

FINAL ENVIRONMENTAL IMPACT REPORT GRAYSON REPOWERING PROJECT

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

4.9 TRANSPORTATION AND TRAFFIC

This section evaluates the road transportation system in the vicinity of the Project and potential impacts that could result from the Project. The analysis in this section is based on Traffic and Circulation Study completed for the Project (Appendix J), California Department of Transportation (Caltrans) traffic data, local and regional maps, and discussions with appropriate agencies. As discussed in Section 3.4.1, the Initial Study (Appendix A) and Traffic and Circulation Study (Appendix J), the Project does not propose a change in existing employee levels and operational characteristics. Existing employee levels and delivery and service requirements are not anticipated to change after completion of Project. Therefore, any changes in power plant traffic after commissioning are expected to be minimal and would result in less than significant potential impacts to transportation and traffic. As a result, potential operation phase traffic impacts are not discussed further in this analysis. The discussion below therefore only analyzes potential transportation and traffic impacts related to demolition, construction and commissioning which are temporary in nature.

4.9.1 ENVIRONMENTAL SETTING

A description of the existing transportation system of the Project site and the surrounding area is presented in the following paragraphs.

4.9.1.1 Existing Conditions

The Grayson Power Plant, an operating power plant, is located within the Glendale Water & Power Utility Operation Center. The site is bounded to the south by the Verdugo Wash and State Route 134 (SR-134), to the west by the Los Angeles River and Interstate 5 (I-5), to the north by commercial properties, and to the east by commercial and residential properties. Access to the site is provided via an existing Operation Center entrance driveway on Fairmont Avenue. Secondary access is provided via the gated entrance on Flower Street, opposite Air Way and the gated driveway access to the Glendale Water Treatment Plant at 800 and 830 Flower Street.

The following roadway/highway segments have the potential to be impacted by implementation of the Project:

- I-5 (segment 7 – between SR-134 and State Route 2)
- I-5 (segment 8– between SR-134 and State Route 170)
- SR-134 (segment 1 – between I-5 and State Route 170)
- SR-134 (segment 2 – between I-5 and State Route -2)

FINAL ENVIRONMENTAL IMPACT REPORT GRAYSON REPOWERING PROJECT

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

The following intersections have the potential to be impacted by implementation of the Project:

- Flower Street/Western Avenue
- Western Ave/I-5 southbound ramps
- Flower Street/I-5 northbound ramps
- Flower Street/Sonora Avenue
- Flower Street/Grandview Avenue
- San Fernando Road/Flower Street
- Flower Street/Air Way
- Flower Street/Fairmont Avenue
- San Fernando Road/Fairmont Avenue
- Fairmont Avenue/SR-134 westbound ramps
- Fairmont Avenue/Concord Street
- San Fernando Road/Doran Street
- Doran Street/SR-134 eastbound ramps
- Doran Street/Concord Street

The following provides a description of the regional and local roadways which service the Project for access, material staging, and waste transport. The local roadway designations were identified from the California Department of Transportation California Road System (CRS) maps and from the *Traffic and Circulation Study* completed for the Project (Appendix J).

Regional Transportation Network

Interstate 5 Freeway (I-5) is the major 1,381-mile north-south urban interstate freeway through California (796 miles), Oregon (308 miles), and Washington (277 miles). The southern terminus is at the Mexican Border in Tijuana. The northern terminus is at the Canadian Border in White Rock. I-5 connects Los Angeles County to northern and southern California. The California Department of Transportation (Caltrans) I-5 Transportation Concept Report (District 7) dated June 2013, divides the District 7 portion of this interstate into segments. Segment 7 starts at the interchange of SR-2 and extends north to SR-134 and has five mixed-flow lanes in each direction. Segment 8 starts at the SR-134 interchange and extends north to SR-170 and has four mixed-flow lanes in each direction. Regional access from I-5 to the project site is provided via the interchange with Western Avenue and Flower Street.

State Route 134 (SR-134) is a 13.34 mile east-west urban principle arterial freeway that extends from State Route 170/101 interchange and extends to the State Route 210 interchange. The Caltrans I-5 Transportation Concept Report (District 7) dated June 2015, divides the District 7 portion of this interstate into segments. Segment 1 starts at the State Route 170/101 interchange

FINAL ENVIRONMENTAL IMPACT REPORT GRAYSON REPOWERING PROJECT

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

and extends east to I-5 and has four mixed-flow lanes and one high occupancy vehicle (HOV) lane in each direction. Segment 2 starts at the I-5 interchange and extends east to SR-2 and has four mixed-flow lanes and one HOV lane in each direction. Regional access is provided via the freeway-to-freeway connector with I-5 and the San Fernando interchange consists of hook ramps that connect to Fairmont Avenue and Doran Street.

Local Transportation Network

San Fernando Road is a four-lane, north-south roadway that extends parallel to and on the east side of the railroad tracks. It is classified as a major arterial in the City of Glendale *Circulation Element* (City of Glendale, 1998). It currently accommodates approximately 26,500 vehicles per day (vpd) south of Doran Street. On-street parking is prohibited on the west side but allowed on the east side. Sidewalks are provided on the east side. The posted speed limit is 40 miles per hour (mph). The intersections with Flower Street, Fairmont Avenue and Doran Street are signalized.

Fairmont Avenue is an east-west roadway that extends parallel to and on the north side of SR-134. The roadway is classified as major arterial between San Fernando Road and SR-134 westbound ramps. On-street parking is not allowed on either side of the roadway. East of the SR-134 westbound ramps, Fairmont Avenue is classified as a minor arterial with parking allowed on both sides of the street. West of the SR-134 westbound ramp intersection, Fairmont Avenue continues on an overpass over the railroad tracks, and extends northerly parallel to the Los Angeles River until it connects to Flower Street. The posted speed limit is 35 mph. This segment of Fairmont Avenue accommodates approximately 7,500 vpd.

Flower Street extends as an east-west two-lane minor arterial from San Fernando Road to Fairmont Avenue, where it turns northerly and continues as a four-lane facility parallel to I-5 until it terminates at Olive Street. Parking is allowed intermittently along the two-lane and four-lane segments. The posted speed limit is 30 mph. The roadway provides direct access to the project site via the existing power plant gate.

Doran Street is an east-west roadway that extends parallel to and on the south side of SR-134. The roadway is classified as major arterial between San Fernando Road and the SR-134 eastbound ramps. On-street parking is not allowed on either side of the roadway. East of the SR-134 eastbound ramps, Doran Street is classified as an urban collector with parking allowed on both sides of the street. West of San Fernando Road, Doran Street crosses the railroad tracks and terminates in a cul-de-sac street classified as a local street in the City of Los Angeles. This segment provides access to the Caltrans Maintenance Station located under the SR-134.

