

8.10 Traffic and Transportation

8.10.1 Introduction

This section presents the potential effects of the South Bay Replacement Project (SBRP) Project on the transportation system, including any necessary modifications to the transportation system and an increase in traffic from construction and operation of the proposed facility, and demolition of the existing South Bay Power Plant (SBPP).

A description of the existing transportation system and levels of service (LOS) are presented, along with an analysis of potential impacts. Figure 8.10-1 (all figures are at the end of this subsection) shows the Project site and the surrounding roadway network within the study area.

Subsection 8.10.2 presents applicable laws, ordinances, regulations, and standards (LORS); Subsection 8.10.3 discusses the existing environmental setting; Subsection 8.10.4 discusses the environmental effects of construction and subsequent operation and demolition; Subsection 8.10.5 describes the cumulative impacts; Subsection 8.10.6 includes any proposed mitigation measures to be implemented during construction, demolition and operation; Subsection 8.10.7 describes the permits and permitting schedule; and Subsection 8.10.8 contains references.

The SBRP Project consists of three phases:

- **The Construction Phase** – The first phase is the demolition of existing structures and foundations associated with the former Liquefied Natural Gas (LNG) Facility, preparation of construction lay down areas, and the construction of the SBRP. Initial operations of SBRP will include an interim interconnection to the San Diego Gas & Electric Company (SDG&E) transmission system through a new 230-kilovolt ampere (kVA) substation on approximately 0.6 acre (interconnecting to SDG&E’s planned new 230-kilovolt [kV] transmission line) and an underground interconnection to the existing SDG&E South Bay 138/69 kV substation.¹
- **The Demolition Phase** – The second phase of Project construction activities will occur after the SBRP achieves commercial operation. The construction activity during this phase will be the demolition of the existing SBPP facilities, excluding SDG&E’s existing South Bay Substation which will remain in service until the new substation is constructed.
- **The New Substation Phase** – The final phase of the Project will involve the construction of the SDG&E substation on approximately 6.5 acres south of and adjacent to the SBRP site. This construction will be performed after the start up of the SBRP and demolition of SBPP. After the new SDG&E substation construction is completed and operational, and the SBRP generator leads are attached to the new facilities, SDG&E could then initiate demolition activities on the South Bay Substation, located north of the SBRP Project site.

¹ SDG&E was granted a Certificate of Public Convenience and Necessity (CPCN) for the Otay Mesa Power Purchase Agreement (OMPPA) Transmission Project. The CPCN is for the construction of two new 230-kV electric transmission circuits to connect SDG&E’s Miguel Substation with both the Sycamore Canyon Substation and the Old Town Substation in San Diego County. The circuit to the Old Town Substation is planned to pass within approximately 100 feet of the proposed SBRP. This project is under construction. The SBRP interconnection plan is based in part on interconnecting to this circuit.

These demolition activities, however, are not part of the scope of this Application for Certification (AFC). They are part of a separate project of unknown timing and scope.

The reason there are two interconnect steps is to ensure that interconnection can be secured by the proposed on-line date of SBRP (2010). Also, SDG&E holds certain obligations associated with a new substation as part of its Memorandum of Understanding with the City of Chula Vista, but these obligations occur after the demolition of SBPP.

8.10.2 Laws, Ordinances, Regulations and Standards

LORS related to traffic and transportation are summarized in the following subsections and Table 8.10-1.

