4.15 TRANSPORTATION/TRAFFIC

This section of the EIR analyzes the potential environmental effects on transportation/traffic from implementation of the proposed project. Data for this section was taken from the South Glendale Community Plan: Transportation Analysis Report (Fehr & Peers 2017) found in Appendix F of this EIR, the Glendale General Plan Circulation Element, and the Los Angeles County Metropolitan Transportation Agency (Metro). Full reference-list entries for all cited materials are provided in Section 4.15.5 (References).

4.15.1 Environmental Setting

The proposed SGCP area is primarily bounded by SR-134 to the north, SR-2 to the east, Forest Lawn Memorial Park to the south, and the SCRRA ROW to the west. It contains several key commercial corridors that serve as attractors for both local and regional residents. The assessment of existing conditions relevant to this study includes an inventory of the proposed SGCP area transportation networks including freeways, arterials, transit, bicycle, and pedestrian systems. Traffic volumes and operating conditions are provided at freeway and arterial study locations.

Existing Highway Network

Regional access to the proposed SGCP area is provided by SR-134, SR-2, and I-5. The following provides a brief description of the freeways that provide access to the proposed SGCP area.

- **SR-134**, also known as the Ventura Freeway, is a 10-lane (including carpool lanes) freeway that operates in an east/west direction through the City. It is located at the north end of the proposed SGCP area, and provides access to the cities of Los Angeles and Pasadena to the east and the cities of Burbank and Los Angeles to the west.
- **SR-2**, known as the Glendale Freeway, is an eight- to ten-lane freeway that operates in a north/south direction on the eastern edge of the City. Just east of Glendale, it intersects with SR-134; south of Glendale it intersects with I-5. It passes through a small portion of the eastern boundary of the proposed SGCP area, and provides access to the proposed SGCP area at Colorado Street and Holly Drive.
- **I-5**, or the Golden State Freeway, is an eight to ten-lane freeway that operates in a north/south direction through the State of California. Access is possible via the west end of Colorado Street, where north and southbound ramps connect the proposed SGCP area to I-5. The freeway provides regional access between the cities of Santa Clarita, Burbank, Los Angeles, and into Orange County. I-5 extends from the northern California border with Oregon to the United States border with Mexico.

Exiting Roadway Network

The following section provides a brief description of key roadway segments serving the proposed SGCP area. For each roadway, its functional designation in the Glendale General Plan Circulation Element has been identified. The roadway functional classifications contained in the Glendale General Plan are as follows:

- **Major Arterial**—Major arterials are characteristically the widest (four to six lanes) urban streets and carry the heaviest traffic volumes (up to 45,000 vehicles per day). They generally provide

motorists with the most continuous, efficient routes throughout the City, since traffic signals, parking limitations and prohibitions, and access are utilized to maximize traffic flow.

- **Minor Arterials**—Minor arterials are characteristically four lanes wide. These streets augment the major arterial system by forming a street network between local, collector, and arterial streets. Minor arterials generally carry up to 30,000 vehicles per day, have fewer parking limitations and prohibitions, and fewer access controls to adjacent land uses than major arterials.
- **Urban Collector**—Urban collectors are streets with adjacent land dominated by commercial, industrial, and/or multi-family residential uses. These streets take traffic from local streets and along urban collectors and distribute that traffic to the major/minor arterial street system. They generally carry up to 10,000 vehicles per day. Parking limitations or prohibitions and/or access control to adjacent land use may or may not be imposed along urban collectors depending on the generation characteristics of adjacent land use, street width, and the location within the City. Urban collectors also serve light truck traffic to a lesser extent than minor arterials, serve as transit routes, and can be candidates for bicycle lanes or routes.
- **Community Collectors**—Communities are relatively large areas containing several neighborhoods, which share common commercial or public centers that serve the surrounding residents. Community collectors are streets that connect communities to each other and are usually longer than neighborhood collectors. Adjacent land uses are predominantly low density residences. These streets collect traffic from local streets and along the community collector, and distribute that traffic to the minor/major arterial street system. They generally carry up to 10,000 vehicles per day, are typically two-lane roadways with parking generally permitted on one or both sides, and generally have full access to adjacent properties. Community collectors also serve light truck traffic to a lesser extent than minor arterials, serve as transit routes, and can be candidates for bicycle lanes or routes.
- **Local Streets**—Local streets perform a variety of functions and accommodate both vehicular, bicyclist, and pedestrian traffic. In most instances, they serve the residential needs of the immediate community, carrying low volumes of traffic to and from collectors and arterials (typically 500-700 vehicles per day). Since the primary function of local streets is to provide access to adjacent properties, they should not carry through traffic. Moving from one part of the City to another should be discouraged along local streets, particularly in residential areas. Local streets are generally two-lane roadways with street width available for parking on one or both sides.

Major and Minor Arterials, and certain Urban Collector and Community Collector streets that serve the proposed SGCP area are described below and are shown in Figure 4.15-1.

- **Colorado Street**—Colorado Street is a four-lane east/west Major Arterial with a center turn lane between SR-2 and entrance ramps to I-5, with a 5-lane to 6-lane segment between Galleria Way and Louise Street. It has a primarily commercial use in the corridor, including several large shopping centers. The majority of intersections on this segment also have dedicated right and left-turn lanes. There is on-street parking available along the length of Colorado Street, with some sections limited to two hours. Parking is prohibited between Columbus Avenue and Central Avenue. The posted speed limit is 35 mph.
- **Verdugo Road**—Verdugo Road is a four-lane, north/south Major Arterial with no center turn lane. It passes through primarily medium density housing uses; a segment between Broadway and Chevy Chase Drive is primarily commercial uses. On-street parking is permitted on both sides of the road along the street's length. Verdugo Road has (shared lane markings denoting a designated

Class III bike route ("sharrows") north of Colorado Street to Glendale Avenue. The posted speed limit ranges from 25 to 35 mph.

- **Glenoaks Boulevard**—Glenoaks Boulevard is a four to six-lane Major Arterial that runs in an east/west direction at the northern edge of the proposed SGCP area. West of Brand Boulevard, the road is divided by a planted median, and on-street parking is prohibited to Pacific Avenue. East of Brand Boulevard, the road has no center left-turn lanes and on-street parking is allowed, with a 2-hour restriction. The segment of Glenoaks Boulevard that borders the proposed SGCP area consists primarily of commercial uses, with several high-rise uses on the southern side. Glenoaks Boulevard has Class II bike lanes in both directions, going west from Pacific Avenue, and sharrows in the eastbound direction. Between Brand Boulevard and Geneva Street, there are sharrows in both directions. The posted speed limit ranges from 35 to 40 mph.
- **San Fernando Road**—San Fernando Road is a four-lane Major Arterial that runs north/south along the western border of the proposed SGCP area. It has a center turn lane along its entire extent, from SR-134 to the southern City border. On-street parking is permitted along both sides of the street with time restrictions south of Windsor Road. North of Windsor Road to SR-134, parking is not permitted on the west side of the street, which runs along a railroad ROW. The corridor is primarily mixed use north of Windsor Road, with some commercial and medium-density residential land uses along the southern portion. The posted speed limit is 35 mph.
- **Central Avenue**—Central Avenue is a four to six-lane Major Arterial that runs north/south through the proposed SGCP area. Central Avenue has four lanes, with a center turn lane south of Colorado Street, and alternates between five and six lanes north of Colorado to the northern boundary of the proposed SGCP area. Parking is generally permitted on both sides of the street, with varying time restrictions, and no parking between Colorado Street and Wilson Avenue. There are bike lanes north of Wilson Avenue to SR-134, and the posted speed limit is 35 mph. The street has various types and intensities of primarily commercial uses along the majority of its length, with multi-family housing uses at the north end of the street.
- **Brand Boulevard**—Brand Boulevard is a four to five-lane Major Arterial that runs north/south through the proposed SGCP area. It is five lanes wide north of Lexington Drive, and four lanes wide south of Lexington to the City boundary. Both segments have dedicated left turn lanes, with diagonal parking along both sides of the street for the majority of its length. The street is on a major commercial corridor in Glendale, and contains large regional commercial uses, including large shopping centers and auto dealerships. The posted speed limit is 30 mph.
- **Glendale Avenue**—Glendale Avenue is a four-lane Major Arterial that runs north/south through the proposed SGCP area. It has a center turn lane the entirety of its length, from the southern City boundary to the northeast boundary of the proposed SGCP area. There are a range of commercial uses along the majority of Glendale Avenue, with some single family residential uses along its southern extent. Glendale Avenue has sharrows south of Los Feliz avenue to Cerritos Avenue. There is on-street parking on both sides of the street along its entire extent, and the posted speed limit is 30 mph.
- **Los Feliz Road**—Los Feliz is an east/west Major Arterial that operates in the southern portion of the proposed SGCP area. From San Fernando Road to the western City boundary, the road is divided by a median, and east of San Fernando Road the street has a center turn lane. The corridor is primarily commercial use, with some mixed use and light industrial uses on the western extent. Parking is permitted on both sides of the street from Glendale Avenue to Gardena Avenue. The posted speed limit is 35 mph.

- **Broadway**—Broadway is a four-lane Minor Arterial that operates from the western City boundary to Wilson Avenue in the proposed SGCP area. The road runs in an east/west direction and has center turn lanes between Columbus Avenue and Brand Boulevard. The corridor is primarily commercial in nature, with some single and multi-family residential uses east of Chevy Chase Drive. Parking is permitted on both sides of the street, with the exception of the aforementioned segment between Brand Boulevard and Glendale Avenue. The street has sharrows along its entire length within the proposed SGCP area. The posted speed limit is 35 mph.
- **Pacific Avenue**—Pacific Avenue is a two to four-lane Minor Arterial that operates in a north/south orientation from the northern boundary of the proposed SGCP area to San Fernando Road in the south. From Glenoaks Boulevard to Colorado Street, the road is four lanes with a center turn lane; south of Colorado Street, the roadway narrows to two lanes with a center turn lane. The majority of the corridor is primarily single- and multi-family residential uses; between Broadway and Colorado Street, there are commercial and public uses in addition to residential. Parking is permitted south of Broadway to the street's terminus at San Fernando Road. The posted speed limit is 30 mph.
- **Chevy Chase Drive**—Chevy Chase Drive is a Minor Arterial that operates in an east/west orientation from the western City boundary to Adams Street; Chevy Chase then changes direction and runs in a north/south orientation to the northeastern boundary of the proposed SGCP area. Both orientations are four-lane roads; the north/south segment has sharrows. The street traverses through a mix of single- and multifamily housing and commercial uses. Parking is permitted along most blocks along the street. The posted speed limit is 35 mph.
- **Wilson Avenue**—Wilson Avenue is a two to four-lane Minor Arterial that runs in an east/west orientation across the entire proposed SGCP area; two lanes with a center turn lane east of Central Avenue to the City boundary. East of Sinclair Avenue, it expands to four lanes with a center turn lane until it ends at Broadway. The corridor is primarily medium- to high-density residential uses, with a commercial segment between Central Avenue and Louise Street. Parking is allowed on both sides of the street, with the exception of short segments between Isabel Street and Everett Street and Maryland Avenue and Brand Boulevard. The posted speed limit is 25 to 30 mph.
- **California Avenue**—California Avenue is a two-lane Urban Collector street that operates in an east/west orientation, from San Fernando Road at the western boundary of the proposed SGCP area, to Verdugo Road at its eastern boundary. The corridor is composed of primarily moderate- to high-density residential uses, with a commercial corridor between Central Avenue and Maryland Avenue. Parking is permitted along most blocks, on both sides of the street, and the posted speed limit is 25 mph.
- **Maple Street**—Maple Street is an Urban Collector street that runs east/west from Pacific Avenue to the eastern boundary of the City. It is a two-lane street, with parking allowed on both sides of the street, and has sharrows from Pacific Avenue to Verdugo Road. The corridor is comprised of mostly moderate- to medium density residential uses, and the posted speed limit is 25 mph.
- **South Adams Street**—Adams Street is a two-lane Community Collector street that runs north/south from Palmer Avenue to the southern City boundary. It runs through a largely single-family residential area, with street parking and a posted speed limit of 25 mph.