Project Vicinity Primary Site Access and Parking

FINAL ENVIRONMENTAL IMPACT REPORT GRAYSON REPOWERING PROJECT

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

Project Site Access

Access to the site is provided via the existing Utility Operations Center entrance on Fairmont Avenue. Secondary access is provided via the gated entrance on Flower Street, opposite Air Way and the gated driveway access to the Glendale Water Treatment Plant at 800 and 830 Flower Street. The Utility Operations Center entrance contains two inbound and two outbound lanes, which are separated by fencing and a guardhouse, and is controlled by a stop sign on the exit. A southbound left-turn lane and a northbound right-turn lane are provided on Fairmont Avenue at the entrance.

Traffic on Fairmont Avenue is metered by the all-way stop control at Flower Street to the north and the traffic signal at the SR-134 westbound ramps to the south, and sufficient gaps are provided to enter and exit the project site without significant delays. Review of the entrance intersection indicates that adequate corner and stopping sight distance lines are provided.

Parking and Temporary Parking Lot Access

Limited parking is available on the existing Glendale Water & Power Utility Operation Center site through a combination of existing parking spaces and temporary construction parking areas. Construction worker parking will be provided on the Caltrans/City of Glendale storage yard between the Verdugo Wash and Doran Street, which will be converted to a temporary parking lot during peak construction periods. Access to the proposed temporary construction worker parking lot on Doran Street will be via two existing driveways for the Caltrans/City of Glendale maintenance yard.

Bicycle Facilities

No designated bicycle lanes are currently provided on the study area roadways. The City's Bicycle Transportation Plan (2012) includes the following bicycle network improvements:

- Multipurpose path along north side of the Los Angeles River from Flower Street to Verdugo Wash/Los Angeles River confluence (near Fairmont Avenue flyover);
- Flower Street – Class III Bike route with sharrows from Western Ave to San Fernando Road;
- Fairmont Avenue – B-type sharrows from Flower Street to Concord Street;
- Doran Street – Class II colored bike lane from San Fernando Road to Concord Street;
- Western Avenue - Class III Bike route with sharrows from Glenoaks Boulevard to Flower Street. Class II colored bike lanes between Flower Street and Lake Street, including pylons at I-5 ramps to separate merging vehicles from bicycles; and

**FINAL ENVIRONMENTAL IMPACT REPORT
GRAYSON REPOWERING PROJECT**

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

- Concord Street – Class III bike route with sharrows from South Street to Broadway. Class II colored bike lanes between Fairmont Avenue and Doran Street.

Railways

The Project site is located in an industrial area that contains existing rail activity. The Southern California Regional Rail Authority (SCRRA) maintains and operates the railroad tracks located immediately east of the project site, which is used by approximately 85 Metrolink, Amtrak and Union Pacific Rail trains on a daily basis. The Glendale Transportation Center Station is located on 400 W Cerritos Avenue approximately two miles south of the Project site. The railway corridor is included in the future California High Speed Rail Palmdale/Los Angeles segment.

Transit

The Los Angeles County Metropolitan Transportation Authority (Metro) and the City of Glendale Beeline provide fixed route service in the study area. Within the study area, Metro Routes 94, 183 and 794 provide regional service along San Fernando Road with bus stops located in the vicinity of the project site. Metro Route 183 also provides service along Doran Street. Beeline Route 12 provides bus service between the Glendale Transportation Center and the Burbank Transportation Center, with bus stops along San Fernando Road and Flower Street. The Project site is located in an industrial area that contains an extensive network of sidewalks and public transit system.

4.9.2 LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Table 4-63 Laws, Ordinances, Regulations, and Standards (LORS) for Transportation and Traffic

LORS	Administering Agency
State	
Senate Bill 743	Governor's Office of Planning and Research
General roadway regulation	Caltrans
Local	
Regional Transportation Plan	Southern California Association of Governments
Congestion Management Program	Metro
City of Glendale General Plan	City of Glendale
City of Glendale Bicycle Transportation Plan	City of Glendale

State LORS

Senate Bill 743

Senate Bill (SB) 743 required the Governor's Office of Planning and Research (OPR) to revise the guidelines for conducting transportation analyses and identify new metrics for identifying and mitigating transportation impacts under CEQA. OPR identified Vehicle Miles Traveled (VMT) per capita and VMT per employee as the new metrics for transportation analysis. Thus, the reliance



FINAL ENVIRONMENTAL IMPACT REPORT GRAYSON REPOWERING PROJECT

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

on roadway capacity, level of service, and delay as performance measures will no longer constitute a significant environmental effect under CEQA. The intent is to encourage smart growth and infill developments and reduce the amount of greenhouse gas emissions produced by vehicle travel.

Agencies, such as the California Department of Transportation (Caltrans), are starting to make process changes in assisting with early implementation of SB 743 by evolving their transportation analysis to be more multimodal. It is anticipated that regulatory language changes to CEQA will be adopted in late 2017 by the Natural Resources Agency and that statewide implementation will occur in late 2019. In addition, the Project would not result in a change to long-term Project traffic levels or trip lengths compared to baseline conditions, therefore VMT analysis is not applicable to the Project.

General Roadway Regulation – Caltrans

California Department of Transportation (Caltrans) regulates and maintains State and Interstate roadways (state routes, highways, freeways) in the State of California. In areas with State roadways, Caltrans has the responsibility to maintain these roadways while the local jurisdictions (e.g., City and County transportation departments) are responsible for maintaining local roads. Local jurisdictions work with Caltrans to achieve transportation service requirements and improvements.

The Project site is located in Caltrans District 7, which includes Los Angeles County. This district is responsible for planning, designing, and maintaining State highways in the general area of the Project site, including I-5 and SR-134.

Local LORS

Regional Transportation Plan – Southern California Association of Governments

The Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) is a long-term vision document that outlines transportation goals, objectives, and policies for the SCAG region, including Los Angeles County (SCAG 2016). The latest SCAG RTP, adopted in April 2012, includes an assessment of overall growth and economic trends in the region and provides strategic direction for transportation capital investments to support more efficient and “sustainable” modes of transportation from 2012 through 2035. Future planning will promote the use of bus and light rail transit, passenger high speed rail, and other Transportation Demand Management strategies.

Congestion Management Program – Metro

As the Congestion Management Agency for Los Angeles County, Metro, is responsible for implementing the Congestion Management Program (CMP) (Metro 2010). The CMP is a state-mandated program that was enacted by the State Legislature with the passage of Proposition



FINAL ENVIRONMENTAL IMPACT REPORT GRAYSON REPOWERING PROJECT

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

111 in 1990. The program is intended to address the impact of local growth on the regional transportation system. The most recent CMP was adopted by the Metro Board on October 28, 2010. The 2010 CMP summarizes the results of 18 years of CMP highway and transit monitoring and 15 years of monitoring local growth. CMP implementation guidelines for local jurisdictions are also contained in the 2010 CMP.

