4.4 TRAFFIC, CIRCULATION, AND PARKING

INTRODUCTION

This section presents an overview of the existing traffic and circulation system in the proposed project area. It also discusses the potential impacts to traffic and circulation as a result of the implementation of the proposed project. Where significant and adverse impacts are identified, mitigation measures are recommended to reduce such impacts to less than significant levels to the extent possible. The section summarizes the findings of a traffic report prepared for the proposed project by Linscott, Law & Greenspan, Engineers, April 24, 2007. A complete copy of the traffic report has been included in ***Appendix 4.4*** *of the EIR.*

EXISTING CONDITIONS

The assessment of existing conditions relevant to this study includes a description of the highway and street system, traffic volumes on these facilities, and operating conditions of analyzed intersections and public transit services.

Regional Highway System

The Glendale Freeway (SR-2), the Ventura Freeway (SR-134), and the Golden State Freeway (I -5) provide regional access in the project vicinity. A brief description of each freeway is provided below.

State Route 2 (Glendale Freeway)

SR-2 is a north-south freeway that extends from just south of I-5 near Echo Park to the south to just north of I-210 near La Canada Flintridge to the north. The northern terminus of the freeway occurs at Foothill Boulevard. At Colorado Street, a partial diamond interchange provides a southbound on-ramp and a northbound off-ramp.

State Route 134 (Ventura Freeway)

SR-134 is an east-west freeway that extends from I-210 in Pasadena to the U.S. 101 freeway in North Hollywood. Four mixed-flow travel lanes and one high-occupancy vehicle (HOV) lane are provided in each direction on SR-134 in the Glendale area. Full interchanges are provided at Pacific Avenue, Central Avenue/Brand Boulevard, and Glendale Avenue/Monterey Road. The SR-134 Freeway ramps at Central Avenue and Brand Boulevard are connected by one-way connector roadways (Goode Avenue and Sanchez Drive). At Central Avenue, a westbound on-ramp and an eastbound off-ramp are provided in connection with the Goode Avenue and Sanchez Drive freeway frontage roadways. At Brand Boulevard, a westbound off-ramp and an eastbound on-ramp are provided in connection with these two freeway

frontage roadways. At Glendale Avenue, an eastbound off-ramp, a southbound-to-eastbound loop on-ramp, and a northbound-to-eastbound diamond on-ramp are provided. Westbound on- and off-ramps are provided at Monterey Road. Segments of the Ventura Freeway to the east and west of Central Avenue were selected for analysis in order to determine potential impacts related to the proposed project.

Interstate 5

I-5 is a north-south freeway that extends between Northern and Southern California. Five mainline travel lanes are generally provided in each direction on the I-5 Freeway in the Glendale area. Northbound and southbound on- and off-ramps are provided at Colorado Street/Colorado Boulevard, southwest of the project site.

Existing Street System

Local Street System

Immediate access to the Verdugo Gardens project site is provided via Sanchez Drive, Central Avenue, and Doran Street. The following eight study intersections located within approximately a 0.25-mile radius of the project site were selected for analysis by the City of Glendale Traffic and Transportation Division in order to determine potential impacts related to the proposed project:

- Central Avenue/Goode Avenue
- Central Avenue/Sanchez Drive
- Central Avenue/Pioneer Drive
- Central Avenue/Doran Street
- Orange Street/Doran Street
- Brand Boulevard/Goode Avenue
- Brand Boulevard/Sanchez Drive
- Brand Boulevard/Doran Street

The traffic analysis study area is generally comprised of those locations that have, as defined by the Lead Agency, the greatest potential to experience significant traffic impacts due to the proposed project. The above eight intersections were selected because they are (1) immediately adjacent or in proximity to the project site, (2) in the vicinity of the project site and are documented to have current or projected adverse operational issues, and/or (3) are in the vicinity of the project and are forecast to experience a relatively

greater percentage of project-related vehicular turning movements. All of the study intersections selected for analysis are presently controlled by traffic signals. The existing lane configurations at the eight study intersections are shown in **Figure 4.4-1, Existing Lane Configurations**.

Roadway Descriptions

Brief descriptions of the key roadways that provide access to the Verdugo Gardens site are provided below.

Central Avenue

Central Avenue is a north-south oriented roadway that borders the project site on the west. Central Avenue is designated as a Major Arterial in the Circulation Element of the City of Glendale General Plan. Two through travel lanes are generally provided in each direction in the project vicinity, however three northbound travel lanes are provided directly adjacent to the project site. Exclusive left-turn lanes are provided in both directions at the major intersections in the project vicinity. Dual left-turn lanes are provided in the northbound direction at the SR-134 freeway on-ramp-Goode Avenue intersection. Curbside parking is generally prohibited on both sides of Central Avenue north of Lexington Drive. South of Lexington Drive, 2-hour metered parking between the hours of 9:00 AM and 6:00 PM is allowed along the east and west sides of Central Avenue. Central Avenue is posted for a speed limit of 35 miles per hour (mph) in the project vicinity.

Brand Boulevard

Brand Boulevard is a north-south oriented roadway that is located east of the project site. Brand Boulevard is designated as a Major Arterial between Glenoaks Boulevard and the southern City boundary in the Circulation Element of the City of Glendale General Plan. Three through travel lanes are generally provided in each direction in the project vicinity. Exclusive left-turn lanes are provided in both directions at the major intersections in the project vicinity. Dual left-turns are provided in the northbound direction at the SR-134 Freeway westbound Off-Ramp-Goode Avenue intersection and in the southbound direction at the SR-134 Freeway eastbound on-ramp-Sanchez Drive intersection. Two-hour angled parking is generally provided along both sides of Brand Boulevard between the hours of 9:00 AM and 6:00 PM, except near the SR-134 Freeway ramp intersections. In addition, some of the angled parking, as well as a few parallel parking areas north of Lexington Drive, are designated as 30-minute parking. Brand Boulevard is posted for a speed limit of 25 mph within the study area.

Orange Street

Orange Street is a north-south oriented roadway that extends between Doran Street and Colorado Street. Orange Street is designated as an Urban Collector in the Circulation Element of the City of Glendale General Plan. One through travel lane is provided in each direction in the project vicinity. Two-hour metered parking is generally allowed along both sides of Orange Street between the hours of 9:00 AM and 6:00 PM. There is no posted speed limit on Orange Street in the project vicinity, thus it is assumed to have a prima facie speed limit of 25 mph, consistent with the State of California Vehicle Code.

Goode Avenue

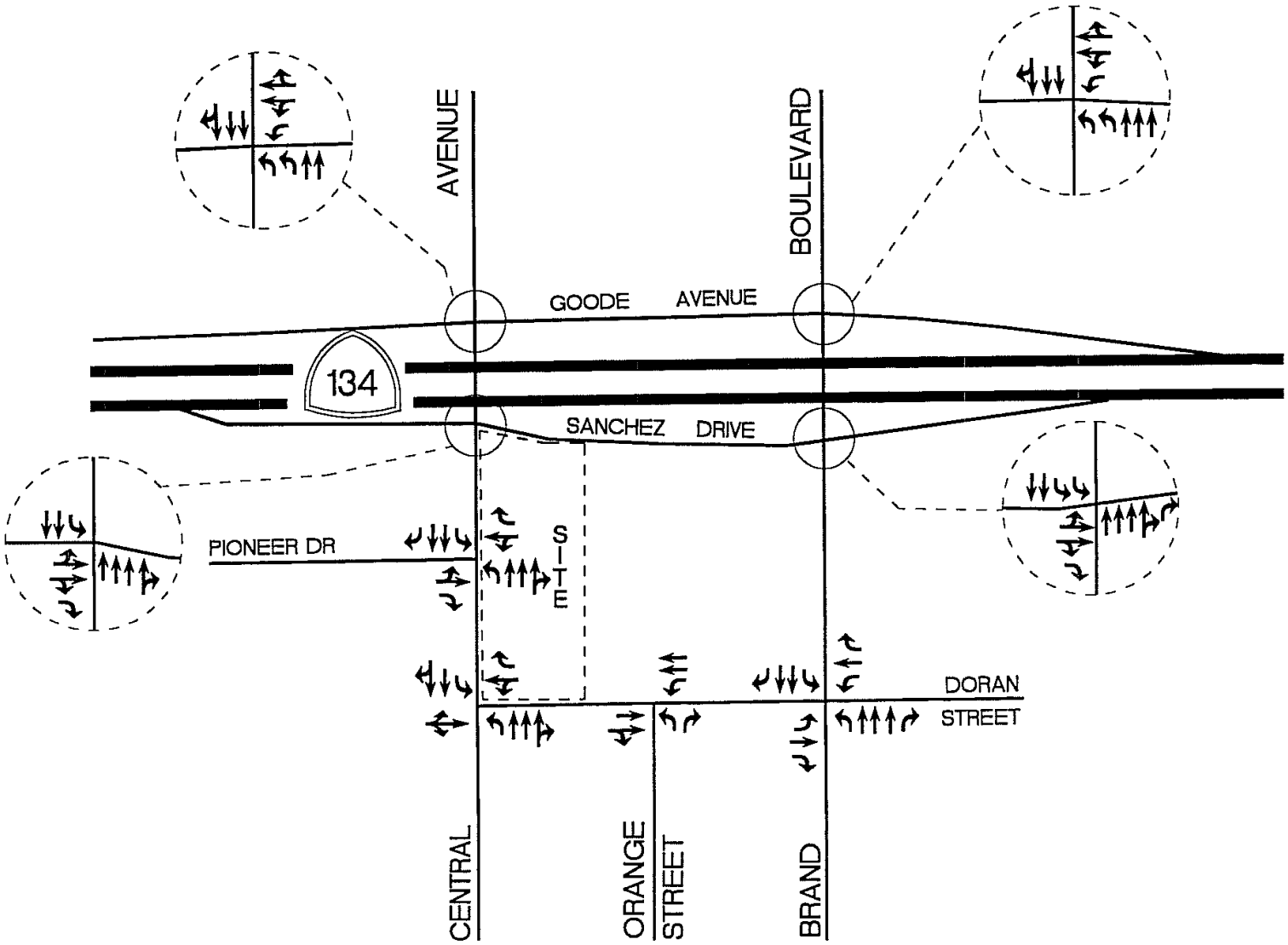
Goode Avenue is a one-way, westbound roadway that extends between the SR-134 Freeway ramps at Central Avenue and Brand Boulevard and is located north of the project site. Goode Avenue is designated as a Major Arterial in the Circulation Element of the City of Glendale General Plan. Three westbound through travel lanes are generally provided along Goode Avenue in the project vicinity. An exclusive left-turn lane is provided in the westbound direction at the Central Avenue intersection. Curbside parking is prohibited on both sides of Goode Avenue. There is no posted speed limit on Goode Avenue in the project vicinity, thus it is assumed to have a prima facie speed limit of 25 mph, consistent with the State of California Vehicle Code.

Sanchez Drive

Sanchez Drive is a one-way, eastbound roadway that extends between the SR-134 Freeway ramps at Central Avenue and Brand Boulevard. Sanchez Drive borders the project site to the north. Sanchez Drive is designated as a Major Arterial in the Circulation Element of the City of Glendale General Plan. Three through eastbound travel lanes are provided on Sanchez Drive in the project vicinity. An exclusive right-turn lane is provided in the eastbound direction at the Brand Boulevard intersection. Curbside parking is prohibited on both sides of Sanchez Drive in the project vicinity. There is no posted speed limit on Sanchez Drive in the project vicinity, thus it is assumed to have a prima facie speed limit of 25 mph, consistent with the State of California Vehicle Code.

Doran Street

Doran Street is an east-west oriented roadway that borders the project site to the south. Doran Street is designated as an Urban Collector in the Circulation Element of the City of Glendale General Plan. One through travel lane is provided in each direction in the project vicinity. Exclusive left-turn lanes are provided in both directions at the Brand Boulevard intersection. Separate right-turn only lanes are provided in both directions at the Brand Boulevard intersection and in the westbound direction



NOT TO SCALE

SOURCE: Linscott Law & Greenspan – June 2006

FIGURE **4.4-1**

Existing Lane Configurations

at the Central Avenue intersection. Parking is generally prohibited on both sides of Doran Street in the project vicinity. There is no posted speed limit on Doran Street in the project vicinity, thus it is assumed to have a prima facie speed limit of 25 mph, consistent with the State of California Vehicle Code.

Level of Service Methodology

Intersections

The study intersections were evaluated using the Intersection Capacity Utilization (ICU) method of analysis, which determines volume-to-capacity (v/c) ratios on a critical lane basis. The overall intersection v/c ratio is subsequently assigned a level of service (LOS) value to describe intersection operations. Level of service varies from LOS A (free flow) to LOS F (jammed condition). Intersection level of service definitions for signalized intersections are provided in **Table 4.4-1, Level of Service Definitions for Signalized Intersections**.

Table 4.4-1
Level of Service Definitions for Signalized Intersections

LOS	Volume/Capacity Ratio	Description
A	0.000–0.600	Free flow conditions; unimpeded ability to maneuver pass; very little delay; no platoons; highest average travel speeds.
B	0.601–0.700	Mostly free flow conditions; presence of other vehicles begins to be noticeable. Passing is required to maintain speeds; slightly less average travel speeds than Level of Service A.
C	0.701–0.800	Traffic density clearly affects ability to pass maneuver within the stream. Speeds are reduced to about 50 mph on highways to about fifty (50) percent of the average on urban arterials. Motorists will experience appreciable tension while driving in urban areas.
D	0.801–0.900	Unstable flow. Speeds are reduced from forty (40) to sixty (60) percent of normal. Passing demand is high although mostly impossible on two-lane highways. Traffic disruptions usually cause extensive queues.
E	0.901–1.000	Very unstable flow at or near capacity. Passing maneuvering virtually impossible. Extensive platooning on highways queuing on arterials. Speeds range from 20 mph or less on arterials two-lane highways up to 50 mph on multi-lane highways.
F	>1.000	Forced or breakdown flow. Demand exceeds capacity. Vehicles experience short spurts of movements followed by stoppages. Intersection congestion, long queues, delays are common for Level of Service F.