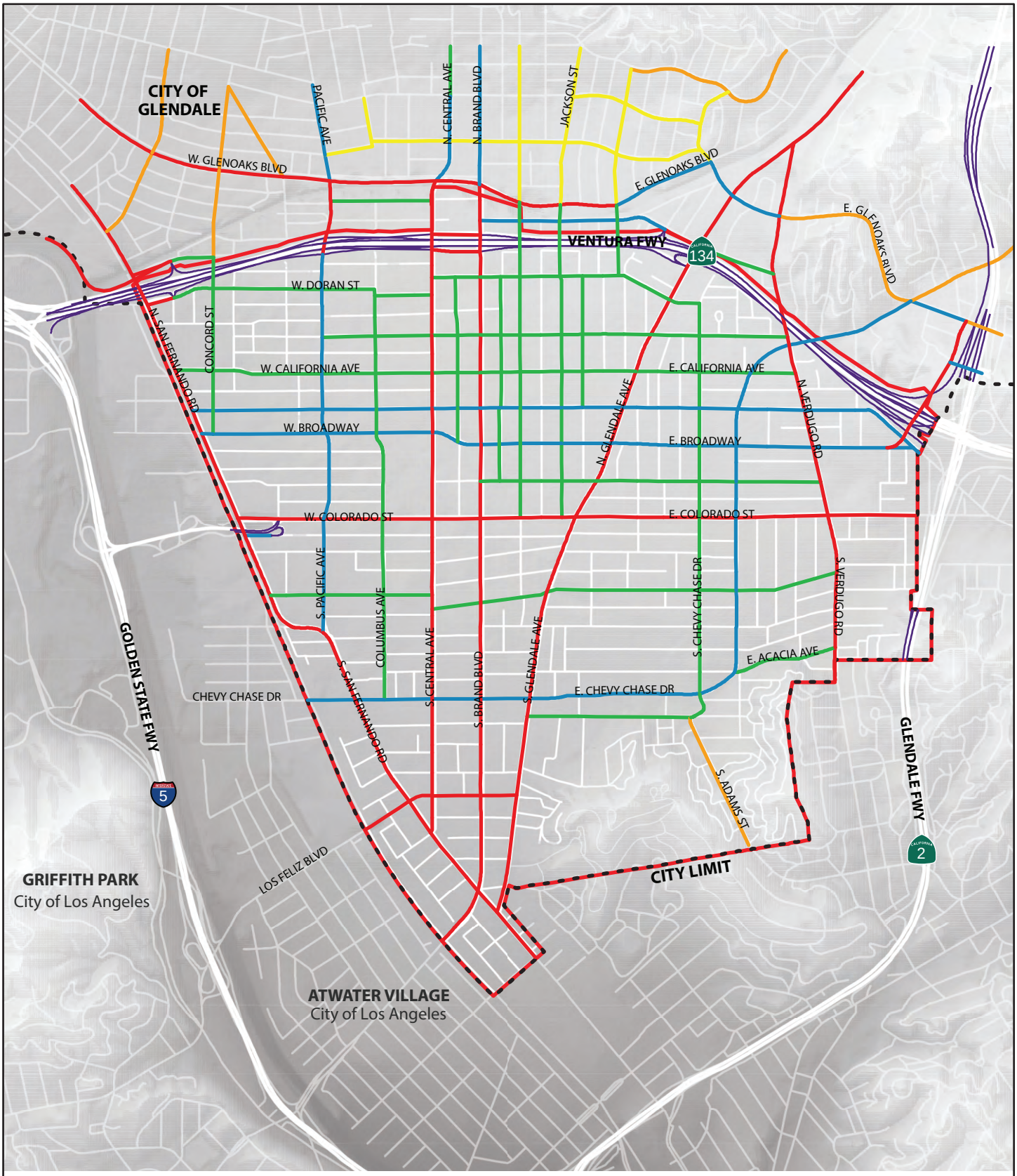

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FIGURE 4.15-1

Roadway Functional Classifications

Source: City of Glendale 2017, Fehr & Peers 2017

100042606 South Glendale Community Plan PEIR

In addition to the previously listed streets, the following streets are classified as Urban Collector Streets within the proposed SGCP area:

- Columbus Avenue between Doran Street and Chevy Chase Drive,
- Concord Street between Fairmont Avenue and Broadway,
- Doran Street between Commercial Street and Adams Street,
- Harvard Street between Brand Boulevard and Verdugo Road,
- Isabel Street between Doran Street and Wilson Avenue,
- Jackson Street between Glenoaks Boulevard and Colorado Street,
- Lexington Drive between Pacific Avenue and Verdugo Road,
- Louise Street between Glenoaks Boulevard and Colorado Street,
- Maryland Avenue between Doran Street and Harvard Street,
- Orange Street between Doran Street and Broadway,
- Palmer Avenue between Glendale Avenue and Adams Street, and
- Riverdale Drive between San Fernando Road and Central Avenue.

All remaining streets are classified as Local Streets within the proposed SGCP area.

Level of Service Methodology

The operating conditions experienced by motorists are described in terms of LOW, which is a qualitative measure used to describe the condition of traffic flow, ranging from excellent (free-flow) conditions at LOS A to overloaded conditions at LOS F. LOS D is typically recognized as the minimum acceptable LOS for intersections in urban areas; however, an impact is considered significant if a facility's volume-to-capacity ratio increases by 0.02 or more and LOS D, E or F occurs. LOS definitions for signalized intersections are provided, with accompanying volume-to-capacity ratios, in Table 4.15-1.

The City requires the use of the Intersection Capacity Utilization (ICU) methodology for traffic impact analysis on the operation of intersections. The ICU method measures an intersection's capacity to serve all legs of an intersection within a complete signal phase cycle. ICU can also indicate how much reserve capacity the intersection has, or how much the intersection is over capacity. Table 4.15-2 shows the existing LOS for the intersections included in the analysis for this section, and Figure 4.15-2 shows the location of the intersections.

The following three intersections operate at LOS E during either the AM or PM peak hour:

- Pacific Avenue and Glenoaks Boulevards (PM peak hour only);
- Glendale Avenue and SR-134 Eastbound Ramps (AM and PM peak hours); and
- San Fernando Road and Los Feliz Road (PM peak hour only).

The following three intersections operate at LOS F during either the AM or PM peak hour:

- Pacific Avenue and SR-134 Westbound Ramps (PM peak hour only);
- Pacific Avenue and SR-134 Eastbound Ramps (PM peak hour only); and
- Glendale Avenue and Monterey Road (AM and PM peak hours).

Table 4.15-1 Intersection Level of Service Thresholds

Level of Service	*Description*	*Volume/Capacity Ratio*
A	LOS A occurs when progression is extremely favorable. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turning movements are easily made, and nearly all drivers find freedom of operation. Short cycle lengths may also contribute to low delay.	0.000 - 0.600
B	LOS B represents stable operation. An occasional approach phase is fully utilized, and a substantial number are approaching full use. Many drivers begin to feel somewhat restricted within platoons of vehicles.	>0.600 - 0.700
C	In LOS C stable operation continues. Full signal cycle loading is still intermittent, but more frequent. Occasionally drivers may have to wait through more than one red signal indication, and back-ups may develop behind turning vehicles.	>0.700 - 0.800
D	LOS D encompasses a zone of increasing restriction, approaching instability resulting in noticeable congestion. Delays to approaching vehicles may be substantial during short peaks within the peak period, but enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive back-ups.	>0.800 - 0.900
E	LOS E represents the most vehicles that any particular intersection approach can accommodate and is considered to be the limit of acceptable delay. At capacity (Volume/Capacity = 1.00) there may be long queues of vehicles waiting upstream of the intersection and delays may be great (up to several signal cycles).	>0.900 - 1.000
F	LOS F represents congested conditions and is considered to be unacceptable to most drivers. Back-ups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration, hence, volumes carried are not predictable. Volume/Capacity values are highly variable because full utilization of the approach may be prevented by outside conditions.	>1.000

Source: Metro 2010

Table 4.15-2 2016 Existing Intersection Level of Service Results

			2016 Existing	
ID	*Intersection*	*Peak Hour*	*V/C*	*LOS*
1	Pacific Avenue/Glenoaks Boulevard	AM	0.785	C
		PM	**0.944**	**E**
2	Central Avenue/Glenoaks Boulevard	AM	0.540	A
		PM	0.630	B
3	Brand Boulevard/Glenoaks Boulevard	AM	0.685	B
		PM	0.691	B
4	Pacific Avenue/SR-134 WB Ramps	AM	0.723	C
		PM	**1.076**	**F**
5	Pacific Avenue/SR-134 EB Ramps	AM	0.768	C
		PM	**1.023**	**F**
6	Central Avenue/Goode Avenue	AM	0.592	A
		PM	0.808	D
7	Central Avenue/Sanchez Drive	AM	0.805	D
		PM	0.678	B
8	Brand Boulevard/Goode Avenue	AM	0.898	D
		PM	0.864	D
9	Brand Boulevard/Sanchez Drive	AM	0.718	C
		PM	0.661	B

Table 4.15-2 2016 Existing Intersection Level of Service Results

ID	Intersection	Peak Hour	2016 Existing V/C	2016 Existing LOS
10	SR-134 WB Ramps/Monterey Road	AM	0.756	C
		PM	0.790	C
11	Glendale Avenue/Monterey Road	**AM**	**1.134**	**F**
		PM	**1.074**	**F**
12	Glendale Avenue/SR-134 EB Ramps	**AM**	**0.906**	**E**
		PM	**0.992**	**E**
13	Pacific Avenue/Lexington Drive	AM	0.411	A
		PM	0.488	A
14	Central Avenue/Lexington Drive	AM	0.447	A
		PM	0.559	A
15	Brand Boulevard/Lexington Drive	AM	0.471	A
		PM	0.671	B
16	Glendale Avenue/Lexington Drive	AM	0.718	C
		PM	0.767	C
17	Verdugo Road/Wilson Avenue	AM	0.683	B
		PM	0.691	B
18	San Fernando Road/Broadway	AM	0.692	B
		PM	0.788	C
19	Pacific Avenue/Broadway	AM	0.409	A
		PM	0.679	B
20	Columbus Avenue/Broadway	AM	0.425	A
		PM	0.552	A
21	Central Avenue/Broadway	AM	0.450	A
		PM	0.646	B
22	Brand Boulevard/Broadway	AM	0.433	A
		PM	0.644	B
23	Glendale Avenue/Broadway	AM	0.585	A
		PM	0.762	C
24	Chevy Chase Drive/Broadway	AM	0.568	A
		PM	0.660	B
25	Verdugo Road/Broadway	AM	0.493	A
		PM	0.857	D
26	Harvey Drive/Wilson Avenue	AM	0.889	D
		PM	0.627	B
27	San Fernando Road/Colorado Street	AM	0.572	A
		PM	0.638	B
28	Pacific Avenue/Colorado Street	AM	0.711	C
		PM	0.879	D
29	Columbus Avenue/Colorado Street	AM	0.648	B
		PM	0.763	C
30	Central Avenue/Colorado Street	AM	0.534	A
		PM	0.712	C
31	Brand Boulevard/Colorado Street	AM	0.564	A
		PM	0.676	B

Table 4.15-2 2016 Existing Intersection Level of Service Results

ID	Intersection	Peak Hour	2016 Existing V/C	2016 Existing LOS
32	Glendale Avenue/Colorado Street	AM	0.672	B
		PM	0.753	C
33	Chevy Chase Drive/Colorado Street	AM	0.676	B
		PM	0.758	C
34	Verdugo Road/Colorado Street	AM	0.786	C
		PM	0.801	D
35	Pacific Avenue/San Fernando Road	AM	0.636	B
		PM	0.684	B
36	Central Avenue/Maple Street	AM	0.492	A
		PM	0.637	B
37	Brand Boulevard/Maple Street	AM	0.539	A
		PM	0.628	B
38	San Fernando Road/Chevy Chase Drive	AM	0.609	B
		PM	0.638	B
39	Central Avenue/Chevy Chase Drive	AM	0.535	A
		PM	0.681	B
40	Brand Boulevard/Chevy Chase Drive	AM	0.701	C
		PM	0.720	C
41	Glendale Avenue/Chevy Chase Drive	AM	0.816	D
		PM	0.803	D
42	Adams Street/Chevy Chase Drive	AM	0.586	A
		PM	0.639	B
43	Chevy Chase Drive/Acacia Avenue	AM	0.655	B
		PM	0.574	A
44	San Fernando Road/Los Feliz Road	AM	0.754	C
		PM	**0.906**	**E**
45	Central Avenue/Los Feliz Road	AM	0.518	A
		PM	0.641	B
46	Brand Boulevard/Los Feliz Road	AM	0.647	B
		PM	0.717	C
47	Glendale Avenue/Los Feliz Road	AM	0.456	A
		PM	0.577	A
48	Central Avenue/San Fernando Road	AM	0.426	A
		PM	0.567	A
49	Brand Boulevard/San Fernando Road	AM	0.848	D
		PM	0.848	D
50	Glendale Avenue/San Fernando Road	AM	0.689	B
		PM	0.753	C

Source: Fehr & Peers 2017 (Appendix F to this EIR)

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FIGURE 4.15-2

Existing Intersection Level of Service

Source: City of Glendale 2017, Fehr & Peers 2017

100042606 South Glendale Community Plan PEIR

Highway Traffic Level of Service Methodology

The Los Angeles County Congestion Management Program (CMP) administered by Metro provides a mechanism for the coordination and alignment of land use and development decisions with roadway system performance.