There are no CMP intersection monitoring locations in the Project study area. However, the following CMP freeway monitoring locations have been identified in the project vicinity:

- No. 1005 I-5 Freeway south of Colorado Boulevard Extension
- No. 1055 SR-134 Freeway east of Central Avenue

City of Glendale General Plan – City of Glendale

Land Use Element - Circulation

Goal: Ensure that existing development is provided with adequate and safe streets

Goal: Provide adequate streets in advance of development capable of accommodating traffic associated with proposed uses

Circulation Element

Goal 2: Minimization of congestion, air pollution, and noise associated with motor vehicles

Goal 3: Reasonable access to services and goods in Glendale by a variety of transportation modes

Goal 4: Functional and safe streetscapes that are aesthetically pleasing for both pedestrians and vehicular travel

City of Glendale Bicycle Transportation Plan – City of Glendale

The Glendale Bicycle Transportation Plan serves as a guide to the City in planning, development, design, and maintenance for new and upgraded bicycle facilities for the next 20 years. The Bicycle Transportation Plan will be updated every 5 years to inventory and evaluate changes to infrastructure, and to adjust planned facilities based on changing future conditions. The Glendale Bicycle Transportation Plan is compliant with Caltrans Bicycle Transportation Account requirements.

Goal 1: Create an environment where people of all ages can circulate safely and easily on a bicycle

FINAL ENVIRONMENTAL IMPACT REPORT GRAYSON REPOWERING PROJECT

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

- Goal 2: Increase the number of bicyclists by enticing more people to use their bicycles instead of driving
- Goal 3: Promote the health of Glendale residents
- Goal 4: Enhance the economic viability of Glendale
- Goal 5: Goal 6: Reduce greenhouse gas emissions and energy consumption
- Goal 6: Develop and implement an educational program for safe bicycling

The Glendale Bicycle Transportation Plan outlines the following policies in order to accomplish these goals.

- Policy 1: The City will develop a complete bikeway network throughout Glendale
- Policy 2: The City will actively accommodate and encourage safe and convenient bicycle utilitarian trips to schools, employment sites, stores, parks, and other destinations throughout Glendale
- Policy 3: The City will take steps to reduce the bicycle-involved crash rate (fewer crashes per mile ridden)
- Policy 4: The City will make bicycle parking available, secure, and convenient throughout Glendale
- Policy 5: The City will work to implement Safe Routes to School (SRTS) programs in each Glendale school within the next 10 years
- Policy 6: The City will ensure that new development is bikeable, walkable, and barrier-free
- Policy 7: The City will implement this Bicycle Transportation Plan within 20 years

4.9.3 ENVIRONMENTAL IMPACTS

4.9.3.1 Methodology

Traffic data and other transportation system information were obtained from the traffic study for the Project, maps, literature searches, and aerial photos. Traffic volumes for regional roadways in the vicinity of the Project were obtained from the Traffic and Circulation Study completed for the Project (Appendix J) and the Transportation Concept Reports published by Caltrans. Transit data was obtained from Southern California Regional Rail Authority website. The thresholds in Metro's CMP and City of Glendale General Plan were taken into consideration in the evaluation of impacts.

**FINAL ENVIRONMENTAL IMPACT REPORT
GRAYSON REPOWERING PROJECT**

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

Existing Freeway Design Volumes & Level of Service

The standard measure used to gauge traffic congestion is Level of Service (LOS). LOS uses field data to report the flow and mobility of vehicles along road segments and delays at intersections. LOS is then rated from “A”, indicating free-flow traffic and minimal delays, to “F”, indicating traffic exceeding capacity, with stop-and-go gridlock. LOS F is further defined by a number (LOS F0, LOS F1, LOS F2, etc.) which signifies the amount of time that traffic would be at LOS F. LOS F0 would be less than one hour, LOS F1 would be one hour or more, but less than two hours; LOS F2 would be two hours or more, but less than three hours; etc. The LOS for potentially affected roadway/highway segments was determined from the Caltrans Transportation Concept Reports. Table 4-64 presents the existing Average Annual Daily Traffic (AADT) and LOS for the roadway/highway segments with the potential to be impacted by the Project.

**Table 4-64 Existing Roadway/Highway Segment Conditions and Level of Service
Summary for Project Routes**

Roadway/Highway Segment	Roadway Type	Jurisdiction	Existing Conditions AADT	LOS
I-5 (segment 7)	Urban Interstate Freeway	Caltrans Roadway	294,000	F1
I-5 (segment 8)	Urban Interstate Freeway	Caltrans Roadway	233,910	F0
SR-134 (segment 1)	Urban Principle Arterial/Other Freeway or Expressway	Caltrans Roadway	243,300	F0
SR-134 (segment 2)	Urban Principle Arterial/Other Freeway or Expressway	Caltrans Roadway	247,300	F0
Sources: Transportation Concept Reports: I-5 – Caltrans Highways (2013b) Transportation Concept Reports: SR-134 – Caltrans Highways (2015)				

Caltrans District 7 has established LOS F0 as the minimum acceptable level of service on the freeway system (Caltrans, 1996). If an existing freeway system is operating at less than the acceptable LOS, the existing Measure of Effectiveness should be maintained. Segment 7 along I-5 has an existing LOS below the minimum acceptable level. The Transportation Concept Report for I-5 outlines improvements for the additional capacity forecasted to achieve the desired LOS by 2035. While segment 7 is below the current minimum acceptable level, no improvements were outlined for this segment.

**FINAL ENVIRONMENTAL IMPACT REPORT
GRAYSON REPOWERING PROJECT**

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

The Los Angeles County Metro has established LOS E or better as the acceptable LOS for transportation facilities on the CMP highway network. Any transportation facility on the CMP highway network operating at LOS F is considered to be deficient. Both I-5 and SR-134 are part of the CMP highway network and operating at a deficient LOS according to the CMP. A significant adverse traffic impact would occur on a CMP highway network if implementation of the Project would result in the following:

- The ramp segment to operate at an unacceptable LOS and an increase in the volume-to-capacity (V/C) ratio of greater than or equal to 0.02 (based on Los Angeles County CMP Guidelines).

Existing Intersection Volumes & Level of Service

Intersections impacted by the Project were evaluated in the Traffic and Circulation Study completed for the Project (Appendix J). The traffic analysis focuses on key intersections within the study area during the a.m. and p.m. commute periods, when peak traffic volumes typically occur. A LOS rating is used to identify the operating condition at intersections. Table 4-65 presents the LOS criteria for intersections.

