4.14 TRANSPORTATION AND TRAFFIC

4.14.1 METHODOLOGY

This Draft Environmental Impact Report (EIR) section discusses potential transportation and traffic impacts that could result from implementing the Inglewood Oil Field Specific Plan (Project). The potential environmental impacts to transportation and traffic are analyzed at a project-level of detail. Direct, indirect, and cumulative impacts are addressed for each threshold criterion below, and growth-inducing impacts are described in Sections 6.0, CEQA-Mandated Analyses of this Draft EIR.

A memorandum summarizing the findings of the traffic analysis prepared by Psomas (Traffic Analysis Memo), dated November 2, 2015, is provided in Appendix I-1 of this Draft EIR. The Traffic Analysis Memo evaluated the trip generation for the Project. Appendix I-2 includes correspondence from Caltrans District 7 confirming that the Project will have minimal traffic impact on State facilities, based on the Traffic Analysis Memo provided to them (see Appendix I-1). Appendix I-3 includes the Intersection Capacity Utilization (ICU) model data for the impact analysis provided below. This Draft EIR analysis assumes a buildout at Year 2028, but not past Year 2032.

A Memorandum of Understanding (MOU) was prepared to provide justification for not preparing a Traffic Impact Analysis report for the Project. As stated in the memorandum, a traffic study would not be required for the City of Culver City if the Project is not expected to have a significant impact at any intersection. Throughout this Draft EIR, the City's portion of the Inglewood Oil Field (77.8 acres) is referred to as the "Project Site" or the "City IOF." The entire surface boundary limits of the Inglewood Oil Field, including lands within both the City and County, is referred to as "Inglewood Oil Field." The off-site portion of the Inglewood Oil Field that is within the jurisdiction of the County of Los Angeles is referred to as the "County IOF."

Study Area

The Traffic Analysis Memo analyzed the Project's trip generation and the trip distribution and projected peak hour traffic volumes at the following four study intersections:

- Stocker Street and La Cienega Boulevard (located in Los Angeles County)
- Stocker Street and Fairfax Avenue (main site access – located in Los Angeles County)
- Stocker Street/La Brea Avenue/Overhill Drive (located in Los Angeles County)
- Jefferson Boulevard/Duquesne Avenue (secondary employee/visitor access – located in the City of Culver City)

These intersections were chosen because they either currently provide access to the Inglewood Oil Field; will provide access in the future; or are immediately adjacent to the access points and will serve a portion of the traffic from the Project. In addition to the intersection evaluation, the operations on nearby freeway segments were evaluated to determine whether or not a Congestion Management Program (CMP) Traffic Impact Analysis was required. The following freeway segments were analyzed:

- Santa Monica Freeway (Interstate [I] 10) west of La Brea Avenue
- San Diego Freeway (I-405) north of Marina Freeway (State Route [SR] 90)
- San Diego Freeway (I-405) south of Marina Freeway (SR-90)
- Marina Freeway (SR-90) at San Diego Freeway (I-405)

The selected freeway segments match those which were evaluated in the 2008 *Baldwin Hills Community Standards District Final Environmental Impact Report* (CSD EIR), which provided analysis for the Oil Field. A freeway segment analysis was not required for the analysis of this Project, but was included for consistency with the CSD documentation.

Traffic Generation and Distribution

Assumptions for future traffic generation for the Project was developed based on information provided in the Baldwin Hills CSD EIR prepared by the Los Angeles County Department of Regional Planning, and the 2015 *Analysis of Oil and Gas Well Stimulation Treatments in California Final Environmental Impact Report* (SB4 EIR) prepared by the California Department of Conservation (DOC), and the Project Description as discussed in Section 3.0 of this Draft EIR.

Determining future traffic conditions is completed through a process called forecasting. There are three main steps to forecasting future traffic conditions. The first step is to determine traffic generation. Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the Project Site. The second step is traffic distribution. Traffic distribution identifies the starting and end points of inbound and outbound Project traffic. The third step consists of traffic assignment. Traffic assignment is based on minimizing travel time, which may or may not involve the shortest route, depending on operating conditions and travel speeds.

Once these three steps of forecasting are complete, a determination of Project impacts is then developed by comparing operational traffic conditions (i.e., Level of Service [LOS]) at the intersections and freeway segments analyzed using the forecasted traffic volumes with and without the anticipated Project traffic for each traffic scenario. The methods used to determine LOS, the anticipated Project traffic volumes, and the traffic scenarios evaluated in the analysis are described below.

Traffic Scenarios

The traffic analysis evaluated the incremental effects of Project traffic against multiple traffic scenarios that combine the existing, ambient, and/or cumulative traffic volumes. These traffic conditions are defined as follows:

- Existing volumes are the actual traffic count data collected in the Project vicinity. Peak period intersection turning movement volumes at the study intersections were collected on Thursday, October 22, 2015. Traffic volumes for the study's freeway segments were obtained from the California Department of Transportation (Caltrans) (Caltrans 2014).
- Project traffic volumes were calculated based on traffic anticipated during the maximum buildout condition.
- Cumulative volumes (Future Pre-Project and Future with Project) were calculated using the City of Culver City's ambient growth rate assumption of one percent per year. This is considered conservative because the *Los Angeles County Congestion Management Program's (CMP)* projected growth rate for the area is only 0.2 percent per year. Further, because of the long build out time for the Project, the City stated that a growth rate could be considered to include all potential related projects in the area.

Based on these traffic conditions, the traffic analysis addressed the following scenarios:

- Existing Conditions

- Project Traffic
- Existing plus Ambient Growth plus Related Projects without the Project
- Existing plus Ambient Growth plus Related Projects with the Project.

Level of Service Calculations

The *Traffic Study Criteria for the Review of Proposed Development Projects Within the City of Culver City*, published in July 2012, is used to determine traffic impacts within Culver City limits. Similarly, the *County of Los Angeles Traffic Impact Analysis Report Guidelines,* dated January 1, 1997, is used to guide the evaluation of projects located within the County.

The Intersection Capacity Utilization (ICU) method, with corresponding LOS calculations, was used to evaluate the traffic conditions associated with Project implementation per the City guidelines. The ICU method calculates the operating conditions of an intersection using a ratio of peak hour traffic volumes to overall intersection capacity. ICU volume-to-capacity ratios are used to determine the intersection LOS. The LOS value is a relative measure of the intersection performance.

The ICU method is used for signalized intersection analysis and estimates the volume to capacity (V/C) ratios for key conflicting traffic movements. The ICU numerical value represents the percent of signal (green) time, and thus represents capacity, required by existing and/or future traffic volumes. The ICU value is the sum of the critical V/C ratios at a given intersection; it is not intended to be indicative of the LOS of each of the individual turning movements. However, the ICU value translates to an LOS value for the intersection. The ICU method was used to evaluate existing and future AM and PM peak hour operating conditions for the four signalized intersections included in the Project analysis.

Table 4.14-1, Intersection Level of Service Standards Based on Volume-to-Capacity Ratios, provides ICU values with the associated LOS standards for the signalized intersections. For use in the ICU calculations, the assumed capacity for through and single turn lanes is 1,600 vehicles per lane (per hour), and for dual turn lanes is 2,880 vehicles total (per hour) (LACDRP 2008).

TABLE 4.14-1
INTERSECTION LEVEL OF SERVICE STANDARDS BASED ON VOLUME-TO-CAPACITY RATIOS

LOS	ICU	Description
A	0.0–0.60	Free flow
B	>0.60–0.70	Free to stable flow
C	>0.70–0.80	Stable flow
D	>0.80–0.90	Approaches unstable flow
E	>0.90–1.00	Extremely unstable flow
F0	>1.00–1.25	Forced Flow
F1	>1.25–1.35	Heavy Congestion
F2	>1.35–1.45	Extremely Heavy Congestion
F3	>1.45	Gridlock

LOS = Level of Service; ICU = Intersection Capacity Utilization
Sources: Metro 2010; LACDRP 2008.

Freeway operations are evaluated using a similar system, where LOS is determined based on demand-to-capacity (D/C) ratios. This is consistent with the *County of Los Angeles Traffic Impact Analysis Report Guidelines*, which were employed for the Baldwin Hills Community Standards District Final Environmental Impact Report. Table 4.14-2, Freeway Level of Service Standards Based on Demand-to-Capacity Ratio, provides D/C values with the associated LOS standards for the freeway segments.