In accordance with the CMP, mainline freeway operating conditions during peak periods were evaluated using the general procedures established by the CMP. Mainline LOS is estimated by calculating the demand-to-capacity ratio of each mainline segment. LOS calculations based on demand-to-capacity ratios is a proxy for the speed-based LOS performance measures used by Caltrans for traffic operations analysis. The LOS criteria for freeway sections are shown in Table 4.15-3.

Table 4.15-3 CMP Level of Service Thresholds

Level of Service	*Description*	*Demand to Capacity Ratio*
A	Highest quality of service. Free traffic flow with low volumes and densities. Little or no restriction on maneuverability and speed.	0.00 - 0.35
B	Stable traffic flow, speed becoming slightly restricted. Low restriction on maneuverability.	>0.35 - 0.54
C	Stable traffic flow, but less freedom to select speed, change lanes, or pass. Density increasing.	>0.54 - 0.77
D	Approaching unstable flow. Speeds tolerable, but subject to sudden and considerable variation. Less maneuverability and driver comfort.	>0.77 - 0.93
E	Unstable traffic flow with rapidly fluctuating speeds and flow rates. Short headways, low maneuverability, and low driver comfort.	>0.93 - 1.00
F(0) F(1) F(2) F(3)	Forced traffic flow. Speed and flow may drop to zero with high densities.	>1.00 - 1.25 >1.25 - 1.35 >1.35 - 1.45 >1.45

Source: Metro 2010

No CMP arterial locations were analyzed, since none are near the proposed SGCP area. However, four freeway segment locations on SR-2, I-5, and SR-134 were selected for analysis. Mainline freeway segment volumes are reported for 2010 in the most recent CMP report. These volumes were increased using the published growth factor for the Glendale area (1.014) to estimate existing freeway demand. The following locations operate at LOS F during either the AM or PM peak hour, or during both peak hours:

- SR-2 at Round Top Road – Southbound (AM peak hour only);
- I-5 at Stadium Way – Northbound (PM peak hour only);
- I-5 at Stadium Way – Southbound (AM and PM peak hours);
- I-5 south of Colorado Street Exit – Northbound (AM and PM peak hours); and
- I-5 south of Colorado Street Exit – Southbound (AM and PM peak hours).

Vehicle Miles Traveled

The number of average daily weekday vehicle trips generated within the proposed SGCP area and the VMT associated with those trips was ascertained by using the City's updated travel demand model.

The Origin-Destination methodology was used to estimate the number of vehicle trips and VMT generated by the land uses within the proposed SGCP area. This methodology isolates specific trip types depending on their origin and destination relative to the proposed SGCP area, and includes the entire trip length of each vehicle trip in the VMT estimate. The trip types included are:

- **Internal-internal**—trips that begin and end entirely within the proposed SGCP area;
- **Internal-external**—trips with an origin within, but a destination outside the proposed SGCP area; and
- **External-internal**—trips with an origin outside, but a destination within the proposed SGCP area.

Additionally, a fourth trip type exists, external-external, which are trips that pass through the proposed SGCP area without stopping at a destination. These trips are not included in the Origin-Destination Methodology to estimate vehicle trips and VMT, since the land use policies within the proposed SGCP area do not apply to these trips. Table 4.15-4 shows the estimated average daily weekday vehicle trips, VMT, and vehicle trip lengths for all of the land uses within the proposed SGCP area.

Table 4.15-4 Existing Average Daily Weekday Vehicle Miles Traveled

Trip Type	*Daily Vehicle Miles Traveled*	*Daily Vehicle Trips*	*Average Trip Length*
Internal-Internal	152,000	145,500	1.0 miles
Internal-External	1,863,000	201,300	9.3 miles
External-Internal	1,855,000	201,300	9.2 miles
Total	3,870,000	548,100	7.1 miles

Source: Fehr & Peers 2017 (Appendix F to this EIR)

The citywide travel demand model was also used to approximate the existing directional trip distribution for vehicle trips generated within the proposed SGCP area. Approximately 27 percent of vehicle trips originating within the proposed SGCP area stay within the proposed SGCP area. Approximately 47 percent of trips originating within the proposed SGCP area stay within the City boundary, inclusive of trips internal to the proposed SGCP area. Of the trips that do not stay within the proposed SGCP area, 16 percent have a trip end in the west towards the city of Burbank and the San Fernando Valley; 18 percent have a trip end in the south towards the Westside and Downtown Los Angeles, and 17 percent have trip end in the east towards the city of Pasadena and the San Gabriel Valley. A very small percentage of vehicle trips (2 percent) head north towards La Crescenta-Montrose/Tujunga and La Cañada Flintridge.

Transit Network

A range of transportation options exist within the proposed SGCP area, including local and regional bus routes, paratransit, and commuter rail services.

Glendale Beeline

Glendale Beeline is the City's local fixed-route transit service, serving the cities of Glendale, La Cañada Flintridge, and the unincorporated areas of La Crescenta and Montrose. Of the 101 routes operated by the Glendale Beeline, nine operate within the proposed SGCP area, as shown in Table 4.15-5.

Paratransit service is provided by Glendale Dial-A-Ride, which is available to seniors and persons with disabilities for travel anywhere served by the Glendale Beeline. The service operates seven days a week. Beeline routes connect the Downtown Glendale and San Fernando Road corridor employment centers and housing to regional rail services at the Larry Zarian Transportation Center. The transportation center provides connections to Amtrak rail and bus service and Metrolink rail service, which serves the major employment areas in Southern California.

Table 4.15-5 Glendale Beeline Bus Routes

Route	*Origin*	*Destination*	*Average Peak Headway*
1/2	Larry Zarian Transportation Center	Stocker Square	20 minutes
3/31/32	Glendale Galleria	Jet Propulsion Lab	30 minutes
4	Roosevelt Middle School	Glendale Galleria	20 minutes
5	Pacific Park	Hoover High School	15 minutes
6	Pacific Park	Glendale High School	20 minutes
11	Larry Zarian Transportation Center	Downtown Glendale	25 minutes
12	Larry Zarian Transportation Center	Burbank Regional Intermodal Transportation Center	25 minutes

Source: Fehr & Peers 2017 (Appendix F to this EIR)

Los Angeles Metropolitan Transit Authority and Los Angeles Department of Transportation Commuter Express

The Metro operates eight local routes, one shuttle circulator, and two Rapid routes that provide transit coverage in a north/south and east/west orientation servicing the proposed SGCP area. The Los Angeles Department of Transportation operates two Commuter Express Lines within the proposed SGCP area, operating during AM and PM peak hours only. The Metro and Los Angeles Department of Transportation routes are set out in Table 4.15-6.

Table 4.15-6 Los Angeles Metropolitan Transit Authority and Department of Transportation Bus Routes

Route	*Type*	*Service Area*	*Average Peak Headway*
28	Local	Century City, Miracle Mile, Koreatown, Downtown Los Angeles, Eagle Rock, Glendale High School	15 minutes
90/91	Local	Downtown Los Angeles, Chinatown, Glassell Park, Glendale, Sunland, Pacoima, Sylmar	15 minutes
92	Local	Downtown Los Angeles, Echo Park, Downtown Glendale, Burbank	25 minutes
94	Local	Downtown Los Angeles, Glassell Park, Glendale, Burbank, Sun Valley	20 minutes
180	Local	Hollywood/Vine Red Line Station, Downtown Glendale, Eagle Rock, Pasadena City College, Sierra Madre Villa Transportation Center	30 minutes
183	Local	Sherman Oaks, Valley Village, North Hollywood Red/Orange Line Station, Burbank Station, Downtown Glendale, Eagle Rock Plaza, Larry Zarian Transportation Center	30 minutes
201	Local	Glendale Adventist Medical Center, Downtown Glendale, Atwater Village, Silver Lake, Vermont/Beverly Red Line Station, Vermont/Wilshire Red Line Station	60 minutes
501	Express	North Hollywood Red/Orange Line Station, Burbank, Walt Disney Studios, Downtown Glendale, Old Town Pasadena, Memorial Park Gold Line Station, Del Mar Gold Line Station	12 minutes
603	Local	Grand/LATTC Blue Line Station, Los Angeles Trade Tech College, Pico-Union, Westlake/ MacArthur Park Red/Purple Line Station, Echo Park, Atwater Village, Downtown Glendale	15 minutes
780	Rapid	Los Angeles, West Hollywood, Hollywood, Downtown Glendale, Eagle Rock, Pasadena	15 minutes
794	Rapid	Downtown Los Angeles, Chinatown, Glendale (San Fernando Road Corridor), Burbank Town Center, Hollywood Burbank Airport, Hansen Dam Lake, Sylmar Metrolink Station	20 minutes
409	Commuter Express	Sylmar and Sunland to Downtown Los Angeles; also stops at the Glendale Park and Ride.	20-25 minutes
549	Commuter Express	West San Fernando Valley to Pasadena, with a Gold Line connection to the east San Gabriel Valley; also stops at the Glendale Park and Ride.	20-25 minutes

Source: Fehr & Peers 2017 (Appendix F to this EIR)

Metrolink

Metrolink commuter rail service provides transit connectivity to several areas in Southern California, including Ventura County, Orange County, Riverside County, San Bernardino County, and north Los Angeles County. The Glendale Amtrak/Metrolink Station (also referred to as the Larry Zarian Transportation Center) is located on Cerritos Avenue, west of San Fernando Road at Brand Boulevard. The station serves as a stop on the Metrolink Antelope Valley and Ventura County Lines. Passengers may travel south to Union Station/Los Angeles to transfer to Orange, Riverside, and San Bernardino county routes.

The Antelope Valley Line originates from Los Angeles Union Station, following a north/south orientation along the I-5 and SR-14 freeways. It provides direct connections to Santa Clarita and Palmdale/Lancaster via the Larry Zarian Transportation Center, through to Downtown Los Angeles. The Antelope Valley Line operates during the weekday and weekend, with headways of 40 to 50 minutes on weekdays, and one to two hours on the weekend.

The Ventura County Line originates at Los Angeles Union Station, and operates in an east/west orientation, providing a direct connection at the Larry Zarian Transportation Center, ending in the eastern portion of Ventura County. The route operates during the weekdays only, with headways of 30 to 40 minutes. The Ventura County Line also provides connections to the Hollywood Burbank Airport.

It should be noted that Metro is evaluating at-grade crossing closures in Glendale. Other future commuter rail changes include the California High-Speed Rail project. The Burbank to Los Angeles section of the high-speed rail will follow the existing railroad ROW along the Los Angeles River, and will provide a link between the San Fernando Valley and Los Angeles Union station. These changes to the rail system have been incorporated into the Glendale Transportation Demand Model.

Amtrak

Amtrak provides passenger rail service across the United States and inter-regional transit connectivity to communities in California. Amtrak's Pacific Surfliner service provides rail connections from the Larry Zarian Transportation Center to Ventura, Santa Barbara, San Luis Obispo, Orange, and San Diego counties. Additionally, Amtrak's bus service connects to Amtrak San Joaquin service, which serves Central California and the San Francisco Bay Area. Passengers may travel from the Larry Zarian Transportation Center to Union Station for connections to Amtrak's national rail service via the Coast Starlight, Southwest Chief, Sunset Limited, and Texas Eagle routes.

From Amtrak and Metrolink trains, passengers can transfer to the bus for free using their pass or same-day ticket. Passengers can also use their pass or same-day ticket to travel throughout the day on Glendale Beeline buses.