All study area intersections are located within the City of Glendale. The City of Glendale considers LOS C or better acceptable for intersection operations. The target level of service applies to the freeway ramp intersections with City streets in the study area.

Table 4-65 Intersection Level of Service Criteria

LOS	Signalized Intersections (V/C Ratio)	Signalized Intersections (Sec. of Delay)	Unsignalized Intersections (Sec. of Delay)	Definition
A	< 0.60	≤ 10	≤ 10	Conditions of free unobstructed flow, no delays and all signal phases sufficient in duration to clear all approaching vehicles.
B	0.61 – 0.70	> 10 and ≤ 20	> 10 and ≤ 15	Conditions of stable flow, very little delay, a few phases are unable to handle all approaching vehicles.
C	0.71- 0.80	> 20 and ≤ 35	> 15 and ≤ 25	Conditions of stable flow, delays are low to moderate, full use of peak direction signal phases is experienced.
D	0.81 – 0.90	> 35 and ≤ 55	> 25 and ≤ 35	Conditions approaching unstable flow, delays are moderate to heavy, significant signal time deficiencies are experienced for short durations during the peak traffic period.
E	0.91 – 1.00	> 55 and ≤ 80	> 35 and ≤ 50	Conditions of unstable flow, delays are significant, signal phase timing is generally insufficient, congestion exists for extended duration throughout the peak period.

**FINAL ENVIRONMENTAL IMPACT REPORT
GRAYSON REPOWERING PROJECT**

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

LOS	Signalized Intersections (V/C Ratio)	Signalized Intersections (Sec. of Delay)	Unsignalized Intersections (Sec. of Delay)	Definition
F	> 1.00	> 80	> 50	Conditions of forced flow, travel speeds are low and volumes are well above capacity. This condition is often caused when vehicles released by an upstream signal are unable to proceed because of back-ups from a downstream signal
Sources: Highway Capacity Manual, 2010 Edition				

Existing intersection turning volumes for the a.m. and p.m. peak commute periods (7AM to 9AM and 4PM to 6PM) were derived from counts collected on April 5, 2017 for the Traffic and Circulation Study completed for the Project (Appendix J). Levels of service were calculated for the study area intersections based on the level of service methodology outlined in the study, including lane capacity reductions for turning movements affected by train activity. The *Intersection Capacity Utilization (ICU) Methodology* was used to determine LOS for signalized intersections, and the results are shown as a V/C ratio. The LOS for the unsignalized intersections were calculated using the methodologies outlined in the Highway Capacity Manual (HCM) and the results are presented as seconds of delay. Table 4-66 presents the existing intersection peak hour LOS for intersections that may be impacted by the Project.

Table 4-66 Existing Intersection Peak Hour Levels of Service

Intersection	Control	AM Peak Hour		PM Peak Hour	
		ICU (V/C Ratio)	HCM (Sec. of Delay)	ICU (V/C Ratio)	HCM (Sec. of Delay)
1. Flower Street/Western Avenue	Signal	0.55/LOS A	-	0.76/LOS C	-
2. Western Avenue/I-5 southbound ramps	Two-Way Stop	-	29.9/LOS D	-	23.2/LOS C
3. Flower Street/I-5 northbound ramps	Signal	0.54/LOS A	13.7/LOS B	0.72/LOS C	23.5/LOS C
4. Flower Street/Sonora Avenue	Signal	0.71/LOS C	-	0.78/LOS C	-
5. Flower Street/Grandview Avenue	All-Way Stop	-	10.6/LOS B	-	21.6/LOS C
6. San Fernando Road/Flower Street ^a	Signal	0.42/LOS A	-	0.60/LOS B	-
7. Flower Street/Air Way ^a	Signal	0.14/LOS A	-	0.25/LOS A	-
8. Flower Street/Fairmont Avenue	All-Way Stop	-	16.8/LOS C	-	10.6/LOS B
9. San Fernando Road/Fairmont Avenue	Signal	0.55/LOS A	-	0.64/LOS B	-
10. Fairmont Avenue/SR 134 westbound ramps	Signal	0.69/LOS B	19.5/LOS B	0.74/LOS C	21.0/LOS C

**FINAL ENVIRONMENTAL IMPACT REPORT
GRAYSON REPOWERING PROJECT**

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

Intersection	Control	AM Peak Hour		PM Peak Hour	
		ICU (V/C Ratio)	HCM (Sec. of Delay)	ICU (V/C Ratio)	HCM (Sec. of Delay)
11. Fairmont Avenue/Concord Street	Signal	0.68/LOS B	-	0.72/LOS C	-
12. San Fernando Road/Doran Street ^a	Signal	0.67/LOS B	-	0.80/LOS C	-
13. Doran Street/SR 134 eastbound ramps	Signal	0.54/LOS A	21.9/LOS C	0.66/LOS B	24.3/LOS C
14. Doran Street/Concord Street	Signal	0.65/LOS B	-	0.83/LOS D	-

Notes:
^a Capacity adjusted for movements affected by trains.
 Bolded values exceed City or Caltrans LOS standard.

As shown, all the study area intersections currently operate at LOS C or better during both peak hours, except the Western Avenue/I-5 southbound ramps and Doran Street/Concord Street intersections, which operate in the LOS D range during the a.m. and p.m. peak hours; respectively.

The City of Glendale has established that a significant impact to signalized intersections would occur if a Project increases the V/C ratio by 0.020 or more and LOS D, E, or F occurs. A project generates a significant impact at unsignalized (two-way or four way stop-controlled) intersections if project traffic causes an increase in intersection delay of three (3) seconds or more and LOS D, E or F occurs.

Future Intersection Volumes & Level of Service

The Traffic and Circulation Study completed for the Project developed year 2020 (baseline) traffic volumes by applying an annual growth rate of 1% per year from 2017 to 2020 to account for area-wide growth, and incorporation of near-future development projects and transportation projects in the study area (Appendix J). The intersection volume and capacity estimates are adjusted for movements affected by trains. Table 4-67 presents the year 2020 intersection peak hour LOS for intersections that may be impacted by the Project.