TABLE 4.14-2
FREEWAY LEVEL OF SERVICE STANDARDS BASED ON DEMAND-TO-CAPACITY RATIOS

LOS	D/C	Description
A	0.0–0.35	Free flow
B	>0.35–0.54	Free to stable flow
C	>0.54–0.77	Stable flow
D	>0.77–0.93	Approaches unstable flow
E	>0.93–1.00	Extremely unstable flow
F0	>1.00–1.25	Forced Flow
F1	>1.25–1.35	Heavy Congestion
F2	>1.35–1.45	Extremely Heavy Congestion
F3	>1.45	Gridlock

LOS: level of service; D/C: demand-to-capacity ratio
Source: Metro 2010

4.14.1 REGULATORY SETTING

Federal

There are no federal regulations applicable to the Project.

State

Senate Bill 743

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743, which creates a process to change the analysis of transportation impacts under the California Environmental Quality Act (CEQA). On December 30, 2013, the California Office of Planning and Research (OPR) released a preliminary evaluation of alternative methods of transportation analysis. In August 2014, the OPR released a Preliminary Discussion Draft of Updates to CEQA Guidelines Implementing SB 743. The report recommends amendments to the State CEQA Guidelines to replace the Level of Service (LOS, auto-delay-based standard with other metrics to measure transportation impacts; these other metrics may include, but are not limited to, vehicle miles traveled (VMT), vehicle miles traveled per capita, and automobile trips generated in order to align CEQA analyses more closely with other State goals, most notably the greenhouse gas emission reduction goals contained in the State's climate change law, Assembly Bill (AB) 32.

The SB 743 legislation does not authorize OPR to set thresholds, but it does direct OPR to develop guidelines for determining the significance of transportation impacts for projects. OPR released revised CEQA Guidelines for SB 743 on January 20, 2016. While a current schedule has not been determined at this time for the adoption of the OPR amendment to the State CEQA

Guidelines, comments on the revised Guidelines were due on February 29, 2016. Thus, no specific significance thresholds have yet been adopted for purposes of complying with SB 743. In addition, the OPR guidance does not preclude an agency from establishing their own significance thresholds prior to the adoption of the OPR amendment to the State CEQA Guidelines and/or permitting additional analysis beyond the typical auto delay based standards in the interim.

As of the date of this Draft EIR, the City of Culver City has not adopted elements of SB 743 into its current traffic study guidelines.

Regional/County

Congestion Management Program for Los Angeles County

The Los Angeles County Metropolitan Transportation Authority (Metro) has developed and implemented the Congestion Management Program (CMP) for Los Angeles County. The CMP was last updated in 2010 and links transportation, land use, and air quality decisions in the County and addresses the impact of local growth on the regional transportation system. The CMP calls for (1) monitoring the CMP highway and roadway system; (2) a multi-modal system performance analysis; (3) a Transportation Demand Management Program to promote alternative modes of transportation; (4) a Land Use Analysis Program; (5) a seven-year capital improvement program of projects on the CMP highway and roadway system; and (6) a deficiency plan to maintain LOS standards.

The CMP requires monitoring of land use and roadway performance by individual jurisdictions and provides guidelines for conducting a Traffic Impact Analysis (TIA). The CMP sets the LOS standard in Los Angeles County at LOS E, except where base year LOS is worse than E.

Local

City of Culver City General Plan

The Culver City General Plan includes a Circulation Element that identifies transportation systems and facilities in correlation with the Land Use Element. The Circulation Element aims to reclaim and revitalize the local street system through a proactive stance to protect and promote Culver City's interests regarding issues of public transit priorities, performance criteria for rail corridors serving the City, street widening, on-street parking, and intrusion of traffic and parking into residential neighborhoods. The City's Circulation Element also contains goals and policies related to traffic and transportation. The policy that is applicable to the Project is listed below.

> **Circulation Element Policy 1A.** Facilitate movement of vehicles at intersections and along roadway links by increasing capacity, improving operation, and reducing volumes as appropriate and feasible.

The Culver City General Plan also includes a Noise Element. Objective 3 of the Noise Element specifically addresses transportation-related noise sources. The following is the policy applicable to the Project:

> **Noise Element Policy 3.F.** Limit truck movements to those arterials designed to handle the traffic and those located farther from noise sensitive areas.

Culver City Municipal Code

Title 7 of the Culver City Municipal Code (CCMC) is the Traffic Code. Section 7.02.210 contains a list of designated truck routes for any commercial vehicle, the laden or unladen weight of which exceeds six thousand (6,000) pounds. Jefferson Boulevard, La Cienega Boulevard, and Fairfax Avenue are included on this list.

4.14.2 ENVIRONMENTAL SETTING

Regional and Local Roadway Systems

Regional

Regional access to the Project Site is provided by the following freeways:

- San Diego Freeway (I-405) is located approximately 1.5 miles southwest of the Project Site and about 2.0 miles west of the Oil Field's main access point. Access to the San Diego Freeway can be made from La Cienega Boulevard in the Project vicinity.
- The Santa Monica Freeway (I-10) is located approximately 1.5 miles north of the Project Site and 2.5 miles north of the Oil Field's main access point. Access to the Santa Monica Freeway can be made from Fairfax Avenue, La Brea Avenue, or La Cienega Boulevard in the Project vicinity.
- The Marina Freeway (SR-90) is located approximately 1.75 miles southwest of the Project Site and the Oil Field's main access.

Local

Primary access to the Inglewood Oil Field is provided via Fairfax Avenue at Stocker Street (LACDRP 2008). North of Stocker Street, Fairfax Avenue provides exclusive access to the internal roadway system for the oil fields both east and west (via a grade separated connection) of La Cienega Boulevard.

La Cienega Boulevard is a six-lane divided roadway in the Project area. The roadway has a posted speed limit of 55 miles per hour (mph) and provides access to I-10 north of the Project area and to I-405 south of the Project area.

Stocker Street is a four-lane roadway with a western terminus at La Cienega Boulevard. The roadway has a posted speed limit of 50 mph through the Project area and has signalized intersections at La Cienega Boulevard, Fairfax Avenue, and La Brea Avenue (east of the Project Site).

Jefferson Boulevard is a four-lane roadway in the Project area. The roadway has a posted speed limit of 45 mph.

Intersection Analysis

The analysis of traffic impacts focuses on four intersections near the Project Site. These intersections have been chosen because they either currently provide access to the Inglewood Oil Field; will provide access in the future; or are immediately adjacent to the access points and will serve a portion of the traffic volumes from the Project. Three of these intersections are under the County of Los Angeles jurisdiction and one intersection is under the City of Culver City's

jurisdiction. All of these intersections are controlled by traffic signals and are shown on Exhibit 4.14-1, Existing Traffic Volumes. Lane configurations of these intersections are shown on Exhibit 4.14-2, Lane Configurations.

Traffic volume data were collected during the morning (7:00 AM to 9:00 AM) and evening (4:00 PM to 6:00 PM) peak periods at each of the four intersections on Thursday, October 22, 2015. The peak hours were found to be from 7:00 AM to 8:00 AM and from 5:00 PM to 6:00 PM. Table 4.14-3 shows the existing traffic volumes (number of vehicles per hour) during the AM peak hours (7:00 AM to 9:00 AM) and PM peak hours (4:00 PM to 6:00 PM) for each intersection analyzed.

