equipment or vehicles than what has been used for past construction activity. Nevertheless, roadway damage remains a possibility. This is not a potential environmental effect under CEQA, but individual property owners developing properties would be responsible for repair of any damage to roadways caused by construction vehicles.

Emergency Access. A total of approximately 165 homes can be accommodated in the Portuguese Bend community, including 111 homes in the project area (i.e., which includes the 31 additional single family homes analyzed as part of the proposed project, the 11 entitled lots, as well as 69 developed lots within the project area) based on review of available aerial photography records/files. Field observations were conducted by LLG Engineers in order to verify existing signage, traffic control and pavement widths associated with the private roadways within the Portuguese Bend area (see Appendix G for the Transportation Impact Study). Narcissa Drive has a pavement width of roughly 23 feet north of the existing gate (north of Palos Verdes Drive South) and the pavement width generally varies between 22 feet and 24 feet in width along its length. Peppertree Drive has a pavement width of roughly 22 feet north of the existing gate (north of Palos Verdes Drive South) and the pavement width generally varies between 22 feet and 24 feet in width along its length. The roadways are of sufficient width to allow large vehicles (i.e., fire engine type trucks) to access the Portuguese Bend area.

Evacuation from a wildfire is the primary consideration for public safety during such an emergency. The law enforcement agencies' primary responsibility during a wildland fire is to assist in evacuation of an area. Residents are expected to follow the evacuation routes as communicated and directed by Los Angeles County fire personnel via local roads and onto either Narcissa Drive or Peppertree Drive to exit the area via Palos Verdes Drive South.

A study documenting the number of existing residential units and potential future residential units for the Portuguese Bend area that would utilize either Narcissa Drive or Peppertree Drive to evacuate has been prepared as part of the Transportation Impact Study (see Appendix G). Given an overall gateway distribution of 56 percent via Narcissa Drive and 44 percent via Peppertree Drive associated with the future potential homes (i.e., 18 via Narcissa Drive and 13 via Peppertree Drive), the total number of existing and future homes expected to evacuate via Narcissa Drive totals 86 homes (i.e., 68 existing and up to 18 future homes) and via Peppertree Drive totals 79 homes (i.e., 66 existing and up to 13 future homes). Based on this, during an emergency evacuation approximately 172 vehicles are forecast to exit via Narcissa Drive and 158 vehicles are forecast to exit via Peppertree Drive. The study estimates that the clearing time to evacuate the vehicles traveling south on Narcissa Drive would be approximately 1.1 minutes and the time to evacuate the vehicles traveling south on Peppertree Drive would be approximately 1.1 minutes. The study was based on two emergency access routes, with vehicles



in a street facing position with traffic control provided such that no stops are needed. The conditions of the study assume that, as in the likelihood of an emergency evacuation, advance warning would be provided and voluntary evacuations will be requested by Fire Department personnel. As concluded in the Transportation Impact Study, a total evacuation time of 20 minutes is ideal, but in no case should be time exceed 30 minutes. Thus, the estimated clearing time is within an acceptable range for evacuation purposes.

The study also includes an evaluation of the number of access points (exit roads). For a total number of households of between 51 and 300 homes, the minimum number of exit roads is two and the maximum number of households per exit totals 150 homes. Since the Portuguese Bend community has been constructed with two exit roads and a total of 86 and 79 total households are forecast to exit the Narcissa Drive and Peppertree Drive gateways, respectively, the design of the roadway system with respect to number of exit roadways and number of households per exit is concluded to be adequate for emergency evacuation purposes. Thus, these access points are considered adequate for the proposed project. Impacts would not be significant.

Construction Traffic Implications During an Evacuation. Accounting for the addition of the construction worker and construction truck trip generation/vehicles (while subtracting the future resident vehicles from the evacuation analysis), the evacuation clearance times discussed above (1.1 minutes for both Narcissa Drive and Peppertree Drive) would increase to 1.4 minutes for Narcissa Drive and 1.3 minutes for Peppertree Drive, respectively. It should also be noted that the provisions for resident evacuation would also apply to construction-related vehicles and personnel. Therefore, it can be concluded that these clearance times would increase by approximately 0.3 minutes (18 seconds) and 0.2 minutes (12 seconds) for the Narcissa Drive and Peppertree Drive access points, respectively. Although clearance times would increase during construction by 18 seconds and 12 seconds, respectively, the times are still within an acceptable range for evacuation purposes. Impacts would not be significant.

