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CHAPTER 4 – ENVIRONMENTAL IMPACT ASSESSMENT

4.14 TRANSPORTATION AND TRAFFIC

Would the project:	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Measures	Less-Than-Significant Impact	No Impact
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	☐	☐	☑	☐
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☑	☐
c) Result in substantial safety risks caused by a change in air traffic patterns, including either an increase in traffic levels or a change in location?	☐	☐	☐	☑
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☑
e) Result in inadequate emergency access?	☐	☐	☑	☐
f) Result in inadequate parking capacity?	☐	☐	☑	☐
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☑

4.14.0 Introduction

This section describes the existing transportation and traffic conditions within the San Diego Gas & Electric Company (SDG&E) South Bay Substation Relocation Project (Proposed Project) area and evaluates potential project-related transportation and traffic impacts. A summary of existing roadways, transit and rail service, airports, and bicycle facilities, as well as a description of the regulatory setting for transportation and traffic, are presented. Also, an analysis of transportation and traffic impacts that would result from the Proposed Project is provided. The Proposed

Project is located adjacent to several public roadways and bicycle paths, but would not have a significant impact on transportation and traffic in the area and would not conflict with any adopted alternative transportation policies.

4.14.1 Methodology

Transportation and traffic data was obtained primarily through relevant literature and Internet research. The City of Chula Vista General Plan and Municipal Code, the Unified Port of San Diego (Port District) Port Master Plan (PMP), and the San Diego Association of Government (SANDAG) transportation publications were reviewed. The Traffic and Circulation analysis contained within the Chula Vista Bayfront Master Plan (CVBMP) Revised Draft Environmental Impact Report (EIR) and the California Department of Transportation (Caltrans) website were consulted for current traffic counts and trip data. Additional information was gathered through personal communication with Port District planning staff. A site visit was conducted to all public roadways that could be directly affected by the Proposed Project.

4.14.2 Existing Conditions

Regulatory Background

Construction projects that cross public transportation corridors are subject to local, state, and federal encroachment permits. Use or obstruction of navigable air space also requires permits. The following summarizes transportation and traffic regulations that are applicable to the construction of electric facilities, such as the Proposed Project.

Federal

All airports and navigable airspace not administered by the Department of Defense are under the jurisdiction of the Federal Aviation Administration (FAA). Federal Regulation Title 14 Section 77 establishes the standards and required notification for objects affecting navigable airspace. In general, construction projects exceeding 200 feet in height above ground level or extending at a ratio greater than 50 to one (horizontal to vertical) from a public or military airport runway less than 3,200 feet long out to a horizontal distance of 20,000 feet are considered potential obstructions, and require notification to the FAA. In addition, the FAA requires a Helicopter Lift Plan for operating a helicopter within 1,500 feet of residential dwellings.

State

The use of California state highways for other than normal transportation purposes may require written authorization or an encroachment permit from Caltrans. Caltrans has jurisdiction over the state's highway system and is responsible for protecting the public and infrastructure. Caltrans reviews all requests from utility companies that plan to conduct activities within its right-of-way (ROW). Encroachment permits may include conditions or restrictions that limit when construction activities can occur within or above roadways under the jurisdiction of Caltrans.

Local

Chapter 12.28 of the City of Chula Vista Municipal Code governs the use of or encroachment into public ROWs for private uses. The city requires an encroachment permit for the

construction of any tower, pole, pole line, private pipe, private pipeline, nonstandard driveway, private road, fence, billboard, stand or building, or any structure or object of any kind or character, which is placed in, under, or over any portion of a roadway.

The Circulation Element of the City of Chula Vista General Plan provides guidance to help achieve an efficient and economical transportation system, and to facilitate the planning required to maintain and expand the existing transportation network.

Existing Roadway Network

The Proposed Project is located in a primarily industrial area within the City of Chula Vista. Figure 3-1: Project Location Map in Chapter 3 – Project Description depicts the location of the Proposed Project area and the existing roadway network. A list of roadways that are adjacent to the Proposed Project and that may be used for construction equipment travel has been included in Table 4.14-1: Public Roadways Adjacent to the Proposed Project Area. This list also includes the classification, number of lanes, and Level of Service (LOS)[1] information for each roadway where available.