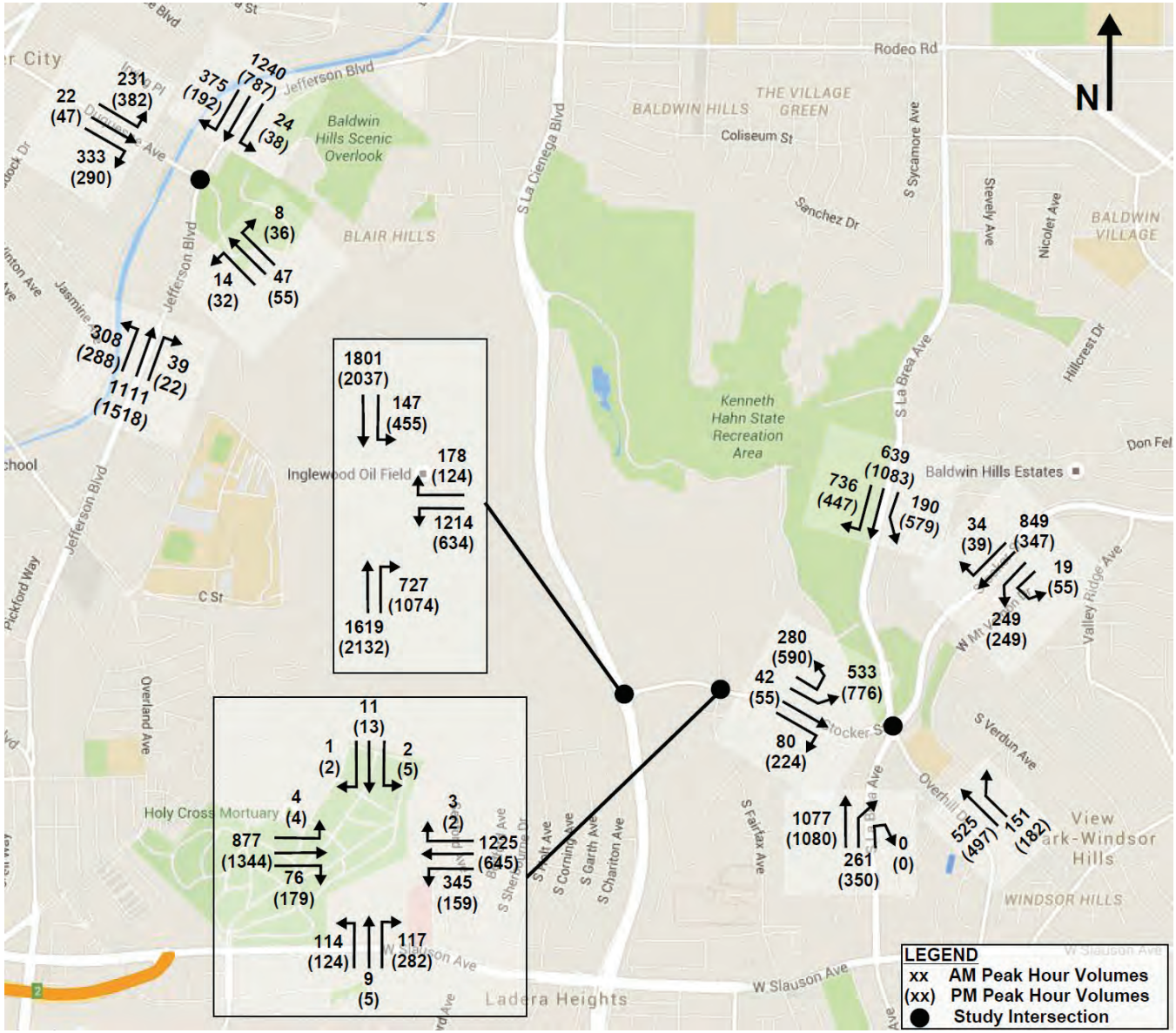
TABLE 4.14-3
EXISTING TRAFFIC VOLUMES

No.	Intersection	Date	Direction	AM Peak Hour		PM Peak Hour	
				Time Began	Volume	Time Began	Volume
1	Stocker St and La Cienega Blvd	10/22/15	EB WB NB SB	7:00 AM	0 1,392 2,346 1,948	4:00 PM	0 758 3,206 2,492
2	Stocker St and Fairfax Ave	10/22/15	EB WB NB SB	7:00 AM	957 1,573 240 14	4:00 PM	1,527 806 411 20
3	Stocker St/La Brea Ave/Overhill Dr	10/22/15	EB WB NB SB NB*	7:00 AM	935 1,151 1,338 1,565 676	4:00 PM	1,645 690 1,430 2,109 679
4	Jefferson Blvd/Duquesne Ave	10/22/15	EB WB NB SB	7:00 AM	586 69 1,458 1,693	4:00 PM	719 123 1,828 1,017

EB: eastbound; WB: westbound; NB: northbound; SB: southbound
*The second northbound value is for Overhill Drive
Source: Psomas 2015 (Appendix I-1)

Existing traffic volumes at these intersections during the AM and PM peak hour on weekdays are shown on Exhibit 4.14-1, Existing Traffic Volumes.

Based on intersection capacity, traffic volumes, and turning movements, the existing LOS operations at the Project study intersections are provided in Table 4.14-4. As shown, the intersection of La Cienega Boulevard and Stocker Street currently operates at LOS F0 during both peak hours, and the La Brea Avenue/Stocker Street/Overhill Drive intersection also operates at LOS F0 in the PM peak hour.



Existing Traffic Volumes

Exhibit 4.14-1

Inglewood Oil Field Specific Plan Project

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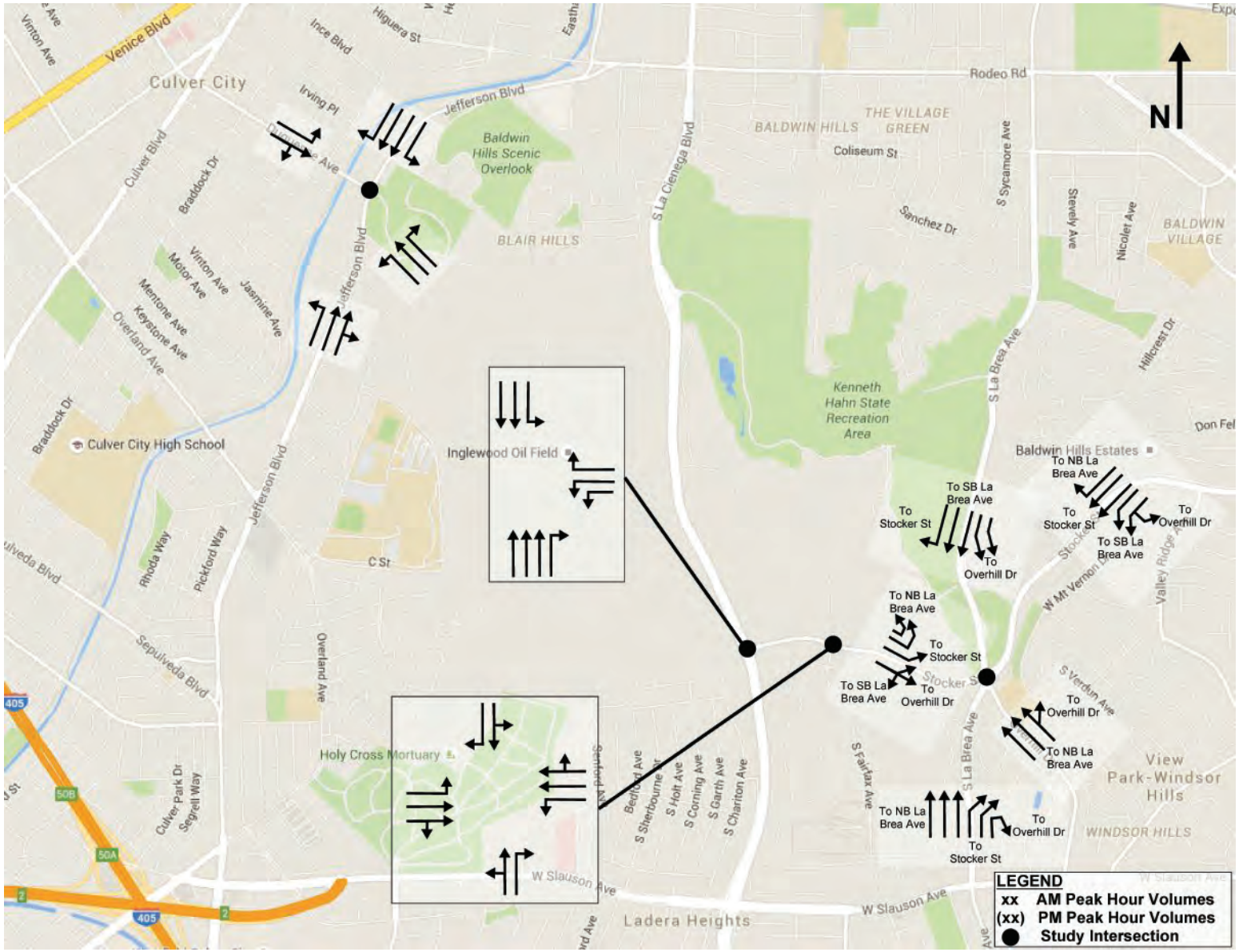

Lane Configurations

Exhibit 4.14-2

Inglewood Oil Field Specific Plan Project

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TABLE 4.14-4
EXISTING INTERSECTION LEVELS OF SERVICE

No.	Intersection	Peak Hour	Existing Condition	
			V/C	LOS
1	Stocker St and La Cienega Blvd	AM PM	1.02 1.14	F0 F0
2	Stocker St and Fairfax Ave	AM PM	0.84 0.93	D E
3	Stocker St/La Brea Ave/Overhill Dr	AM PM	0.95 1.13	E F0
4	Jefferson Blvd/Duquesne Ave	AM PM	0.85 0.80	D C

V/C: volume-to-capacity ratio; LOS: Level of Service
Source: Psomas 2015 (Appendix I-1)

Alternative Transportation

Regional

Metro provides public transportation in the study area. Several Metro routes operate in the area, including Route 217 along La Cienega Boulevard and Routes 212 and 312 along La Brea Avenue. Route 102 also runs along Stocker Street east of La Brea Avenue (Metro 2017).