8.10.2.1 Federal

- Title 49, Code of Federal Regulations (CFR), Sections 171-177 (49 CFR 171-177), governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles.
- 49 CFR 350-399, and Appendices A-G, Federal Motor Carrier Safety Regulations, address safety considerations for the transport of goods, materials, and substances over public highways.
- 49 CFR 397.9, the Hazardous Materials Transportation Act of 1974, directs the U.S. Department of Transportation to establish criteria and regulations for the safe transportation of hazardous materials.
- 14 CFR 77.13(2)(i) requires an applicant to notify the Federal Aviation Administration (FAA) of the construction of structures within 20,000 feet of the nearest point of the nearest runway of an airport with at least one runway longer than 3,200 feet. No airports are within 20,000 feet of the SBRP Project site; therefore, this requirement is not applicable.
- 14 CFR 77.17 requires an applicant to submit a Notice of Proposed Construction or Alteration (FAA Form No. 7460-1) to the FAA for construction within 20,000 feet of the nearest runway of an airport with at least one runway longer than 3,200 feet. This requirement is not applicable.
- 14 CFR 77.21, 77.23, and 77.25 outlines the criteria used by the FAA to determine whether an obstruction would create an air navigation conflict. Because of the distance SBRP is more than 3 nautical miles from the nearest airport, these requirements are not applicable.

TABLE 8.10-1
SBRP Compliance with Laws, Ordinances, Regulations, and Standards

| Authority | Administering Agency | Requirements | Compliance (Location in AFC where compliance discussed) |
|---|---|--|--|
| 49 CFR, Section 171-177 and 350-399 | U.S. Department of Transportation and Caltrans | Requires proper handling and storage of hazardous materials during transportation. | Project and transportation will comply with all standards for the transportation of hazardous materials. (Subsection 8.10.4.4 and Subsection 8.10.7) |
| 14 CFR, Section 77.13(2)(i), 77.17, 77.21, 77.23, and 77.25 | U.S. Department of Transportation and Federal Aviation Administration | Requires an applicant to notify the FAA of the construction or alterations of structures within certain distance from an airport, in order to avoid air navigation conflicts. | No airports are within 20,000 feet of the Project site; therefore, this requirement is not applicable (Subsection 8.10.3.8) |
| CVC §§13369, 15275, and 15278 | Caltrans | Addresses the licensing of drivers and classifications of licenses required for the operation of particular types of vehicles. In addition, certificates permitting the operation of vehicles transporting hazardous materials are required. | The Project will conform to these sections in the CVC. (Subsection 8.10.4.4) |
| CVC §§25160 et seq. | Caltrans | Addresses the safe transport of hazardous materials. | The Project will conform to these sections in CVC. (Subsection 8.10.4.4) |
| CVC §§2500-2505 | Caltrans | Authorizes the issuance of licenses by the Commissioner of the CHP for the transportation of hazardous materials including explosives. | The Project will conform to these sections in the CVC. (Subsection 8.10.4.4 and Subsection 8.10.7) |
| CVC §31300 et seq. | Caltrans | Requires transporters to meet proper storage and handling standards for transporting hazardous materials on public roads. | Transporters will comply with standards for transportation of hazardous materials on state highways during construction and operations. The Project will conform to CVC §31303 by requiring that shippers of hazardous materials use the shortest route possible to and from the site. (Subsection 8.10.4.4) |
| CVC §§31600 - 31620 | Caltrans | Regulates the transportation of explosive materials. | The Project will conform to CVC 31600 - 31620. (Subsection 8.10.4.4) |
| CVC §§32000 - 32053 | Caltrans | Regulates the licensing of carriers of hazardous materials and includes noticing requirements. | The Project will conform to CVC 32000 - 32053. (Subsection 8.10.4.4 and Subsection 8.10.7) |