Source: Linscott, Law & Greenspan, Engineers

It should be noted that the ICU methodology is a static analysis tool for evaluating traffic operations of individual intersections. Therefore, it does not account for vehicular queues, which may extend through

nearby intersections. Therefore, the LOS may appear better than what is actually observed in the field. For example, this situation occurs during peak periods at the SR-134 Freeway ramp intersections with Brand Boulevard and Central Avenue, where frequent vehicle queuing occurs as vehicles wait to merge onto the SR-134 Freeway due to ramp metering. Based on direction from the City of Glendale Traffic and Transportation Division, and in order to reflect actual operating conditions, capacity reductions were applied to all travel lanes that feed the SR-134 Freeway on-ramps from Central Avenue and Brand Boulevard. In addition, the traffic volumes were assigned to the travel lanes based upon the geometric configuration of each pair of the SR-134 Freeway ramp intersections. Volumes were assigned to the available lanes taking into consideration "trap lanes" (through lanes that exit one intersection and become mandatory turn lanes at the next).

Freeway

Freeway segment Levels of Service were evaluated in accordance with the definitions included in the *2004 Congestion Management Program for Los Angeles County*, Los Angeles County Metropolitan Transportation Authority, July 2004 (CMP). The demand/capacity (D/C) ratios and Level of Service relationships are defined in the CMP document and presented in **Table 4.4-2, Caltrans Freeway Segment Level of Service Designations** (refer to Exhibit D-6, General Procedure for Freeway Segment [Mainline] Analysis, in Appendix D of the CMP).

Table 4.4-2
Caltrans Freeway Segment Level of Service Designations

D/C	LOS	D/C	LOS
0.00–0.35	A	>1.00–1.25	F(0)
>0.35–0.54	B	>1.25–1.35	F(1)
>0.54–0.77	C	>1.35–1.45	F(2)
>0.77–0.93	D	>1.45	F(3)
>0.93–1.00	E	---	---

Source: Linscott, Law & Greenspan, Engineers

Existing Traffic

Intersections

Manual traffic counts of vehicular turning movements were conducted at each of the eight study intersections during the weekday morning and afternoon commuter periods to determine the peak-hour traffic volumes. Traffic volumes at the study intersections show the typical peak periods between 7:00

and 9:00 AM generally associated with the peak morning commuter hours, and 4:00 and 6:00 PM generally associated with the afternoon commuter hours. These periods are generally associated with peak commuter hours in the Metropolitan Los Angeles area, including the City of Glendale.

The peak-period manual traffic counts were conducted at the study intersections in early June 2005. It should be noted that the 2005 manual traffic count data were increased by an annual growth factor of one percent (1.0 percent) per year to reflect existing traffic volumes. The 1.0 percent annual growth factor is based on the background traffic growth estimates for the San Fernando Valley contained in the *2004 Congestion Management Program for Los Angeles County*, which indicates a 1.0 percent increase per year between 1998 and 2010. Thus, the existing traffic volumes utilized in this analysis (i.e., traffic volume figures, Level of Service calculations, etc.) reflect existing conditions. It should also be noted that schools were in session when the traffic counts were conducted.

The existing traffic volumes at the study intersections during the AM and PM peak hours are shown in **Figure 4.4-2, Existing AM Peak Hour Traffic Volumes**, and **Figure 4.4-3, Existing PM Peak Hour Traffic Volumes**, respectively. As indicated in **Table 4.4-3, Existing Weekday Volume-to-Capacity Ratios and Levels of Service**, seven of the study intersections are presently operating at LOS D or better during the AM and PM peak hours under existing conditions. The Central Avenue/SR-134 Freeway WB on-ramp-Goode Avenue intersection (Intersection No. 1) is presently operating at LOS E during the PM peak hour.

Table 4.4-3
Existing Weekday Volume-to-Capacity Ratios and Levels of Service

No.	Intersection	Peak Hour	Volume/Capacity Ratio	Level of Service
1	Central Avenue/SR-134 Freeway WB on-ramp	AM	0.685	B
	- Goode Avenue	PM	0.926	E
2	Central Avenue/SR-134 Freeway EB Off-Ramp	AM	0.742	C
	- Sanchez drive	PM	0.728	C
3	Central Avenue/Pioneer Drive	AM	0.590	A
		PM	0.586	A
4	Central Avenue/Doran Street	AM	0.597	A
		PM	0.734	C
5	Orange Street/Doran Street	AM	0.442	A
		PM	0.554	A
6	Brand Boulevard/SR-134 Freeway WB Off-Ramp	AM	0.855	D
	- Goode Avenue	PM	0.835	D
7	Brand Boulevard/SR-134 Freeway EB on-ramp	AM	0.782	C
	- Sanchez Drive	PM	0.827	D
8	Brand Boulevard/Doran Street	AM	0.649	B
		PM	0.722	C

Source: Linscott, Law & Greenspan, Engineers

Freeways

Table 4.4-4, Existing Weekday Freeway Peak Hour Levels of Service, summarizes the existing AM and PM peak-hour LOS at two freeway segments. These two freeway segments were selected for analysis based on their proximity to the project site and are forecast to experience a relatively greater percentage of project-related vehicular traffic (e.g., at SR-134, both east and west of the project site [east and west of Central Avenue]). I-5 and SR-2 do provide regional access to the general vicinity, but are not anticipated to be significantly impacted by project trips. As shown in the table, all of the freeway segments are presently operating at LOS D or worse during the AM and PM peak hours.

Existing Public Bus Transit Service

The Metropolitan Transportation Authority (MTA) and the City of Glendale Beeline currently provide public bus transit service in the project vicinity.

MTA Metro Bus Transit Services

MTA provides bus transit service along major roadways within the traffic analysis study area: Brand Boulevard and Central Avenue. MTA operates 11 local Metro Bus transit routes in the vicinity of the project site. Most of the MTA local bus transit routes provide headways of two to five buses per hour during the morning and afternoon peak hours.

Table 4.4-4
Existing Weekday Freeway Peak Hour Levels of Service

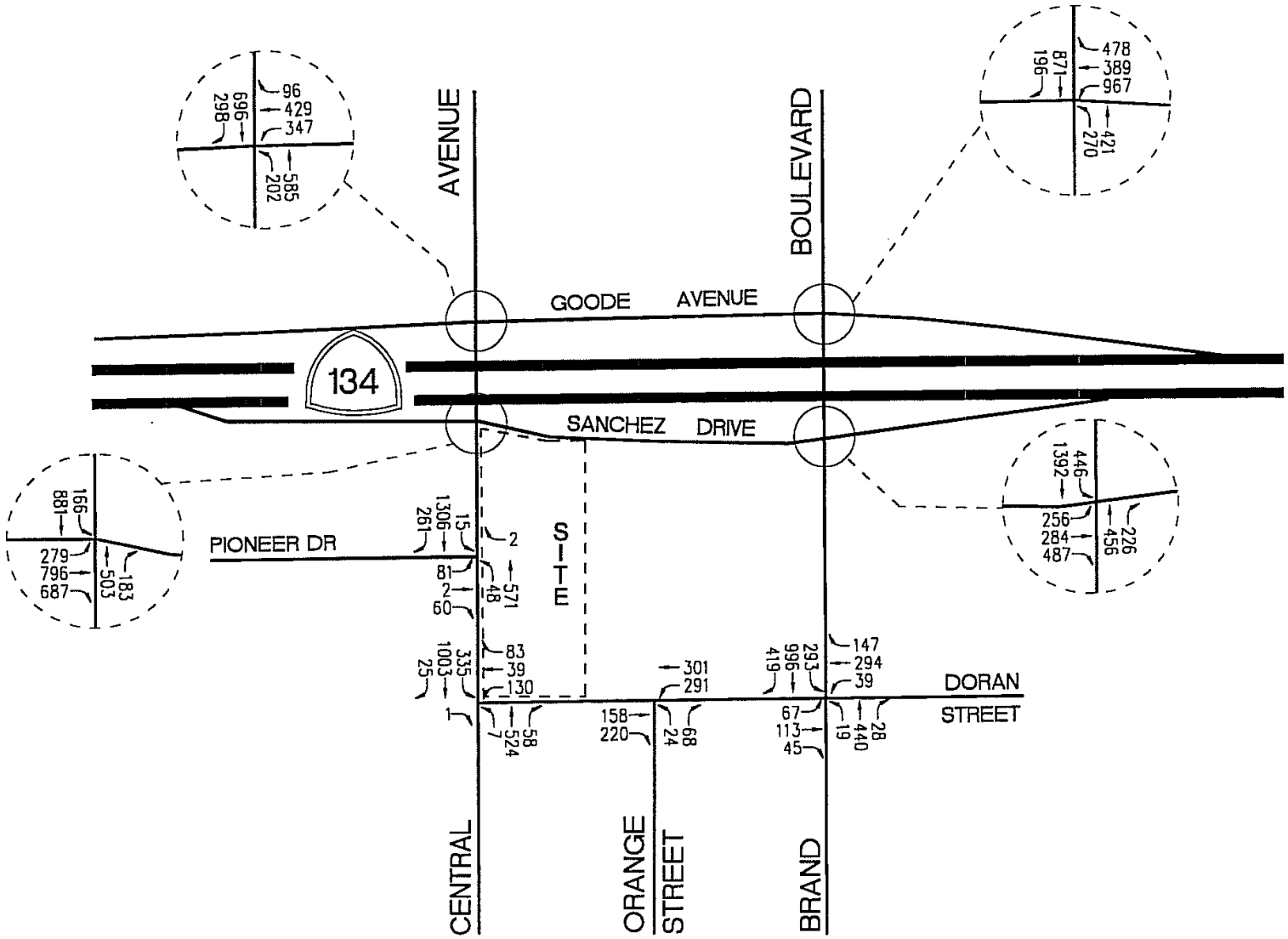
Freeway Segment	Peak Hour	Direction	Peak Hour Capacity	Demand 1	D/C2	LOS3
SR-134 Freeway west of Central Ave	AM	EB	10,000	10,280	1.03	F(0)
		WB	10,000	8,090	0.81	D
	PM	EB	10,000	10,230	1.02	F(0)
		WB	10,000	9,330	0.93	E
SR-134 Freeway east of Central Ave	AM	EB	10,000	10,580	1.06	F(0)
		WB	10,000	8,330	0.83	D
	PM	EB	10,000	10,530	1.05	F(0)
		WB	10,000	9,610	0.96	E

Source: Linscott, Law & Greenspan, Engineers, 2007

[1] *"2004 Traffic Volumes on California State Highways," Caltrans, June 2005. The year 2004 volumes were increased by Caltrans' annual average growth rate of 2.3 percent per year to reflect year 2006 existing conditions.*

[2] *Demand-to-Capacity ratio (D/C) calculated based on a capacity of 2,000 vehicles per lane per hour applied to the through freeway lanes, including HOV lanes. Auxiliary lanes are excluded.*

[3] *Freeway mainline Levels of Service are based on the D/C scale mentioned above.*



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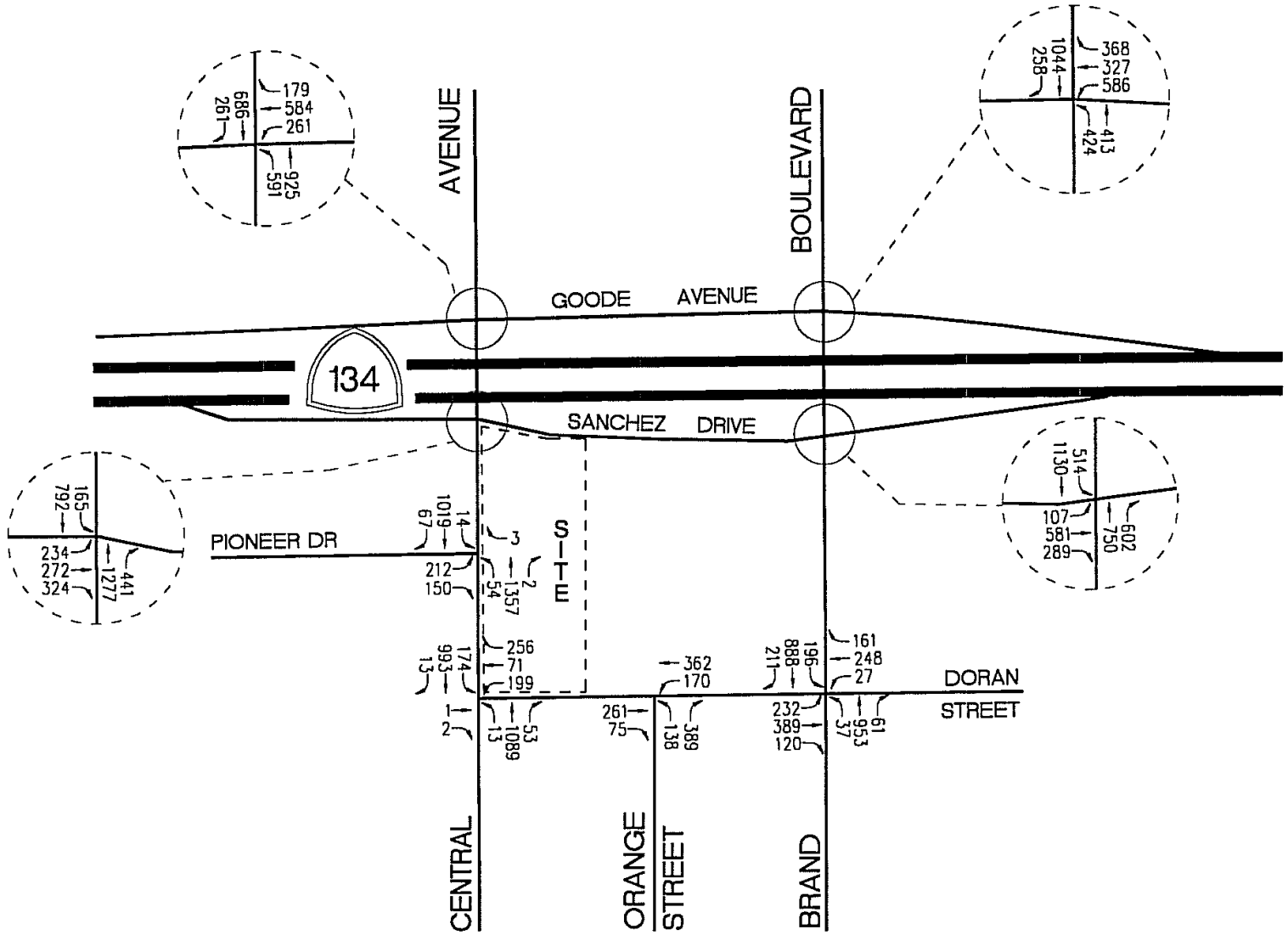
SOURCE: Linscott Law & Greenspan – June 2006

