

14 TRANSPORTATION AND TRAFFIC

14.1 INTRODUCTION

This chapter describes existing conditions and potential project-related impacts to transportation and traffic from construction and operation of Pacific Gas and Electric Company's (PGandE) Delta Distribution Planning Area Capacity Increase Substation Project (project). In the project vicinity there is one highway, three arterials maintained by the City of Antioch, and one minor road in the City of Brentwood. Along these roadways there are transit routes and bikeways. The project will not have a significant impact on transportation and traffic in the area and will not conflict with any adopted transportation policies.

14.2 METHODOLOGY

Traffic and transportation data were obtained from literature review, Internet research, and communications with agency staff. The general plans for the City of Antioch and Contra Costa County, the 2001 Regional Transportation Plan for the San Francisco Bay Area, the 2004 Update to the Contra Costa Countywide Comprehensive Transportation Plan, the East Contra Costa County Bikeway Plan, and local ordinances were reviewed. Additionally, traffic-engineering staff was contacted at the cities of Antioch and Brentwood for existing transportation and traffic conditions in the area.

14.3 EXISTING CONDITIONS

14.3.1 Regulatory and Planning Background

As described above, the general plans, regional transportation plans, and municipal codes for Contra Costa County and the cities of Antioch and Brentwood were reviewed for transportation plans, policies, and programs. The City of Brentwood requires an encroachment permit to perform construction activities in public rights-of way. There are no applicable policies related to public or alternative transportation.

14.3.2 Roadways and Highways

Construction traffic will primarily be traveling to and from the PGandE Antioch Service Center construction yard on Hillcrest Avenue. General access to the substation site will be via one highway, three arterial roadways within the City of Antioch, and one minor road within the City of Brentwood. Table 14-1 provides the approximate location and traffic data, including level of service (LOS)¹, for each of these roads. Refer to Figure 1-1 Project Overview Map in Chapter 1: Project Description for a depiction of the roadways in the project vicinity. All public roads used for construction transportation are paved and all-weather.

¹ LOS is based on traffic congestion, which is measured by dividing traffic volume by roadway capacity. The resulting number, known as the volume-to-capacity (V/C) ratio, usually ranges from 0 to 1.0. The V/C ratings are divided into six LOS categories, A through F, which represent conditions ranging from unrestricted traffic flow (A) to extreme traffic congestion (F).

Table 14-1: Roadways in the Project Vicinity

Roadway	Lanes	Classification	Average Daily Traffic Volume	Peak-Hour Level of Service (LOS)
Highway 4	4-6	Highway	21,950	Information Not Available
Deer Valley Road	2-4	Arterial	4,827	B-C
Hillcrest Avenue	2-4	Arterial	426	A
Lone Tree Way	2-5	Arterial	9,177	C-D
Heidorn Ranch Road at Lone Tree Way	2	Minor	647 ¹	A

Source: California Department of Transportation, 2004; City of Antioch Department of Community Development, 2002; City of Brentwood Engineering Department, 2001

¹ Northbound and southbound daily traffic counts averaged.

Anticipated future extension of Hillcrest Avenue south toward the substation site may provide alternative access to the project site.

14.3.3 Bus Service

Tri Delta Transit provides bus service to residents within the 225 square miles of eastern Contra Costa County. Tri Delta Transit bus routes on portions of Deer Valley Road, Hillcrest Avenue, and Lone Tree Way include:

- Routes 380 and 388, servicing the Pittsburg Bay Area Rapid Transit (BART)/Hillcrest Park and Ride (north of Highway 4 on Hillcrest Avenue), both of which run weekdays only, and
- Route 392, servicing the Pittsburg BART/Brentwood Park and Ride, running Saturday, Sunday, and holidays only.

In addition, there are bus stops along each of these roads:

- Deer Valley Road, between Hillcrest and the end of Deer Valley Road, has eight bus stops.
- Hillcrest Avenue, between Highway 4 and Lone Tree Way, has 13 bus stops.
- Lone Tree Way, between Deer Valley Road and the Highway 4 Bypass, has five bus stops.

14.3.4 Commuter Rail

There is no commuter rail service in the City of Antioch; however, Tri Delta Transit provides connections to and from the Bay Point/Pittsburg BART.

14.3.5 Passenger Rail

Amtrak provides passenger rail service to the City of Antioch via the Burlington Northern Santa Fe Railroad (BNSF) track, which services the Oakland-Bakersfield corridor. Amtrak has four round-trip, San Joaquin passenger trains running on the BNSF tracks daily from the Antioch train station, located approximately 7 miles northwest of the project site.

14.3.6 Bikeways

There are several existing Class I (separate, multi-use trails or paths) and Class II (striped bicycle lanes on roadways) bicycle facilities that run along or intersect Deer Valley Road, Hillcrest Avenue, and/or Lone Tree Way. Table 14-2 provides the approximate location and data for these existing bikeways.

Table 14-2: Existing Bikeways in the Project Vicinity

Bikeway	Class	Location
Mokelumne Trail (East Bay Municipal Utility District right-of-way)	I	From Buchanan Road to Hillcrest Avenue
Country Hills Drive	II	From Hillcrest Avenue to 2 miles east of Vista Grande Drive; from Lone Tree Way to Deer Valley Road
Hillcrest Avenue	II	From Highway 4 to Prewett Ranch Drive
Via Dora Drive	II	From Deerfield Drive to Hillcrest Avenue

In addition, there is one proposed Class II bike path extension within the project area. The Mokelumne Trail within the East Bay Municipal Utility District's right-of-way would be extended from Hillcrest Avenue to the City of Brentwood, crossing the Highway 4 Bypass.

