

4.10 TRAFFIC

The purpose of this section is to establish existing conditions for existing roadways and transportation systems, identify potentially significant impacts, and recommend mitigation measures to reduce the significance of such impacts. The primary question regarding traffic and circulation, relative to the CEQA process, is whether or not the project has any direct effect on traffic and circulation through impacts on existing roadways and transportation systems, particularly where such impacts would have an adverse impact on the environment. Information in this section is based on the City of Brea General Plan and the Canyon Crest Draft Environmental Impact Report (EIR No. 02-01) (prepared by RBF Consulting).

EXISTING CONDITIONS

STREET SYSTEM

The Orange Freeway (State Route 57) interchange at the Lambert/Carbon Canyon Road provides regional north–south access to the project site; east–west access is provided by Carbon Canyon Road (State Route 142), bordering the north side of the project.

ORANGE FREEWAY (SR- 57)

The freeway provides north–south access across Orange County, providing access between the San Gabriel Valley to the north and the City of Anaheim to the south. Both the north and south directions provide five lanes for travel within the City of Brea. In the project area, full interchanges with SR-57 are provided at Lambert Road/Carbon Canyon Road and at Imperial Highway, as well as a partial interchange at Tonner Canyon Road.

LAMBERT ROAD/CARBON CANYON ROAD (SR-142)

Lambert Road/Carbon Canyon Road provides east–west regional connection from the San Bernardino County line to the City of Brea. Lambert Road is a six-lane roadway from SR-57, west of Kraemer Boulevard and transitions to four lanes east of Kraemer Boulevard and ultimately to two lanes at Olinda Ranch. The *City of Brea Master Plan of Highways* shows the portion of Lambert Road/Carbon Canyon Road adjacent to the site as a commuter road with a 60-foot to 80-foot right-of-way and designated as a scenic corridor within the City=s *General Plan* Open Space and Conservation Element.

Carbon Canyon Road provides regional access to the north Orange County and the western Inland Empire area. This roadway is within District 12 of the California Department of Transportation (CALTRANS) jurisdiction. As a regional access roadway, several studies over the years have been generated to address possible solutions to this deficient roadway. The Four Corners Study was initiated through the formation of a Joint Powers Authority with surrounding communities and agencies to investigate potential circulation alternatives. Several draft alternatives for improvements or realignment of Carbon Canyon Road are presently being explored to relieve existing and cumulative future deficiencies on a regional basis.

OLINDA DRIVE

Olinda Drive is a two-lane residential street within Olinda Village. This roadway provides access to the residential units in Olinda Village and emergency access to Chino Hills State Park lands.

ARTERIAL ROADWAYS

The arterial system includes the primary east–west arterial, Imperial Highway, which is primarily a six-lane highway, with five lanes east of Valencia Avenue. Primary north–south travel is provided by Brea Boulevard, Kraemer Boulevard, and Valencia Avenue, as well as State College Boulevard.

Secondary east–west travel is provided by Central Avenue and Birch Street; secondary north–south travel by Puente Street, Berry Street, and Valencia Avenue.

A traffic report was not prepared for this specific project, as the potential impacts would be for only a short term. Traffic data for a recently analyzed project (Available in the *Canyon Crest Draft EIR No. 02-01, 2002*) is included here to aid OCSD in determining the least-congested routes for construction vehicles and equipment in order to avoid unnecessary delays and potential hazards. The following 31 existing intersections were identified by the City of Brea staff for analysis in 2001:

- Brea Blvd. & SR - 57 SB Ramp
- Brea Blvd. & Tonner Canyon
- SR-57 Northbound Ramp & Tonner Canyon
- Brea Blvd. & Central/State College
- Brea Blvd. & Lambert/Carbon Canyon
- State College Blvd. & Lambert/Carbon Canyon
- SR-57 Southbound Ramps & Lambert/Carbon Canyon
- SR-57 Northbound Ramps & Lambert/Carbon Canyon
- Pointe Dr. & Lambert/Carbon Canyon
- Associated & Lambert/Carbon Canyon
- Kraemer Blvd. & Lambert/Carbon Canyon
- Valencia & Lambert/Carbon Canyon
- Brea Blvd. & Birch
- Randolph Ave. & Birch
- State College Blvd. & Birch
- Associated S. & Birch
- Associated N. & Birch
- Kraemer Blvd. & Birch
- Valencia & Birch/Rose
- Brea Blvd. & Imperial Highway
- Randolph Ave. & Imperial Highway
- State College and Imperial Highway
- SR-57 Southbound Ramps & Imperial Highway
- SR-57 Northbound Ramps & Imperial Highway
- Associated & Imperial Highway
- Kraemer Blvd. & Imperial Highway
- Valencia Ave. & Imperial Highway
- Rose Dr. & Imperial Highway
- Placentia & Imperial Highway
- SR-57 Southbound Ramp & Brea Canyon
- SR-57 Northbound Ramp & Brea Canyon

The heaviest traffic volumes on the arterial system occur on the following roadway segments: Imperial Highway, with volumes ranging from 31,000 vehicles per day (VPD) east of Valencia

Avenue to 66,000 VPD west of SR-57; and Lambert Road, with volumes of 52,000 VPD west of SR-57 Freeway and 14,000 VPD west of Valencia Avenue.

LEVEL OF SERVICE

To analyze the existing and forecast future operation of the study intersections during the morning and afternoon/evening peak hours, a level of service (LOS) scale is utilized. Existing intersection LOS are calculated using the peak hour counts in combination with the geometric lane configuration of each of the intersection locations. The technique used to assess the operation of an intersection is known as intersection capacity utilization (ICU). A level of service scale is used to evaluate intersection performance based on the ICU values. The levels range from “A” to “F”, with LOS “A” representing free flow conditions and LOS “F” representing severe traffic congestion. The City of Brea has established an acceptable congestion level value of 0.90 (LOS “D”) as the maximum acceptable ICU value for intersections within the City circulation system. The City of Brea has four Congestion Management Program (CMP) intersections that have a LOS standard of LOS “E” (ICU value less than or equal to 1.00), namely: State College at Imperial Highway, the SR-57/Imperial Highway interchange, and Valencia at Imperial Highway. Table 4.10-1, *Peak-Hour Level of Service Descriptions*, summarizes the peak hour level of service descriptions to analyze the operation of the thirty-one study intersections.

As shown in Table 4.10-2, two intersections show ICU values greater than 0.90 (LOS D), indicating that on the day of the traffic count, the maximum acceptable ICU value was exceeded. The intersection of Brea Blvd./Central/State College shows a deficiency in the morning and afternoon/evening peak hours with ICU values of .91 and .98. The intersection of Valencia and Lambert/Carbon Canyon has a PM ICU value of 1.07 (an ICU of more than 1.0 indicates that traffic demand is exceeding the intersection’s theoretical capacity, suggesting severe traffic congestion and/or traffic diversions to alternate, less-congested routes). Intersection improvements are proposed for Brea Boulevard and Central/State College, while improvements are under construction at the intersection of Valencia Avenue at Lambert/Carbon Canyon Road.

**TABLE 4.10-1
 PEAK-HOUR LEVEL OF SERVICE DESCRIPTIONS**

LEVEL OF SERVICE	TRAFFIC FLOW QUALITY	ICU VALUE
A	Low volumes; high speeds; speed not restricted by other vehicles; all signal cycles clear, with no vehicles waiting through more than one traffic signal cycle.	0.00 to 0.60
B	Operating speeds beginning to be affected by other traffic; between one and ten percent of the signal cycles have one or more vehicles that wait through more than one signal cycle during peak traffic periods.	0.61 to 0.70
C	Operating speeds and maneuverability closely controlled by other traffic; between 11 and 30 percent of the signal cycles have one or more vehicles that wait through more than one signal cycle during peak traffic periods; recommended ideal design standards.	0.71 to 0.80
D	Tolerable operating speeds; 31 to 70 percent of the signal cycle have one or more vehicles that wait through more than one signal cycle during peak traffic periods; often used as design standard in urban areas.	0.81 to 0.90
E	Capacity; the maximum traffic volume an intersection can accommodate; restricted speeds; 71 to 100 percent of the signal cycles have one or more vehicles that wait through more than one signal cycle during peak traffic periods.	0.91 to 1.00
F	Long queues of traffic; unstable flows; stoppages of long durations; traffic volume and traffic speed can drop to zero; traffic volume will be less than the volume that occurs at LOS A through LOS E.	Exceeds 1.00