FIGURE **4.4-2**

Existing AM Peak Hour Traffic Volumes



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SOURCE: Linscott Law & Greenspan – June 2006

FIGURE **4.4-3**

Existing PM Peak Hour Traffic Volumes

City of Glendale Bus Transit Services

City of Glendale provides bus transit service within the study area with its Beeline shuttle bus service. In the traffic analysis study area, Glendale Beeline service is provided along Brand Boulevard and Central Avenue. Glendale Beeline also provides express service to the Glendale Transportation Center (GTC) along Brand Boulevard. Glendale Beeline operates nine local transit routes in the immediate vicinity of the project site. Most of the Beeline transit routes provide headways of five to seven buses per hour during the morning and afternoon peak hours.

ENVIRONMENTAL IMPACTS

Thresholds of Significance

The following thresholds for determining the significance of impacts related to transportation/traffic are contained in the environmental checklist form in Appendix G of the most recent update of the *California Environmental Quality Act (CEQA) Guidelines*. The *CEQA Guidelines* state that a significant impact would occur if the project 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, a Level of Service standard 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 (**Appendix 1.0(a), Notice of Preparation/Initial Study**).
- 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.
- Result in inadequate parking capacity.
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

The *CEQA Guidelines* do not provide a definition for "substantial increase" in number of vehicle trips, the volume-to-capacity ratio, or congestion at intersections. Therefore, the significance of the potential impacts of traffic generated by the proposed project at each study intersection was identified using criteria provided by the City of Glendale Traffic and Transportation Division. According to the City's criteria for calculating the level of impact due to traffic generated by the proposed project, a significant

transportation impact is determined based on the criteria presented in **Table 4.4-5, City of Glendale Intersection Impact Threshold Criteria**.

Table 4.4-5
City of Glendale Intersection Impact Threshold Criteria

Final v/c	Level of Service	Project-Related Increase in v/c
> 0.800–0.900	D	Equal to or greater than 0.020
> 0.900–1.000	E	Equal to or greater than 0.020
> 1.000	F	Equal to or greater than 0.020

Source: Linscott, Law & Greenspan, Engineers, 2007

In addition, freeway segments have been evaluated in accordance with the standards included in the *2004 Congestion Management Program (CMP) for Los Angeles County*. A significant impact on the freeway system is defined as follows:

- For purposes of the CMP, a significant impact occurs when the proposed project increases traffic demand on a CMP facility 2 percent of capacity (V/C greater than or equal to 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 greater than or equal to 0.02).

The CMP document also states that:

> *Calculation of LOS based on V/C ratios is a surrogate for the speed-based LOS used by Caltrans for traffic operational analysis. LOS F(1) through F(3) designations are assigned where severely congested (less than 25 mph) conditions prevail for more than one hour, converted to an estimate of peak hour demand . . . . Note that calculated LOS F traffic demands may therefore be greater than observed traffic volumes.*

Projected Traffic

Trip Generation

Traffic volumes expected to be generated by the project during the AM and PM peak hours, as well as on a daily basis, were estimated using rates published in the Institute of Transportation Engineers' (ITE) Trip Generation manual, 7th Edition, 2003. Expected traffic volumes that would be generated by the residential component of the proposed project were based upon rates per number of dwelling units. Traffic volumes expected to be generated by the commercial component of the proposed project were based upon rates per 1,000 square feet of building floor area. ITE Land Use Code 232 (High-Rise Residential Condominium/Townhouse) trip generation rates were used to forecast traffic volumes

expected to be generated by the residential component of the proposed project. ITE Land Use Code 814 (Specialty Retail) trip generation rates were used to forecast traffic volumes expected to be generated by the retail use on the ground floor of the project.

Traffic volumes generated by the existing uses located on the project site were also estimated using rates published in the ITE Trip Generation manual. ITE Land Use Code 720 (Medical Office Building) trip generation rates were used to estimate traffic volumes generated by the existing medical office uses on the project site. ITE Land Use Code 932 (High-Turnover Sit-Down Restaurant) trip generation rates were used to estimate traffic volumes generated by the existing restaurant on the project site.

It should be noted that no adjustments were made to the vehicular trip generation forecast to account for pass-by trips associated with the commercial component or for the internal capture trips associated with project residents that are expected to patronize the commercial component. In addition, no adjustments to the vehicular trip generation forecast were made to account for trips made by walking, public bus transit, and bicycle, even though the urban location of the project site would encourage these types of travel modes as an alternative to the private automobile. Therefore, the project trip generation forecast contained in this analysis likely overstates the number of new vehicular trips onto the local street network that will be generated by the project. Furthermore, the current project description reflects only 2,875 square feet of commercial space; however, to provide a conservative analysis, a total of 3,600 square feet of commercial space has been assumed as part of the analysis. Thus, the trip generation forecast provides a conservative assessment of project-related impacts.

The traffic generation forecast for the proposed project is summarized in **Table 4.4-6, Trip Generation**. As presented in **Table 4.4-6**, the proposed project is expected to generate 73 net new vehicle trips (1 fewer inbound trip and 74 outbound trips) during the AM peak hour. During the PM peak hour, the proposed project is expected to generate 26 net new vehicle trips (28 inbound trips and 2 fewer outbound trips). Over a 24-hour period, the proposed project is forecast to generate 344 net new daily trip ends during a typical weekday (172 inbound trips and 172 outbound trips).

Trip Distribution

The principal ingress routes for the project site were determined based on the accessibility via the nearby freeway ramps and appropriate arterial routes. Principal freeway routes in the vicinity of the project site include SR-134, SR-2, and I-5. The project site is also situated within an area that provides desirable access via arterial streets surrounding the site. Key arterials providing access to the project study area include Central Avenue, Brand Boulevard, Goode Avenue, and Sanchez Drive.

Table 4.4-6
Trip Generation[1]

Land Use	Size	Daily Trip Ends[2] Volumes	AM Peak Hour Volumes[2]			PM Peak Hour Volumes[2]		
			In	Out	Total	In	Out	Total
Proposed								
Condominiums[3]	287 DU	1,200	19	79	98	68	41	109
Retail[4]	3,600 SF	160	--	--	0	4	6	10
Subtotal		1,360	19	79	98	72	47	119
Existing Use								
Medical Office[5]	10,000 SF	361	20	5	25	10	27	37
Restaurant[6]	5,150 SF	655	n/a	n/a	n/a	34	22	56
Subtotal		1,016	20	5	25	44	49	93
Net New Trips		344	(1)	74	73	28	(2)	26

Source: Linscott, Law & Greenspan, Engineers, 2007.

1 *ITE "Trip Generation," 7th Edition, 2003.*

2 *Trips are one-way traffic movements, entering or leaving.*

3 *ITE Land Use Code 232 (High Rise Condominium/Townhouse) trip generation average rates.*

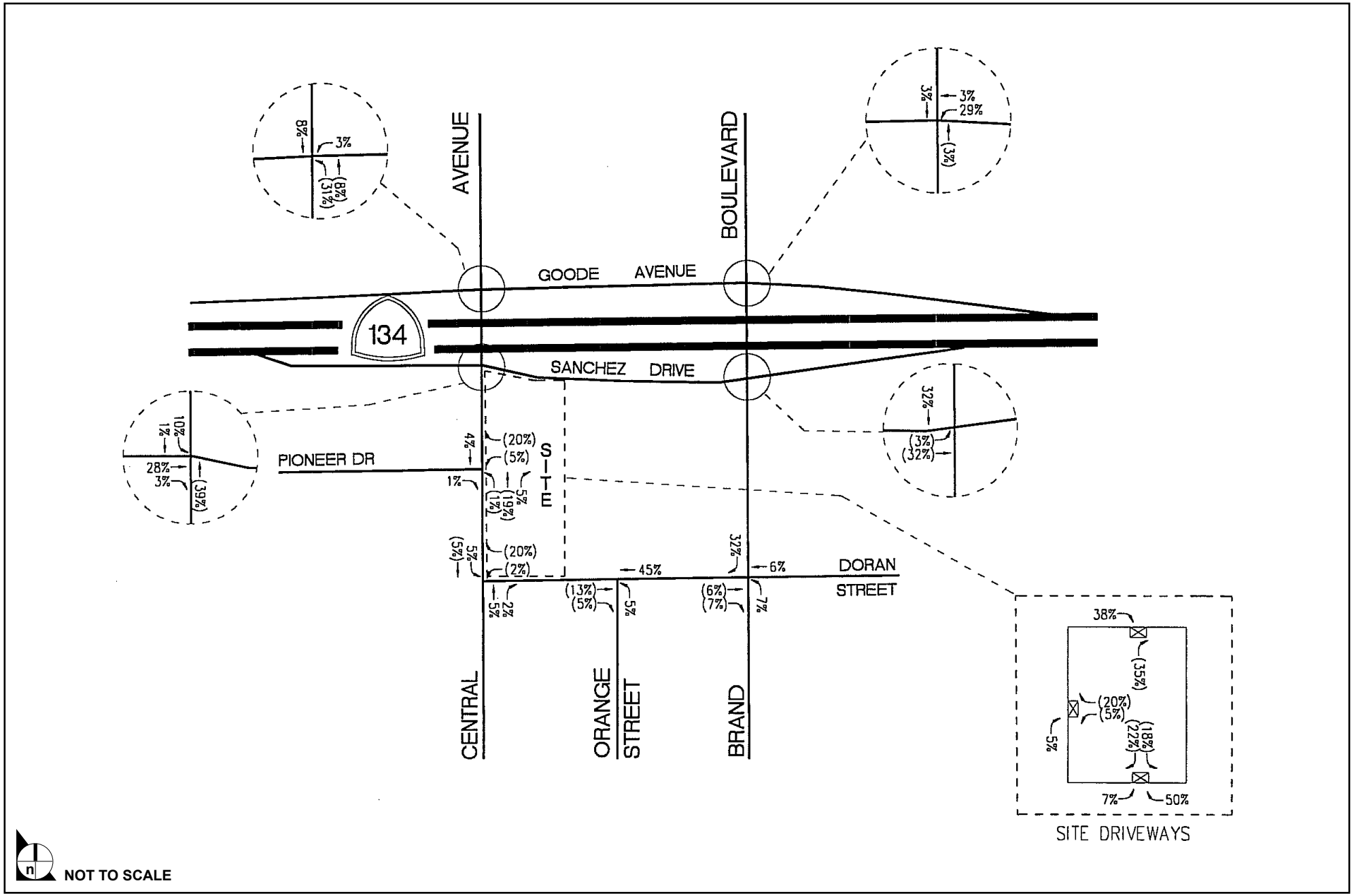
4 *ITE Land Use Code 814 (Specialty Retail) trip generation average rates.*

5 *ITE Land Use Code 720 (Medical Office Building) trip generation average rates.*

6 *ITE Land Use Code 932 (High-Turnover Sit-Down Restaurant) trip generation average rates. The existing restaurant does not serve breakfast and is not open during the AM commuter peak period.*

The regional traffic distribution pattern was determined using the City's travel demand model. The traffic distribution pattern was based on the proposed project land uses, the planned site access scheme, existing traffic patterns, characteristics of the surrounding roadway system, and nearby population and employment centers. The traffic distribution pattern (particularly at intersections near the project site) was determined based on the site access and internal circulation schemes associated with the proposed project. The distribution pattern also reflects the inclusion of the project driveway as the fourth leg of the Central Avenue/Pioneer Drive intersection, as well as the turning movement restrictions at the project driveways.

The project traffic volume distribution percentages at the eight study intersections are illustrated in **Figure 4.4-4, Project Trip Distribution**. The forecast project traffic volumes at the study intersections for the AM and PM peak hours are displayed in **Figure 4.4-5, Project AM Peak Hour Traffic Volumes** and **Figure 4.4-6, Project PM Peak Hour Traffic Volumes**, respectively.