**FINAL ENVIRONMENTAL IMPACT REPORT
GRAYSON REPOWERING PROJECT**

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

Table 4-67 Year 2020 Intersection Peak Hour Levels of Service

Intersection	Control	AM Peak Hour		PM Peak Hour	
		ICU (V/C Ratio)	HCM (Sec. of Delay)	ICU (V/C Ratio)	HCM (Sec. of Delay)
1. Flower Street/Western Avenue	Signal	0.57/LOS A	-	0.78/LOS C	-
2. Western Avenue/I-5 southbound ramps	Two-Way Stop	-	33.8/LOS D	-	25.1/LOS D
3. Flower Street/I-5 northbound ramps	Signal	0.54/LOS A	13.8/LOS B	0.73/LOS C	25.0/LOS C
4. Flower Street/Sonora Avenue	Signal	0.73/LOS C	-	0.81/LOS D	-
5. Flower Street/Grandview Avenue	All-Way Stop	-	10.8/LOS B	-	23.8/LOS C
6. San Fernando Road/Flower Street ^a	Signal	0.44/LOS A	-	0.61/LOS B	-
7. Flower Street/Air Way ^a	Signal	0.14/LOS A	-	0.25/LOS A	-
8. Flower Street/Fairmont Avenue	All-Way Stop	-	10.8/LOS B	-	17.9/LOS C
9. San Fernando Road/Fairmont Avenue	Signal	0.56/LOS A	-	0.66/LOS B	-
10. Fairmont Avenue/SR 134 westbound ramps	Signal	0.71/LOS C	20.6/LOS B	0.76/LOS C	22.7/LOS C
11. Fairmont Avenue/Concord Street	Signal	0.69/LOS B	-	0.73/LOS C	-
12. San Fernando Road/Doran Street ^a	Signal	0.69/LOS B	-	0.82/LOS D	-
13. Doran Street/SR 134 eastbound ramps	Signal	0.55/LOS A	21.9/LOS C	0.68/LOS B	25.4/LOS C
14. Doran Street/Concord Street	Signal	0.66/LOS B	-	0.85/LOS D	-

Notes:
^a Capacity adjusted for movements affected by trains.
 Bolded values exceed City or Caltrans LOS standard.

As shown, all the study area intersections are projected operate at LOS C or better during both peak hours, except the Western Avenue/I-5 southbound ramps (a.m. and p.m. peak hours), Flower Street/Sonora Avenue (p.m. peak hours), San Fernando Road/Doran Street (p.m. peak hours) and Doran Street/Concord Street (p.m. peak hours) intersections; all which are projected to operate at LOS D.

Thresholds of Significance

As described in the Grayson Repowering Project Initial Study, only two criteria from Appendix G of the CEQA Guidelines related to Transportation and Traffic were determined to result in potentially significant impacts (City of Glendale, 2016a). Other criteria from Appendix G of the CEQA Guidelines related to Transportation and Traffic were determined to result in less than



FINAL ENVIRONMENTAL IMPACT REPORT GRAYSON REPOWERING PROJECT

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

significant impacts or no impacts. Therefore, only the two criteria determined to result in potentially significant impacts from the Initial Study will be discussed in this analysis.

Based on Appendix G of the GEQA Guidelines, implementation of the Project would result in a significant adverse impact on the environment related to transportation and traffic if it would:

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

4.9.4 PROJECT IMPACTS

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

As discussed in Section 3.4.1, any changes in existing traffic generated by the power plant are expected to be minimal after completion of the repowering project. The Project vehicle trips will be generated by construction personnel commuting to the site and project hauling/delivery trucks. Details regarding the demolition and construction personnel vehicle trips, on-site equipment, material truck deliveries are provided on a monthly basis in the Traffic and Circulation Study completed for the Project (Appendix J). The daily project construction schedule will be from 6:30 a.m. to 2:30 p.m. with the project related commuter traffic occurring outside of the a.m. peak (7:00 a.m. – 9:00 a.m.) and p.m. peak (4:00 p.m. – 6:00 p.m.) periods.

Truck routes will be regional in nature and truck traffic will use the I-5 and SR-134 to reach the project site. Construction personnel travel is expected to be both regional and local. Construction worker parking will be provided on the Caltrans/City of Glendale storage yard between the Verdugo Wash and Doran Street, which will be converted to a temporary parking lot during peak construction periods. Access to the storage yard is provided via a driveway on Doran Street west of San Fernando Road. A pedestrian bridge is provided between the yard and the project site for direct construction worker access. The peak parking demand can be entirely accommodated on the temporary parking lot. All construction worker traffic is therefore assumed to travel to and from the parking lot.

FINAL ENVIRONMENTAL IMPACT REPORT GRAYSON REPOWERING PROJECT

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

All trips generated by the project will be related to demolition, construction and commissioning, and are considered short-term in nature. A brief summary of construction worker levels and truck traffic is provided below.

- Demolition phase (June 2018 – March 2019): During the demolition phase the Project will require between 25 and 60 construction personnel on a daily basis. Between five and 22 trucks delivering equipment or hauling demolition materials will travel to and from the project site daily.
- Construction phase (April 2019 – December 2020): During the construction phase the Project will require between 35 and 150 construction personnel on a daily basis, with a peak demand of between 170 to 240 personnel during the December 2019 – May 2020 period. Between two and nine trucks delivering equipment or hauling demolition materials are expected to travel to and from the project site daily. In addition, soils import will require up to 50 hauling trucks per day during the first two months (April - May 2019) and up to 25 trucks per day during December 2019 and January 2020. Concrete delivery for foundation pilings will require an average of up to 12 trucks per day, with a maximum of 36 trucks for two days per month during four months (total of eight days during the life of the Project).
- Commissioning (January 2021 – June 2021): During the commissioning phase the Project will require between 25 and 85 construction personnel on a daily basis. The number of hauling/delivery trucks will be reduced to an average of two trucks per day.

Maximum construction related traffic levels are anticipated to occur from January to May 2020.

Project Trip Generation and Distribution

The Traffic and Circulation Study completed for the Project calculated trip generation estimates for each month using the following trip generation factors:

- Truck trips were converted to passenger car trips by applying a passenger car equivalent (PCE) of 2.5, which is consistent with the SCAG Heavy Duty Truck Model.
- Truck arrival and departure pattern is expected to be even throughout the workday, with 13% of truck traffic arriving and leaving during the a.m. and p.m. peak hours.
- Manpower trip generation estimates assume an average vehicle occupancy of 1.15 persons per vehicle.
- Manpower trip generation estimates assume that 25% of construction personnel arrive during the a.m. peak hour and 50% of construction personnel depart during the p.m. peak hour. This assumption was requested by the City's Public Works Department to

**FINAL ENVIRONMENTAL IMPACT REPORT
GRAYSON REPOWERING PROJECT**

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

provide for a conservative analysis, even though construction personnel shifts may typically begin and end outside of peak traffic times.

Table 4-68 presents the detailed trip generation estimates for the peak month per project phase. Peak month trip generation rates were used to provide a conservative analysis of potential traffic-related impacts.