City of Culver City

The City of Culver City has two public transportation routes that are in close proximity to the Project Site: Line 4 (Jefferson Boulevard) and Line 5 (Braddock Boulevard) (Culver City 2017b). There is also a bike path along Ballona Creek. While the bike path is not immediately adjacent to the Project Site, access points for the bike path are near the intersection of Jefferson Boulevard and Duquesne Avenue (LABP 2017). There are also striped bike lanes along Jefferson Boulevard from Duquesne Avenue to Holdrege Avenue (Culver City 2017c).

4.14.3 SPECIFIC PLAN AND REGULATORY REQUIREMENTS

Specific Plan Drilling Regulations

Section 21.K.9. Limit vehicular traffic to established paved and unpaved roads and parking areas.

Section 22.F.2. **Deliveries.** Deliveries within 500 feet of any residential property shall not be permitted after 5:00 PM and before 7:00 AM except in cases of emergency. Deliveries on Sundays or legal holidays shall not be permitted after 5:00 PM and before 9:00 AM, except in cases of emergency or as approved by the Community Development Director.

Section 38.A. **Deliveries.** In the event that deliveries of new drilling, maintenance, or other equipment or that the removal of old drilling rigs would utilize Culver City roadways, all truck routes and oversized vehicle trips must be approved by the Public Works Director/City Engineer prior to delivery of equipment or removal

of drilling rigs. The Drilling Project's traffic shall avoid peak hours and residential roadways to the maximum extent feasible.

Regulatory Requirements

RR TRA-1 Culver City Municipal Code, Section 7.02.210, Truck Routes Designated, requires any commercial vehicle, the laden or unladen weight of which exceeds 6,000 pounds, to use specific designated truck routes. Jefferson Boulevard, La Cienega Boulevard, and Fairfax Avenue are included on this list.

4.14.4 THRESHOLDS OF SIGNIFICANCE

The Initial Study for the Project concludes that additional project-level analysis of the following thresholds of significance is required in this Draft EIR. According to Appendix G of the State CEQA Guidelines, a project would result in a significant adverse impact related to traffic and transportation if it would:

Threshold 14-1: Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system. Including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

Threshold 14-2: Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand established by the county congestion management agency for designated roads or highways.

Threshold 14-3: Result in inadequate emergency access.

Threshold 14-4: Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decreased the performance or safety of such facilities.

4.14.5 IMPACT ANALYSIS

Threshold 14-1: Would the Project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system. Including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Trip Generation

The Project would generate new vehicle trips during construction and operational activities. The duration of time the Specific Plan covers is through 2032. Construction and operational activities will be occurring simultaneously during this time period. In order to determine when the maximum buildout (and therefore the maximum impacts) would occur, it was assumed that the Specific Plan requirements would begin in 2018. Buildout would be incremental and would occur over the

course of many years (no fewer than 11 years in 2028, but not past 2032). If the maximum number of wells are drilled as allowed by the Specific Plan then, in the year 2028, the maximum traffic-related impacts are expected to occur. See Table 3-2 in Section 3.0, Project Description, of this Draft EIR for more details on the timing of the maximum of new wells to be drilled.

During 2028, the following activities are assumed to occur at the same time for the maximum buildout condition:

- A maximum of 1 well pad under construction
- A maximum of 1 well being drilled
- A maximum of 2 well workover operations occurring
- A maximum number of 25 workers and trucks for facility operations in attendance
- A maximum of 1 well stimulation activity occurring

Table 4.14-5 provides the trips expected to be generated during this Maximum Buildout Scenario. These values were developed based on information provided in the Baldwin Hills CSD EIR prepared by the Los Angeles County Department of Regional Planning, the SB 4 EIR prepared by the DOC, and information provided in the Project Description found in Section 3.0 of this Draft EIR.

TABLE 4.14-5
TRIP GENERATION

	Per Well				Max Trip Generation (2028)			
Facility Operations	**Peak Day Volume (vpd)**	**Peak Day Volume (PCE)**	**AM Peak Hour* Total**	**PM Peak Hour* Total**	**Peak Day Volume (vpd)**	**Peak Day Volume (PCE)**	**AM Peak Hour* Total**	**PM Peak Hour* Total**
Well Pad Construction								
Workers Commuting	4	4	0.4	0.4	4	4	0.4	0.4
Trucks	2	2	0.2	0.2	2	2	0.2	0.2
Visitors	3	3	0.3	0.3	3	3	0.3	0.3
Well Drilling/Completion								
Workers Commuting – Day Shift (per drill rig)	14	14	1.4	1.4	14	14	1.4	1.4
Workers Commuting – Night Shift (per drill rig)	14	14	1.4	1.4	14	14	1.4	1.4
Trucks (per drill rig)	6	12	1.2	1.2	6	12	1.2	1.2
Visitors	3	3	0.3	0.3	3	3	0.3	0.3
Well Workover/Abandonment								
Workers Commuting	4	4	0.4	0.4	8	8	0.8	0.8
Trucks	4	8	0.8	0.8	8	16	1.6	1.6
Facility Operations								
Workers Commuting –Day Shift (weekday)	20	20	1.0	1.0	20	20	1.0	1.0
Workers Commuting – Night Shift (weekday)	1	1	0.1	0.1	1	1	0.1	0.1
Workers Commuting –Day Shift (weekend)	2	2	0.0	0.0	2	2	0.0	0.0