SOURCE: Linscott Law & Greenspan – June 2006

FIGURE **4.4-4**

Project Trip Distribution

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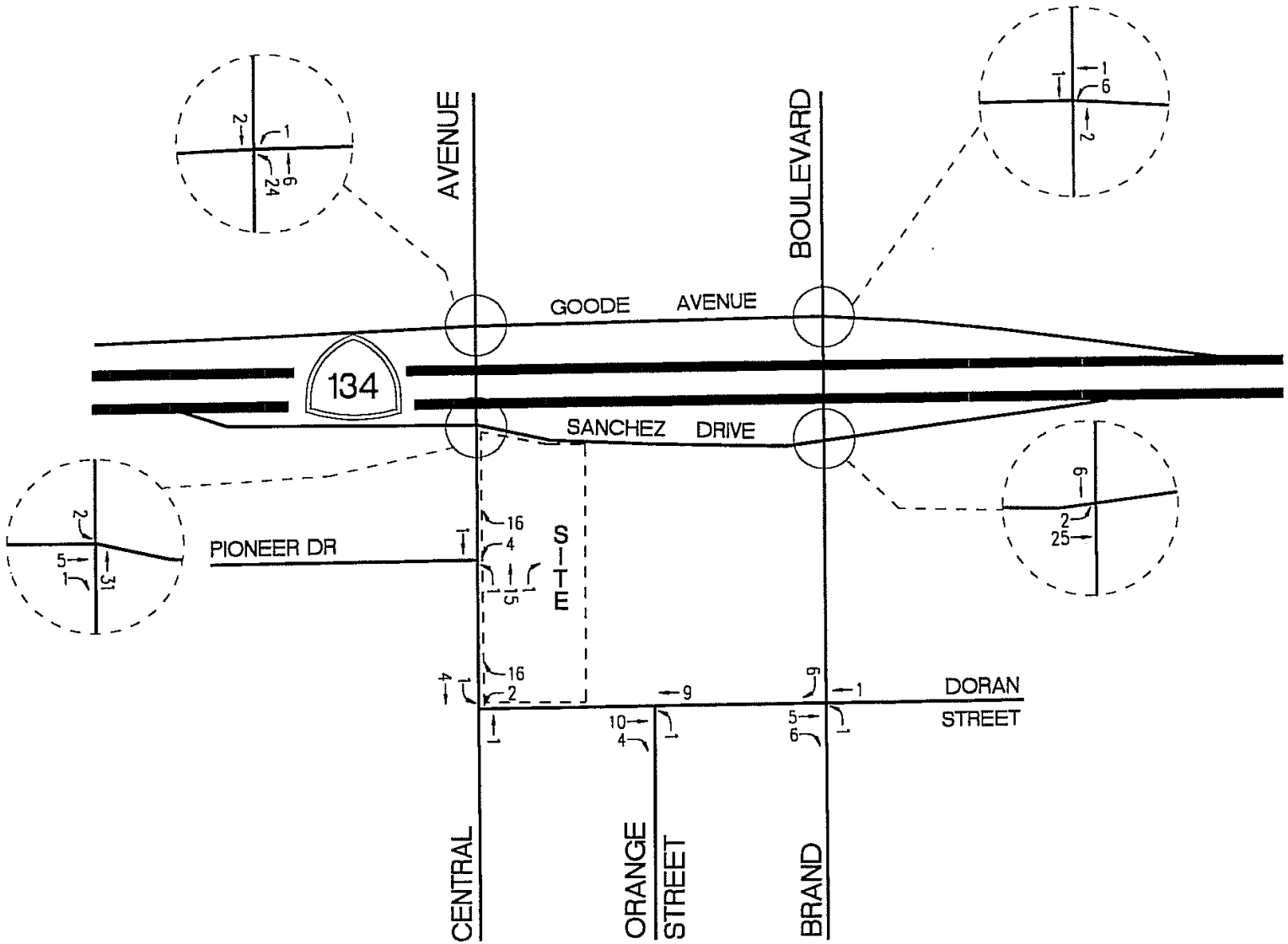

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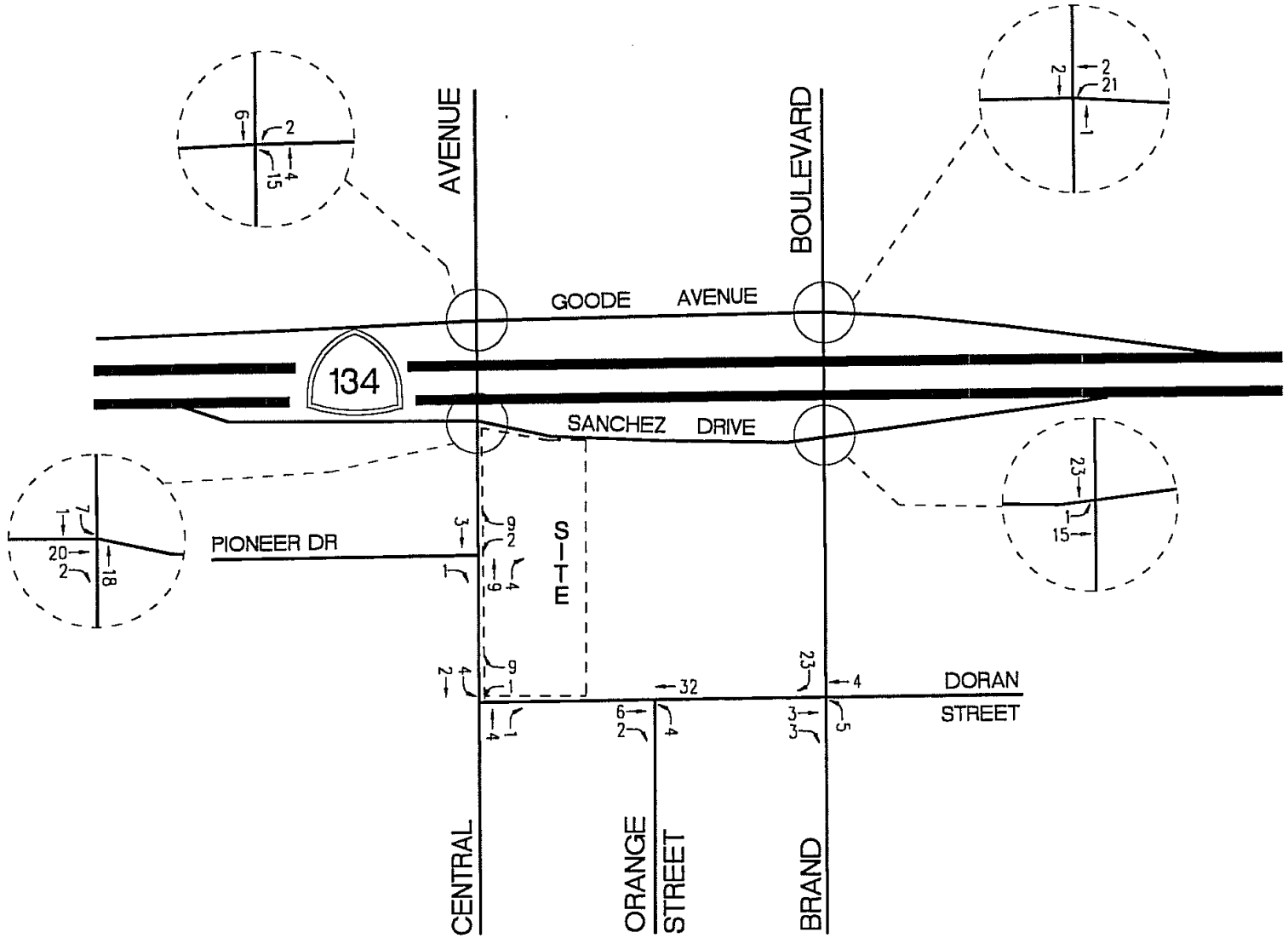
SOURCE: Linscott Law & Greenspan – June 2006

FIGURE **4.4-5**

Project AM Peak Hour Traffic Volumes



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SOURCE: Linscott Law & Greenspan – June 2006

FIGURE **4.4-6**

Project PM Peak Hour Traffic Volumes

Impact Analysis

Each applicable threshold of significance is listed below followed by analysis of the significance of any potential impacts and the identification of mitigation measures that would lessen or avoid potential impacts. Finally, the significance of potential impacts after implementation of all identified mitigation measures is presented.

Threshold: ***Would the project 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).***

Construction Impacts

As discussed in **Section 3.0, Project Description**, construction of the project is anticipated to consist of four phases: Phase I - Environmental Abatement/Demolition, Phase II - Site Grading, Phase III - Sub-Grade Construction, and Phase IV - Above Grade Construction (Phase III and Phase IV constitute building construction). Activities related to Phases III and IV (Building Construction) would generate a higher number of vehicle trips as compared to the anticipated Phase II (Site Grading) construction period. Thus, the greatest potential for impact would occur during the Building Construction phases.

Peak Construction Worker Demand – During the peak period of Phase III and IV construction activities, a work force of 220–245 construction workers would be required. The construction workers are likely to work in a single shift (i.e., during the initial periods of this construction phase), beginning at 7:00 AM and ending at 3:30 PM. In general, the majority of the construction workers are expected to arrive and depart the project site during off-peak hours, i.e., arrive prior to 7:00 AM and depart prior to 4:30 PM. The peak hour of traffic at the study intersections along Central Avenue adjacent to the site primarily occurs between 7:00 AM and 9:00 AM during the morning commuter period and between 4:00 and 6:00 PM during the afternoon commuter period. It is anticipated that construction workers would remain on-site throughout the day.

The number of construction worker vehicles is estimated using an average vehicle ridership of 1.35 persons per vehicle, as provided in the South Coast Air Quality Management District *CEQA Air Quality Handbook*. It is estimated that the construction workers would generate approximately 216 inbound trips and 216 outbound trips on a daily basis during the peak construction phases at the site. The inbound construction worker trips would occur outside of the AM commuter peak hour; however, the outbound worker trips may occur during the PM commuter peak hour. It should be noted that the PM peak commuter period occurs between approximately 4:00 and 6:00 PM, with little variation in traffic flow throughout the two-hour period. Given a construction shift ending at 3:30 PM, it is anticipated that

approximately half would leave the site between 3:30 to 4:00 PM and the remaining half would leave the site between 4:00 and 4:30 PM, which overlaps with the PM commuter peak hour. Therefore, for purposes of this analysis, it is estimated that approximately half of the outbound construction worker trips (i.e., 108 outbound trips) may occur during the PM commuter peak hour (e.g., between 4:00 and 5:00 PM).

In general, it is anticipated that construction-related traffic would be largely freeway-oriented. Construction workers would likely arrive and depart via nearby on- and off-ramps serving SR-134. The most commonly used freeway ramps would be nearest the project site, including SR-134 ramps at Central Avenue and Brand Boulevard. The construction work force would likely be generated from all parts of the Los Angeles region and, therefore, are assumed to arrive from all directions (i.e., 20 percent each from I-5, SR-2, from each direction on SR-134, and 20 percent from the local Glendale Area). This general distribution (i.e., 80 percent on the freeways and 20 percent on local roadways) would result in approximately 40 construction-related vehicles at any study intersection during the PM peak hour. This increase is not anticipated to result in any significant impacts based on the city's significance criteria. Further, this PM peak-hour traffic increase is conservative, as it does not reflect the traffic volumes generated by the existing uses that will have been eliminated.

Peak Construction Truck Demand – Heavy construction equipment would be located on site during demolition and grading activities and would not travel to and from the project site on a daily basis. However, truck trips would be generated to remove material from the site and import material to the site. A maximum of 20 to 40 concrete trucks and 10 to 20 material delivery trucks per day are anticipated to be generated to/from the project site during peak construction activities (i.e. Phases III and IV). Therefore, during peak building construction, up to 60 truck round-trips per day (60 inbound trucks and 60 outbound trucks) are anticipated. Assuming a material delivery period of 8 hours per day (beginning at 7:00 AM, with the last delivery at 3:00 PM), this corresponds to a total of approximately eight trucks per hour. Since construction truck trips would occur along major highways with the number of trips during the AM and PM peak hours being relatively limited, construction impacts from peak construction truck demand would be less than significant.

It is anticipated that delivery trucks/construction equipment would be brought onto the project site and be stored within the perimeter fence of the construction site, thus, no staging is expected to occur on the perimeter public streets. Therefore, detours around the construction site would not be required. Flagmen, however, would be used to control traffic movement during the ingress or egress of trucks and heavy equipment from the construction site. A Construction Traffic Control Plan will be developed to minimize potential conflicts between construction activity and through traffic.

Peak Construction Traffic Generation Summary – Taken together, the construction worker vehicles and trucks are forecast to generate 552 vehicle trips per day (276 inbound, 276 outbound) during the peak construction phases at the site (i.e., Phases III and IV: Building Construction). It should be noted that the daily trips generated to and from the project site during the peak construction phases are less than half of the 1,360 daily trips that will be generated by the site with occupancy of the project (see analysis for operational impacts below). The inbound construction worker trips are anticipated to occur outside of the AM commuter peak hour; however, the outbound construction worker trips may overlap with the PM commuter peak hour. It is estimated that approximately 108 outbound construction worker trips may be generated during the PM peak hour. The construction workforce would likely be generated from all parts of the Los Angeles region and, therefore, is assumed to arrive and depart from all directions (i.e., I-5, SR-2, each direction on SR-134, and from the local Glendale area). Based on a general distribution of 80 percent on the freeways and 20 percent on local roadways, approximately 40 vehicles are forecast at any study intersection during the PM peak hour. This increase is not anticipated to result in any significant impacts based on the City's significance criteria. Therefore, the traffic impacts associated with construction activities are determined to be less than significant. Impacts would be further reduced with implementation of the following design features:

- Maintain existing access for land uses in proximity of the project site;
- Limit any potential lane closures to off-peak travel periods;
- Schedule receipt of construction materials during non-peak travel periods, to the extent possible;
- Coordinate deliveries to reduce the potential of trucks waiting to unload for extended periods of time; and
- Prohibit parking by construction workers on adjacent streets and direct construction workers to available parking as determined in conjunction with City staff.