TABLE 8.10-1
SBRP Compliance with Laws, Ordinances, Regulations, and Standards

| Authority | Administering Agency | Requirements | Compliance (Location in AFC where compliance discussed) |
|---|-----------------------------|---|---|
| CVC §§32100 - 32109 and 32105 | Caltrans | Establishes special requirements for the transportation of substances presenting inhalation hazards and poisonous gases. Requires that shippers of inhalation or explosive materials contact the CHP and apply for a Hazardous Material Transportation License. | The Project will conform by requiring shippers of inhalation or explosive materials to contact the CHP and obtain a Hazardous Materials Transportation License. (Subsection 8.10.4.4 and Subsection 8.10.7) |
| CVC §§34000 -34121 | Caltrans | Establishes special requirements for the transportation of flammable and combustible liquids over public roads and highways. | The Project will conform to CVC §§34000 - 34121. (Subsection 8.10.4.4 and Subsection 8.10.7) |
| CVC §§34500, 34501, 34501.2, 34501.3, 34501.4, 34501.10, 34505.5-7, 34506, 34507.5 and 34510-11 | Caltrans | Regulates the safe operation of vehicles, including those used to transport hazardous materials. | The Project will conform to these sections in the CVC. (Subsection 8.10.4.4 and Subsection 8.10.7) |
| S&HC §§660, 670, 1450, 1460 <i>et seq.</i> , 1470, and 1480 | Caltrans | Regulates right-of-way encroachment and the granting of permits for encroachments on state and county roads. | The Project will conform to these sections in the S&HC. (Subsection 8.10.7) |
| S&HC §§117, 660-711 | Caltrans | Requires permits from Caltrans for any roadway encroachment during truck transportation and delivery. | Encroachment permits will be obtained by transporters, as required. (Subsection 8.10.7) |
| CVC §35780; S&HC §660-711 | Caltrans | Requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways. | Transportation permits will be obtained by transporters for all overloads, as required. (Subsection 8.10.7) |
| CVC §§35550-35559 | Caltrans | Regulates weight and load limitations. | The Project will conform to these sections in the CVC. (Subsection 8.10.7) |
| California State Planning Law, Government Code Section 65302 | Caltrans | Project must conform to the General Plan. | Project will comply with San Diego County General Plan and the City of Chula Vista's Comprehensive General Plan. (Subsection 8.10.2.3) |

TABLE 8.10-1
SBRP Compliance with Laws, Ordinances, Regulations, and Standards

| Authority | Administering Agency | Requirements | Compliance (Location in AFC where compliance discussed) |
|--|--------------------------------------|---|--|
| Circulation and Transportation Element of the San Diego County General Plan and City of Chula Vista Comprehensive General Plan | San Diego County/City of Chula Vista | Specifies long-term planning goals and procedures for transportation infrastructure system quality in San Diego County and the City of Chula Vista, respectively. | Project will comply with goals and policies for County and City transportation and traffic system. (Subsection 8.10.2.3) |
| CVC | California Vehicle Code | | |
| CFR | Code of Federal Regulations | | |
| S&HC | California Streets and Highways Code | | |

8.10.2.2 State

- California Vehicle Code (CVC), Sections 13369, 15275, and 15278 address the licensing of drivers and classifications of licenses required to operate particular types of vehicles. In addition, certificates permitting the operation of vehicles transporting hazardous materials are addressed.
- CVC Sections 25160 et seq. address the safe transport of hazardous materials.
- CVC Sections 2500-2505 authorize the issuance of licenses by the Commissioner of the California Highway Patrol (CHP) to transport hazardous materials, including explosives.
- CVC Sections 31300 et seq. regulate the highway transportation of hazardous materials, routes used, and restrictions. CVC Section 31303 requires hazardous materials to be transported on state or interstate highways that offer the shortest overall transit time possible.
- CVC Sections 31600-31620 regulate the transportation of explosive materials.
- CVC Sections 32000-32053 regulate the licensing of carriers of hazardous materials and include noticing requirements.
- CVC Sections 32100-32109 establish special requirements for the transportation of substances presenting inhalation hazards and poisonous gases. CVC Section 32105 requires shippers of inhalation or explosive materials to contact the CHP and apply for a Hazardous Material Transportation License. Upon receiving this license, the shipper will obtain a handbook specifying approved routes.
- CVC Sections 34000-34121 establish special requirements for transporting flammable and combustible liquids over public roads and highways.
- CVC Sections 34500, 34501, 34501.2, 34501.3, 34501.4, 34501.10, 34505.5-7, 34506, 34507.5, and 34510-11 regulate the safe operation of vehicles, including those used to transport hazardous materials.
- California Street and Highways Code (S&HC), Sections 660, 670, 1450, 1460 et seq. 1470, and 1480, regulates right-of-way encroachment and granting of permits for encroachments on state and county roads.
- S&HC, Sections 117 and 660-711, and CVC, Sections 35780 et seq., require permits to transport oversized loads on county roads. California S&HC Sections 117 and 660 to 711 requires permits for any construction, maintenance, or repair involving encroachment on state highway rights-of-way. CVC Section 35780 requires approval for a permit to transport oversized or excessive loads over state highways.
- California Department of Transportation (Caltrans) weight and load limitations for state highways apply to all state and local roadways. The weight and load limitations are specified in the CVC Sections 35550 to 35559. The following provisions, from the CVC, apply to all roadways and are therefore applicable to this Project.