California Interstate 5 (I-5) is a major north/south transportation corridor located approximately 300 feet east of the Proposed Project area. It is an eight-lane divided freeway with a posted speed limit of 70 miles per hour. I-5 would serve as the main route to Bay Boulevard and the Proposed Project area. Construction vehicles and equipment would likely utilize the H Street, L Street, and/or Palomar Street exits to access Bay Boulevard.

H Street, L Street, and Palomar Street are local public streets that run east-to-west, are four lanes wide (in the Proposed Project area), and have a speed limit of 35 miles per hour. The H & Bay Yard would likely be accessed using the H Street and/or J Street exits from I-5. A series of existing and proposed private access roads would then be used to reach the Proposed Project components, as described in Section 3.6.3 Access.

Railway

The San Diego and Arizona Eastern (SD&AE) Railway, owned and operated by the San Diego Metropolitan Transit System within San Diego County, runs from downtown San Diego to Plaster City, near El Centro. In 1979, the San Diego Metropolitan Transit Development Board, now the Metropolitan Transit System (MTS), purchased the SD&AE Railway with the intention of bringing light rail transportation to the San Diego Area. This service began in 1981, and currently three lines are operated in and around San Diego. An unused portion of the SD&AE line is located within a 40-foot easement that currently parallels SDG&E's existing transmission easement area, as shown on Figure 4.9–1: Land Use Map.

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

Table 4.14-1: Public Roadways Adjacent to the Proposed Project Area

Roadway	Cross Street	Classification	Number of Lanes	Average Weekday Traffic Volume	LOS a.m./p.m. Peak*
Walnut Avenue	H Street and I Street	Other Roadway	2	Not Available	Not Available
H Street	Walnut Avenue and Bay Boulevard	Other Roadway	4	8,000	A/B
Bay Boulevard	H Street and I Street	Other Roadway	2	2,100	A/B
	Marina Parkway/ West J Street and L Street	Other Roadway	2	3,100	B/B
	L Street and Palomar Street	Other Roadway	2	17,000	Not Available
L Street	Bay Boulevard and Industrial Boulevard	Gateway Street	4	15,100	C/F

Source: City of Chula Vista, 2010
* The a.m. peak is between 7:00 a.m. and 9:00 a.m. The p.m. peak is between 4:00 p.m. and 6:00 p.m.

Airports

San Diego International Airport is the closest international airport to the Proposed Project. It is located approximately 10 miles northeast of the Bay Boulevard Substation site. This airport operates approximately 600 arrivals and departures daily along a single runway that measures approximately 9,400 feet long. The airport is operated by the San Diego County Regional Airport Authority. The closest public airport to the Proposed Project—Brown Field Municipal Airport—is located approximately 6.3 miles southeast of the Bay Boulevard Substation site. This airport has two runways measuring approximately 8,000 and 3,200 feet long, respectively. This airport is owned and operated by the City of San Diego.

Bus

The Proposed Project area is located within the South Bay Region of the San Diego Metropolitan Transit System. The closest bus stops are located along Industrial Boulevard, which is east of and generally parallel to I-5. The nearest bus stop is at the Palomar Street Trolley Station, located at the intersection of Palomar Street and Industrial Boulevard, approximately 0.5 mile southeast of the Proposed Project area. This bus stop is serviced by the 701, 704, 712, and 712L routes. Route 701 runs every 15 minutes between 5:45 a.m. and 11:05 p.m. Monday through Friday, and every 0.5 hour on Saturday. Route 704 runs every 0.5 hour between 5:29 a.m. and 9:21 p.m. Monday through Friday, and every hour between 6:29 a.m. and 9:16 p.m. on Saturday. Route 712 runs every 15 minutes Monday through Friday, and every 0.5 hour on Saturday. Route 712L is a limited express bus and only runs Monday through Friday when Southwestern

College is in full session. There are no bus routes that travel adjacent to the Proposed Project area along Bay Boulevard.