Pedestrian network

The majority of arterials and local streets in the proposed SGCP area have a fully developed pedestrian network, interconnected by a variety of paved sidewalks, controlled crossings, access ramps, and painted crosswalks. Specific corridors, including segments of Brand Boulevard, Broadway, Central Avenue, and Colorado Street and others within Downtown Glendale, have wide sidewalks to accommodate significant pedestrian activity.

Many improvements to the pedestrian network have been implemented within the proposed SGCP area in the past several years, including American Disabilities Act accessibility upgrades at hundreds of bus stops, and Safe Routes to School crossing enhancement projects.

The City is in process of drafting a Citywide Pedestrian Plan to improve pedestrian connectivity and safety through policies, programs, and improvement projects. Some recommendations include roadway reconfigurations that have implications for roadway capacity in the proposed SGCP area. These reconfigurations have been incorporated into the Glendale Transportation Demand Model scenarios for the proposed project and its alternatives.

Bicycle Network

The City maintains a network of 18 on-street bikeways; of these, 11 are within the proposed SGCP area, and include Class II and Class III facilities. Bicycle facilities are classified based on a standard typology, as follows:

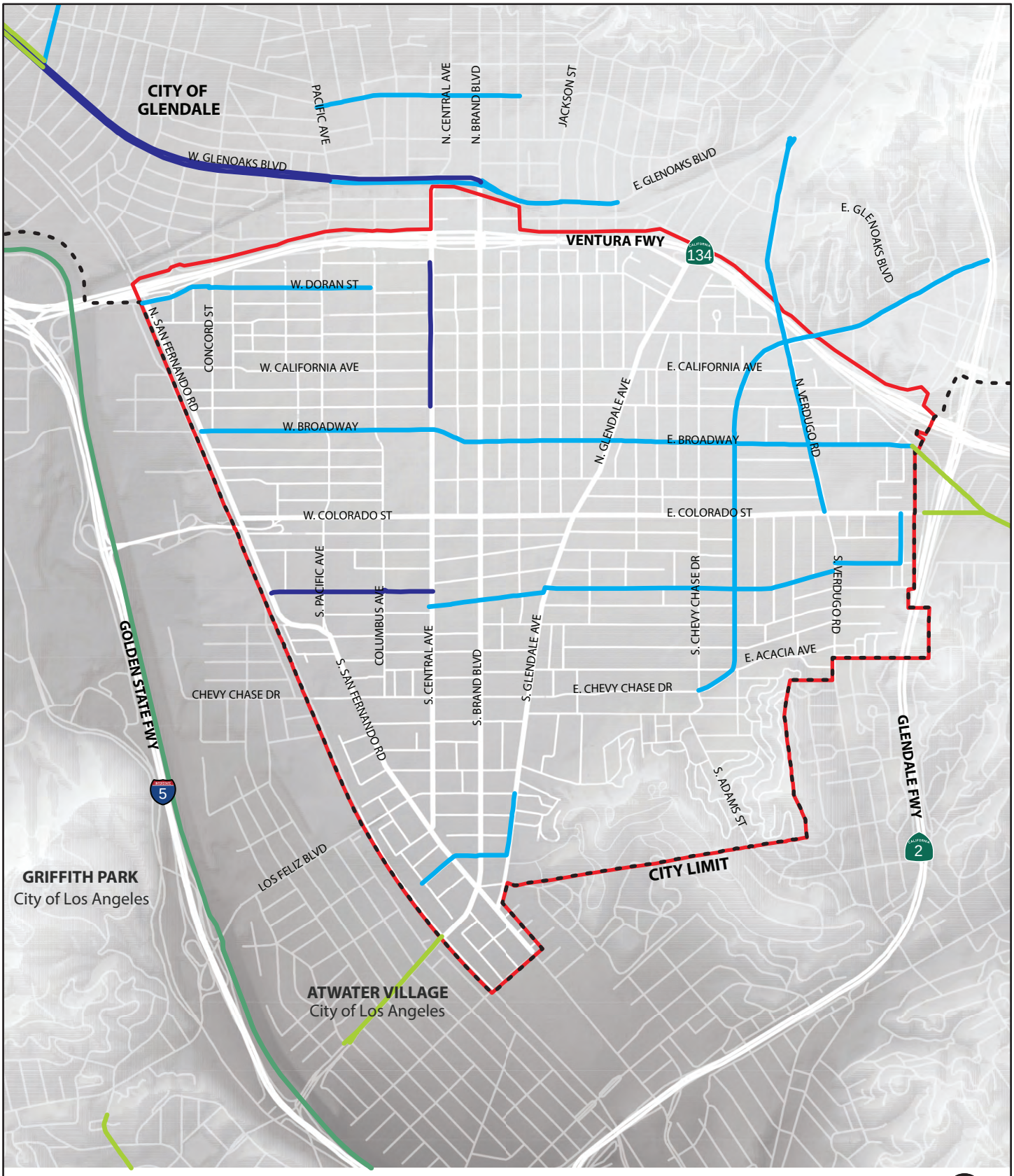
- **Class I Bikeways (Bicycle Paths)** provide a separated right-of-way for bicycle travel that is typically shared with pedestrians and provides a 10 to 12-foot-wide path. Bike path intersections are usually minimized, and street crossings often require special treatment.
- **Class II Bikeways (Bicycle Lanes)** provide on-street right-of-way in the form of a striped lane for the exclusive use of bicyclists, except where right-turning vehicles are allowed to encroach. Bicycle lanes are typically 5 feet wide and located to the right of vehicular travel lanes.
- **Class III Bikeways (Bicycle Routes)** are signed routes for use by bicyclists without the benefit of allocated right-of-way, sometimes incorporating shared-lane markings sharrows. Bicyclists share lanes with motor vehicles. Bike routes are typically designated along streets with wider curb lanes or are otherwise better suited for bicycle travel.
- **Class IV Bikeways (Protected Bicycle Lane)** are also known as a cycletrack and provide a separated right-of-way for the exclusive use of bicyclists adjacent to a roadway through the use of a "vertical element" such as delineators, bollards, or concrete curbs.

There is a total of 10.2 miles of existing bikeway facilities within the proposed SGCP area: 1.1 miles of Class II lanes, and 9.1 miles of Class III routes. According to the Glendale Bicycle Master Plan (2012), each of Glendale's designated bicycle facilities includes individual design and operation components that contribute to the overall success of the Bicycle Master Plan's implementation. Table 4.15-7 lists all existing bicycle facilities within the proposed SGCP area; these are also shown in Figure 4.15-3.

Table 4.15-7 Bicycle Facilities

Name	*From*	*To*	*Class*	*Length (miles)*
Doran Street	San Fernando Road	Columbus Avenue	III	0.80
Broadway	San Fernando Road	Wilson Avenue	III	2.47
Central Avenue	Pioneer Drive	Wilson Avenue	II	0.50
Riverdale Drive	San Fernando Road	Central Avenue	II	0.56
Maple Street	Central Avenue	Verdugo Road	III	1.41
Chevy Chase Drive	Adams Street	SR-134	III	2.10
Verdugo Road	State Route 134	Colorado Street	III	1.36
Glendale Avenue	Cerritos Avenue	Los Feliz Road	III	0.21
Cerritos Avenue	Gardena Avenue	Glendale Avenue	III	0.32
Rock Glen Avenue	Verdugo Road	Lincoln Avenue	III	0.23
Lincoln Avenue	Rock Glen Avenue	Colorado Street	III	0.17

Source: Fehr & Peers 2017 (Appendix F to this EIR)



ATKINS

FIGURE 4.15-3

Bikeway Facilities within the SGCP Area

Source: City of Glendale 2017, Fehr & Peers 2017

100042606 South Glendale Community Plan PEIR

4.15.2 Regulatory Framework

Federal

Highway Capacity Manual

The Transportation Research Board's Highway Capacity Manual, is a collaborative multi-agency effort between the Transportation Research Board, FHWA, and American Association of State Highway and Transportation Officials. The manual contains concepts, guidelines, and procedures for computing the capacity and LOS of various transportation facilities. These include freeways, signalized and unsignalized intersections, and rural highways. Additionally, considered are the effects of transit, pedestrians, and bicycles on the performance of these systems.

Moving Ahead for Progress in the 21st Century Act

The Moving Ahead for Progress in the 21st Century Act (MAP-21) was signed into law on July 6, 2012. MAP-21 revised the policy and programmatic framework for investments meant to guide the nation's surface transportation system's growth and development. MAP-21 establishes a streamlined and performance-based surface transportation program, which builds upon many of the highway, transit, bike, and pedestrian programs and policies established by the Intermodal Surface Transportation Efficiency Act of 1991.

State

California Department of Transportation

Caltrans is responsible for planning, designing, building, operating, and maintaining California's State road system. Caltrans sets standards, policies, and strategic plans that aim to do the following: (1) provide the safest transportation system in the nation for users and workers, (2) maximize transportation system performance and accessibility, (3) efficiently deliver quality transportation projects and services, (4) preserve and enhance California's resources and assets, and (5) promote quality service. Caltrans has the discretionary authority to issue special permits for the use of state highways for other than normal transportation purposes.

Statewide Transportation Improvement Program

The California Statewide Transportation Improvement Plan, approved by the California Transportation Commission in May 2016, is a multiyear, intermodal program of transportation projects that is consistent with the statewide transportation planning processes, metropolitan plans, and CFR Title 23. The plan is prepared by Caltrans in cooperation with the MPOs and the Regional Transportation Planning Agencies. In Los Angeles County, SCAG is the MPO and Metro is the Regional Transportation Planning Agency. The plan contains all capital and non-capital transportation projects or identified phases of transportation projects for funding under the federal Transit Act and CFR Title 23, including federally funded projects.

Senate Bill 743

On September 27, 2013, California Governor Jerry Brown signed SB 743 into law and started a process that could fundamentally change transportation impact analysis as part of CEQA compliance. These changes would include elimination of auto delay, LOS, and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts in many parts of California (if not statewide). Historically, the LOS metric has provided an analysis of the local vehicular capacity of an intersection, by adding on traffic generated by the specific development project. However, this LOS

metric does not take into account the fact that if a specific development project is not constructed, that the potential residents of that development would still reside elsewhere in the city/region. If this residential and mixed use development is not allowed to be constructed in city centers or in proximity to jobs and other commercial/entertainment uses, then development has traditionally been forced to expand on the urban fringes, thereby resulting in increased commute times and greater regional traffic, GHG emissions, and air quality emissions. More recently, the Office of Planning and Research has provided preliminary guidance recommending the use of a VMT metric, which, unlike the LOS metric, can address whether a project would result in fewer/shorter regional vehicle trips (because it is located in close proximity to jobs and other commercial/entertainment options). VMT is also already used in planning for regional Sustainable Community Strategies.

While the CEQA Guidelines update for SB 743 is still in preliminary form, some agencies are beginning to adopt new VMT thresholds in order to assess impacts. Measuring VMT rather than number of trips generated by a project places a higher weight on longer trips, which contribute more to traffic congestion and GHG emissions than shorter trips, since vehicles are on the road for a longer amount of time. While the regulations of SB 743 have not been finalized or adopted, several analyses were conducted to provide project-related information.

Regional

Sustainable Community Strategy

Every four years, SCAG updates its RTP for the 191-city SCAG region. The RTP assembles a regional project list based on input from cities, counties, transit agencies, congestion management agencies, regional transportation planning agencies, and Caltrans. This project list is then combined with population and employment growth forecasts to project how future (a minimum of 20 years) travel, air quality, and GHG conditions will change. Beginning with the 2012 RTP, SB 375 required the inclusion of a Sustainable Communities Strategy (SCS) in RTPs prepared by MPOs, such as SCAG. The key goal of the SCS is to achieve GHG emission reduction targets through integrated land use and transportation strategies, although SB 375 did not require any modification of the regional project list contained in the RTP. Instead, the focus is on other transportation and land use strategies that influence vehicle travel; a key objective is for planners and developers to consider how land use patterns influence travel demand.

As part of the transportation modeling and analysis for the RTP/SCS, SCAG prepares population and employment growth projections by Transportation Analysis Zone and creates a future transportation network that represents the changes to the existing network based on the regional project list. Transportation Analysis Zones are geographic polygons representing communities and neighborhoods at a sub-city level of detail.