**TABLE 4.10-2
EXISTING INTERSECTION CAPACITY UTILIZATION SUMMARY**

Intersection	MORNING PEAK			EVENING PEAK		
	AM	LOS	Count Date	PM	LOS	Count Date
1. Brea Blvd. & SR-57 SB Ramps	.68	B	3/30/01	.72	C	3/30/01
2. Brea Blvd. & Tonner Canyon	.70	B	3/31/01	.79	C	5/10/01
3. SR-57 NB Ramps & Tonner Canyon	.06	A	3/30/01	.10	A	4/29/01
6. Brea Blvd. & Central/State College	.91	E	4/4/01	.98	E	4/4/01
9. Brea Blvd. & Lambert	.65	B	9/24/01	.67	B	9/24/01
10. State College Blvd. & Lambert	.72	C	3/27/01	.87	D	3/27/01
11. SR-57 SB Ramps & Lambert	.68	B	3/27/01	.63	B	3/27/01
12. SR-57 NB Ramps & Lambert	.66	B	3/27/01	.69	B	3/27/01
13. Pointe Dr. & Lambert	.43	A	3/27/01	.60	A	3/27/01
14. Associated & Lamber	.59	A	3/27/01	.49	A	3/27/01
15. Kraemer Blvd. & Lambert	.90	D	3/28/01	.62	B	3/26/01
16. Valencia & Lambert	.84	D	10/30/01	1.07*	F	10/30/01
19. Brea Blvd. & Birch	.43	A	3/27/01	.84	D	3/22/01
20. Randolph Ave & Birch	.37	A	4/20/01	.54	A	3/22/01
21. State College Blvd. & Birch	.62	B	4/03/01	.77	C	3/26/01
22. Associated S. & Birch	.69	B	3/26/01	.80	C	5/4/01
23. Associated N. & Birch	.51	A	3/28/01	.53	A	3/26/01
24. Kraemer Blvd. & Birch	.64	B	4/14/01	.79	C	3/26/01
25. Valencia & Birch/Rose	.66	B	10/30/01	.64*	B	10/30/01
26. Brea Blvd. & Imperial Hwy.	.83	D	2/26/01	.86	D	3/29/01
27. Randolph Ave & Imperial Hwy.	.48	A	4/19/01	.76	C	3/27/01
28. State College & Imperial Hwy.	.63	B	3/29/01	.86	D	3/28/01
29. SR-57 SB Ramps & Imperial Hwy.	.70	B	3/29/01	.75	C	3/28/01
30. SR-57 NB Ramps & Imperial Hwy.	.71	C	3/29/01	.68	B	3/28/01
31. Associated & Imperial Hwy.	.63	B	4/2/01	.80	C	3/28/01
32. Kraemer Blvd. & Imperial Hwy.	.65	B	4/26/01	.78	C	4/21/01
33. Valencia Ave & Imperial Hwy.	.60	A	4/26/01	.59	A	3/25/01
34. Rose Dr. & Imperial Hwy.	.68	B	4/26/01	.68	B	3/25/01
36. Placentia & Imperial Hwy.	.66	B	3/26/01	.60	A	3/27/01
37. SR-57 SB Ramp & Brea Canyon	.60	A	3/31/01	.46	A	4/13/01
38. SR-57 NB Ramp & Brea Canyon	.45	A	3/31/01	.32	A	4/26/01