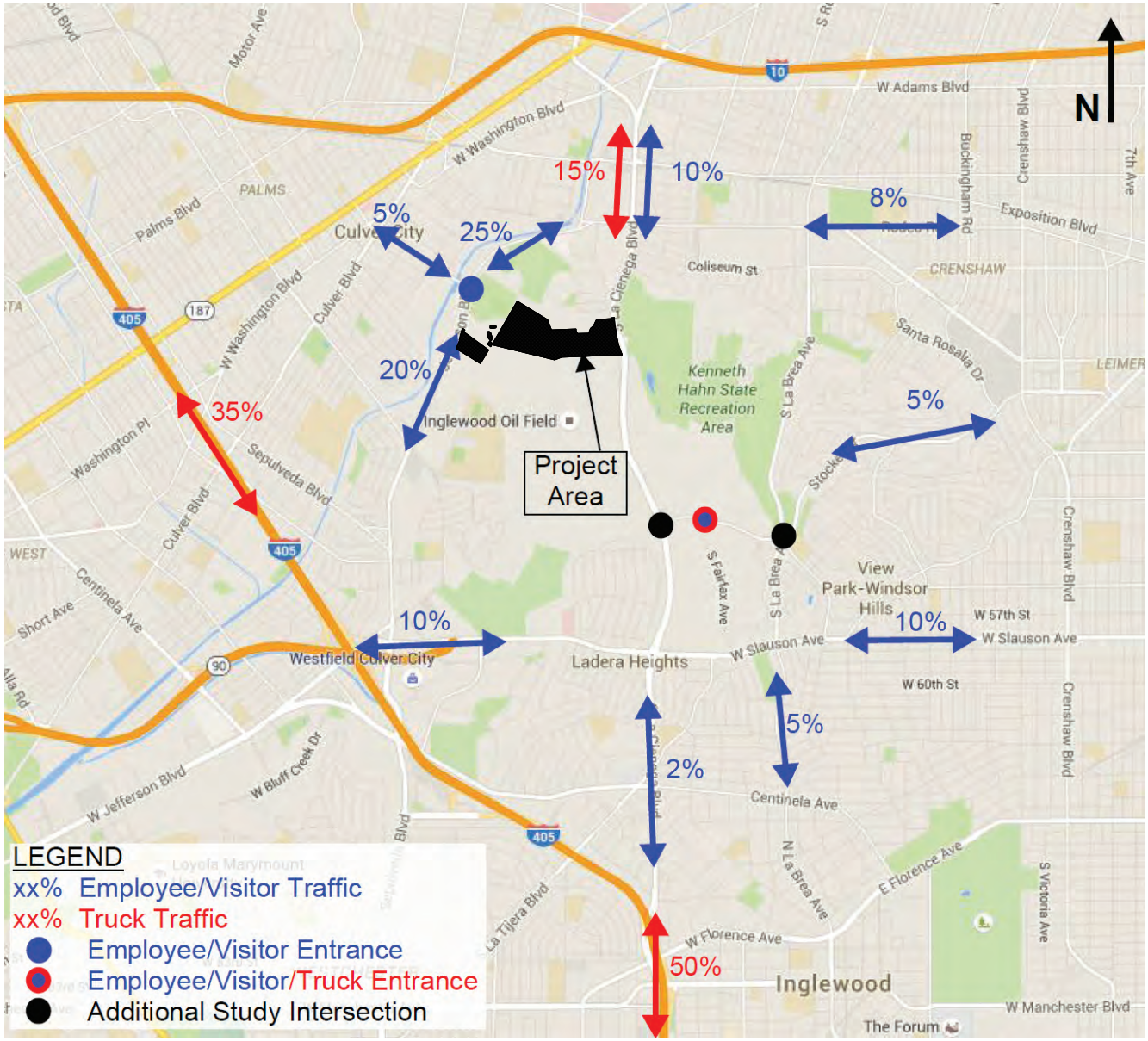
TABLE 4.14-5
TRIP GENERATION

Facility Operations	Per Well				Max Trip Generation (2028)			
	Peak Day Volume (vpd)	Peak Day Volume (PCE)	AM Peak Hour* Total	PM Peak Hour* Total	Peak Day Volume (vpd)	Peak Day Volume (PCE)	AM Peak Hour* Total	PM Peak Hour* Total
Workers Commuting –Night Shift (weekend)	1	1	0.0	0.0	1	1	0.0	0.0
Trucks – General Operations	3	6	0.6	0.6	3	6	0.6	0.6
Trucks – Propane Transport	1	2	0.2	0.2	1	2	0.2	0.2
Visitors	1	1	0.1	0.1	1	1	0.1	0.1
Employee Trips								
Workers Commuting – Day Shift	8–15	15	15	0	15	15	15	0
Workers Commuting – Night Shift (if needed)	8–15	15	0	15	15	15	0	15
Additional Personnel	5	5	3	2	5	5	3	2
Truck Trips								
Sand	1–3	6	3	0	3	0	3	0
Water	9–10	0	0	0	0	0	0	0
Chemical Flatbed, Manifold Trailer	1	2	1	0	1	2	1	0
Waste	1	2	0	1	1	2	0	1
Others (pump truck, mixer, blender, crane)	1	2	1	0	1	2	1	0
Maximum Totals	**134**	**144**	**31**	**26**	**132**	**150**	**33**	**28**
Employee/Visitor Traffic	102	102	23	22	106	106	24	23
Truck Traffic	32	42	8	4	26	44	9	5

vpd = vehicles per day; PCE: passenger car equivalent
* Volumes are in PCE
Sources: Psomas 2017 (Appendix I-3)

Trip distribution was partly based on information provided in the Baldwin Hills CSD EIR Traffic Report. That report analyzed three of four intersections being analyzed for this Project. With the addition of the intersection at Jefferson Boulevard and Duquesne Avenue for this Project, it was assumed that 50 percent of the employee and visitor traffic (non-truck traffic) would access the site via this intersection. Based on discussions with the City, due to the presence of the nearby residential areas, Culver City Park, and other recreational uses, no truck traffic will be permitted to access the Project Site from Duquesne Avenue (see the Traffic Impact Memorandum in Appendix I). If the City were to allow some construction trucks to access the City IOF from Duquesne Avenue, it would relieve truck congestion on other roadways and result in a dispersal of truck-related traffic impacts. Exhibit 4.14-3, Trip Distribution, shows the trip distribution assumed for the traffic analysis.

Given the trip generation and distribution described above, the Project trip traffic was developed and is shown on Exhibit 4.14-4, Project Traffic Volumes. As Exhibit 4.14-4 shows, the main Project access intersection of Stocker Street and Fairfax Avenue will serve the highest traffic volumes. Table 4.14-6 shows the Project traffic volumes (number of vehicles per hour) during the AM peak hour (7:00 AM to 9:00 AM) and PM peak hour (4:00 PM to 6:00 PM) for each intersection analyzed.



Trip Distribution

Exhibit 4.14-3

Inglewood Oil Field Specific Plan Project

PSOMAS

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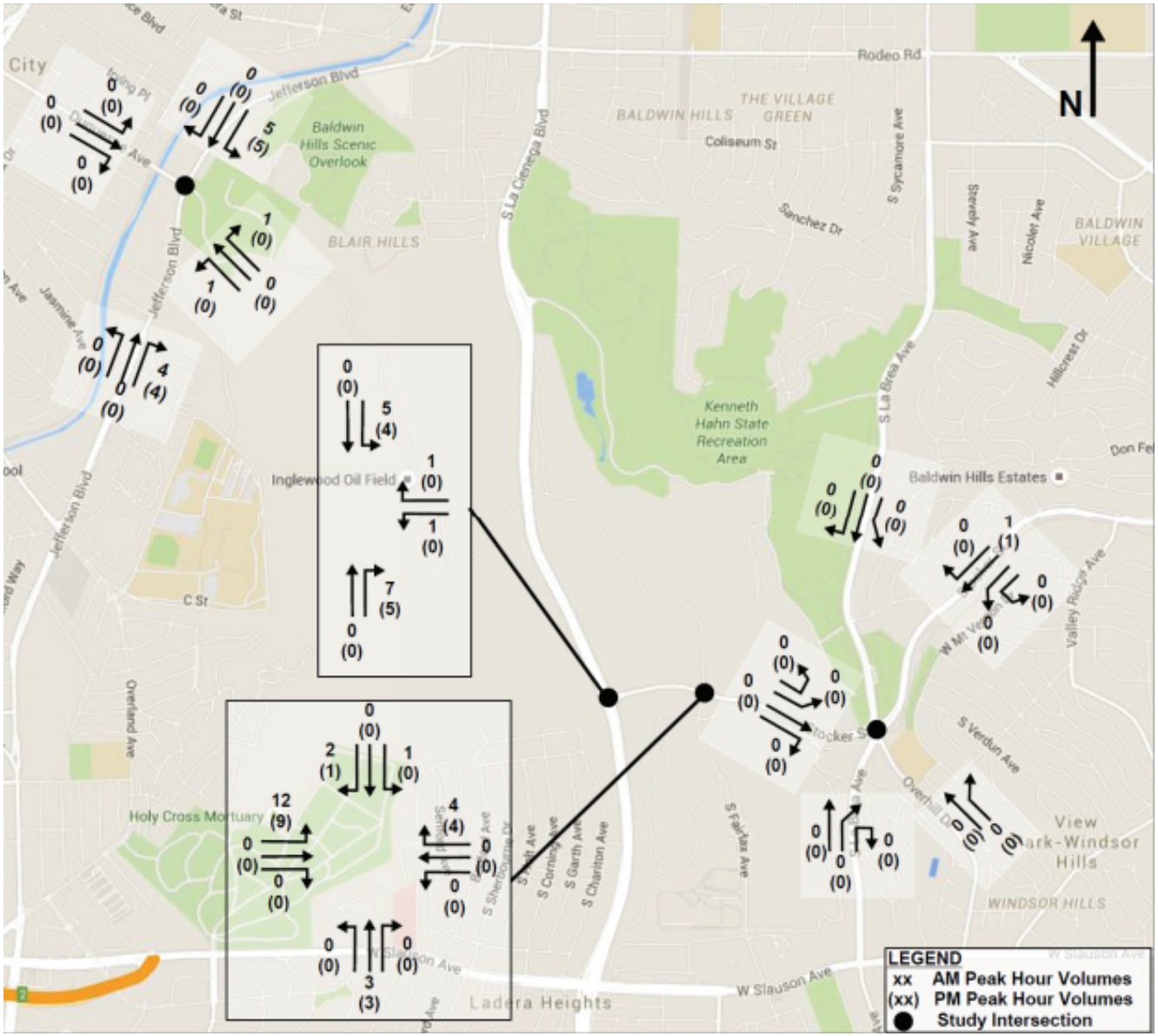