Los Angeles County Congestion Management Program

The CMP is a state-mandated program that was enacted by the California Legislature to address the impact of local growth on the regional transportation system (Metro 2010). Within Los Angeles County, Metro is responsible for planning and managing vehicular congestion and coordinating regional transportation policies. The 2010 CMP for Los Angeles County adopted by Metro provides screening criteria and traffic impact assessment methodology to assess the potential impacts on designated monitoring locations on the CMP system. Specifically, the CMP Guidelines require the evaluation of all arterial monitoring intersections where a project would add 50 or more trips during the morning or evening weekday peak hours, and all freeway segments where a project could add 150 or more trips, in either direction, during the morning or evening weekday peak hours. If, based on these screening criteria, no CMP facilities are identified for study, no further highway or freeway system analysis need be

conducted and project impacts are deemed to be less than significant. If the project meets the minimum CMP screening thresholds for including the location in a more detailed analysis, according to the CMP Traffic Impact Analysis Guidelines, an increase of 0.02 or more in the demand-to-capacity ratio with a resulting LOS F at a CMP freeway monitoring station is deemed a significant impact. At non-CMP freeway segments, an increase of 0.02 or more in the demand-to-capacity ratio with a resulting LOS F at a CMP freeway monitoring station is deemed a significant impact.

Local

Glendale General Plan

The following Glendale General Plan policies, goals and objectives located in the Circulation and Noise Elements are applicable to transportation and traffic.

Circulation

- **Goal 1**: Preservation and enhancement of the quality of life in Glendale's unique communities.
  - Minimize non-local vehicular traffic and parking in both single- and multiple-family residential neighborhoods through land use management and traffic/parking control.
  - Support and enhance existing neighborhood commercial centers to continue to serve the needs of nearby residents.
  - Maintain acceptable noise levels in residential areas as defined in the Noise Element by managing traffic volumes and speed.
  - Discourage high speeds on residential streets through roadway design and traffic enforcement.
  - Develop acceptable thresholds of traffic volume in residential zones based on environmental capacity.
- **Goal 2**: Minimization of congestion, air pollution, and noise associated with motor vehicles.
  - Increase/support public and high occupancy vehicle transportation system improvements through mitigation of traffic impacts from new development.
  - Develop parking policies which support reduced automobile travel in the most congested areas of Glendale.
  - Construct the complete bikeway system for Glendale as identified in the Bikeway Master Plan and continue to consider additions or adjustments to the planned system.
  - Support Transportation Demand Management and Transportation System Management policies.
- **Goal 3**: Reasonable access to services and goods in Glendale by a variety of transportation modes.
  - Encourage growth in areas and in patterns which are or can be well served by public transportation.
  - Encourage housing around and in commercial centers.
  - Provide opportunities for successful neighborhood retail uses.
  - Ensure transportation connections to regional systems by a variety of modes.
  - Meet special transportation needs to the physically challenged.

- **Goal 4:** Functional and safe streetscapes that are aesthetically pleasing for both pedestrians and vehicular travel.
  - Provide and maintain high quality streetscapes and pedestrian amenities (i.e. bus shelters, street trees, street furniture, wide sidewalks, etc.)
  - Support the enhancement of existing and creation of new pedestrian-oriented retail centers.
- **Goal 5**: Land use which can be supported within the capacity constraints of existing and realistic future infrastructure.
  - Balance land use/zoning with roadway capacity by establishing congestion thresholds and avoiding unacceptable levels of congestion from future development.

Noise Element

- **Goal 2**: Protect and maintain those areas having acceptable noise environments.
  - Regulate the impacts of motor vehicle noise through proper street design and building locations.
- **Goal 4**: The reliance on the automobile will be reduced.
  - Coordinate land use planning with existing and planned transportation systems to encourage the use of public transportation systems and non-polluting transportation in standards for new construction.
  - Promote the use of public transportation and non-polluting transportation in standards for new construction.
  - Expand existing public transportation and non-polluting transportation systems and develop new systems in order to reach a greater number of potential users. Continue to seek federal, state, and regional funding sources.
  - Coordinate various transportation modes with transfer facility to increase convenience.
  - Coordinate non-automobile transportation systems with surrounding jurisdictions.

Downtown Specific Plan

The following mobility policies within the DSP aim to maximize the accessibility, safety and efficiency of the Downtown transportation system for all users, including pedestrians, cyclists, transit passengers, and vehicle drivers.

Local Circulation and Regional Connections

- **Policy 6.1.1(A):** Maintain acceptable levels of local circulation in the DSP area and adjacent neighborhoods and good connections with the regional circulation network for both transit and personal/commercial vehicles.
- **Policy 6.1.1(B):** Develop street typology based on functional and urban design considerations, emphasizing connectivity and linkages, pedestrian and cyclist safety and comfort, increasing transit movement and reducing total person delay, and compatibility with adjacent land uses.
- **Policy 6.1.1(D):** Maintain, re-establish, and enhance the multi-modal use of Downtown alleys as an integral part of the Downtown transportation system.

- **Policy 6.1.1(I):** Maintain, re-establish, and enhance the street grid, to promote flexibility of movement through greater street connectivity, capture natural views, and retain the historic relationships between various streets.

Land Use and Transit

- **Policy 6.1.2(A):** Link land use and transit development policies to maximize transit use and convenience in Downtown.

Multi-Modal Future

- **Policy 6.1.3(A):** Increase transportation choices by providing viable alternatives to exclusive reliance on the auto for Downtown residents and visitors.
- **Policy 6.1.3(B):** Through sound land use and transportation planning, emphasize diversifying modal choices, increasing number of downtown trips by transit, bicycle, and on foot, and improving pedestrian comfort and safety.

Encourage Bicycle Travel

- **Policy 6.1.5(A):** Provide designated bicycle routes with lane markings and signage within and to and from major downtown destinations.
- **Policy 6.1.5(B):** Include bicycle parking, showers, and lockers to promote bicycle commuting in new development.

Parking Management

- **Policy 6.1.6(A):** Maximize the efficiency of existing and future parking facilities.
- **Policy 6.1.6(B):** Create a Transportation Management District to manage parking supply and revenue policies. The District can facilitate coordination of parking pricing to promote efficient use of parking resources, policies which provide incentives for transit use for employees, and other downtown transportation programs and incentives.

Bicycle Facilities

- **Policy 6.3.3(A):** Construct a continuous network of bicycle lanes or bicycle boulevards to enable access throughout Glendale.

Transportation Management

- **Policy 6.3.6(A):** Strengthen existing Transportation Management Association
- **Policy 6.3.6(C):** Provide Universal Transit passes to all downtown employees and residents

4.15.3 Project Impacts and Mitigation

Glendale Transportation Demand Model

The recently updated Glendale Transportation Demand Model was used to analyze the potential impacts of the proposed project on transportation within the SGCP area. The City's model was developed using the TransCAD modeling software and was calibrated and validated to 2015 travel conditions citywide. The 3-step, vehicle trip-based model represents travel conditions within Glendale on an average weekday (when schools are in session) and produces daily, AM peak hour, and PM peak hour volume estimates.

The roadway network in the model includes Freeways; Major and Minor Arterials; Urban, Community, and Neighborhood Collectors; and many Local Streets. The primary attributes of the roadway network are the number of travel lanes and the travel speed. The City's model is also consistent with the 2016 SCAG RTP/SCS model and uses inputs from that model regarding land uses outside the city and travel behavior information.

Outside of Glendale, the assumptions are consistent with the land use and highway projects contained in the 2040 Project Scenario of the 2016 SCAG RTP/SCS. The appropriate input variables in the City's model were updated to reflect all of these assumptions.

The vehicle trip and VMT estimates for the proposed SGCP area were estimated directly from the City's model using the Origin-Destination Methodology discussed in Section 4.15.1 (Environmental Setting) of this EIR.

Thresholds of Significance

The following thresholds of significance are based on the 2017 CEQA Guidelines Appendix G. For purposes of this EIR, implementation of the proposed project may have a significant adverse impact on transportation/traffic if it would do any of the following:

- 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 nonmotorized 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;
- Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access; or
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Effects Found Not Significant

Threshold	Would the project 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?

The proposed SGCP area is not located within the sphere of influence of any major public airport nor does it contain any airports within its boundaries. The closest airport being the Hollywood Burbank Airport (also known as the Bob Hope Airport), which is located approximately five miles northwest of the boundary between the city of Los Angeles and the city of Burbank. Implementation of the proposed project would not result in a change in air traffic patterns (commercial and military), including either an

increase in traffic levels or a change in location that results in substantial safety risks. No further analysis of this issue is required in the EIR.

Less than Significant Impacts

Threshold	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)?

Impact 4.15-1 Implementation of the proposed project would not substantially increase hazards due to a design feature or incompatible uses. This would be a *less than significant* impact.

The proposed SGCP would utilize the existing local and regional roadway infrastructure located within the proposed SGCP area. The only changes to road design within the proposed SGCP area would be from the implementation and improvements associated with mitigation measures *MM 4.15-1* through *MM 4.15-10*. These improvements include adding an additional lane to a road segment, adding an additional turn lane at an intersection or widening of a road segment; however, these would not represent an increase in hazards associated with a design feature. The road improvements associated with *MM 4.15-1* through *MM 4.15-10*, as discussed in the Mitigation Measures section below, are designed to reduce any potential hazards due to congestion; therefore, the impacts associated with hazards due to design features is less than significant and no mitigation is required.

Threshold	Would the project result in inadequate emergency access?

Impact 4.15-2 Implementation of the proposed project would not result in inadequate emergency access. This would be a *less than significant* impact.

As discussed in Section 4.7-3, Impact 4.7-5 [Implementation of the proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan], traffic conditions would become more congested in the SGCP area as a result of the proposed SGCP. In the event of an accident or natural disaster, the increase in traffic would impede the rate of evacuation for employees and residents. Traffic would also increase response times for emergency medical or containment services. Glendale General Plan Safety Element Goal 8, Policy 8-1, Program 8-1.4 would reduce impacts to the maximum extent possible by establishing, and updating as necessary, traffic control contingency plans for disaster routes.

The City's EOC serves to keep citizens informed and prepared for an emergency, coordinates resources during an emergency, and provides relief after an emergency. The goal of EOC personnel is to save lives and protect property by developing programs and emergency operational capabilities in the event of a natural or man-made disaster. Planning for and responding to disasters and emergencies requires many different actions, such as evacuations, shelter set-ups or preparations for power outages. All of these activities are coordinated and directed by the EOC. Training for residents and employees within the City continues through the Community Emergency Response Team program (Glendale 2017).

Construction activities, associated with future development, may result in temporary construction barricades or other obstructions that would impede emergency access; however, future development projects that involved any work within a public ROW would be subject to review and approval from the Public Works Department, which requires coordination to inform police and fire departments of potential obstructions or street closures.

The Office of Emergency Services is tasked with coordinating disaster operations within the City. Glendale General Plan Safety Element Goal 8, Policy 8-1, Program 8-1.1 is directly related to emergency services; Program 8-1.1 encourages the update of disaster preparedness and recovery plans as necessary. Adherence to Goal 8, and related policies and programs, in the Safety Element of the Glendale General Plan would reduce impacts associated with an emergency response plan or emergency evacuation plan. This impact is considered less than significant, and no mitigation is required.

The proposed SGCP would be required to meet all applicable local and state regulatory standards for adequate emergency access. Adherence to applicable local and State regulatory standards would ensure that this impact remain less than significant; no mitigation is required.

Threshold	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 nonmotorized 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?

Impact 4.15-3 Implementation of the proposed project would not 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 nonmotorized 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. This would be a *less than significant* impact.

The City has adopted a citywide policy to "foster a well-planned, comprehensive and safe transportation system that enhances mobility through infrastructure, technology, design, and multi-modal options." This policy is applicable to the proposed SGCP through the creation and enhancement of facilities for non-automobile travel, concentrating development around transit and along important transportation corridors, identifying Pedestrian Priority Areas throughout the proposed SGCP area, and implementing TDM and parking management programs. These are described in further detail in Section 4.15.1 (Environmental Setting) of this EIR.

The proposed SGCP was developed to align with the applicable plans, ordinances, and policies related to transportation at the local jurisdiction level, including the Glendale General Plan, Glendale Bicycle Master Plan (2012), the Glendale Safe and Healthy Streets Plan (2011), and the Downtown Mobility Study (2007). At the regional and State level, implementation of the proposed SGCP will align with the SCAG Compass Blueprint and RTP/SCS and California Active Transportation Program and climate change policies. These plans and policies together aim to support growth around transit, develop opportunities for non-automotive travel, and reduce GHG emissions. The planned geographic concentration of growth and TDM strategies included as part of the proposed project advances these goals.