IMPACTS

SIGNIFICANCE CRITERIA

For the short-range analysis, two specific levels of service requirements are addressed and include the Orange County Growth Management Plan (GMP) and the Orange County Congestion Management Plan (CMP), which is consistent with the State Congestion Management Plan. The GMP requires an evaluation of locations where the project impact is greater than one percent, and

requires all locations to operate at a LOS D or better. The CMP requirement is three percent, with a LOS E requirement. The four CMP locations for the City of Brea include State College Boulevard and Imperial Highway, Valencia Avenue and Imperial Highway, SR-57 SB ramps and Imperial Highway, and SR-57 NB ramps and Imperial Highway. The long-range analysis is based on General Plan Buildout with transportation improvements intended to achieve LOS D throughout the City.

In addition, Appendix G, Initial Study Checklist, of the *CEQA Guidelines* was used to develop significance thresholds in this analysis. As such, the project would create a significant impact if it would:

- Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to capacity ratio on roads, or congestion at intersections);
- Exceed, either individually or cumulatively, an LOS standard established by the City, County or State agency for designated roads or highways;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access; and/or
- Conflict with adopted policies, plans, or programs supporting alternative transportation.

Impacts on traffic and circulation are analyzed below according to the topic. The mitigation measures at the end of this section directly correspond with each identified impact.

IMPACT DISCUSSION

WOULD THE PROJECT:

- (a) *Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?* **Less Than Significant Impact with Mitigation Incorporated.**

A minor temporary increase in vehicular trips would occur as a result of the construction activity for the proposed project. The proposed pipeline tie-in would occur within Rose Drive right-of-way, where an OCSD sewer pipeline currently exists. Implementation of this pipeline tie-in would cause a temporary disruption of traffic along Rose Drive due to pipeline construction. Additionally, subsequent to construction, periodic maintenance would occur, but would be negligible based on the number of trips to and from the project site required for maintenance.

- (b) *Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?* **Less Than Significant Impact with Mitigation Incorporated.**

Refer to Response (a), above.

- (c) *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?* **No Impact.**

Because of the nature and scope of the proposed project, project implementation would not have the capacity change to air traffic patterns. No impacts would occur.

- (d) *Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?* **Less Than Significant Impact with Mitigation Incorporated.**

As stated above, implementation of the proposed project would cause a temporary disruption of traffic along Rose Drive due to pipeline construction. Construction may cause traffic congestion, delays, and associated effects due to lane closures, detours, and slower speeds in construction zones. Mitigation would reduce short-term impacts on traffic from construction-related activities to a level of less than significant.

- (e) *Result in inadequate emergency access?* **Less Than Significant Impact with Mitigation Incorporated.**

Refer to Response (d), above.

- (f) *Result in inadequate parking capacity?* **Less Than Significant Impact.**

During construction, the personal vehicles of construction personnel may be parked within the west lot of Carbon Canyon Regional Park. The number of vehicles would be minimal and such parking would cease after the construction phase of the project. Additionally, project construction operations would occur during the weekdays. Carbon Canyon Regional Park is busier on the weekends, therefore construction operations would occur during periods of least use within the park. Other areas of project construction would be on open space, therefore construction personnel would park in these areas. Based on this, less than significant impacts would occur with respect to parking.

- (g) *Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?* **No Impact.**

Due to the scope and nature of the proposed project, no conflicts with adopted policies, plans, or programs supporting alternative transportation are anticipated.

MITIGATION MEASURES

T-1 Concurrent with grading permit applications, OCSD shall submit a Traffic Control Plan for review and approval by the City of Brea Engineer. The Traffic Control Plan shall include, but not be limited to, the following:

- Using flagmen and signage to alert motorists and pedestrians;
- Providing advance notice posted on Rose Drive and Vesuvius Drive;
- Limiting the hours of construction per City ordinances;
- Maintaining one through lane in each direction on Rose Drive during peak;

SIGNIFICANT UNAVOIDABLE IMPACTS

No significant unavoidable impacts have been identified.