Table 4-68 Project Trip Generation

Project Component	Demolition Sept 2018	Construction Jan 2020	Commissioning Feb 2021
Trucks (hauling/equipment etc.)			
Number of trucks - average/day	22	9	2
Passenger car equivalent multiplier ^a	2.5	2.5	2.5
ADT trucks - average/day	110	45	10
Trucks (delivering soil)			
Number of trucks - average/day	--	25	--
Passenger car equivalent multiplier ^a	--	2.5	--
ADT trucks - average/day	--	125	--
Trucks (concrete/pilings)			
Number of trucks - average/day & maximum/day	--	6 & 10	--
Passenger car equivalent multiplier ^a	--	2.5	--
ADT trucks - average/day & maximum/day	--	30 & 50	--
TOTAL TRUCKS			
Total ADT trucks - average	110	200	10
AM peak hour - average (7AM - 9AM) ^b	14	26	1
PM peak hour - average (4PM - 6PM) ^b	14	26	1
Total ADT trucks - maximum	110	220	10
AM peak hour - maximum (7AM - 9AM) ^b	14	29	1
PM peak hour - maximum (4PM - 6PM) ^b	14	29	1
Project Personnel			
Number of persons	60	180	35
Average vehicle occupancy (AVO)	1.15	1.15	1.15
ADT Project Personnel	104y	313	61
Total ADT personnel - average	104	313	61
AM peak hour - average (25% 7AM - 9AM) ^c	13	39	8
PM peak hour - average (50% 4PM - 6PM) ^c	26	78	15
TOTALS			
ADT Total (trucks and personnel) - average	214	513	71
AM peak hour - average (7AM - 9AM)	27	65	9
PM peak hour - average (4PM - 6PM)	40	104	17

**FINAL ENVIRONMENTAL IMPACT REPORT
GRAYSON REPOWERING PROJECT**

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

Project Component	Demolition Sept 2018	Construction Jan 2020	Commissioning Feb 2021
Notes: ^a Truck trips converted to passenger car equivalent trips by applying a conversion factor of 2.5 per SCAG Heavy Duty Truck Model ^b Trip generation estimates for truck trips assumes that 13% of ADT arrive and depart during both a.m. and p.m. peak hours ^c Project personnel trips assume 25% arrive during a.m. peak hour and 50% depart during p.m. peak hour			

The Project is expected to result in a short-term addition of 214 ADT, 27 a.m. peak hour trips and 40 p.m. peak hour trips during the demolition period. During the construction period, a short-term addition of 513 ADT, 65 a.m. peak hour trips and 104 p.m. peak hour trips would be generated. During the commissioning period, a short-term addition of 71 ADT, 9 a.m. peak hour trips and 17 p.m. peak hour trips would be generated. The project peak is during the construction phase (January 2020).

The Traffic and Circulation Study (Stantec 2017) completed for the Project further evaluated the peak project trips (construction phase, January 2020) by distributing and assigning the trips to the local street network based on the location of the project site, knowledge of the local street network and anticipated truck route and commute travel patterns. The distribution assumes that all truck trips are generated to and from the project site. Trucks trips will be generated during the life of the project to and from the materials lay-off site located on Flower Street opposite the I-5 northbound ramps (excludes trips to and from the lay-off site since these are expected to be minimal). Table 4-69 presents the construction trip distribution for the Project.

Table 4-69 Project Construction Trip Distribution

Street (to/from)	Direction	Percentage of Truck Trips	Percentage of Personnel Trips
I-5	North	35%	20%
	South	30%	20%
SR-134	East	15%	25%
	West	20%	15%
San Fernando Road	North	-	5%
	South	-	5%
Flower Street	North	-	5%
Glenoaks Boulevard	East	-	3%
Grandview Avenue	North	-	2%
Total		100%	100%

Roadway segments in the local transportation network could potentially be damaged by truck traffic. There is also the potential for tracking dust, soils, and other materials from the construction

FINAL ENVIRONMENTAL IMPACT REPORT GRAYSON REPOWERING PROJECT

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

sites onto public and private roads. Although relatively large volumes of loaded trucks have the potential to chronically damage roadways, truck trips associated with the project construction would be legally loaded. Any extra-legal loads needed for specialized deliveries, would be subject to a permit process involving fees and special requirements. The potential for damage to public and private roadways from construction traffic is considered significant.

Caltrans District 7 has established LOS F0 as the minimum acceptable level of service on the freeway system (Caltrans, 1996). If an existing freeway system is operating at less than the acceptable LOS, the existing Measure of Effectiveness should be maintained. Segment 7 along I-5 has an existing LOS below the minimum acceptable level. The AADT for segment 7 is 294,000 vehicles. The Project would add an ADT average of 513 vehicles during the peak period (construction, January 2020). The construction trip distribution calculates that 65% of the 513 vehicles will utilize I-5. Therefore, approximately 334 vehicles may travel along segment 7 of I-5 consisting of 0.11% of the AADT along this freeway. The Project contribution of 0.11% is not expected to degrade the existing measure of effectiveness (MOE) along segment 7.

Project Intersection Volumes & Level of Service (Year 2020)

The Traffic and Circulation Study completed for the Project developed year 2020 (baseline) traffic volumes by applying an annual growth rate of 1% per year from 2017 to 2020 to account for area-wide growth, and incorporation of near-future development projects and transportation projects in the study area. Project generated traffic volumes were added to these baseline volumes and levels of service were recalculated including the project contributions. Table 4-70 presents the intersection a.m. peak hour LOS with the Project contribution. Table 4-71 presents the intersection p.m. peak hour LOS with the Project contribution.

Table 4-70 Year 2020 (plus Project) Intersection a.m. Peak Hour Levels of Service

Intersection	Control	AM Peak Hour		Change in V/C or Delay	Temporary Impact?
		ICU V/C Ratio	HCM Delay		
1. Flower Street/Western Avenue	Signal	0.57/LOS A	-	0.0	No
2. Western Avenue/I-5 southbound ramps	Two-Way Stop	-	33.8/LOS D	0.0	No
3. Flower Street/I-5 northbound ramps	Signal	0.55/LOS A	13.8/LOS B	0.001	No
4. Flower Street/Sonora Avenue	Signal	0.73/LOS C	-	0.001	No
5. Flower Street/Grandview Avenue	All-Way Stop	-	10.9/LOS B	0.1	No
6. San Fernando Road/Flower Street ^a	Signal	0.44/LOS A	-	0.001	No
7. Flower Street/Air Way ^a	Signal	0.14/LOS A	-	0.0	No
8. Flower Street/Fairmont Avenue	All-Way Stop	-	10.8/LOS B	0.0	No

**FINAL ENVIRONMENTAL IMPACT REPORT
GRAYSON REPOWERING PROJECT**

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

Intersection	Control	AM Peak Hour		Change in V/C or Delay	Temporary Impact?
		ICU V/C Ratio	HCM Delay		
9. San Fernando Road/Fairmont Avenue	Signal	0.56/LOS A	-	0.003	No
10. Fairmont Avenue/SR 134 westbound ramps	Signal	0.72/LOS C	20.6/LOS B	0.001	No
11. Fairmont Avenue/Concord Street	Signal	0.70/LOS B	-	0.008	No
12. San Fernando Road/Doran Street ^a	Signal	0.69/LOS B	-	0.006	No
13. Doran Street/SR 134 eastbound ramps	Signal	0.56/LOS A	21.9/LOS C	0.01	No
14. Doran Street/Concord Street	Signal	0.68/LOS B	-	0.009	No

Notes:
^a Capacity adjusted for movements affected by trains.
 Bolded values exceed City or Caltrans LOS standard.