These strategies include amendments to the Circulation Element, including those required for the document to recognize the proposed SGCP; updating allowable LOS standards for intersections where LOS may exceed Level "E," as a result of "No Project" or the proposed SGCP; the addition of VMT as an allowable method of analysis for General Plan and development review; incorporation of traffic calming, as well as mandatory TDM measures for new development projects by Center, Corridor, Neighborhood or District as proposed in the SGCP or identified as mitigation measures in the SGCP

EIR. Therefore, the proposed SGCP would not be in conflict with the applicable polices and goals of the SCAG RTP/SCS and the Glendale General Plan. This impact is considered less than significant, and no mitigation is required.

Threshold	Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Impact 4.15-4 **Implementation of the proposed project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. This would be a *less than significant* impact.**

Chapter 2 of the proposed SGCP, states that the vision of the proposed SGCP focuses on transit-oriented development, with growth being largely dependent on the establishment of new transit lines and stations that connect Glendale to the larger region, such as through Bus Rapid Transit, localized Metrolink services, and a streetcar line. Other aspects of the plan focus on enhancing the transportation network to encourage more walking, bicycling, and transit use among residents, workers, and visitors.

In addition to the safety-focused strategies, the proposed SGCP encourages walking, biking, and transit use through the provision of amenities that improve the ease and comfort of travel. Transit-focused strategies include, improving transit frequency and providing transit station and stop amenities like benches and shelters. To improve the pedestrian experience and encourage walking, the proposed SGCP proposes mixed use corridors with services and amenities that can be easily accessed on foot from homes or offices, ground-floor retail and active street walls, a network of pedestrian paseos in the Downtown center, small block structure and mid-block pedestrian passages between buildings in some locations, and wide sidewalks, street trees and wayfinding signage throughout the proposed SGCP area. Proposed bicycle amenities include new bike lanes and bike routes, short-term bicycle parking, and the implementation of a bike share system. This impact is considered less than significant, and no mitigation is required.

Significant and Unavoidable Impacts

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

Impact 4.15-5 **Implementation of the proposed project would conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways. This is considered a potentially significant impact. Implementation of mitigation would reduce impacts to the identified intersections; however, the remaining intersection would remain significantly impacted. Therefore, this impact would remain *significant and unavoidable*.**

Freeway Operations

The CMP is a state-mandated program administered by Metro that provides a mechanism for coordinating land use and development decisions. In accordance with Metro's CMP guidelines, mainline freeway operating conditions during morning and evening peak periods were evaluated. Mainline LOS is estimated by calculating the demand-to-capacity ratios of each mainline segment. LOS calculations based on demand-to-capacity ratios is a proxy for the speed-based LOS performance measure used by Caltrans for traffic operations analysis. An impact is considered significant if a facility's volume-to-capacity ratio increases by 0.02 or more causing or worsening LOS F. The following locations are determined as operating at an LOS of F:

- SR-2 at Round Top Road – Southbound (AM only);
- I-5 at Stadium Way – Southbound (PM only); and
- I-5 south of Colorado Street Exit – Northbound and Southbound (AM and PM).

These locations already operate at LOS F under existing conditions.

As part of the CMP analysis that was performed for the proposed project (Appendix F of this EIR), the four freeway locations, listed above, near the SGCP area were found to be impacted under 2040 SGCP conditions (refer to Table 4.15-8).

In order to reduce the impacts at these locations, additional capacity would be required along SR-2 and I-5. Mitigation to reduce these impacts would require widening these freeway facilities; however, the area is currently fully built-out and any expansion measure is considered infeasible.

Table 4.15-8 2040 Proposed Project Freeway Level of Service Results

					2016 Existing		*2040 Proposed Project*				
CMP Station	*Dir.*	*Lanes*	*Capacity*	*Peak Hour*	*D/C*	*LOS*	*Demand*	*D/C*	*LOS*	*Change*	*Impact*
1001. SR 2 at Round Top Road	NB	5	10,000	AM	0.47	B	4,900	0.49	B	0.02	NO
				PM	0.84	D	8,800	0.88	D	0.04	NO
	SB	5	10,000	AM	1.06	F(0)	**10,900**	**1.09**	**F(0)**	**0.03**	**YES**
				PM	0.59	C	6,100	0.61	C	0.02	NO
1004. I-5 at Stadium Way	NB	5	10,000	AM	0.95	E	9,500	0.95	E	0.00	NO
				PM	1.29	F(1)	12,900	1.29	F(1)	0.00	NO
	SB	5	10,000	AM	1.42	F(2)	14,300	1.43	F(2)	0.01	NO
				PM	1.07	F(0)	**11,000**	**1.10**	**F(0)**	**0.03**	**YES**
1005. I-5 south of Colorado Boulevard Exit	NB	5	10,000	AM	1.03	F(0)	**10,700**	**1.07**	**F(0)**	**0.04**	**YES**
				PM	1.32	F(1)	**13,500**	**1.35**	**F(1)**	**0.03**	**YES**
	SB	5	10,000	AM	1.41	F(2)	**14,600**	**1.46**	**F(3)**	**0.05**	**YES**
				PM	1.17	F(0)	**12,300**	**1.23**	**F(0)**	**0.06**	**YES**
1055. SR-134 east of Central Avenue	EB	5	10,000	AM	0.66	C	7,000	0.70	C	0.04	NO
				PM	0.86	D	9,300	0.93	D	0.07	NO
	WB	5	10,000	AM	0.91	D	9,600	0.96	E	0.05	NO
				PM	0.62	C	6,700	0.67	C	0.05	NO

D/C = demand-to-capacity
Source: Fehr & Peers 2017 (Appendix F to this EIR)

Arterial Operations

The operation of the arterial street network was evaluated at 50 study intersections (Figure 4.15-2) during the morning (AM) and evening (PM) peak hours. Intersection volumes were collected from 7:30 to 9:30 A.M. and from 4:30 to 6:30 P.M. respectively, in May and August 2016. The peak one-hour time period for the morning and afternoon is found by identifying the four consecutive 15-minute periods with the highest traffic volumes.

During the months when traffic counts were collected, San Fernando Road was under construction between Colorado Street and Pacific Avenue, and the number of through lanes was reduced to one lane in each direction. The intersection at Pacific Avenue and Colorado Street was also under construction and the number of northbound through lanes was reduced from two to one. Additionally, local schools were in session when the counts were collected in both May and August. The weekday traffic volumes are representative of existing conditions in 2016 for the purposes of this analysis. The Transportation Analysis Report (Fehr & Peers 2017, Appendix F of this EIR) includes the lane configurations at each study intersection when the time counts were collected.

The City requires the use of ICU methodology for traffic impacts on the operation of intersections. The ICU method measures an intersection's capacity to serve all legs of an intersection within a complete signal phase cycle. ICU can also indicate how much reserve capacity the intersection has, or how much the intersection is over capacity. An impact is considered significant if a facility's volume-to-capacity ratio increases by 0.02 or more and LOS D, E or F occurs.

The LOS was calculated for each of the 50 study area intersections using the ICU methodology. Since the proposed SGCP is not an individual development project, the standard practice is to compare each future scenario to existing conditions to determine impact. Table 4.15-9 shows existing volume-to-capacity and LOS, and proposed SGCP (2040) volume-to-capacity and LOS for the 50 study intersections. Buildout of the proposed SGCP would result in 27 total impacts (17 morning and 23 evening); 28 LOS D or worse impacts (19 morning and 24 evening); and 18 new LOS D or worse impacts (12 morning and 11 evening). An intersection operating under LOS D or worse under existing conditions is not considered a new impact, only intersections that experience a 0.02 or more volume-to-capacity ratio increase and a LOS D, E, or F are new impacts and are considered significant.

Table 4.15-9 2040 Proposed Project Intersection Level of Service Results

ID	Intersection	Peak Hour	2016 Existing		2040 Proposed Project			
			V/C	LOS	V/C	LOS	Change	Impact
1	Pacific Avenue/Glenoaks Boulevard	AM	0.785	C	**0.848**	**D**	**0.063**	**YES**
		PM	0.944	E	**1.041**	**F**	**0.097**	**YES**
2	Central Avenue/ Glenoaks Boulevard	AM	0.540	A	0.573	A	0.033	NO
		PM	0.630	B	0.689	B	0.059	NO
3	Brand Boulevard/ Glenoaks Boulevard	AM	0.685	B	**0.851**	**D**	**0.166**	**YES**
		PM	0.691	B	0.761	C	0.070	NO
4	Pacific Avenue/SR-134 WB Ramps	AM	0.723	C	0.759	C	0.036	NO
		PM	1.076	F	**1.161**	**F**	**0.085**	**YES**
5	Pacific Avenue/SR-134 EB Ramps	AM	0.768	C	**0.875**	**D**	**0.107**	**YES**
		PM	1.023	F	**1.138**	**F**	**0.115**	**YES**
6	Central Avenue/ Goode Avenue	AM	0.592	A	0.645	B	0.053	NO
		PM	0.808	D	**0.899**	**D**	**0.091**	**YES**

Table 4.15-9 2040 Proposed Project Intersection Level of Service Results

ID	Intersection	Peak Hour	2016 Existing		2040 Proposed Project			
			V/C	LOS	V/C	LOS	Change	Impact
7	Central Avenue/ Sanchez Drive	AM	0.805	D	**0.854**	**D**	**0.049**	**YES**
		PM	0.678	B	0.769	C	0.091	NO
8	Brand Boulevard/ Goode Avenue	AM	0.898	D	**0.977**	**E**	**0.079**	**YES**
		PM	0.864	D	**0.984**	**E**	**0.120**	**YES**
9	Brand Boulevard/ Sanchez Drive	AM	0.718	C	0.752	C	0.034	NO
		PM	0.661	B	0.746	C	0.085	NO
10	SR-134 WB Ramps/ Monterey Road	AM	0.756	C	**0.887**	**D**	**0.131**	**YES**
		PM	0.790	C	**0.849**	**D**	**0.059**	**YES**
11	Glendale Avenue/ Monterey Road	AM	1.134	F	1.141	F	0.007	NO
		PM	1.074	F	**1.160**	**F**	**0.086**	**YES**
12	Glendale Avenue/ SR-134 EB Ramps	AM	0.906	E	0.918	E	0.012	NO
		PM	0.992	E	1.011	F	0.019	NO
13	Pacific Avenue/ Lexington Drive	AM	0.411	A	0.467	A	0.056	NO
		PM	0.488	A	0.525	A	0.037	NO
14	Central Avenue/ Lexington Drive	AM	0.447	A	0.488	A	0.041	NO
		PM	0.559	A	0.598	A	0.039	NO
15	Brand Boulevard/ Lexington Drive	AM	0.471	A	0.500	A	0.029	NO
		PM	0.671	B	0.734	C	0.063	NO
16	Glendale Avenue/ Lexington Drive	AM	0.718	C	0.778	C	0.060	NO
		PM	0.767	C	**0.832**	**D**	**0.065**	**YES**
17	Verdugo Road/ Wilson Avenue	AM	0.683	B	0.761	C	0.078	NO
		PM	0.691	B	0.738	C	0.047	NO
18	San Fernando Road/ Broadway	AM	0.692	B	0.550	A	-0.142	NO
		PM	0.788	C	0.727	C	-0.061	NO
19	Pacific Avenue/ Broadway	AM	0.409	A	0.429	A	0.020	NO
		PM	0.679	B	0.719	C	0.040	NO
20	Columbus Avenue/ Broadway	AM	0.425	A	0.519	A	0.094	NO
		PM	0.552	A	0.648	B	0.096	NO
21	Central Avenue/ Broadway	AM	0.450	A	0.476	A	0.026	NO
		PM	0.646	B	0.704	C	0.058	NO
22	Brand Boulevard/ Broadway	AM	0.433	A	0.510	A	0.077	NO
		PM	0.644	B	0.704	C	0.060	NO
23	Glendale Avenue/ Broadway	AM	0.585	A	0.672	B	0.087	NO
		PM	0.762	C	**0.895**	**D**	**0.133**	**YES**
24	Chevy Chase Drive/ Broadway	AM	0.568	A	0.763	C	0.195	NO
		PM	0.660	B	0.800	C	0.140	NO
25	Verdugo Road/ Broadway	AM	0.493	A	0.573	A	0.080	NO
		PM	0.857	D	**1.019**	**F**	**0.162**	**YES**
26	Harvey Drive/ Wilson Avenue	AM	0.889	D	**0.945**	**E**	**0.056**	**YES**
		PM	0.627	B	0.700	B	0.073	NO
27	San Fernando Road/ Colorado Street	AM	0.572	A	0.519	A	-0.053	NO
		PM	0.638	B	0.473	A	-0.165	NO
28	Pacific Avenue/ Colorado Street	AM	0.711	C	**0.847**	**D**	**0.136**	**YES**
		PM	0.879	D	**0.919**	**E**	**0.040**	**YES**