Trolley

The Blue Line of the San Diego Metropolitan Transit System connects San Ysidro in the south to Old Town San Diego in the north. This trolley line is located approximately 0.2 mile east of the Proposed Project area, and runs along the east side of I-5. Northbound weekday service from San Ysidro begins at 4:44 a.m. and continues until 12:59 a.m., with routes departing every 30 minutes or less. Similar service is provided on Saturday and Sunday with routes beginning at 4:59 a.m. Southbound service from Old Town begins at 4:45 a.m. and continues until approximately midnight, with routes departing every 45 minutes or less. Approximately 200 routes run along the Blue Line on weekdays and approximately 150 routes occur each weekend day. The Proposed Project would not parallel or span any trolley routes.

Bicycle Facilities

According the City of Chula Vista General Plan's Circulation Element, Bay Boulevard between J Street and Palomar Street is considered a Class II bicycle route. Class II bicycle routes have on-street bicycle lanes that are marked either in the curb or in the parking lane. According to the General Plan, Bay Boulevard between E Street and J Street has been proposed as a Class II bicycle route. No other designated bicycle facilities exist adjacent to the Proposed Project area.

4.14.3 Impacts

Significance Criteria

The Proposed Project is more likely to affect transportation facilities or increase traffic during the construction phase than during operation and maintenance because typically, only a very limited amount of surface activity is required to operate a transmission line and substation. Further, the lines and substation already exist in the area and no increase in activity is expected once the new lines and substation are in service. Consequently, the transportation analysis focuses on the construction phase.

According to Appendix G of the California Environmental Quality Act Guidelines, the Proposed Project would have a significant impact if it:

- Results in a substantial increase in traffic that affects existing traffic flows
- Results in the exceedance of an established LOS standard
- Causes a change in air traffic patterns
- Results in a substantial increase in hazards due to design feature or incompatible uses
- Results in inadequate emergency access
- Results in inadequate parking capacity
- Conflicts with adopted policies, plans, or programs supporting alternative transportation

Question 4.14a – Traffic Increases

Construction – Less-than-Significant Impact

Proposed Project construction personnel would generally drive to the worksite at the beginning of the day and leave at the end of the day, with few people traveling to and from the worksite throughout the day. This would result in approximately 60 personal vehicle trips each day during peak construction times. SDG&E would encourage carpooling to the construction site to reduce personal vehicle traffic in the Proposed Project area to the greatest extent possible.

Construction of the Proposed Project could potentially require approximately 140,000 cubic yards, or an estimated total of approximately 9,350 haul truckloads, of imported fill to develop the proposed substation site. The haul trucks would run periodically and as needed to facilitate the grading phase of construction. Some days would have more truck trips than others but, in general, no more than approximately 63 truck trips per day for an estimated six months would be required to complete the proposed substation site development. In addition, approximately six additional trips per day would be anticipated for the delivery of materials and equipment for the duration of construction.

All vehicles and equipment would enter the Proposed Project site from Bay Boulevard. Some traffic disruptions may occur when trucks ingress or egress, as trucks slowly pull into or out of the construction driveway. Signs warning motorists and/or flagmen would be used to minimize traffic impacts and maintain a safe transportation corridor along Bay Boulevard during construction, in accordance with encroachment permit conditions. The additional traffic due to construction of the Proposed Project—a peak of approximately 130 vehicles per day—would account for an increase of approximately one percent in vehicle trips between L Street and Palomar Street along Bay Boulevard. Because of the periodic nature of access to the Proposed Project site for construction vehicles and equipment, combined with the generally adequate capacity of Bay Boulevard and the surrounding road network, impacts resulting from traffic increases are expected be less than significant.

Operation and Maintenance – No Impact

SDG&E does not anticipate that any additional trips beyond those currently required for operation and maintenance of the existing facilities would be necessary. As a result, there would be no permanent increase in traffic and no impact.