Table 4-71 Year 2020 (plus Project) Intersection p.m. Peak Hour Levels of Service

Intersection	Control	PM Peak Hour		Change in V/C or Delay	Temporary Impact?
		ICU V/C Ratio	HCM Delay		
1. Flower Street/Western Avenue	Signal	0.78/LOS C	-	0.0	No
2. Western Avenue/I-5 southbound ramps	Two-Way Stop	-	25.1/LOS D	0.0	No
3. Flower Street/I-5 northbound ramps	Signal	0.73/LOS C	25.0/LOS C	0.001	No
4. Flower Street/Sonora Avenue	Signal	0.81/LOS D	-	0.0	No
5. Flower Street/Grandview Avenue	All-Way Stop	-	23.9/LOS C	0.1	No
6. San Fernando Road/Flower Street ^a	Signal	0.61/LOS B	-	0.0	No
7. Flower Street/Air Way ^a	Signal	0.25/LOS A	-	0.0	No
8. Flower Street/Fairmont Avenue	All-Way Stop	-	18.0/LOS C	0.1	No
9. San Fernando Road/Fairmont Avenue	Signal	0.66/LOS B	-	0.002	No
10. Fairmont Avenue/SR 134 westbound ramps	Signal	0.76/LOS C	22.7/LOS C	0.001/	No
11. Fairmont Avenue/Concord Street	Signal	0.74/LOS C	-	0.008	No
12. San Fernando Road/Doran Street ^a	Signal	0.82/LOS D	-	0.05	Yes

**FINAL ENVIRONMENTAL IMPACT REPORT
GRAYSON REPOWERING PROJECT**

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

Intersection	Control	PM Peak Hour		Change in V/C or Delay	Temporary Impact?
		ICU V/C Ratio	HCM Delay		
13. Doran Street/SR 134 eastbound ramps	Signal	0.69/LOS B	25.4/LOS C	0.01/	No
14. Doran Street/Concord Street	Signal	0.86/LOS D	-	0.009	No

Notes:
a Capacity adjusted for movements affected by trains.
Bolded values exceed City or Caltrans LOS standard.

The Project would generate a short-term impact at the San Fernando Road/Doran Street intersection by adding V/C 0.05 during the p.m. peak hour, which would exceed the City of Glendale's threshold of V/C 0.02 for signalized intersections operating at LOS D, E, or F. As per the direction by the City, the Project personnel trip generation estimates assume that 25 percent of construction personnel arrive during the a.m. peak hour and 50 percent of construction personnel depart during the p.m. peak hour to provide for a conservative analysis. The threshold is exceeded when the total number of project personnel exceed 95 persons. As per Table 4-68, project personnel expected during the construction phase is 180 persons. Project personnel trips during the demolition and commissioning phases are not expected to exceed 60 and 35 persons; respectively. The intersection can accommodate 24 vehicle trips during the p.m. peak hours before the threshold is exceeded. The additional traffic during the construction phase is directly related to construction worker parking on the temporary lot on Doran Street. This short-term significant impact is expected to be for a maximum 21-month time period (construction duration). Although actual construction personnel shifts may typically begin and end outside of peak traffic times, the potential temporary construction impact to the San Fernando Road/Doran Street intersection has been conservatively assumed to be a potentially significant impact.

Project Vicinity Primary Site Access and Parking

Project Site Access

During the demolition phase, the entrance will be used by 25 to 60 construction personnel and 22 trucks delivering equipment or hauling demolition materials on a daily basis. During the construction phase, the entrance will be used by approximately 40 to 50 construction personnel (remainder will use the temporary parking lot on Doran Street, which will have between 176 and 210 spaces) and 6 to 62 trucks on a daily basis.

The majority of truck traffic access the site using the northbound right-turn lane on Fairmont Avenue. The entrance driveway is 25 feet wide and is designed to accommodate most truck movements. However, larger trucks (CA-Legal 65 feet) will require a wider turn radius and encroach into the number two northbound through lane.



FINAL ENVIRONMENTAL IMPACT REPORT GRAYSON REPOWERING PROJECT

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

Parking and Temporary Parking Lot Access

Parking demand generated by demolition personnel is expected to be a maximum of 52 spaces (60 personnel) and would be accommodated entirely on the Glendale Water & Power Utility Operation Center site through a combination of existing parking spaces and temporary construction parking areas.

Parking demand generated by construction personnel is expected to be a maximum of 209 spaces (240 personnel) and would be accommodated on the Glendale Water & Power Utility Operation Center site and on the temporary parking lot on Doran Street. Initial design indicates that the temporary parking lot can provide a parking supply of between 176 and 210 spaces. Assuming a total of 176 spaces on the lot, 33 spaces would be required on the Glendale Water & Power Utility Operation Center site to accommodate the maximum construction worker parking demand.

Parking demands during the commissioning phase would be accommodated entirely on the Glendale Water & Power Utility Operation Center site. It is expected that a parking demand of 30 – 35 spaces would be generated, which can be accommodated by the existing parking supply available on the site.

Bicycle Facilities

No designated bicycle lanes are currently provided on the study area roadways. The City's Bicycle Transportation Plan includes several network improvements on streets within the study area including development of B-type sharrows, Class II bike lanes, Class III bike routes, and a multipurpose path. There are no uncontrolled intersections in the study area. The Project as designed would not conflict with the goals or policies outlined in the Bicycle Transportation Plan or in the City General Plan.

Railways

The Project site is located in an industrial area that contains existing rail activity. The intersection volume and capacity estimates are adjusted for movements affected by trains. The Glendale Transportation Center Station is located on 400 W Cerritos Avenue approximately two miles south of the Project site. The railway corridor is included in the future California High Speed Rail Palmdale/Los Angeles segment. The SCAG RTP long-term vision The Project as designed would not conflict with adopted transportation policies as indicated in the RTP or in the City General Plan.

Transit

The Project site is located in an industrial area that contains an extensive network of sidewalks and public transit system. Within the study area, Metro Routes 94, 183 and 794 provide regional service along San Fernando Road with bus stops located in the vicinity of the project site. Metro



FINAL ENVIRONMENTAL IMPACT REPORT GRAYSON REPOWERING PROJECT

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

Route 183 also provides service along Doran Street. Beeline Route 12 provides bus service between the Glendale Transportation Center and the Burbank Transportation Center, with bus stops along San Fernando Road and Flower Street. The Project as designed would not conflict with adopted transportation policies as indicated in the City of Glendale's General Plan.