Project Traffic Volumes

Exhibit 4.14-4

Inglewood Oil Field Specific Plan Project

PSOMAS

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TABLE 4.14-6
PROJECT TRAFFIC VOLUMES

No.	Intersection	Direction	AM Peak Hour Volume	PM Peak Hour Volume
1	Stocker St and La Cienega Blvd	EB	0	0
		WB	2	0
		NB	7	5
		SB	5	4
2	Stocker St and Fairfax Ave	EB	12	9
		WB	4	4
		NB	3	3
		SB	3	1
3	Stocker St/La Brea Ave/Overhill Dr	EB	0	0
		WB	1	1
		NB	0	0
		SB	0	0
		NB*	0	0
4	Jefferson Blvd/Duquesne Ave	EB	0	0
		WB	2	0
		NB	4	4
		SB	5	5

EB: eastbound; WB: westbound; NB: northbound; SB: southbound
* The second northbound value is for Overhill Dr.

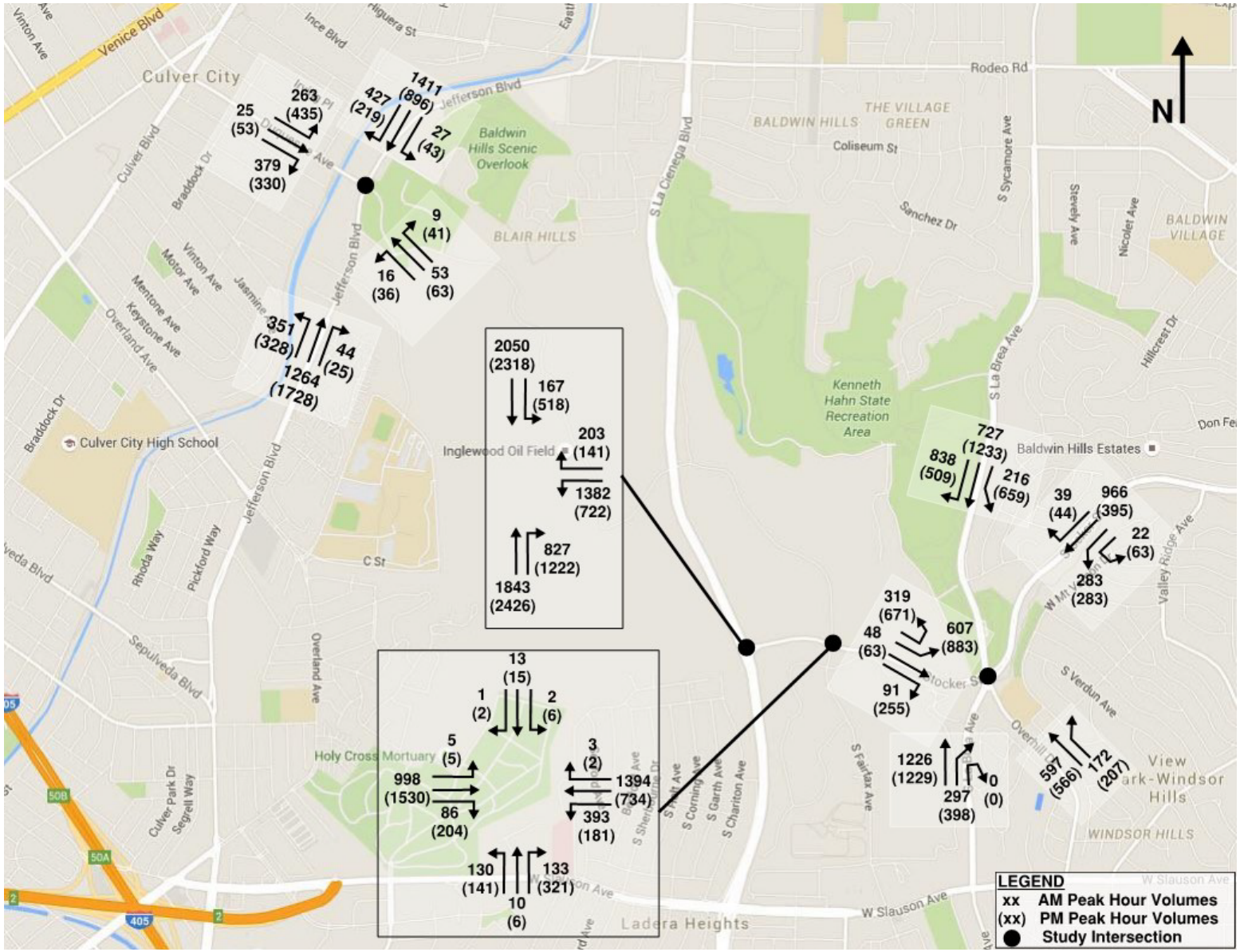
Source: Psomas 2017 (Appendix I-3)

Year 2028 Traffic Conditions – Intersections

Data from several sources were used to develop projected traffic volume information for the study intersections related to the Project Site. To develop future projected volumes without the Project traffic, the City of Culver City agreed that applying a growth rate would be appropriate because of the extended construction time. The City typically requires that a 1.0 percent growth rate be applied to existing volumes in order to develop projected ambient traffic growth.

The Los Angeles County CMP also provides growth factors for different areas of the County. For the City of Culver City, based on information in the CMP, the projected growth rate is approximately 0.2 percent per year through the design year of the project, 2028 (Metro 2010). Therefore, to be conservative, a growth rate of 1.0 percent per year was used to develop projected traffic volumes based on ambient growth, including any nearby development projects. The existing plus ambient growth (and related projects) traffic volumes are shown in Exhibit 4.14-5, Existing Plus Ambient Growth Traffic Volumes (2028).

Table 4.14-7 shows the Year 2028 Future Pre-Project Intersection Traffic Volumes (number of vehicles per hour) during the AM peak hour (7:00 AM to 9:00 AM) and PM peak hour (4:00 PM to 6:00 PM) for each intersection analyzed. Table 4.14-8, Year 2028 Future Pre-Project Intersection Level of Service, shows that the intersection of La Cienega Boulevard and Stocker Street operates at LOS F0 in the AM peak hour and LOS F1 in the PM peak hour; the Fairfax Avenue/Stocker Street intersection operates at LOS F0 in the PM peak hour; and the La Brea Avenue/Stocker Street/Overhill Drive intersection also operates at LOS F0 in the AM peak hour and LOS F1 in the PM peak hour.



Existing Plus Ambient Growth Traffic Volumes (2028)

Exhibit 4.14-5

Inglewood Oil Field Specific Plan Project

PSOMAS

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TABLE 4.14-7
EXISTING PLUS AMBIENT GROWTH (YEAR 2028)
TRAFFIC VOLUMES

No.	Intersection	Direction	AM Peak Hour Volume	PM Peak Hour Volume
1	Stocker St and La Cienega Blvd	EB	0	0
		WB	1,569	854
		NB	2,663	3,641
		SB	2,195	2,808
2	Stocker St and Fairfax Ave	EB	1,089	1,737
		WB	1,772	908
		NB	270	464
		SB	15	23
3	Stocker St/La Brea Ave/Overhill Dr	EB	1,054	1,853
		WB	1,297	778
		NB	1,508	1,611
		SB	1,763	2,376
		NB*	762	765
4	Jefferson Blvd/Duquesne Ave	EB	660	810
		WB	78	139
		NB	1,643	2,061
		SB	1,847	1,146

EB: eastbound; WB: westbound; NB: northbound; SB: southbound
* The second northbound value is for Overhill Dr.