Mitigation Measures. All construction contractors would need to gain City approval of haul routes and construction traffic is generally expected to avoid peak traffic hours. In addition, the following measures are proposed to further minimize impacts:

- T-4(a) Maintain Access.** Maintain existing access for land uses in proximity to the project area.
- T-4(b) Lane Closure Restrictions.** Limit any potential lane closures to off-peak travel periods.
- T-4(c) Material Deliveries.** Schedule receipt of construction materials during non-peak travel periods and coordinate deliveries to reduce the potential of trucks waiting to unload for extended periods of time.
- T-4(d) Parking Restrictions.** Prohibit parking by construction workers on adjacent streets and direct construction workers to available parking as determined in conjunction with City staff.



T-4(e) Portuguese Bend Community Association (PBCA) Building

Regulations and Architectural Standards. Construction activities shall adhere to the following PBCA regulations and standards:

1. *All construction vehicles must be parked on-site and may not be parked on the streets within PBCA. The entrance gate parking area may be used if requested in advance and vehicles will be required to display parking passes.*
2. *Contractor shall not track mud on to the streets from construction vehicles*
3. *Large truck deliveries must enter and exit from the Peppertree Gate. Semi-trucks allowed for heavy equipment delivery only. All other deliveries limited to 3 axle or smaller trucks.*
4. *Concrete Deliveries: Only one truck on-site at a time. Second and third trucks can stay on Narcissa or Sweetbay. No more than three trucks in PBCA at a time. All trucks must enter and exit through the Peppertree Gate.*

T-4(f) Construction Activity Tracking. The Community Development

Department will maintain a database of ongoing construction activity on the 31 undeveloped project area lots that identifies construction site locations and makes the information available to the public. This will allow project area residents and City staff to effectively track construction activity and ensure compliance with applicable standards and requirements.

Significance After Mitigation. The above measures would limit temporary construction impacts to the degree feasible and, as noted above, construction on all 31 properties is unlikely to occur simultaneously. Nevertheless, because impacts could temporarily exceed City thresholds, construction impacts are conservatively determined to be significant and unavoidable. A Statement of Overriding Considerations would be needed for this impact if the City approves the project.

Impact T-5 Development facilitated by the proposed project would not conflict with adopted policies, plans, or programs supporting alternative transportation. Impacts relating to alternative transportation would be Class III, less than significant.

The proposed Landslide Moratorium Ordinance revisions would facilitate development of up to 31 new residences within the Zone 2 project area. As described in Impact T-3, five bus transit lines and routes are provided adjacent to or in close proximity to the project area, with two of these transit lines and routes directly serving the Portuguese Bend community. A total of two different bus transit providers provide service within the study area. These seven transit lines provide service for an average (i.e., an average of the directional number of buses during the peak hours) of approximately 13 buses during the AM peak hour and roughly 11 buses during the PM peak hour.

The Portuguese Bend community is a private/gated residential community. The proposed project would allow the owners of existing vacant or underutilized lots to build residential units. As such, no new development types or patterns within Portuguese Bend are proposed.



Thus, the project would be consistent with the existing pattern of development and would not conflict with policies relating to alternative transportation modes. Impacts relating to alternative transportation would not be significant.

Mitigation Measures. Impacts would be less than significant; therefore, mitigation is not required.

Significance after Mitigation. Impacts would be less than significant without mitigation.

c. Cumulative Impacts. The analysis under Impact T-1 considers cumulative growth through the year 2030. As noted under that discussion, cumulative growth would result in cumulative impacts at five of the seven study intersections that are forecast to operate at adverse levels of service (LOS E or worse during either the AM, School PM, or PM peak hours under Year 2030 Future with Project conditions). Mitigation Measures T-1(a-d) would reduce impacts at four of the five significantly intersections to a less than significant level, but feasible mitigation is not available for the Via Rivera/Hawthorne Boulevard intersection. As discussed under Impact T-2, cumulative growth through the year 2030 would result in cumulative impacts at the Palos Verdes Drive South east of Narcissa Drive roadway segment. Although Mitigation Measure T-2 would reduce impacts at this segment to a less than significant level, implementation of this measure would be infeasible due to the associated removal of bicycle lanes along Palos Verdes Drive South. As such, cumulative impacts at this segment and the Via Rivera/Hawthorne Boulevard intersection are considered significant and cumulatively considerable. The City would need to adopt a Statement of Overriding Considerations for this impact if it approves the project.



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