Question 4.14b – Level of Service Changes

Construction – Less-than-Significant Impact

As previously discussed in the response to Question 4.14a – Traffic Increases, the Proposed Project-related construction traffic would result in a less-than-significant increase in the existing daily traffic. Traffic delays could occur when large trucks enter and exit the roadway at designated access points and during temporary work activities involving transmission lines adjacent to Bay Boulevard. However, traffic controls would be implemented to direct local traffic safely around work areas should they encroach on Bay Boulevard, in accordance with encroachment permit conditions.

Traffic flow may also be disrupted during construction of Transmission Line (TL) 644 and TL645. As described in Chapter 3 – Project Description, approximately 300 feet of underground duct banks associated with the two lines would be installed within Bay Boulevard. The construction methods that would be used for the installation of these facilities—including the removal of pavement, trench excavation, concrete pouring, and asphalt paving restoration—would require the temporary closure of a portion of the southbound lane of Bay Boulevard and the adjacent bicycle route and shoulder. Bay Boulevard, from curb to curb, measures approximately 45 feet wide in the vicinity of these proposed underground duct banks. Northbound traffic along Bay Boulevard would utilize the existing shoulder and bicycle route and southbound traffic would utilize the existing northbound lane. As a result, vehicle access in both directions along Bay Boulevard would be maintained. SDG&E would provide traffic controls and/or use flaggers, as well as obtain encroachment permits from the City of Chula Vista to work within public roadways, as required. All work would be performed according the applicable permit requirements. Because these road alterations would be temporary, short in duration (lasting approximately three weeks), and coordinated with the local regulatory agencies, construction of the Proposed Project is not anticipated to significantly disrupt traffic. Thus, the impact would be less than significant.

The existing LOS standards for roads, indentified in Table 4.14-1: Public Roadways Adjacent to the Proposed Project Area, all range from LOS A–D (indicating free flowing traffic); with the exception of the intersection of Bay Boulevard and L Street, which has an LOS standard of F during the p.m. peak hours. Therefore, most of the existing network of roads in the Proposed Project area has adequate capacity to handle the increase in traffic volume due to construction. To ensure that the existing LOS F standard is not exasperated as a result of construction of the Proposed Project, APM-TRA-01, which requires that construction traffic utilize alternate access and travel routes, such as J Street and Palomar Avenue, during the p.m. peak hours (between 4:00 p.m. and 6:00 p.m.) would be implemented. As a result, impacts would be less than significant.

Operation and Maintenance – No Impact

As described previously, SDG&E does not anticipate any additional trips beyond those currently required to operate or maintain the existing facilities to be needed once the Proposed Project has been constructed. As a result, there would be no permanent impacts to the existing LOS.

Question 4.14c – Air Traffic Changes

Construction – No Impact

Helicopters, as described in Section 3.6.5 Methods, would be used to string the sock line used during conductor pulling activities. Helicopter flight would generally be limited to within SDG&E's existing easement. Helicopter activities are anticipated to require up to 24 hours of total operation. Line work would temporarily increase air traffic and encroach on navigable air space during construction; however, SDG&E or its contractor would coordinate flight patterns with local air traffic control and the FAA prior to construction to prevent any adverse impacts due to increased air traffic. In addition, a Helicopter Lift Plan would be prepared and implemented for the construction phase of the Proposed Project, as required by the FAA. As a result, no impact to air traffic is anticipated.

The San Diego International Airport and Brown Field Municipal Airport are located approximately 10 miles northeast and 6.3 miles southeast of the Proposed Project, respectively. The Proposed Project is not subject to airport land use approvals because of its distance from these airports. In addition, none of the Proposed Project components or equipment used to construct the Proposed Project would be taller than 200 feet. Therefore, no FAA clearance would be required and no impact would occur.

Operation and Maintenance – No Impact

As described previously, SDG&E does not anticipate that any additional helicopter use beyond that currently required for their existing facilities would be necessary to operate or maintain the Proposed Project. As a result, there would be no impact to air traffic due to the operation and maintenance of the Proposed Project.