Source: Psomas 2017 (Appendix I-3)

TABLE 4.14-8
EXISTING PLUS AMBIENT GROWTH (YEAR 2028)
INTERSECTION LEVEL OF SERVICE

Intersection	Peak Hour	Existing + Ambient Growth (2028) ICU	Existing + Ambient Growth (2028) LOS
Stocker St and La Cienega Blvd	AM	1.145	F0
	PM	1.281	F1
Stocker St and Fairfax Ave	AM	0.939	E
	PM	1.045	F0
Stocker St/La Brea Ave/Overhill Dr	AM	1.067	F0
	PM	1.270	F1
Jefferson Blvd/Duquesne Ave	AM	0.958	E
	PM	0.896	D

ICU: Intersection Capacity Utilization; LOS: Level of Service
Source: Psomas 2017 (Appendix I-3)

With the addition of Project-generated traffic, V/C ratios are expected to increase only slightly, if at all. Table 4.14-9 shows the Existing Plus Ambient Growth Plus Project (Year 2028) Intersection Traffic Volumes (number of vehicles per hour) during the AM peak hour (7:00 AM to 9:00 AM) and PM peak hour (4:00 PM to 6:00 PM) for each intersection analyzed. The total traffic volumes

are shown are shown in Exhibit 4.14-6, Existing Plus Ambient Growth Plus Project Traffic Volumes (2028). Table 4.14-10, Existing Plus Ambient Growth Plus Project (Year 2028) Intersection Level of Service shows that the increases in V/C are minimal, and the Project is not expected to have a significant impact at any of the study intersections.

TABLE 4.14-9
EXISTING PLUS AMBIENT GROWTH PLUS PROJECT (YEAR 2028)
INTERSECTION TRAFFIC VOLUMES

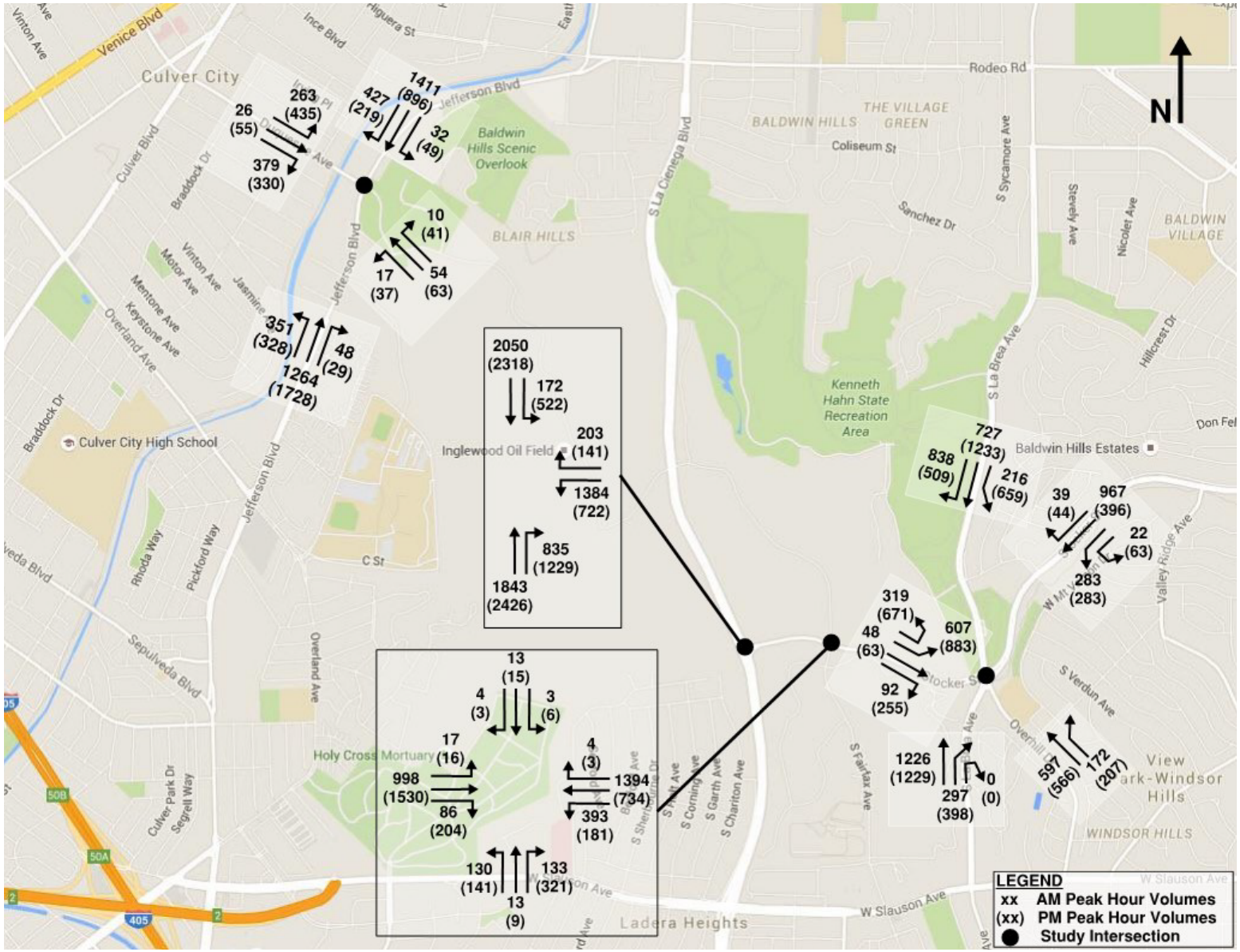
No.	Intersection	Direction	AM Peak Hour Volume	PM Peak Hour Volume
1	Stocker St and La Cienega Blvd	EB WB NB SB	0 1,587 2,678 2,222	0 855 3,619 2,813
2	Stocker St and Fairfax Ave	EB WB NB SB	1,1011,791 276 20	1,750 918 471 24
3	Stocker St/La Brea Ave/Overhill Dr	EB WB NB SB NB*	1,066 1,311 1,523 1,781 769	1,872 786 1,627 2,401 773
4	Jefferson Blvd/Duquesne Ave	EB WB NB SB	668 81 1,663 1,870	820 141 2,085 1,164

EB: eastbound; WB: westbound; NB: northbound; SB: southbound
*The second northbound value is for Overhill Drive
Source: Psomas 2017 (Appendix I-3)

TABLE 4.14-10
EXISTING PLUS AMBIENT GROWTH PLUS PROJECT (YEAR 2028)
INTERSECTION LEVEL OF SERVICE

Intersection	Peak Hour	Existing + Ambient Growth (2028)		Existing + Ambient Growth + Project (2028)		Increase in Impact	Significant Impact?
		ICU	LOS	ICU	LOS		
Stocker St and La Cienega Blvd	AM	1.145	F0	1.149	F0	0.004	No
	PM	1.281	F1	1.284	F1	0.003	No
Stocker St and Fairfax Ave	AM	0.939	E	0.939	E	0.000	No
	PM	1.045	F0	1.045	F0	0.000	No
Stocker St/La Brea Ave/Overhill Dr	AM	1.067	F0	1.067	F0	0.001	No
	PM	1.270	F1	1.270	F1	0.000	No
Jefferson Blvd/Duquesne Ave	AM	0.958	E	0.958	E	0.000	No
	PM	0.896	D	0.896	D	0.000	No

ICU: Intersection Capacity Utilization; LOS: Level of Service
Sources: Psomas 2017 (Appendix I-3)



Existing Plus Ambient Growth Plus Project Traffic Volumes (2028)

Exhibit 4.14-6

Inglewood Oil Field Specific Plan Project

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Year 2028 Traffic Conditions – Freeways

In addition to the intersection evaluation, the operations on nearby freeway segments were evaluated to determine whether or not a CMP Traffic Impact Analysis was required. Table 4.14-11 shows the Project-related traffic affecting the local freeways. Table 4.14-12 shows the freeway evaluation for the Project, with LOS presented being determined based on the D/C ratio. Recall that the D/C ratio is similar to the V/C ratio used for intersection analysis, but is specific to freeway segments. As seen in the table, Project traffic is not expected to have a significant impact on any of the facilities. Further, the LOS is not expected to change as a result of the added Project traffic.