In addition, to minimize potential conflicts between construction activity and through traffic, a Construction Traffic Control Plan will be developed for use during project construction. The Construction Traffic Control Plan will identify all traffic control measures, signs, and delineators to be implemented by the construction contractor through the duration of demolition and construction activity. Finally, a truck haul route program will also be implemented to minimize conflicts between haul trucks traveling to and from the project site and through traffic on roadways surrounding the project. The program will specify access points to the project site and delineate approved haul routes. It is expected that trucks would access the site via Sanchez Drive, Central Avenue or Doran Street and access SR-134 via Central Avenue or Brand Boulevard.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Operational Impacts

Intersection Analysis – To determine the potential impact of the Verdugo Gardens project on each study intersection, proposed project traffic volumes were added to existing traffic conditions. To determine the operating conditions of the street system under existing plus project conditions, traffic to be generated by the proposed project was added to the year 2006 existing traffic conditions. The existing plus project traffic volumes (existing traffic volumes plus proposed project traffic volumes) at the study intersections during the AM and PM peak hours are shown in **Figure 4.4-7, Existing Plus Project AM Peak Hour Traffic Volumes**, and **Figure 4.4-8, Existing Plus Project PM Peak Hour Traffic Volumes**, respectively.

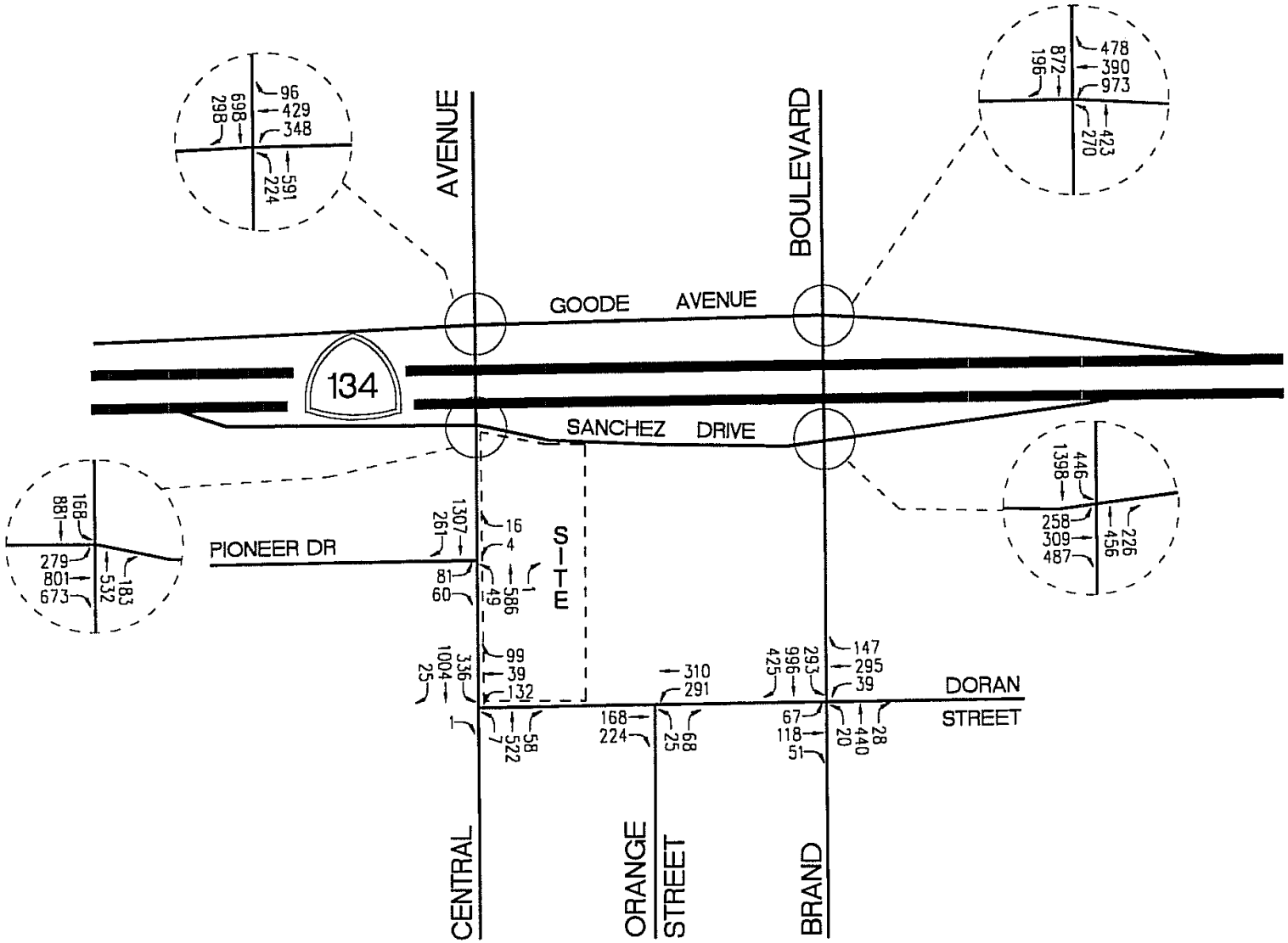
As shown in **Table 4.4-7, Existing Plus Project Volume-to-Capacity Ratios and Levels of Service**, application of the City's significance criteria to the year 2006 existing-plus-project scenario indicates that none of the study intersections would be significantly impacted by the proposed project. Therefore, no traffic mitigation measures are required or recommended. It is important to note that the PM peak-hour operations at two of the eight intersections (i.e., Intersections Nos. 1 and 2 for the Existing Plus Project Conditions) are forecast to improve with the proposed project. These slight operational improvements are due to the application and distribution of the existing active land use trip generation credits at these specific locations.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

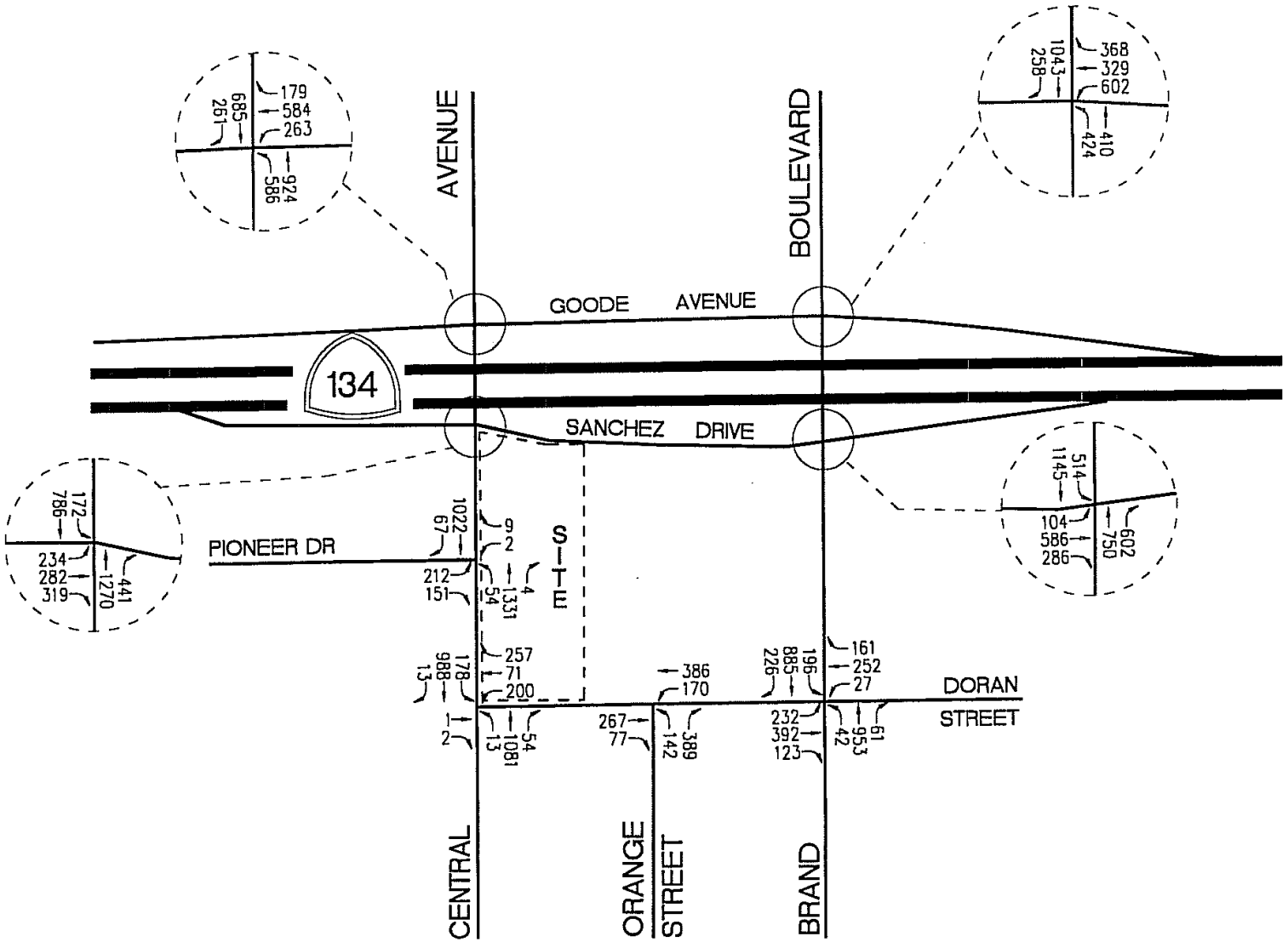
Freeway Analysis – The mainline freeway analysis was prepared in accordance with criteria outlined in the *2004 Congestion Management Program for Los Angeles County*. The results of the weekday freeway impact analysis associated with the AM and PM peak hours associated with the project are summarized in **Table 4.4-8, CMP Freeway Impact Analysis**. As presented in **Table 4.4-8**, the maximum increase in the freeway mainline traffic during the weekday AM peak hour is estimated to be 23 vehicles on the westbound SR-134 freeway, west of Central Avenue and 24 vehicles on the eastbound SR-134 freeway, east of Central Avenue. The maximum increase in the freeway mainline traffic during the weekday PM



SOURCE: Linscott Law & Greenspan – June 2006

FIGURE **4.4-7**

Existing with Project AM Peak Hour Traffic Volumes



NOT TO SCALE

SOURCE: Linscott Law & Greenspan – June 2006

FIGURE **4.4-8**

Existing with Project PM Peak Hour Traffic Volumes

Table 4.4-7
Existing Plus Project Volume-to-Capacity Ratios and Levels of Service

No.	Intersection	AM or PM	V/C	LOS	Change V/C	Significant?
1	Central Avenue/SR-134 Freeway WB	AM	0.695	B	0.010	NO
	on-ramp - Goode Avenue	PM	0.921	E	-0.005	NO
2	Central Avenue/SR-134 Freeway EB	AM	0.740	C	-0.002	NO
	Off-Ramp - Sanchez drive	PM	0.733	C	0.005	NO
3	Central Avenue/Pioneer Drive	AM	0.600	A	0.010	NO
		PM	0.591	A	0.005	NO
4	Central Avenue/Doran Street	AM	0.599	A	0.002	NO
		PM	0.735	C	0.001	NO
5	Orange Street/Doran Street	AM	0.447	A	0.005	NO
		PM	0.556	A	0.002	NO
6	Brand Boulevard/SR-134 Freeway WB	AM	0.856	D	0.001	NO
	Off-Ramp - Goode Avenue	PM	0.839	D	0.004	NO
7	Brand Boulevard/SR-134 Freeway EB	AM	0.790	C	0.008	NO
	on-ramp - Sanchez Drive	PM	0.828	D	0.001	NO
8	Brand Boulevard/Doran Street	AM	0.650	B	0.001	NO
		PM	0.724	C	0.002	NO

Source: Linscott, Law & Greenspan, Engineers, 2007.

peak-hour is estimated to be nine vehicles on the eastbound SR-134 Freeway, west of Central Avenue and nine vehicles on the westbound SR-134 Freeway, east of Central Avenue. These increases in overall mainline freeway traffic volumes correspond to a V/C increase ranging from zero to 0.002, or less than 0.5 percent of the total capacity of the segments included in the analysis. Increases of this magnitude are not discernible to typical motorists. Thus, no significant project-related mainline freeway impacts are anticipated along SR-134 during the weekday AM and PM peak hours.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Table 4.4-8
CMP Freeway Impact Analysis

No.	Freeway Segment	Peak Hour	Direction	2010 Future Pre-Project Demand[1]	D/C[2]	LOS[3]	Project Trip Ends[4]	2010 Future with Project Demand[5]	D/C	LOS	D/C Increase with Project[6]	Significant Project Impact[7]
n/a	SR-134 Freeway west of Central Ave	AM	EB	11,230	1.12	F (0)	0	11,230	1.12	F (0)	0.000	NO
			WB	8,830	0.88	D	23	8,853	0.89	D	0.002	NO
		PM	EB	11,170	1.12	F (0)	9	11,179	1.12	F (0)	0.001	NO
			WB	10,190	1.02	F (0)	Nominal	10,190	1.02	F (0)	0.000	NO
1055	SR-134 Freeway east of Central Ave	AM	EB	11,550	1.16	F (0)	24	11,574	1.16	F (0)	0.002	NO
			WB	9,100	0.91	D	0	9,100	0.91	D	0.000	NO
		PM	EB	11,500	1.15	F (0)	Nominal	11,500	1.15	F (0)	0.000	NO
			WB	10,490	1.05	F (0)	9	10,499	1.05	F (0)	0.001	NO

Source: Linscott, Law & Greenspan, Engineers, 2007

[1] *An ambient growth rate of 2.3 percent per year was assumed to derive the year 2010 traffic volumes to provide a conservative analysis of mainline freeway operations. This ambient growth rate is based on the Caltrans annual average growth rate provided in "2004 Traffic Volumes on California State Highways," Caltrans, June 2005.*

[2] *Demand-to-Capacity ratio (D/C) calculated based on a capacity of 2,000 vehicles per lane per hour applied to the through freeway lanes, including HOV lanes. Auxiliary lanes are excluded.*

[3] *Freeway mainline Levels of Service are based on the D/C scale mentioned above.*

[4] *Based on the project trip generation and trip distribution for the project. See Table 4.4-6.*

[5] *Derived by combining the future pre-project traffic volumes and the proposed project volumes.*

[6] *Derived by subtracting the D/C ratio of the future with project conditions with the future pre-project conditions.*

[7] *Per the "2004 Congestion Management Program for Los Angeles County," July 2004, a significant impact occurs when the proposed project increase traffic demand on the freeway system by 2 percent of capacity (D/C>0.02), causing LOS F (D/C.1.00)*

Threshold: ***Would the project exceed, either individually or cumulatively, a Level of Service standard established by the county congestion management agency for designated roads or highways.***

Congestion Management Program

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 *2004 Congestion Management Program for Los Angeles County*, a Traffic Impact Assessment (TIA) was prepared to determine the project's potential impacts on designated monitoring locations on the CMP highway system. The analysis was prepared in accordance with procedures outlined in the *2004 Congestion Management Program for Los Angeles County*.