General Provisions:

- The gross weight imposed upon the highway by the wheels on any axle of a vehicle shall not exceed 20,000 pounds and the gross weight upon any one wheel, or wheels, supporting one end of an axle, and resting upon the roadway, shall not exceed 10,500 pounds.
- The maximum wheel load is the lesser of the following: a) the load limit established by the tire manufacturer, or b) a load of 620 pounds per lateral inch of tire width, as determined by the manufacturer's rated tire width.

Vehicles with Trailers or Semitrailers:

- The gross weight imposed upon the highway by the wheels on any one axle of a vehicle shall not exceed 18,000 pounds and the gross weight upon any one wheel, or wheels, supporting one end of an axle and resting upon the roadway, shall not exceed 9,500 pounds, except that the gross weight imposed upon the highway by the wheels on any front steering axle of a motor vehicle shall not exceed 12,500 pounds.
- California State Planning Law, Government Code Section 65302, requires each city and county to adopt a General Plan, consisting of seven mandatory elements, to guide its physical development. Section 65302(b) requires that a circulation element be one of the mandatory elements.
- All construction in the public right-of-way will need to comply with the "Manual of Traffic Controls devices" (Caltrans and FHWA 2003).

8.10.2.3 Local

Among the local LORS discussed in this section are certain ordinances, plans or policies of the City of Chula Vista. For informational purposes, this section reviews compliance of the Project with such requirements even though the Applicant understands that they are not applicable to the Project as a matter of law. (See Section 8.4 for a discussion of this issue.) The analysis of City LORS in this section is informational and does not address the jurisdictional issues discussed in Section 8.4. Accordingly, this section reviews compliance with all relevant local LORS without regard to their applicability as a matter of law. These LORS include the following:

- The San Diego Association of Governments (SANDAG) Congestion Management Program (CMP), which is a part of SANDAG's Regional Transportation Plan, contains an integrated set of public policies, strategies, and investments to maintain, manage, and improve the transportation system in the San Diego region. One of the CMP requirements is a review of large projects that generate 2,400 or more average daily trips or 200 or more peak hour trips to assess impacts to state highways and regionally significant arterials.
- The County of San Diego General Plan Public Facilities Element (PFE) establishes policies and implementation measures regarding the assessment and mitigation of traffic impacts of new development. One of the PFE objectives is a minimum LOS C or better on County Circulation Element roads. According to PFE, when an existing LOS is already LOS D, a LOS D may be allowed without mitigation, while projects that

significantly increase congestion on roads operating at LOS E or LOS F must provide mitigation.

- The City of Chula Vista Transportation and Circulation Element, which is a part of the City of Chula Vista General Plan, sets LOS C as the minimum acceptable LOS on city's roadways. LOS E is acceptable for streets in the Urban Core Subarea (SBRP is located just to the south of this area).
- San Diego County "Moving Permit" requires a permit from the Public Works Department before operating any overweight and/or oversized loads on the county roads. The Project will comply with the "Moving Permit" requirements by obtaining the permit from the San Diego County Public Works Department before operating any overweight and/or oversized loads on the county roads.
- The City of Chula Vista requires a permit before operating any oversized vehicles within the City. The Project will comply with the "Transportation Permit" requirements by obtaining the permit from the City of Chula Vista Engineering Department before operating any oversized vehicles within the City.