Table 4.15-9 2040 Proposed Project Intersection Level of Service Results

ID	Intersection	Peak Hour	2016 Existing		2040 Proposed Project			
			V/C	LOS	V/C	LOS	Change	Impact
29	Columbus Avenue/ Colorado Street	AM	0.648	B	0.747	C	0.099	NO
		PM	0.763	C	**0.916**	**E**	**0.153**	**YES**
30	Central Avenue/ Colorado Street	AM	0.534	A	0.660	B	0.126	NO
		PM	0.712	C	**0.861**	**D**	**0.149**	**YES**
31	Brand Boulevard/ Colorado Street	AM	0.564	A	0.688	B	0.124	NO
		PM	0.676	B	0.794	C	0.118	NO
32	Glendale Avenue/ Colorado Street	AM	0.672	B	0.788	C	0.116	NO
		PM	0.753	C	**0.850**	**D**	**0.097**	**YES**
33	Chevy Chase Drive/ Colorado Street	AM	0.676	B	**0.891**	**D**	**0.215**	**YES**
		PM	0.758	C	**0.832**	**D**	**0.074**	**YES**
34	Verdugo Road/ Colorado Street	AM	0.786	C	**0.922**	**E**	**0.136**	**YES**
		PM	0.801	D	**1.018**	**F**	**0.217**	**YES**
35	Pacific Avenue/ San Fernando Road	AM	0.636	B	0.640	B	0.004	NO
		PM	0.684	B	0.529	A	-0.155	NO
36	Central Avenue/ Maple Street	AM	0.492	A	0.578	A	0.086	NO
		PM	0.637	B	0.769	C	0.132	NO
37	Brand Boulevard/ Maple Street	AM	0.539	A	0.682	B	0.143	NO
		PM	0.628	B	0.788	C	0.160	NO
38	San Fernando Road/ Chevy Chase Drive	AM	0.609	B	0.660	B	0.051	NO
		PM	0.638	B	0.785	C	0.147	NO
39	Central Avenue/ Chevy Chase Drive	AM	0.535	A	0.648	B	0.113	NO
		PM	0.681	B	0.798	C	0.117	NO
40	Brand Boulevard/ Chevy Chase Drive	AM	0.701	C	**0.847**	**D**	**0.146**	**YES**
		PM	0.720	C	**0.872**	**D**	**0.152**	**YES**
41	Glendale Avenue/ Chevy Chase Drive	AM	0.816	D	0.907	**E**	**0.091**	**YES**
		PM	0.803	D	0.869	**D**	**0.066**	**YES**
42	Adams Street/ Chevy Chase Drive	AM	0.586	A	0.675	B	0.089	NO
		PM	0.639	B	0.756	C	0.117	NO
43	Chevy Chase Drive/ Acacia Avenue	AM	0.655	B	0.812	**D**	**0.157**	**YES**
		PM	0.574	A	0.782	C	0.208	NO
44	San Fernando Road/ Los Feliz Road	AM	0.754	C	1.179	**F**	**0.425**	**YES**
		PM	0.906	E	1.325	**F**	**0.419**	**YES**
45	Central Avenue/ Los Feliz Road	AM	0.518	A	0.747	C	0.229	NO
		PM	0.641	B	0.828	**D**	**0.187**	**YES**
46	Brand Boulevard/ Los Feliz Road	AM	0.647	B	1.113	**F**	**0.466**	**YES**
		PM	0.717	C	1.082	**F**	**0.365**	**YES**
47	Glendale Avenue/ Los Feliz Road	AM	0.456	A	0.540	A	0.084	NO
		PM	0.577	A	0.715	C	0.138	NO
48	Central Avenue/ San Fernando Road	AM	0.426	A	0.610	B	0.184	NO
		PM	0.567	A	0.784	C	0.217	NO
49	Brand Boulevard/ San Fernando Road	AM	0.848	D	0.944	**E**	**0.096**	**YES**
		PM	0.848	D	1.003	**F**	**0.155**	**YES**
50	Glendale Avenue/ San Fernando Road	AM	0.689	B	0.811	**D**	**0.122**	**YES**
		PM	0.753	C	0.990	**E**	**0.237**	**YES**

Source: Fehr & Peers 2017 (Appendix F to this EIR)

As described in the Mitigation Measures section below, the proposed SGCP would implement mitigation measures *MM 4.15-1* through *MM 4.15-10*, which reduce the impacts to seven of the intersections listed above; however, the proposed project impacts on the remaining intersections cannot be mitigated to a level below significant. The proposed SGCP would result in significant and unavoidable impacts associated with an applicable CMP, including, but not limited to, LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads.

Vehicle Miles Travelled

The City travel model was used to estimate the average daily weekday VMT generated by land uses within the proposed SGCP area. Table 4.15-10 shows the difference in VMT and vehicle trips between existing conditions and the proposed SGCP at buildout (2040).

Table 4.15-10 Average Daily Weekday Vehicle Miles Travelled

All Trip Types	*VMT*	*Vehicle Trips*	*Average Trip Length*
2016 Existing	3,870,000	548,100	7.1 miles
SGCP (2040)	4,410,000	619,500	7.1 miles

Source: Fehr & Peers 2017 (Appendix F of this EIR)

Buildout of the proposed SGCP would generate approximately 14 percent more VMT than under existing conditions; however, the 14 percent net increase in VMT is substantially less than the combined approximately 27 percent increase in dwelling units and 19 percent increase in non-residential land use within the proposed SGCP area. The benefits of trip reduction strategies identified in the proposed SGCP contribute to the substantially less VMT increase than the overall increases in land use intensity. Trip reduction strategies include:

- Providing alternatives to automotive transportation by designing healthy, attractive, and safe streets for all users;
- Supporting flexibility in local street improvements (i.e. sidewalks, lighting, and access) to meet neighborhood needs;
- Improving linkages to important destinations; and
- Increasing pedestrian safety.

Implementation of these goals will help reduce the impact associated with increased vehicle trips and VMT associated with implementation of the proposed SGCP; however, as described above, the proposed project would result in intersections operating at an LOS of D, E or F. These new impacts are considered significant and unavoidable if not mitigated to a level below significant.

Mitigation Measures

The following mitigation measures will reduce the impacts to intersections that currently operate at a LOS D, E or F, and intersections that would operate at LOS D, E or F as a result of proposed SGCP buildout. Additionally, a list of partial/infeasible mitigation measures is included.

Fully Feasible Mitigation Measures

MM 4.15-1 ***Brand Boulevard & Glenoaks Boulevard:*** *The addition of a second northbound left-turn lane is proposed in order to fully mitigate the impact at this intersection. The proposed turn lane would replace an existing concrete, landscaped median that measures roughly 11 feet wide and 160 feet long.*

MM 4.15-2 ***Glendale Avenue & Monterey Road:*** *The eastbound approach of this intersection along Monterey Road consists of a left-turn lane, through lane, and right-turn lane. The proposed mitigation would restripe the through lane as a through/right-turn lane to accommodate high right-turn volumes at this location. This mitigation can be implemented within the existing ROW.*

MM 4.15-3 ***Harvey Drive & Wilson Avenue:*** *A full mitigation of this impact would require widening the westbound approach along Wilson Avenue to add a second right-turn lane to accommodate high right-turn volumes at this location, specifically in the AM peak hour. This mitigation can be implemented within the existing ROW.*

MM 4.15-4 ***Central Avenue & Colorado Street:*** *The northbound approach of this intersection consists of one left-turn lane, two through lanes, and a right-turn lane. Fully mitigating this intersection would require restriping the northbound approach within the existing ROW to two left-turn lanes, one through lane, and one through/right-turn lane. The existing receiving lanes on the west leg of this intersection can accommodate this modification.*

MM 4.15-5 ***Central Avenue & Los Feliz Road:*** *The southbound approach of this intersection consists of one left-turn lane, two through lanes, and a right-turn lane. Fully mitigating this intersection would require restriping the southbound approach within the existing ROW to two left-turn lanes, one through lane, and one right-turn lane. There are currently two receiving lanes on the east leg of the intersection to accommodate this modification.*

Partial/Infeasible Mitigation Measures

Dual jurisdiction control: The following intersections are controlled by both the City and Caltrans. Full mitigation of these intersections is feasible within the existing ROW; however, since the City does not have full control at these intersections, the mitigation measures are not considered fully feasible.

MM 4.15-6 ***Pacific Avenue & SR-134 WB Ramps:*** *The westbound approach of this intersection consists of a one-lane off-ramp from the WB SR-134 freeway, which widens to two lanes (a through/left-turn lane and a right-turn lane) at the intersection. There is currently a raised concrete pad on the north side of the westbound approach that is assumed to be within Caltrans ROW. The proposed mitigation at this location would widen the westbound approach in the Caltrans ROW to add a second westbound right-turn lane. While this mitigation would widen the existing 50-foot pedestrian crossing distance at this location, additional improvements, such as an enhanced crosswalk, could be installed to help mitigate any negative effects on the pedestrian environment at this location.*

MM 4.15-7 ***Pacific Avenue & SR-134 EB Ramps:*** *There are two modifications that can be made at this intersection within the existing right-of-way to fully mitigate this impact. On the northbound approach, an existing through lane would be restriped as a through/right-turn lane. The eastbound approach (the SR-134 off-ramp) would be widened within the existing Caltrans ROW to add a right-turn lane. While this mitigation would widen the existing 35-foot pedestrian crossing distance at this location, additional improvements, such as an enhanced crosswalk, could be installed to help mitigate any negative effects on the pedestrian environment at this location.*

MM 4.15-8 ***SR-134 WB Ramps & Monterey Road:*** *The northbound approach of this intersection consists of a one-lane off-ramp from the WB SR-134 freeway, which widens to two lanes (a left-turn lane and a*

right-turn lane) at the intersection. The mitigation proposed at this location would widen the off-ramp at the intersection in incorporate a second left-turn lane. There is currently additional Caltrans ROW adjacent to the ramp to make this modification. This configuration would require space for two receiving lanes on the west leg of the intersection, which could be accommodated by removing existing median paint and restricting on-street parking along Monterey Road for approximately 225 feet.

Partial Mitigation Measures

Partial mitigations are proposed at the locations identified below. These proposed intersection configurations allow for a partial mitigation of the intersection impact, reducing volume-to-capacity ratio, but do not fully bring the intersection operations into compliance with the City guidelines. Partial feasible mitigations include intersection changes that can be made entirely within the existing ROW.

MM 4.15-9 ***Central Avenue & Goode Avenue:*** *The westbound approach of this intersection includes a through/right-turn lane that is approximately 20 feet wide. In order to partially mitigate this intersection, this through/right-turn lane would be restriped as a 10-foot through lane and a 10-foot right-turn lane. In order to fully mitigate the impact, the southbound approach would also need to be widened to add a new through lane. The full mitigation is considered infeasible due to physical constraints.*

MM 4.15-10 ***Verdugo Road & Broadway:*** *The impact at this intersection would be partially mitigated if the existing northbound through/right-turn lane was restriped as a right-turn only lane. In order to fully mitigate the impact at this location, the southbound approach and the westbound approach would also both need to be widened to add a new left-turn lane on both legs. The full mitigation is not feasible due to physical constraints.*

Infeasible Mitigation Measures

Mitigations are deemed infeasible if they require additional ROW in built-out environments, or if they conflict with the goals and policies of the SGCP related to implementing context-sensitive transportation projects and improving ease and safety of biking, walking, and transit modes. In these locations, there are no feasible partial mitigations available.

- **Pacific Avenue & Glenoaks Boulevard**: A full mitigation of this impact would require the southbound and northbound approaches to add a new southbound through lane and a new northbound through lane and left-turn lane. This mitigation and any partial mitigation is deemed infeasible.
- **Central Avenue & Sanchez Drive**: A full mitigation of this impact would require widening the southbound approach to add a new through lane. This mitigation and any partial mitigation is deemed infeasible.
- **Brand Boulevard & Goode Avenue**: A full mitigation of this impact would require widening the southbound approach to add a new through lane. This mitigation and any partial mitigation is deemed infeasible.
- **Glendale Avenue & Lexington Drive**: A full mitigation of this impact would require widening the northbound approach to add a new through lane. This mitigation and any partial mitigation is deemed infeasible.
- **Glendale Avenue & Broadway**: A full mitigation of this impact would require widening the northbound and eastbound approaches to add a new through lane on each leg and widening the westbound approach to add a left-turn lane. This mitigation and any partial mitigation is deemed infeasible.