Impact Analysis:

Intersections – There are no CMP intersection monitoring locations in the project vicinity. The CMP TIA guidelines require that intersection monitoring locations must be examined if the proposed project will add 50 or more trips during either the AM or PM weekday peak periods. The proposed project will not add 50 or more trips during the AM or PM peak hours at any CMP monitoring intersections, which is the threshold for preparing a traffic impact assessment, as, stated in the CMP manual. Therefore, no further review of potential impacts to intersection monitoring locations that are part of the CMP highway system is required.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Impact Analysis:

Freeways – The following two CMP freeway monitoring locations in the vicinity of the project have been identified:

CMP Station	**Segment**
No. 1005	I-5 Freeway south of Colorado Street extension
No. 1055	SR-134 Freeway east of Central Avenue

The CMP TIA guidelines require that freeway monitoring locations must be examined if the proposed project will add 150 or more trips (in either direction) during either the AM or PM weekday peak periods. The proposed project will not add 150 or more trips (in either direction) during either the AM or PM weekday peak hours to the CMP freeway monitoring locations, which is the threshold for preparing a traffic impact assessment, as stated in the CMP manual. Therefore, no further review of potential impacts to freeway monitoring locations that are part of the CMP highway system is required.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Impact Analysis:

Transit – As required by the *2004 Congestion Management Program for Los Angeles County*, a review has been made of the CMP transit service. As previously discussed, existing transit service is provided in the vicinity of the proposed Verdugo Gardens project.

The project trip generation, as shown in **Table 4.4-6**, 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 four net new transit trips (four outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is anticipated to generate demand for one net new transit trip (one inbound trip). Over a 24-hour period, the proposed project is forecast to generate demand for 17 daily transit trips. The calculations are as follows:

- AM Peak Hour = 73 × 1.4 × 0.035 = 4 Transit Trips
- PM Peak Hour = 26 × 1.4 × 0.035 = 1 Transit Trip
- Daily Trips = 344 × 1.4 × 0.035 = 17 Transit Trips

Based on the projected limited increased demand for transit services generated by the project, it is anticipated that the existing transit service in the project area will adequately accommodate the project-generated transit trips. Thus, based on the calculated number of generated transit trips, no project impacts on existing or future transit services in the project area are expected to occur as a result of the proposed project.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Thresholds: ***Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).***

Would the project result in inadequate emergency access.

Impact Analysis: The proposed Verdugo Gardens Project will be designed to utilize the existing network of regional and local roadways located in the vicinity of the project site. As described in **Section 3.0, Project Description**, the project would provide a 10-foot-wide roadway dedication and roadway widening along Sanchez Drive, Central Avenue, and Doran Street. In addition, access to the site will be provided via a total of three driveways: one on Sanchez Drive, one on Central Avenue and on one Doran Street.

The proposed density and land uses associated with the Verdugo Gardens Project will increase traffic traveling to and from the site. However, as previously noted, the project would not result in significant impacts to traffic circulation and, therefore, would not significantly impact emergency access. Additionally, to prevent potential conflicts with pedestrians and other vehicles, and further allow for adequate emergency access, the project will incorporate several traffic design features. In particular, eastbound through movements from Pioneer Drive into the project driveway on Central Avenue and westbound through movements from the project driveway on Central Avenue to westbound Pioneer Drive will be prohibited. In addition, southbound left-turn movements from Central Avenue into the project driveway on Central Avenue will also be prohibited. Finally, the Sanchez Drive and Doran Street driveways will be located more than 100 feet east of Central Avenue. These roadway improvements would be designed to adhere to standard engineering practices and requirements by the City of Glendale Public Works and Fire departments.

As for pedestrian safety, trees planted along the side of the street will buffer sidewalks surrounding the project site. In addition, crosswalks leading to the site will be signalized and textured, thus highlighting the presence of pedestrians to motorists.

Given these precautions, the proposed project will not substantially increase traffic hazards associated with the project site.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Threshold: ***Would the project result in inadequate parking capacity.***

Construction Impacts

Impact Analysis:

Initially construction workers will park on site. For the final stages of construction, parking will be provided via a combination of on-site areas and off-premises parking facilities within the downtown area (i.e., the City's Orange Street Garage and/or other private parking facilities where surplus parking is available). Such off-site parking spaces shall be located within a reasonable walking distance of the project site or shuttle services will be provided by the project applicant between the off-site parking area/areas and the project site. Given these conditions, the impact is considered less than significant.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Operational Impacts

Impact Analysis: City of Glendale Municipal Code Parking Requirement

Condominium Resident Parking

The City's Subdivision Ordinance requires the conveyance of 2.0 parking spaces for each condominium dwelling unit. However, the current Municipal Code requires (for the DSP zone) 1.25 parking spaces per one-bedroom dwelling unit and 2.0 spaces per any dwelling unit containing two or more bedrooms. As the project consists of condominium units (i.e., non-rental units), the minimum parking requirements in the City's Subdivision Ordinance (i.e., 2.0 parking spaces per condominium dwelling unit) would take precedence over the Municipal Code parking requirement for one-bedroom dwelling units (i.e., 1.25 parking spaces per one-bedroom unit).

The proposed project includes the development of 287 condominium dwelling units: 122 one-bedroom units, 156 two-bedroom units, and 9 three-bedroom units. Therefore, the Municipal Code parking requirement for the condominium residents totals 574 spaces (122×2.0 spaces/unit + 156×2.0 spaces/unit + 9x2.0 spaces/unit = 574 spaces).

Condominium Guest Parking

The Municipal Code requires 0.25 residential guest parking spaces per dwelling unit. Therefore, this translates into a requirement of 72 guest parking spaces (287×0.25 spaces/unit = 72 spaces).

Commercial Parking

The Municipal Code requires 4.0 parking spaces per 1,000 square feet of retail floor area. The Municipal Code parking requirement for café restaurant uses having fewer than eight seats is also 4.0 parking spaces per 1,000 square feet of floor area. The proposed retail/commercial component of the project consists of approximately 3,600 square feet of floor area. This translates into a parking requirement of 14 spaces (3,600×4.0 spaces/1,000 square feet = 14 spaces).

Summary of Code Parking Requirement

A summary of the Municipal Code parking requirements for the project is shown in **Table 4.4–9, Summary of Parking Code Requirement and Parking Supply**. As shown, direct application of the Municipal Code parking ratios yields a total parking requirement of 660 parking spaces (574 condominium resident spaces, 72 residential guest parking spaces, and 14 commercial spaces). Given a proposed parking supply of 653 parking spaces, a shortfall of seven parking spaces would result based on strict application of the City Code.

As further discussed below, based on a review of the parking requirements outlined in the City's Subdivision Ordinance, the City-approved Specific Plans for the downtown area, and recently published rates contained in the Urban Land Institute's (ULI) Shared Parking, 2nd Edition, 2005, and in the Institute of Transportation Engineers' (ITE) Parking Generation Manual, 3rd Edition, 2004, it is anticipated that application of the Municipal Code parking ratios would result in an overestimation of required parking for the project. The Municipal Code parking ratios do not account for the synergy between the project components (i.e., internal capture), as well as the anticipated walk-in patronage from other surrounding commercial buildings to the proposed ground-floor commercial space. Further, the Municipal Code parking requirements represent the sum of the peak parking requirements for each individual land use and do not take into account the hourly variation in parking demand generated by different land uses. The Municipal Code parking requirements do not account for the shared parking demands of the residential guests and commercial patrons.

Table 4.4-9
Summary of Parking Code Requirement and Parking Supply

Land Use	Size	Applicable Code Rate[1]	Code Parking Requirement (Spaces)
Condominium Residents			
1-Bedroom	122 DU	2.0 Spaces	244
2-Bedroom	156 DU	2.0 Spaces	312
3-Bedroom	9 DU	2.0 Spaces	18
Subtotal Condominium Residents	287 DU		574
Condominium Guest	287 DU	0.25 Spaces	72
Retail	3,600 SF	4.0 Spaces per 1,000 SF	14
		Total Code Parking Requirement	660
		Parking Supply	653
		Parking Surplus/(Deficiency)	(7)

Source: Linscott, Law & Greenspan, Engineers, 2007
[1] *Based on City of Glendale Municipal Code and Subdivision Ordinance parking ratios.*

Parking Demand

Review of Parking Ratios

Based on a review of recently published parking demand ratios contained in the ULI Shared Parking and ITE Parking Generation manuals, the City's Subdivision Ordinance, and approved Specific Plans in the downtown area (i.e., the Downtown Specific Plan, Glendale Town Center Specific Plan and East Broadway Specific Plan), it is anticipated that application of the Municipal Code parking ratios would result in an overestimation of required condominium guest and commercial parking for the project.

Regarding the condominium guest parking, the parking demand ratio outlined in ULI *Shared Parking* is 0.15 guest spaces per condominium unit. This would be expected to be adequate for the project, particularly given the project's location and its proximity to transit service. It should be noted that the ULI parking ratio for guests is consistent with or higher than that of other adjacent jurisdictions. For example, the City of Pasadena Municipal Code indicates a parking ratio of one guest parking space for each 10 units for multi-family residential projects both within the Central District and in other areas of the City. However, research of guest parking ratios for other adjacent jurisdictions (e.g., City of Los Angeles) indicates that parking ratios range from zero to 0.25 spaces per dwelling unit. Therefore, based on discussions with City staff and due to the lack of empirical data within the City of Glendale, a guest parking ratio of 0.25 spaces per condominium unit was applied in the parking demand analysis for the

Verdugo Gardens project. This is the same as the Municipal Code parking requirement of 72 spaces for residential guests.

Regarding the commercial parking, the commercial space is expected to generate a significant degree of walk-in patronage both from within the project, as well as from other surrounding downtown uses due to the project's downtown Glendale location. It should be noted that the commercial component of the project will be located on the interior portion of the site and is envisioned to serve primarily the residential tenants and guests, as well as the adjacent commercial buildings. The project site is also located in an area that is well served by several transit routes. Based on these factors, the walk-in patronage to the commercial component of the project was estimated to be approximately 50 percent during the peak periods. Therefore, for purposes of this study, it is estimated that seven parking spaces would adequately accommodate the commercial component of the project.

Summary of Parking Demand

Application of the peak parking demand ratios as outlined above yields a parking requirement of 574 spaces for the residential tenants, 72 spaces for the residential guests, and 7 spaces for the commercial component of the project. Thus, a peak parking demand of 653 spaces is forecast for the project site. Based on a comparison of the proposed parking supply, it is concluded that the parking supply will accommodate the forecast peak parking demand for the proposed project.

Summary of Parking Analysis

It is concluded that the proposed parking supply is expected to accommodate the forecast peak parking demand for the project. Based on the sum of the peak parking demand requirements, the peak parking demand for the project site is 653 spaces (574 condominium resident spaces, 72 residential guest spaces, and 7 commercial spaces). With the proposed parking supply of 653 spaces, the parking supply is sufficient to meet this parking demand requirement.

Level of Significance Before Mitigation Less than significant.

Mitigation Measures: None are available.

Level of Significance After Mitigation: Less than significant.

Threshold: ***Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).***

There are a number of goals and policies set forth in the City of Glendale General Plan that relate to alternative transportation. An analysis of the consistency of these applicable goals and policies with the proposed Verdugo Gardens project is provided in **Section 4.1, Land Use and Planning**. As discussed in **Section 4.1**, the project does not conflict with applicable General Plan goals and policies related to alternative transportation. Therefore, the project would not conflict with adopted policies, plans, or programs supporting alternative transportation, and impacts would be less than significant.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Cumulative Impacts

The following cumulative impacts analysis evaluates the impact of the proposed project and related projects on traffic and circulation, as discussed in **Section 4.0, Environmental Impact Assessment**. A list of the related projects is provided in **Appendix 4.4** of this EIR, Table 9-1. The list was compiled based upon information on file at the City of Glendale Planning Department, Glendale Redevelopment Agency staff, and recent traffic reports prepared for projects in the vicinity of the proposed project. Each applicable threshold is listed below in bold followed by an analysis of the cumulative impact of the project and related projects, and their potential significance.