8.10.2.4 Compliance with Laws, Ordinances, Regulations, and Standards

Table 8.10-1 summarizes all applicable federal, state and local LORS and administering agencies, and describes how SBRP will be consistent with all LORS pertaining to traffic and transportation impacts.

8.10.3 Affected Environment

The LORs described in Table 8.10-1 lay out a framework for managing the transportation resources in the area of the SBRP Project site.

8.10.3.1 Existing Regional and Local Transportation Facilities

The roadways that will serve the SBRP Project are shown in Figure 8.10-2. Interstate 5 (I-5) is the only controlled-access facility serving the Project area. Other roadways that will serve the SBRP are Palomar Street, L Street, J Street, Bay Boulevard, and Industrial Boulevard.

I-5 is a north-south eight-lane freeway in the vicinity of the proposed Project. It begins at the international border at San Ysidro and connects the metropolitan areas of Tijuana, San Diego, Los Angeles, Sacramento, Portland, and Seattle.

Palomar Street is a four-lane roadway west of I-5 and a six-lane roadway east of I-5. This east-west roadway connects the Project site to I-5, Orange Avenue, I-805 and communities to the east of the SBRP site. According to the City of Chula Vista General Plan Update Final Environmental Impact Report (FEIR), Palomar Street is classified as a class I collector east of I-5 with a posted speed limit of 45 miles per hour (mph). Palomar Street is classified as a prime arterial west of I-5 with a posted speed limit of 55 mph. L Street is an east-west four-lane roadway through a residential area. In the Project vicinity, it connects Bay Boulevard to Industrial Boulevard and I-805 to the east. According to the FEIR, L Street is classified as a Class I collector with a posted speed limit of 45 mph.

J Street is an east-west four-lane roadway north of the existing energy facility property and the proposed SBRP site. This roadway connects Bay Boulevard to I-5 and communities to

the east of the SBRP site. According to the FEIR, J Street is classified as a major roadway with a posted speed limit of 45 mph.

Bay Boulevard is a north-south roadway east of the existing energy facility property and the proposed SBRP site. Bay Boulevard is a two-lane roadway between Palomar Street and southbound I-5 and Bay Boulevard ramps and a three- to four-lane roadway between southbound I-5 and Bay Boulevard ramps and L Street. This roadway provides direct access to the Project site and connects Palomar Street, L Street, J Street, as well as communities to the south and north of the Project site. Bay Boulevard is classified as a class II collector with a posted speed limit of 30 mph.

Industrial Boulevard is a north-south two-lane roadway east of the proposed SBRP site and I-5. This roadway provides a connection between Palomar Street, L Street, and adjacent I-5 ramps. Industrial Boulevard parallels I-5 to the south and terminates at L Street to the north. Industrial Boulevard is classified as a class II collector with a posted speed limit of 30 mph.

8.10.3.2 Level of Service Analysis and Current Transportation Facilities Characteristics

The City of Chula Vista uses the LOS criteria, as defined by the 2000 *Highway Capacity Manual*, to assess the performance of its street and highway system and the capacity of roadways. The requirements are specified in the Transportation and Circulation Element of the City of Chula Vista General Plan. Traffic flow characteristics for different LOS are described in Table 8.10-2.

TABLE 8.10-2
Level of Service Criteria for Roadways

| LOS | V/C | Traffic Flow Characteristics |
|-----|-------------|---|
| A | 0.00 – 0.60 | Free flow; insignificant delays |
| B | 0.61 – 0.70 | Stable operation; minimal delays |
| C | 0.71 – 0.80 | Stable operation; acceptable delays |
| D | 0.81 – 0.90 | Approaching unstable flow; queues develop rapidly but no excessive delays |
| E | 0.91 – 1.00 | Unstable operation; significant delays |
| F | > 1.00 | Forced flow; jammed conditions |