14.3.7 Freight Rail

Union Pacific Railroad and BNSF have rail tracks running through the City of Antioch, both of which are approximately 5 to 7 miles north of the project area.

14.3.8 Air Traffic

There are two airports in Contra Costa County, Byron Airport and Buchanan Field, both approximately 15 to 20 miles from the project site. Five heliports are located in Contra Costa County. One of these heliports, located within the City of Antioch, is located approximately 7 miles north of the project site.

14.4 IMPACTS

14.4.1 Significance Criteria

According to Appendix G of the California Environmental Quality Act Guidelines, the project will have a significant impact if it:

- results in an impact to existing traffic flows, including a substantial increase in traffic,
- exceeds an established LOS standard,
- causes a change in air traffic patterns,
- results in a substantial increase in hazards due to design features or incompatible uses,
- results in inadequate emergency access,
- results in inadequate parking capacity, or
- conflicts with adopted policies, plans, or programs supporting alternative transportation.

14.4.2 Construction

14.4.2.1 Increase in Traffic and Traffic Flow Disruption

Impacts to traffic will be limited to use of existing highways/roadways to and from the project site and the PGandE Antioch Service Center construction yard on Hillcrest Avenue in the City of Antioch. The worst-case scenario for number of construction equipment trips is estimated at 15 trips per day during peak construction (an approximate one-week period when cement trucks will be pouring foundations at the substation site). It is estimated that approximately 24 people per day will work during peak construction at the substation site. Personnel will generally drive to the PGandE Antioch Service Center construction yard at the beginning of the day and travel from there to the project site in vans to minimize the number of project vehicles at the site. Based on the peak workforce of approximately 24 persons, up to four vans will make two trips per day to the project site.

This project-related traffic will result in a less than 5 percent increase in the existing daily traffic along Hillcrest Avenue that currently has the lowest average daily traffic volume. This project-related traffic will result in an even lower percent increase in the existing daily traffic on roadways, with higher average daily traffic volumes, such as Highway 4 (less than 1 percent increase), Deer Valley Road (less than 1 percent increase), Lone Tree Way (less than 1 percent increase), and Heidorn Ranch Road at Lone Tree Way (3 percent increase). These low percent increases will not exceed established LOS standards because they do not increase traffic enough to change the existing volume-to-capacity ratios. In addition, these slight increases in traffic will be temporary and short-term. The project will not require temporary road or lane closures. As a result, impacts to traffic will be less than significant.

14.4.2.2 Change in Air Traffic Patterns

No airports or heliports are located within 2 miles of the project area where existing air traffic patterns could be affected. As a result, there will be no impacts to air traffic patterns.

14.4.2.3 Parking Lot and Lane Closures

There are no parking lots within 2 miles of the substation site, and no lane closures that could affect public parking along the streets will be required to complete the project. Construction personnel will park in designated areas that will not affect public parking capacity. As a result, construction will not affect public parking capacity.

14.4.2.4 Hazards

The project does not involve any new design features that could be hazardous or incompatible uses because the project will not be constructed within existing or planned roadways, does not create inadequate emergency access, and does not affect parking capacity in the vicinity.

14.4.2.5 Emergency Access

There are no emergency response plan staging areas or exit routes in the project vicinity, so the project will not impact emergency response activities.

14.4.2.6 Public and Alternative Transportation

Public bus routes run along roadways that will be used to access the project site. However, no bus stops along these routes will be affected, as the increase in construction-related traffic will be less than significant and will not affect transit services.

Public rail service is more than 5 miles from the project site and will not be affected by substation construction.

Public bike facilities run along or intersect roadways that will be used to access the project site. However, traffic in these areas due to construction vehicles will be less than significant and these bike routes will not be affected by project construction.

There are no other public-transit facilities or routes within 5 miles of the project site; therefore, there will be no impacts on public and alternative transportation due to project construction or maintenance.

14.4.2.7 Conflicts with Policies, Plans, or Programs

Construction will occur on PGandE-owned property and will not conflict with transportation policies, plans, or programs. PGandE will obtain ministerial encroachment permits to conduct work in public rights-of-way, as necessary. The project will not conflict with any policies supporting alternative transportation.

14.4.2.8 New Access Road Construction

There are no existing roads adjoining the substation parcel to the city road network; therefore, PGandE will construct a new, paved, all-weather road to provide access to the project area. The new road will intersect with the end of Heidorn Ranch Road and head east to the substation site. Refer to Chapter 1: Project Description for a detailed discussion of new access road construction.

14.4.3 Operations and Maintenance

Operation, including maintenance of substation facilities and the access road, will not result in significant impacts to transportation and traffic in the project area. The substation will be unmanned, with automated features and remote control capabilities, and will only require a PGandE personnel maintenance visit approximately once a month. Therefore, operations and maintenance at the substation will not create an impact on transportation and traffic.

14.5 MITIGATION MEASURES

Construction and operation of the project will not result in significant impacts to transportation or traffic. Therefore, mitigation measures are not required.

14.6 REFERENCES

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