Threshold: ***Would the project 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).***

Impact Analysis:

Construction – It is anticipated that construction of related projects would result in periods of heavy truck traffic as a result of the delivery of construction materials and the hauling of demolition materials. Although the time frame for construction of these projects is uncertain, as well as the degree to which construction of these projects will overlap and the location at which impacts could occur, it is possible that the construction of these related projects could affect roadway segments and intersections, which could result in a significant cumulative impact. However, as discussed under project impacts, the project will be required to implement numerous measures to reduce construction-related traffic impacts,

including preparation and implementation of a truck haul route plan and construction traffic control plan, and workers would be traveling to the project site during non-peak hours. Consequently, the project's contribution to construction-related traffic is not cumulatively considerable and thus, the project's cumulative impacts are less than significant.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Operational – The project's operational impacts were determined by applying an ambient growth factor to existing conditions and then adding the forecast of related projects trip generation. The project's cumulative impact was then determined by adding the project weekday generation to these conditions.

Ambient Traffic Growth

To account for area-wide regional growth not included herein as a related project, the existing traffic volumes were increased at an annual rate of 1 percent to the year 2010 (i.e., the anticipated year of project buildout). A review of the background traffic growth estimates for the San Fernando Valley published in the *2004 Congestion Management Program for Los Angeles County*, indicate a 1 percent increase per year between 1998 and 2010. Thus, the annual growth rate of 1 percent per year to the year 2010 is consistent and appropriate. Application of this ambient growth factor in addition to the forecast traffic generated by the related projects allows for a conservative forecast of future traffic volumes in the project study area.

Related Projects

Traffic volumes expected to be generated by the related projects during the weekday and weekend were estimated using rates published in the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 6th Edition, 1997.

Related projects are expected to generate 3,022 net new vehicle trips (1,542 inbound and 1,480 outbound) during the AM peak hour. During the PM peak hour, the related projects are expected to generate 4,652 net new vehicle trips (2,380 inbound and 2,272 outbound). Over a 24-hour period, the related projects are forecast to generate 54,734 net new daily trips. Refer to **Appendix 4.4, Traffic**, of this EIR for a detailed breakdown of the related projects' weekday trip generation.

Impact Analysis:

Year 2010 Pre-Project Conditions – The future year 2010 pre-project conditions were forecast based on the addition of traffic generated by the related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The v/c ratios at all eight study intersections are incrementally increased with the addition of traffic generated by the related projects and growth in ambient traffic. As presented in **Table 4.4–10, Future Pre-Project Weekday Volume-to-Capacity Ratios and Levels of Service**, five of the eight study intersections are expected to continue operating at LOS D or better during the AM and PM peak hours with the addition of ambient traffic growth and the traffic due to the related projects (future pre-project conditions). The Central Avenue/SR-134 Freeway WB on-ramp-Goode Avenue intersection (Intersection No. 1) is anticipated to operate at LOS E during the PM peak hour; the Brand Boulevard/SR-134 Freeway WB Off-ramp-Goode Avenue intersection (Intersection No. 6) is anticipated to operate at LOS E during the AM and PM peak hours; and the Brand Boulevard/SR-134 Freeway EB On Ramp-Sanchez Drive intersection (Intersection No. 7) is anticipated to operate at LOS E during the PM peak hour.

Table 4.4-10
Future Pre-Project Weekday
Volume-to-Capacity Ratios and Levels of Service

No.	Intersection	AM or PM	V/C	LOS
1	Central Avenue/SR-134 Freeway WB on-ramp - Goode Avenue	AM	0.731	C
		PM	0.988	E
2	Central Avenue/SR-134 Freeway EB Off-Ramp - Sanchez Drive	AM	0.813	D
		PM	0.824	D
3	Central Avenue/Pioneer Drive	AM	0.633	B
		PM	0.671	B
4	Central Avenue/Doran Street	AM	0.658	B
		PM	0.807	D
5	Orange Street/Doran Street	AM	0.472	A
		PM	0.590	A
6	Brand Boulevard/SR-134 Freeway WB Off-Ramp - Goode Avenue	AM	0.921	E
		PM	0.927	E
7	Brand Boulevard/SR-134 Freeway EB on-ramp - Sanchez Drive	AM	0.831	D
		PM	0.913	E
8	Brand Boulevard/Doran Street	AM	0.698	B
		PM	0.783	C

Source: Linscott, Law & Greenspan, Engineers.

The future pre-project (existing, ambient growth and related projects) traffic volumes at the study intersections during the AM and PM peak hours are presented in **Figure 4.4-9, Future Pre-Project AM Peak Hour Traffic Volumes**, and **Figure 4.4-10, Future Pre-Project PM Peak Hour Traffic Volumes**, respectively.

Year 2010 With Project Conditions – In order to determine the operating conditions of the street system under the year 2010 future with project conditions, traffic to be generated by the proposed project was added to the year 2010 future pre-project conditions. As shown in **Table 4.4–11, Future Plus Project Weekday Volume-to-Capacity Ratios and Levels of Service**, the addition of project traffic would not increase the V/C ratio by 0.02 or more. Therefore, based on application of the City's significance criteria to the year 2010 with proposed project scenario, none of the study intersections would be significantly impacted by the proposed project, and the project's incremental effect, accordingly, is not cumulatively considerable. Therefore, the project would not result in significant cumulative impacts and no traffic mitigation measures are required or recommended.

The future with project (existing, ambient growth, related projects, and project) traffic volumes at the study intersections during the AM and PM peak hours are illustrated in **Figure 4.4-11, Future with Project AM Peak Hour Traffic Volumes**, and **Figure 4.4-12, Future with Project PM Peak Hour Traffic Volumes**, respectively.

Table 4.4-11
Future Plus Project Weekday
Volume-to-Capacity Ratios and Levels of Service

No.	Intersection	AM or PM	V/C	LOS	Change V/C	Significant?
1	Central Avenue/SR-134 Freeway WB on-ramp - Goode Avenue	AM	0.740	C	0.009	NO
		PM	0.983	E	-0.005	NO
2	Central Avenue/SR-134 Freeway EB Off-Ramp - Sanchez Drive	AM	0.814	D	0.001	NO
		PM	0.829	D	0.005	NO
3	Central Avenue/Pioneer Drive	AM	0.643	B	0.010	NO
		PM	0.676	B	0.005	NO
4	Central Avenue/Doran Street	AM	0.660	B	0.002	NO
		PM	0.808	D	0.001	NO
5	Orange Street/Doran Street	AM	0.477	A	0.005	NO
		PM	0.593	A	0.003	NO
6	Brand Boulevard/SR-134 Freeway WB Off-Ramp - Goode Avenue	AM	0.923	E	0.002	NO
		PM	0.931	E	0.004	NO
7	Brand Boulevard/SR-134 Freeway EB on-ramp - Sanchez Drive	AM	0.839	D	0.008	NO
		PM	0.913	E	0.000	NO
8	Brand Boulevard/Doran Street	AM	0.699	B	0.001	NO
		PM	0.788	C	0.005	NO

Source: Linscott, Law & Greenspan, Engineers.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Threshold: ***Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.***

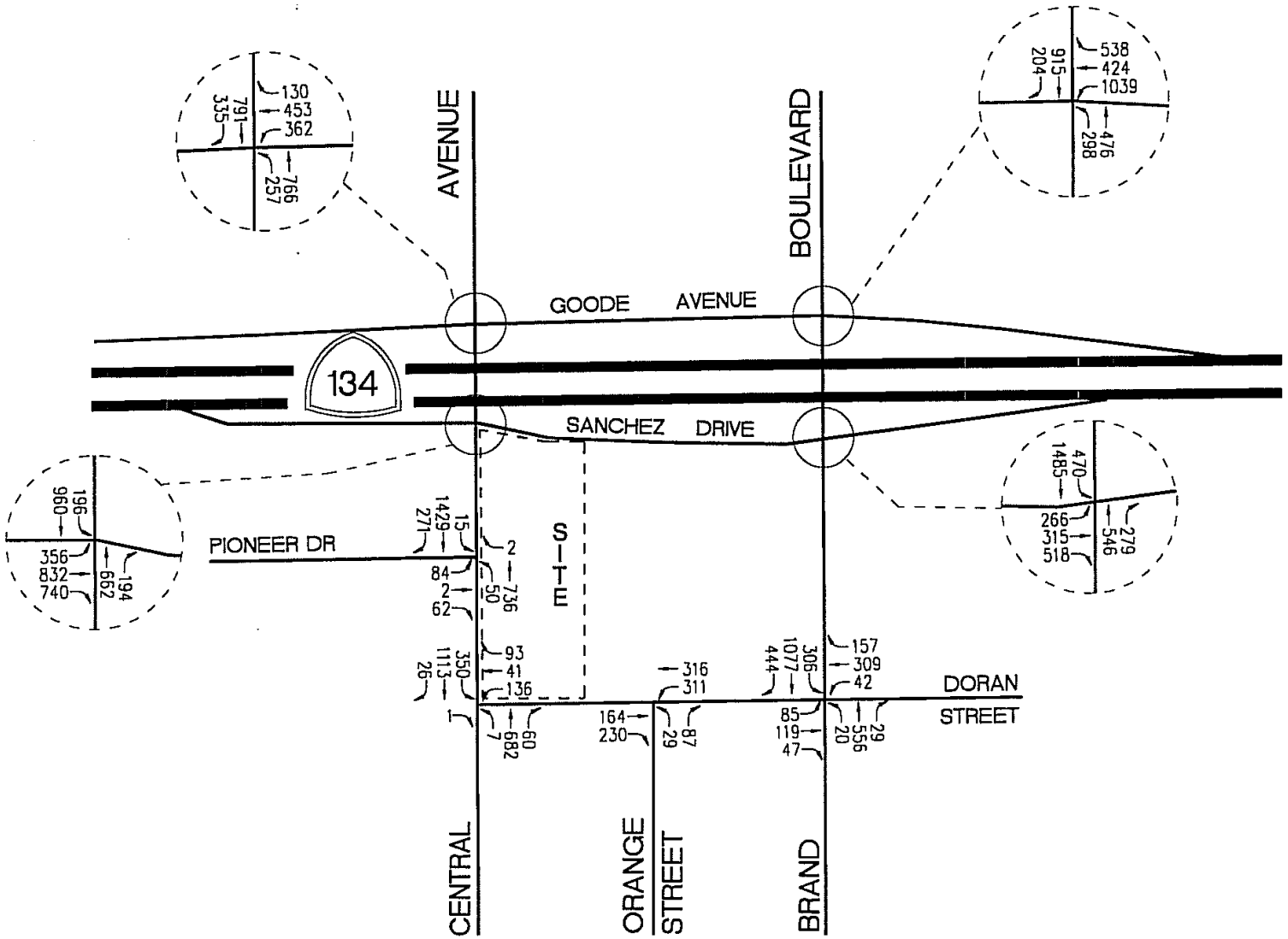
Impact Analysis:

By its nature, the Los Angeles County Congestion Management Program (CMP) is a cumulative scenario that considers the impact of single projects in the context of cumulative traffic demand on CMP roadways. The CMP defines regional project impacts as significant (in terms of contribution to cumulative impact) if a project results in an increase in the demand-to-capacity ratio or v/c ratio by more than 0.02 (two percent) and the final LOS is F. It is possible that traffic impacts created by related projects and cumulative growth could combine to exceed CMP standards of significance, and to the extent that occurs, a significant impact would result. However, even if that occurs the CMP guidelines require that freeway monitoring locations must be examined if the proposed project would add 150 or more trips (in either direction) during either the AM or PM weekday peak hours or 50 or more trips at CMP intersections during either the AM or PM weekday peak hours. The proposed project would not add 150 or more trips (in either direction) during either the AM or PM weekday peak hours at CMP mainline freeway-monitoring locations or 50 or more trips during either the AM or PM weekday peak hours at CMP intersections, which is the threshold for preparing a traffic impact assessment. Consequently, the project does not meet the criteria to be analyzed and the project's contribution is, thus, not cumulatively considerable. This impact is considered to be less than significant. Refer to the Freeway Impact Analysis section of **Appendix 4.4, Traffic, Circulation and Parking**, of the EIR for further information.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