- **Pacific Avenue & Colorado Street:** A full mitigation of this impact would require widening the southbound approach to add a new through lane. This mitigation and any partial mitigation is deemed infeasible.
- **Columbus Avenue & Colorado Street:** A full mitigation of this impact would require widening the northbound approach to add a left-turn lane and a through lane. This mitigation and any partial mitigation is deemed infeasible.
- **Glendale Avenue & Colorado Street:** A full mitigation of this impact would require widening the southbound approach to add a new through lane and widening the eastbound approach to add a new left-turn lane. This mitigation and any partial mitigation is deemed infeasible.
- **Chevy Chase Drive & Colorado Street:** As part of the Glendale Bicycle Master Plan, a lane reconfiguration is planned for Chevy Chase Drive to accommodate bicycle facilities between Acacia and Glenoaks Boulevard. At the intersection of Chevy Chase Drive and Colorado Street, the proposed lane reconfiguration would result in the loss of one northbound through lane and one southbound through lane. If this lane reconfiguration was not implemented, a full mitigation of the intersection would be feasible. However, this removal would conflict with the stated goals of the SGCP to provide safe alternatives to automobile travel for all users. Therefore, this mitigation is deemed infeasible.
- **Verdugo Road & Colorado Street:** A full mitigation of this impact would require widening both the northbound approach and the westbound approach to add and a new through lane on both legs. Fully mitigating the impact would also require widening both the southbound approach and northbound approach to add a new left-turn lane on both legs. This mitigation and any partial mitigation is deemed infeasible.
- **Brand Boulevard & Chevy Chase Drive:** A full mitigation of this impact would require widening the southbound approach to add a new through lane. This mitigation and any partial mitigation is deemed infeasible.
- **Glendale Avenue & Chevy Chase Drive:** A full mitigation of this impact would require widening the westbound approach to add a new left-turn lane and a new through lane. This mitigation and any partial mitigation is deemed infeasible.
- **Chevy Chase Drive & Acacia Avenue:** A full mitigation of this impact would require widening the westbound approach to add a new left-turn lane. This mitigation and any partial mitigation is deemed infeasible.
- **San Fernando Road & Los Feliz Road:** As part of the Glendale Citywide Pedestrian Plan, a lane reconfiguration is planned along Los Feliz between San Fernando Road and Glendale Avenue. At this location, the project calls for removal of one through lane on the westbound approach. Forgoing implementation of this project would result in partial mitigation of the impact at this intersection. To fully mitigate the impact, the northbound and eastbound approaches would also need to be widened to add a new left-turn lane on both approaches, and the southbound approach would need to be widened to add a new through lane. However, these mitigations would conflict with the stated goals of the SGCP to provide safe alternatives to automobile travel for all users and to improve pedestrian safety. This mitigation is deemed infeasible.
- **Brand Boulevard & Los Feliz Road:** At this location, the proposed lane reconfiguration on Los Feliz would require removing one westbound through lane and one eastbound through lane. If this project was not implemented, the impact at this intersection would be partially mitigated. In order to fully mitigate the intersection, a new through lane would need to be added to the

southbound approach, a new through lane would need to be added to the northbound approach, and a left-turn lane would need to be added to the westbound approach. It is assumed that these changes could be made within the existing ROW if angled and parallel parking was removed on each of the three legs discussed previously. However, given that this parking serves automobile uses along the Brand Boulevard of Cars, and that either the full or partial mitigation would drastically alter the environment for pedestrians, these are deemed infeasible.

- **Brand Boulevard & San Fernando Road:** Replacing the existing concrete and painted median along the northbound approach of the intersection with a northbound left-turn lane would partially mitigate the impact at this intersection. However, in order to fully mitigate the impact, the westbound approach would need to be widened to add a new left-turn lane and the eastbound approach would need to be widened to add a new right-turn lane. The full and partial mitigation are considered infeasible due to conflicts with the goals of SGCP and require the additional right-of-way.
- **Glendale Avenue & San Fernando Road:** A full mitigation of this impact would require widening the westbound approach to add a new right-turn lane and widening the eastbound approach to add a new left-turn lane. This mitigation and any partial mitigation is deemed feasible.

Table 4.15-11 shows the LOS that results from implementation of all feasible mitigation measures, including full and partial mitigation measures. The table also shows which locations remain impacted after mitigation measures are implemented.

Table 4.15-11 SGCP Level of Service Results with Full and Partial Mitigations

ID	Intersection	Peak Hour	2016 Existing		2040 Proposed Project with Mitigations			
			V/C	LOS	V/C	LOS	Change	Impact
3	Brand Boulevard/ Glenoaks Boulevard	AM	0.685	B	0.776	C	0.091	NO
		PM	0.691	B	0.726	C	0.035	NO
4	Pacific Avenue/SR-134 WB Ramps	AM	0.723	C	0.759	C	0.036	NO
		PM	1.076	F	1.077	F	0.001	NO
5	Pacific Avenue/SR-134 EB Ramps	AM	0.768	C	0.794	C	0.026	NO
		PM	1.023	F	1.023	F	0.000	NO
6	Central Avenue/ Goode Avenue	AM	0.592	A	0.639	B	0.047	NO
		PM	0.808	D	**0.834**	**D**	**0.026**	**YES**
10	SR-134 WB Ramps/ Monterey Road	AM	0.756	C	0.782	C	0.026	NO
		PM	0.790	C	0.767	C	-0.023	NO
11	Glendale Avenue/ Monterey Road	AM	1.134	F	1.143	F	0.009	NO
		PM	1.074	F	1.039	F	-0.035	NO
25	Verdugo Road/ Broadway	AM	0.493	A	0.663	B	0.170	NO
		PM	0.857	D	**0.947**	**E**	**0.090**	**YES**
26	Harvey Drive/ Wilson Avenue	AM	0.889	D	0.761	C	-0.128	NO
		PM	0.627	B	0.700	B	0.073	NO
30	Central Avenue/ Colorado Street	AM	0.534	A	0.606	B	0.072	NO
		PM	0.712	C	0.794	C	0.082	NO
45	Central Avenue/ Los Feliz Road	AM	0.518	A	0.713	C	0.195	NO
		PM	0.641	B	0.774	C	0.133	NO

Source: Fehr & Peers 2017 (Appendix F to this EIR)

Level of Significance After Mitigation

Implementation of fully feasible mitigation measures *MM 4.15-1* through *MM 4.15-5* would reduce the impacts at the five associated intersections (Brand Boulevard & Glenoaks Boulevard, Glendale Avenue & Monterey Road, Harvey Drive & Wilson Avenue, Central Avenue & Colorado Street, and Central Avenue & Los Feliz Road) to a level below significant. The three dual-jurisdiction and mitigation measures (*MM 4.15-6* through *MM 4.15-8*) and two partially infeasible mitigation measures (*MM 4.15-9* through *MM 4.15-10*) would reduce the impact at the associated intersections (Pacific Avenue & SR-134 WB Ramps, Pacific Avenue & SR-134 EB Ramps, SR-134 WB Ramps & Monterey Road, Central Avenue & Goode Avenue, and Verdugo Road & Broadway, respectively); however, the mitigation measures would not reduce the impact to a level below significant. Therefore, impacts to the remaining intersections listed in Table 4.15-9 cannot be mitigated, and Impact 4.15-5 would remain significant and unavoidable.

4.15.4 Cumulative Impacts

Threshold	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 nonmotorized 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?

Cumulative projects would have the potential to conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, such as the Glendale General Plan and SCAG RTP/SCS; however, all projects within the City require adherence to the citywide goal to "foster a well-planned, comprehensive and safe transportation system that enhances mobility through infrastructure, technology, design, and multi-modal options." Additionally, the cumulative projects would be required to comply with the Glendale Bicycle Master Plan (2012), the Glendale Safe and Healthy Streets Plan (2011), and the Downtown Mobility Study (2007). As with the proposed SGCP, adherence to the citywide goal and compliance with plans mentioned above would reduce any potential conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system to a level below significance. As such, the proposed project's contribution to a cumulatively considerable impact would be less than significant.

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

Cumulative projects would have the potential to increase vehicle trips and VMT, and decrease LOS within the proposed SGCP area. The Existing Conditions (2016) scenario plus Future Buildout scenarios, with and without the proposed project, were analyzed in the Transportation Analysis Report (refer to Appendix F of this EIR) includes projects within Glendale that are listed in Table 3-3 of this EIR, such as existing and future planned arterial, intersection, and highway improvement projects. The impacts thereunder the Existing Conditions (2016) scenario, which includes the cumulative projects, were similar to the buildout of the proposed SGCP in 2040 (refer to Appendix F of this EIR). Thus, development of the cumulative projects would result in significant impacts to LOS, and the impacts would not be

reduced to a level below significance. The proposed project's contribution to a cumulatively considerable impact would be potentially significant and unavoidable.

Threshold	Would the project 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?

As discussed above in Section 14.15-3, Effects Found Not Significant, the proposed SGCP would not result in an impact associated with air traffic patterns (commercial or military); therefore, the proposed SGCP would not result in a cumulative considerable impact associated with air traffic patterns.

Threshold	Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?

Cumulative projects have the potential to increase hazards due to a design feature within the proposed SGCP area. As discussed under Impact 4.15-1, the proposed SGCP would utilize the existing local and regional roadway infrastructure located within the proposed SGCP area. The only changes to road design within the proposed SGCP area would be from the implementation and improvements associated with mitigation measures *MM 4.15-1* through *MM 4.15-10*. These improvements include adding an additional lane to a road segment, adding an additional turn lane at an intersection or widening of a road segment; however, these would not represent an increase in hazards associated with a design feature. Further, the road improvements associated with *MM 4.15-1* through *MM 4.15-10* are designed to reduce any potential hazards due to congestion. Therefore, the proposed SGCP would not result in a cumulatively considerable impact associated with hazards due to a design feature. The cumulative impact would be less than significant.

Threshold	Would the project result in inadequate emergency access?

Cumulative projects have the potential to result in inadequate emergency access. As discussed under Impact 4.15-2 and Impact 4.7-5, traffic conditions would become more congested in the SGCP area as a result of the proposed SGCP. In the event of an accident or natural disaster, the increase in traffic would impede the rate of evacuation for employees and residents. Traffic would also increase response times for emergency medical or containment services. However, the Office of Emergency Services is tasked with coordinating disaster operations within the City. Additionally, Glendale General Plan Safety Element Goal 8, Policy 8-1, Program 8-1.1 is directly related to emergency services; Program 8-1.1 encourages the update of disaster preparedness and recovery plans as necessary. Adherence to Goal 8, and related policies and programs, in the Safety Element of the Glendale General Plan would reduce impacts associated with an emergency response plan or emergency evacuation plan.

All future development would also be required to comply with the provisions of the local, State, and federal regulations for emergency response plans and emergency evacuation plans. Compliance with these regulations would reduce potential cumulative impacts to less than significant.

Threshold	Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Cumulative projects have the potential to result in impacts associated with an adopted policy, plan or program regarding public transit, bicycle, or pedestrian facilities; however, the City of Glendale would require compliance with adopted policies of the City of Glendale Bicycle Master Plan (2012), the Glendale Safe and Healthy Streets Plan (2011), and the Glendale General Plan prior to project approval.

Therefore, the cumulative impact associated with the implementation of the proposed SGCP would be less than significant.

4.15.5 References

City of Glendale (Glendale). 1998. Circulation Element of the General Plan. Planning Division. Online URL: http://www.glendaleca.gov/government/departments/community-development/planning-division/city-wide-plans/circulation-element

City of Glendale (Glendale). 2017. Community Emergency Response Team Program. Online URL: http://www.glendaleca.gov/government/departments/fire-department/other/emergency-preparedness-response/cert-community-emergency-response-team

Fehr & Peers. 2017. South Glendale Community Plan Draft Transportation Analysis Report. (Appendix F to this EIR)

Los Angeles County Metropolitan Transportation Agency (Metro). 2010. Congestion Management Program. Online URL: http://media.metro.net/docs/cmp_final_2010.pdf

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