TABLE 4.14-11
PROJECT-RELATED FREEWAY TRAFFIC

Location	Time Period	Oil Field Traffic	
		Employees/ Visitors	Trucks
I-10 west of La Brea Ave	Daily	37	7
	Peak Hour	8	1
I-405 north of SR-90	Daily	32	15
	Peak Hour	7	3
I-405 south of SR-90	Daily	2	22
	Peak Hour	0	4
SR-90 at I-405	Daily	11	15
	Peak Hour	2	3

I: Interstate; SR: State Route
Source: Psomas 2017 (Appendix I-3)

TABLE 4.14-12
FREEWAY EVALUATION

Location	Time Period	Freeway Capacity*	Existing (2014)			Existing + Ambient Growth (2028)			Existing + Ambient Growth + Project (2028)			Impact
			Volume	D/C	LOS	Volume	D/C	LOS	Volume	D/C	LOS	
I-10 west of La Brea Ave	Daily		271,000			311,508			311,551			
	Peak Hour	20,000	19,100	0.955	E	21,955	1.098	F0	21,965	1.098	F0	0.0%
I-405 north of SR-90	Daily		318,000			365,533			365,580			
	Peak Hour	20,000	19,900	0.995	E	22,875	1.144	F0	22,885	1.144	F0	0.0%
I-405 south of SR-90	Daily		310,000			356,337			356,361			
	Peak Hour	20,000	19,200	0.960	E	22,070	1.103	F0	22,075	1.104	F0	0.0%
SR-90 at I-405	Daily		88,000			101,154			101,180			
	Peak Hour	12,000	6,900	0.575	C	7,931	0.661	C	7,9,37	0.661	C	0.1%

D/C: demand-to-capacity ratio; LOS: level of service; I: Interstate; SR: State Route
* Freeway capacity from Baldwin Hills CSD EIR (LACDRP 2008)
Source: Psomas 2017 (Appendix I-3)

Adding 32 peak hour trips or more for a critical movement at an intersection would be considered a significant impact, and a traffic study would be required. As shown in Table 4.14-6, Project Traffic Volumes, the Project is expected to generate a maximum of 12 trips on any given movement during the AM peak hour and a maximum of 9 trips on any given movement during the PM peak hour. As such, the Project is not expected to have significant Project-related traffic impacts. As shown in Tables 4.14-6 through 4.14-12, the Project is not expected to have significant impacts at any of the four study intersections or on the local freeways. No mitigation is required.

The analysis shown in Tables 4.14-6 through 4.14-12 is based on the assumed buildout of the Project Site by 2028. Although the Project may not be fully constructed until 2032, as allowed by the Specific Plan, the buildout year of 2028 was selected for the traffic analysis to remain consistent with other analyses for this Project. Using the method described above, traffic projections indicate that ambient volumes (as well as ambient plus Project volumes) would be approximately four percent higher in 2032 than they are projected to be in 2028. This minor increase in ambient traffic would not result in the Project having a significant impact at any of the study locations, due in large part to the fact that the Project-generated traffic volumes will comprise less than one percent of the overall peak hour traffic volumes at each of the study intersections. Further, by using 2028 projections instead of 2032 projections, the Project-generated traffic volumes comprise a larger percentage of the overall volume (although still less than one percent), which effectively places more of the traffic "burden" on the Project traffic, and therefore provides a conservative analysis. As such, if Project buildout were to occur in 2032, the Project is not expected to have significant impacts at any of the four study intersections or on the local freeways. No mitigation is required.

Threshold 14-2: Would the Project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand established by the county congestion management agency for designated roads or highways?

The CMP is a State-mandated program that was enacted in 1990 to address the impact of local growth on the regional transportation system. The 2010 CMP for Los Angeles County states that a "significant impact occurs when the proposed Project increases traffic demand on a CMP facility by 2 percent of capacity (V/C ≥ 0.02), causing LOS F (V/C > 1.00); if the facility is already LOS F, a significant impact occurs when the proposed Project increases traffic demand on a CMP facility by 2 percent of capacity (V/C ≥ 0.02)" (Metro 2010).

A review of Project impacts to CMP freeway and intersection monitoring stations was conducted to determine if a Traffic Impact Assessment (TIA) per CMP requirements is required for the Project. The Project will not add 150 or more trips (in either direction) during the weekday AM or PM peak hours to any of the freeways in the Project study area. A maximum of ten vehicle trips would be generated on any CMP monitored intersection by the Project during the peak hour. The Project will not add 50 or more trips in either direction during the weekday peak hour. Therefore, no TIA is required. No conflict with the CMP will occur with the Project. Also, Project impacts on the CMP highway system would be less than significant, and no mitigation is required.

Threshold 14-3: Would the Project result in inadequate emergency access?

The Project Site is served by a developed roadway network that provides emergency access and evacuation routes to the Project Site and existing development on and near the Project Site. No changes to roadways would result from Project implementation, and the Project would be

developed in accordance with current regulations, including emergency access for fire protection personnel.

As required by the Baldwin Hills CSD EIR, an Emergency Response Plan has been developed by Freeport McMoRan Oil and Gas (FM O&G), which is the current operator of the Inglewood Oil Field, including the portion of the oil field within the city limits of Culver City; this Emergency Response Plan is used in annual emergency response drills. As discussed in Section 4.7, Hazards and Hazardous Materials, Section 12 of the Specific Plan requires preparation of an Emergency Response Plan that satisfies all rules and regulations of the U.S. Environmental Protection Agency; the *California Code of Regulations;* the Spill Prevention, Control, and Countermeasure Plan (SPCCP); the California Office of Spill Prevention and Response; and the U.S. Department of Transportation relating to onshore pipeline spills.

There would be no significant impacts to emergency access or response, and no mitigation would be required.

Threshold 14-4: Would the Project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decreased the performance or safety of such facilities?

The Project considers the construction of new oil and gas production facilities within an existing and secured oil field. The Project does not have elements or requirements that affect public transit including bicycle or pedestrian facilities. The Project is not expected to increase the local population where additional public transit, bicycle or pedestrian facilities would be required.

Since the Project will be located within an existing oil and gas production field, there would be no impacts to the bicycle path along Ballona Creek. While there will be a slight increase in traffic along Jefferson Boulevard, this increase in traffic is not expected to affect the bicycle lanes along Jefferson Boulevard between Duquesne Avenue to Holdrege Avenue. No changes to existing sidewalks are expected to occur.

The Park to Playa Trail – Segment C, as described in Section 4.12., Recreation, would be a pedestrian and bicycle trail that would pass through the northeastern section of the Project Site and immediately north of the central and western sections of the Project Site. While the portions of the Trail would be within the Project Site footprint, traffic and transportation impacts associated with implementation of the Project would not impact access or the ability to use this recreational facility. Impacts to alternative transportation systems (public transit, bicycle, and pedestrian facilities) would be less than significant; no mitigation is required.

4.14.6 CUMULATIVE IMPACTS

The traffic analysis accounted for growth in traffic volumes in the study area based on an annual growth factor. As a result, the traffic analysis included an assessment of cumulative traffic impacts. The Existing Plus Ambient Growth Plus Project (year 2028) Intersection Level of Service (Table 4.14-10) analyzed under Threshold 14-1 includes consideration of both ambient and cumulative traffic volumes to which the Project traffic volumes were added. Under this scenario, the Project's implementation would result in less than significant impacts to all study area intersections and roadway segments when compared to the applicable significance criteria. As a result, the Project's incremental contribution to roadway levels of service was determined not to be cumulatively considerable. No mitigation is required.

4.14.7 MITIGATION MEASURES

No significant adverse impacts to transportation and traffic would occur. Therefore, no mitigation is required.

4.14.8 LEVEL OF SIGNIFICANCE

Project-related and cumulative impacts on transportation and traffic would be less than significant. Table 4.14-13 below summarizes the significance finding of each threshold addressed in this section before and after mitigation, where applicable.

TABLE 4.14-13
SIGNIFICANCE SUMMARY

Threshold		Project Level of Significance	Mitigation Measure(s)	Level of Significance after Mitigation
14-1	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system. Including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.	Less than Significant	N/A	Less than Significant
14-2	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand established by the county congestion management agency for designated roads or highways.	Less than Significant	N/A	Less than Significant
14-3	Result in inadequate emergency access.	Less than Significant	N/A	Less than Significant
14-4	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decreased the performance or safety of such facilities.	Less than Significant	N/A	Less than Significant
N/A: not applicable				

4.14.9 REFERENCES

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