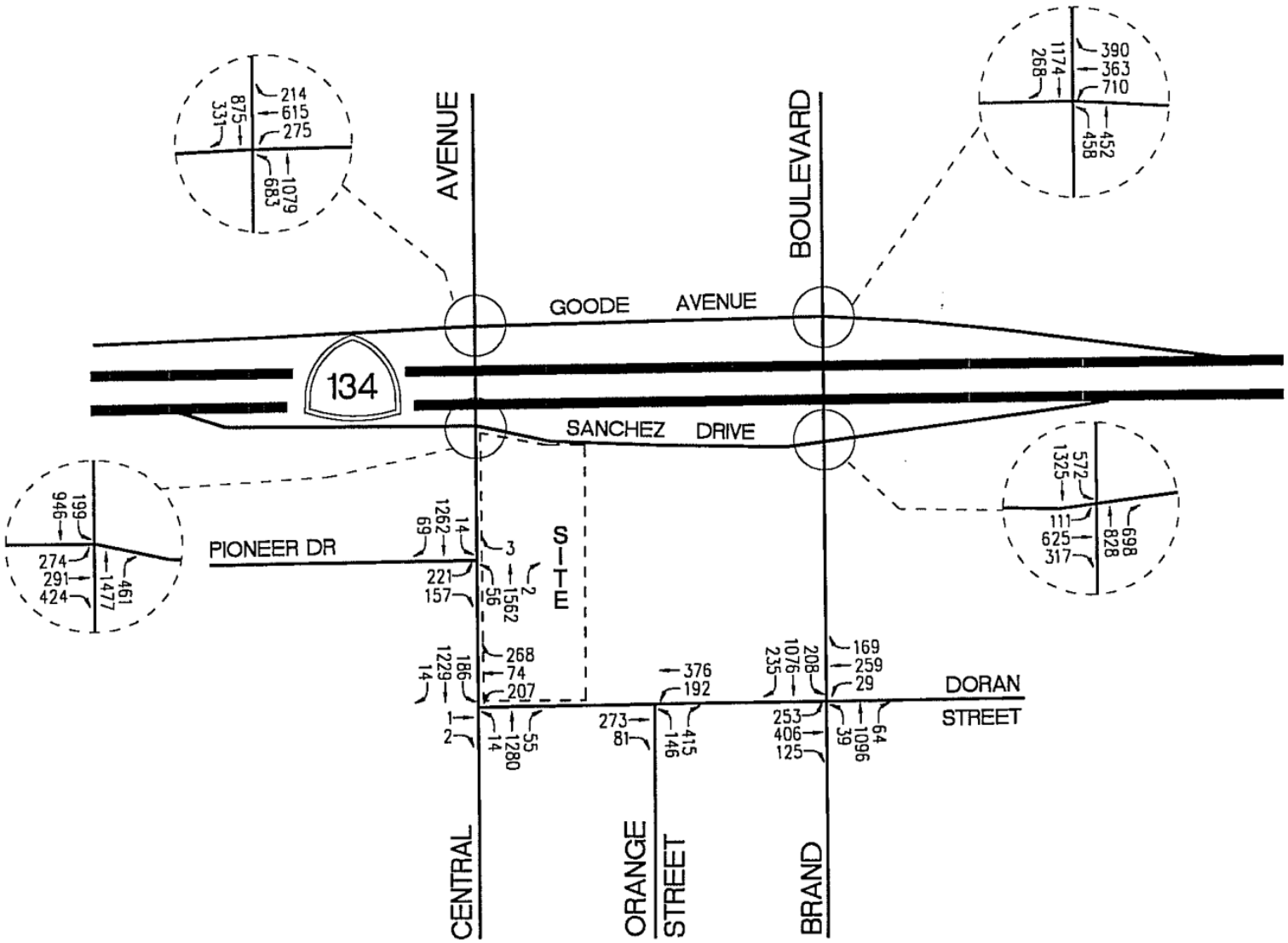


NOT TO SCALE

SOURCE: Linscott Law & Greenspan – June 2006

FIGURE **4.4-9**

Future Pre-Project PM Peak Hour Traffic Volumes

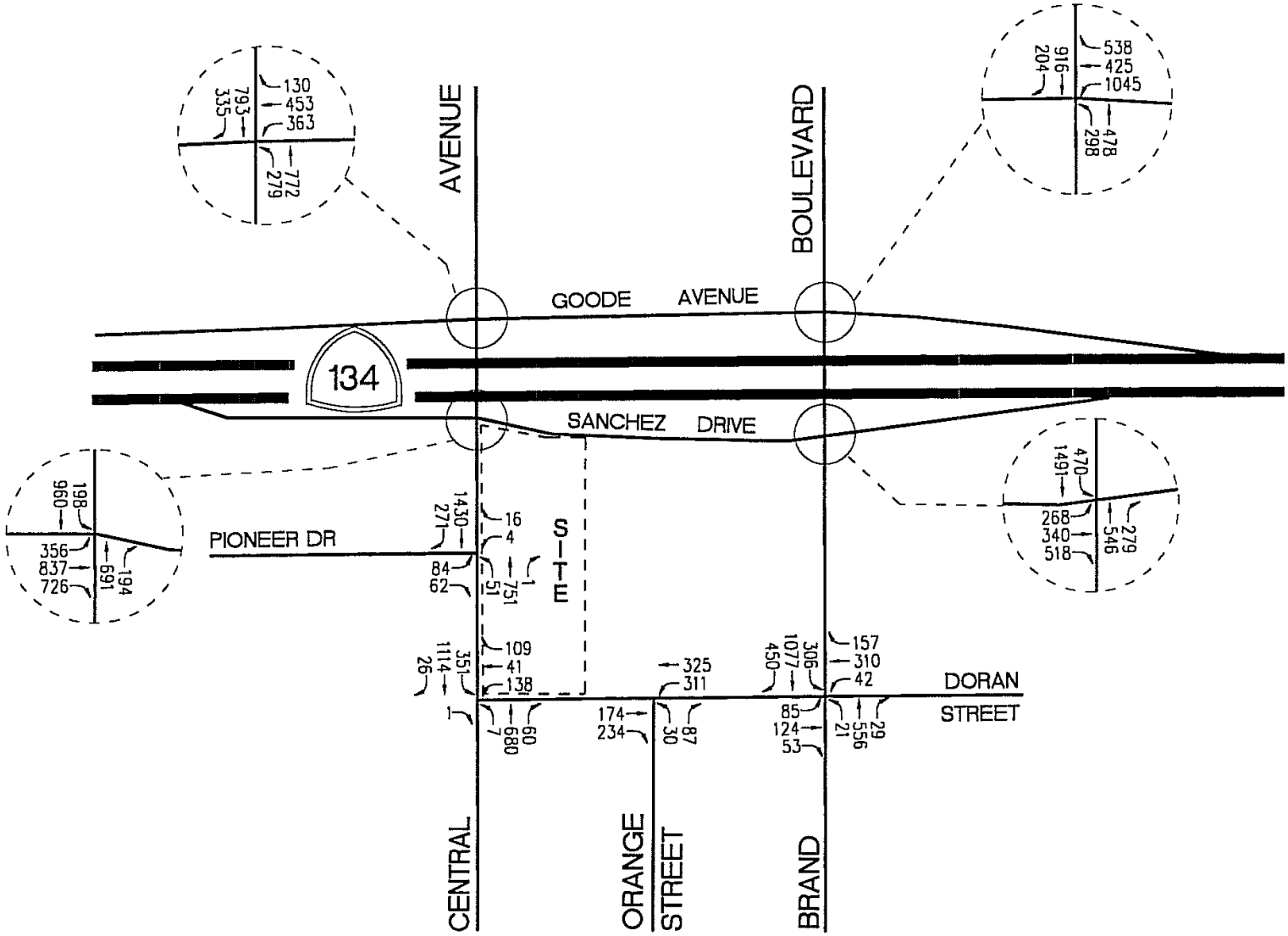


NOT TO SCALE

SOURCE: Linscott Law & Greenspan – June 2006

FIGURE **4.4-10**

Future Pre-Project PM Peak Hour Traffic Volumes



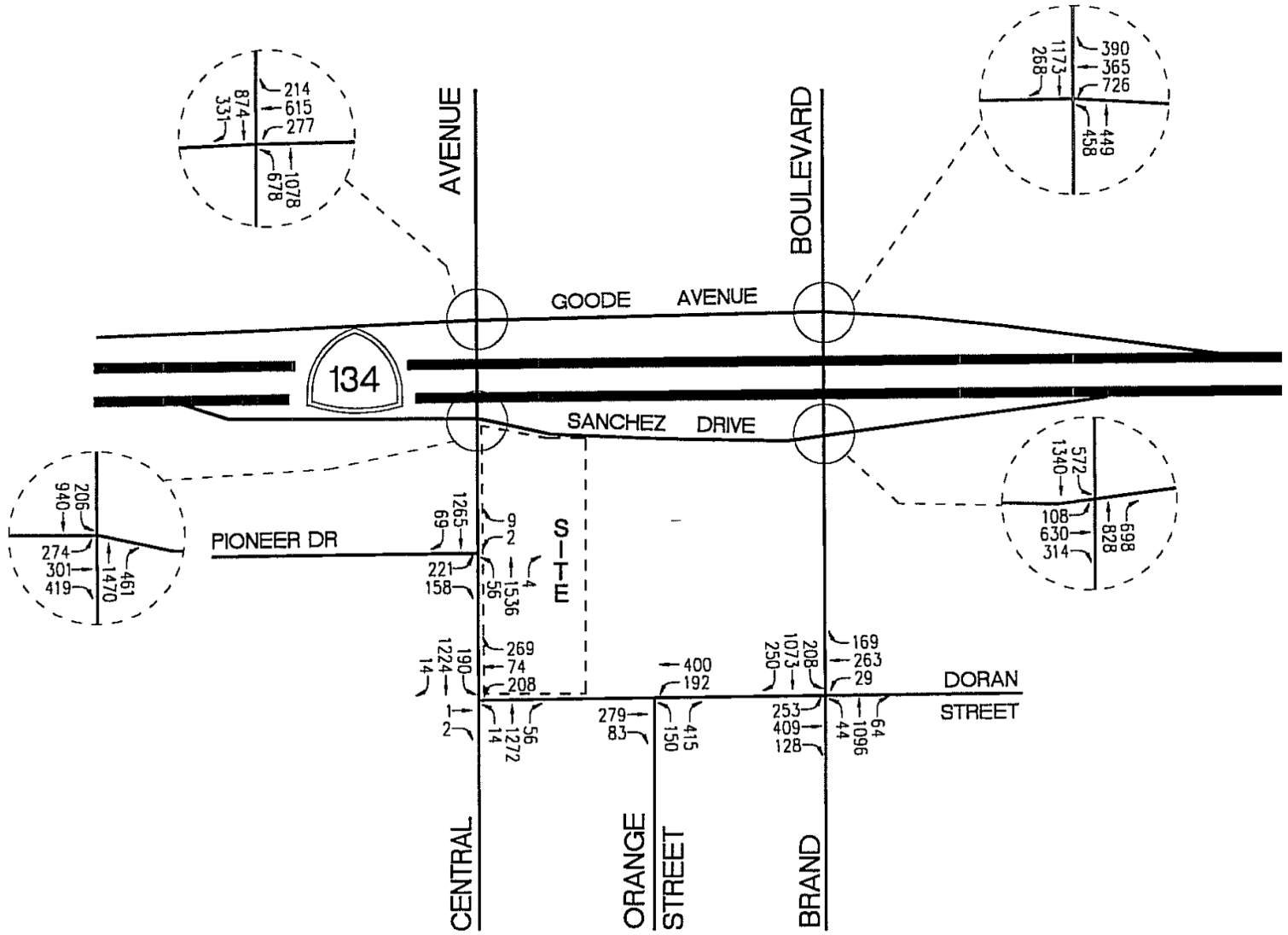
NOT TO SCALE

SOURCE: Linscott Law & Greenspan – June 2006

FIGURE **4.4-11**

Future with Project AM Peak Hour Traffic Volumes

806-001•06/06



NOT TO SCALE

SOURCE: Linscott Law & Greenspan – June 2006

FIGURE **4.4-12**

Future with Project PM Peak Hour Traffic Volumes

806-001•06/06

Thresholds: ***Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).***

Would the project result in inadequate emergency access.

Impact Analysis:

It is anticipated that the related projects would be required to adhere to standard engineering practices and requirements, and would be subject to planning and design review by the City of Glendale to avoid traffic hazards created by design features and land use incompatibilities, or inadequate emergency access. For this reason, and because such impacts (if and when they occur) are relatively site-specific, related project cumulative impacts associated with such hazards are less than significant. All design development associated with the project would include the use of standard engineering practices to avoid design elements that would increase roadway hazards or inadequate emergency access. Moreover, the project would not result in land use incompatibilities that would lead to the creation of traffic hazards, or emergency access. Consequently, the incremental effect of the project would not be cumulatively considerable and the project's cumulative impacts would be less than significant.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Threshold: ***Would the project result in inadequate parking capacity.***

Impact Analysis:

In accordance with City of Glendale requirements, it is anticipated that the related projects would either accommodate construction workers on site or through other suitable means to reduce impacts to surrounding parking facilities. For these reasons, impacts to parking capacity due to cumulative construction activity associated with the related projects would be less than significant. As discussed under the **Project Impacts** section of the EIR, the project would also accommodate workers on site and provide parking within walking distance of the project site or shuttle construction workers to the project site and thus impacts would be less than significant. Consequently, the incremental effect of the project on construction-related parking capacity impacts would not be cumulatively considerable and the project's cumulative impacts would be less than significant.

Under the City of Glendale Municipal Code, the related projects would be required to provide adequate on-site parking as conditions of development approval, and thus it is unlikely that the related projects would have a significant cumulative effect on parking demand in the area. In addition, as illustrated in

Figures 4.0-1 and **4.0-2**, most of the related projects are a sufficient distance from one another to reduce the potential for parking shortages at any one location to have an effect elsewhere. It is further anticipated that on-site parking at many of the related project sites would be regulated by monthly permits and user fees (generally limited to building tenants and visitors), validations by merchants and other businesses. For these reasons, cumulative related project impacts to parking capacity are not anticipated. As previously stated under project impacts, the project is anticipated to provide sufficient parking to accommodate the shared parking demand for the retail-commercial and residential uses in light of the expected synergy between the proposed land uses. Consequently, the incremental effect of the project would not be cumulatively considerable and the project's cumulative impacts would be less than significant.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Threshold: ***Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).***

Impact Analysis:

As discussed in **Section 4.1, Land Use and Planning**, the project does not conflict with applicable General Plan goals and policies related to alternative transportation. Therefore, the incremental effect of the project on any such impacts would not be cumulatively considerable, and the project's cumulative impacts would not be significant. Additionally, it is anticipated that related projects would result in an increased demand for alternative transportation, although due to the locations of various related projects, it is expected that cumulative increases in demand would be distributed among the various bus routes that serve the area. It is possible that ridership demand on a particular bus route associated with related projects could be significant when compared to existing conditions and result in a cumulative impact. Project impacts on alternative transportation were considered to be less than significant since it was concluded that existing transit service in the project area would be able to accommodate the project. Consequently, the incremental effect of the project would not be cumulatively considerable and the project's cumulative impacts would not be significant.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.