Question 4.14d – Increase in Hazards

Construction – No Impact

Construction of the Proposed Project would not necessitate any modification to existing public roadways. In addition, none of the proposed transmission line structures would be located closer to roadways than the existing structures. As previously discussed, temporary road or lane closures may be required to provide safety to the public and workers during certain activities. Road closures and encroachment into public roadways could increase hazards if appropriate safety measures are not in place, such as proper signage, orange cones, and flaggers. However, SDG&E would obtain the required encroachment permits from the City of Chula Vista and implement traffic control measures accordingly. Consequently, no impacts would result.

Operation and Maintenance – No Impact

Operation and maintenance activities associated with the Proposed Project would occur within SDG&E's ROW or within property owned by SDG&E. Access for these activities would be provided from existing public roads and newly constructed access roads located on SDG&E-owned property. Because the roads are not accessible to the public, no new transportation hazards would result from operation and maintenance of the Proposed Project. As a result, there would be no impact.

Question 4.14e – Emergency Access Effects

Construction – Less-than-Significant Impact

Emergency access would not be directly impacted during construction because all streets would remain open to emergency vehicles at all times throughout construction. Increased vehicle traffic during construction and temporary lane closures during underground duct bank installation may occur. Although this can indirectly impact emergency access, the increase in traffic would be minor and would not be expected to significantly affect response times. Thus, impacts would be less than significant.

Operation and Maintenance – No Impact

As discussed previously, the operation and maintenance of the Proposed Project would not differ from the activities currently conducted on the existing facilities. Regular operation and

maintenance activities would not require any planned road closures. Therefore, no impacts to emergency vehicle access would occur from operation and maintenance activities.

Question 4.14f – Parking Capacity

Construction – Less-than-Significant Impact

Parking of crew vehicles and equipment would typically occur within the Proposed Project ROW and staging area limits. During the replacement of Pole 92, Pole 93, and Pole 94 along TL644, the adjacent parking lots serving the commercial business park would be used for the staging and operation of construction equipment. Parking within an approximate radius of 75 feet would be restricted during the pole installation and removal activities. This temporary restriction, lasting one to two days at each location, would reduce the available parking capacity by approximately 40 parking spaces during each closure. During the conductor removal and installation process, SDG&E would close a larger portion of the parking lot—consisting of approximately 200 parking spaces—for approximately one day. These closures would be coordinated to take place during the weekend to the extent practical. Because these parking lots contain in excess of 350 parking spaces and the restrictions would be short-term and coordinated to occur during off-peak parking hours, impacts would be less than significant.

As described previously, temporary lane closures along Bay Boulevard during the installation of underground duct banks may also require street parking to be temporarily restricted within an approximately 700-foot-long area. This area would typically support the parallel parking of approximately 20 vehicles. Because there is typically ample parking capacity along Bay Boulevard and these restrictions would be temporary, lasting approximately three weeks, impacts would be less than significant.

Operation and Maintenance – No Impact

The operation and maintenance of the substations, transmission line, and associated equipment would not require any additional parking spaces compared to pre-project conditions. Therefore, no impact would occur.

Question 4.14g – Alternative Transportation Conflicts

Construction – No Impact

Construction would occur within existing SDG&E ROW areas and on SDG&E-owned land. The Proposed Project would not involve any activities that would conflict with transportation policies, plans, or programs, including bus transportation in the area. SDG&E would obtain encroachment permits to conduct work in the public ROW, and would ensure that access for motorists and bicyclists remains open during construction. While the SD&AE rail line is located to the east of the Proposed Project, it would not be affected by construction activities because it is not currently in use. Therefore, no impacts are anticipated.

Operation and Maintenance – No Impact

The operation and maintenance activities for the Proposed Project would not change from the current practices, which require less than one vehicle trip, on average, per day. Rail, bus, and bicycle traffic are not affected by current operation and maintenance activities, and there would

be no change to the activities as a result of the Proposed Project. Therefore, no impact would occur.

4.14.4 Applicant-Proposed Measures

When implemented, the following APM would reduce the potential adverse impacts to transportation and traffic to a less-than-significant level:

- Heavy-duty construction vehicles and equipment would not utilize L Street during the p.m. peak hours (between 4:00 p.m. and 6:00 p.m. on weekdays). Alternate travel routes, such as J Street and Palomar Avenue, would instead be used during this time.

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