Level of Significance before Mitigation:

Potentially significant impact.

Mitigation Measures:

TRA-1: To accommodate turning movements by large trucks (CA-Legal 65 feet) and public safety on Fairmont Avenue, the demolition and construction contractor shall be required to prepare a traffic control plan for City review and approval prior to initiating demolition and construction activities that includes the use of large trucks entering and departing the Grayson Power Plant from Fairmont Avenue.

TRA-2: To reduce construction traffic at the San Fernando Road and Doran Street intersection during the p.m. peak hours, a construction traffic control plan shall be developed by the contractor, reviewed and approved by the City, and implemented for the duration of the construction phase. The plan shall include measures to limit vehicle trips to a total of 24 trips or less during the hours of 4 to 6 p.m. for the San Fernando Road and Doran Street intersection. Measures may include scheduling of construction activities or trip routing to minimized travel during peak p.m. traffic times, ride sharing, closing the parking lot, and/or other effective and verifiable measure.

TRA-3: The applicant shall ensure that traffic control is implemented for the duration of demolition and construction phases. Traffic control shall include construction warning signs on Fairmont Avenue (Trucks Entering Exiting), and monitoring (flag person) on public roadways as needed during large transports.

TRA-4: A construction traffic control plan shall include provisions for days when high truck traffic is generated (soil delivery days, peak concrete delivery days). The plan will include considerations for truck staging to ensure that truck parking/staging can be accommodated off the City streets.

TRA-5: Traffic control monitors shall direct traffic whenever heavy construction equipment is entering and exiting the plant as warranted to ensure public safety. The traffic monitor shall be posted throughout the demolition and construction periods, as necessary. The applicant shall coordinate with the Glendale Fire Department in order to ensure that traffic control routes and procedures would allow for adequate emergency access.

TRA-6: All construction-related vehicles, equipment staging and storage areas shall be located in approved pre-determined areas that are outside of adjacent road right of ways. The applicant shall provide all construction personnel with a written notice of this requirement and a

FINAL ENVIRONMENTAL IMPACT REPORT GRAYSON REPOWERING PROJECT

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

description of approved parking, staging and storage areas. The notice shall also include the name and phone number of the applicant's designee responsible for enforcement of this restriction.

TRA-7: Construction traffic shall comply with the California Vehicle Code sections related to vehicle weight and width. Any extra-legal loads needed for specialized deliveries shall be subject to special permit requirements from the City of Glendale. Should roadway damage occur along the haul route that is directly attributable to the demolition and construction of the Project, repairs will be assessed by the City and completed accordingly.

TRA-8: Fugitive dust control shall be implemented according to SCAQMD Rule 402, 403 and 1186, and California Vehicle Code Section 23114, and Building & Safety requirements. Dust control mitigation measures include:

- Soil stabilizers and dust suppressants to control fugitive dust levels from exposed soils.
- On-site water trucks to provide control of fugitive dust while soil is moved or disturbed.
- Off-site vacuum and broom sweepers to remove any fugitive materials from the public roadways.
- Track-out control to prevent dirt and mud from being spread to public roadways:
 - Sweeping or spray cleaning trucks prior to leaving project site.
 - Adequate truck load covering.
 - Limit on-site vehicle speeds to 15 mph.

Level of Significance after Mitigation:

Less than Significant with Mitigation Incorporated.

Threshold: 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

The Los Angeles County Metro has established LOS E or better as the acceptable LOS for transportation facilities on the CMP highway network. Any transportation facility on the CMP highway network operating at LOS F is considered to be deficient. Both I-5 and SR-134 are part of the CMP highway network and operating at a deficient LOS according to the CMP. A significant adverse traffic impact would occur on a CMP highway network if implementation of the Project would result in the following:

- The ramp segment to operate at an unacceptable LOS and an increase in the V/C ratio of greater than or equal to 0.02 (based on Los Angeles County CMP Guidelines).

**FINAL ENVIRONMENTAL IMPACT REPORT
GRAYSON REPOWERING PROJECT**

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

The Traffic and Circulation Study completed for the Project evaluated ramp queuing for the peak construction period (January 2020). Queue lengths were calculated for the I-5 northbound and southbound off-ramps and SR-134 eastbound and westbound off-ramps in the study area to determine if the existing ramp accommodates 95th percentile peak hour queues under Project-specific conditions. Table 4-72 presents the ramp queuing calculations.

Table 4-72 95th Percentile Queues for I-5 and SR-134 Off-Ramps (Year 2020 plus Project)

Ramp	Ramp Storage Length ^a	Year 2020 (plus Project)	
		AM Peak Hour	PM Peak Hour
I-5 northbound off-ramp (2 lanes)	1,200 feet per lane	150 feet	270 feet
I-5 southbound off-ramp – to northbound Western Avenue	600 feet	200 feet	100 feet
I-5 southbound off-ramp – to southbound Western Avenue	700 feet	25 feet	25 feet
SR-134 eastbound off-ramp	950 feet	100 feet	250 feet
SR-134 eastbound off-ramp	1,000 feet	250 feet	175 feet
Notes: a Ramp length measured from ramp gore point to limit line at local street intersection			

The 95th percentile queue during the a.m. and p.m. peak hours are expected to be 270 feet or less. The existing storage length of each off-ramp in the study-area is sufficient to accommodate the expected peak hour queues under existing plus project conditions. Therefore, no impacts are anticipated.

Caltrans District 7 has established LOS F0 as the minimum acceptable level of service on the freeway system (Caltrans, 1996). If an existing freeway system is operating at less than the acceptable LOS, the MOE should be maintained. Segment 7 along I-5 has an existing LOS below the minimum acceptable level. The AADT for segment 7 is 294,000 vehicles. The Project would add an ADT average of 513 vehicles during the peak period (construction, January 2020). The construction trip distribution calculates that 65% of the 513 vehicles will utilize I-5. Therefore, approximately 334 vehicles may travel along segment 7 of I-5 consisting of 0.11% of the AADT along this freeway. The Project contribution of 0.11% is not expected to degrade the existing MOE along segment 7. Based on the foregoing analysis, the Project will not conflict with the CMP LOS. Therefore, potential impacts would be less than significant.

**FINAL ENVIRONMENTAL IMPACT REPORT
GRAYSON REPOWERING PROJECT**

ENVIRONMENTAL IMPACT ANALYSIS
March 1, 2018

Level of Significance before Mitigation:

Less than significant impact.

Mitigation Measures:

No mitigation is required.

Level of Significance after Mitigation:

Less than significant impact.