Sources:
City of Chula Vista. December 2005. Final Environmental Impact Report
Transportation Research Board. 2000. Highway Capacity Manual

Notes:
V/C – traffic volume (demand) / roadway capacity ratio

- The analysis for this section is based on daily roadway volumes and the afternoon peak volumes. In general, morning trips tend to be home-to-work trips and are spread out over a longer period than the evening trips. The evening trip volumes tend to be higher than morning trip volumes since they include multiple trip purposes, such as work-to-home, shopping, social, and other trips. This analysis focuses on the following study area roadway segments during a typical weekday and adjacent freeway ramps during a typical weekday peak hour between 4:00 p.m. to 6:00 p.m. (evening peak). Palomar Street from Bay Boulevard to Industrial Boulevard

- L Street from I-5 to I-805
- J Street from Bay Boulevard to Broadway
- Bay Boulevard from Palomar Street to J Street
- I-5 from Palomar Street to J Street
- I-5 on and off ramps

Traffic conditions were evaluated using the methodology of Transportation Research Board's 2000 *Highway Capacity Manual*. Roadway conditions were evaluated for the following scenarios:

- Existing (2005) conditions
- Construction/demolition (2007) conditions

LOS was calculated for most major road segments in the study area. Caltrans, SANDAG and the City of Chula Vista historical traffic data, from 1999 to 2004, for local roadways were compared. It is expected that this area will experience growth due to planned developments; however, details such as number of residents, related trips and beginning and end of construction of these adjacent projects are not currently available. An analysis of the historical data comparison indicated that, if the new developments were excluded, updated traffic forecasts for 2008 (beginning of construction) and 2010 (beginning of commercial operation and demolition of the SBPP) will be comparable to the 2005 (existing) conditions. Facility operation conditions were not evaluated since traffic generated by permanent employees and deliveries during facility operation will be minimal. SBPP demolition conditions were not evaluated since demolition-related vehicle trips will be lower than average and peak period construction trips. In other words, traffic volumes in this extended period of demolition are higher than no-build traffic volumes, but since they are lower than the volumes in the construction period, the construction analysis has the most impacts.

Table 8.10-3 identifies the existing roadway classification, number of lanes, roadway capacity, average daily traffic volume, peak hour volume, volume-capacity ratios, and LOS for roadways that will serve SBRP. LOS C is the minimum acceptable LOS along City maintained roads in the Project vicinity. LOS D threshold for roadway degeneration is acceptable for planning purposes on Caltrans maintained roadways.

Existing average daily traffic (ADT) volumes on selected roadway segments were collected from the City of Chula Vista Traffic Volumes book. Turn movement and truck percentage data for intersections in Chula Vista were not available. Therefore, the traffic impacts were analyzed based on daily roadway capacity. Ramp volumes published by the Caltrans were used to evaluate construction impacts on I-5 from Main Street to H Street and at Palomar Street, Industrial Boulevard/Bay Boulevard and J Street ramps. Existing daily volumes include workers for the existing SBPP.

The LOS for most local roadways surrounding the proposed Project site prior to construction is LOS C and better, which represents near-free-flow traffic operating conditions. An exception is L Street between Hilltop Drive and I-805, which is operating at LOS E.

TABLE 8.10-3
Existing Traffic Characteristics for Roadways Serving SBRP

| Local Roadway | Segment | Classification | Number of Lanes | Capacity | Average Daily Volume | V/C | LOS |
|----------------|----------------------------|--------------------|-----------------|----------|----------------------|------|-----|
| Palomar Street | Bay Blvd to I-5 | Class I Collector | 4 | 22,000 | 4,800 | 0.22 | A |
| Palomar Street | I-5 to Industrial Blvd | Arterial | 6 | 50,000 | 35,360 | 0.71 | C |
| L Street | I-5 to Broadway | Class I Collector | 4 | 22,000 | 15,450 | 0.70 | B |
| L Street | Broadway to Hilltop Dr. | Class I Collector | 4 | 22,000 | 15,641 | 0.71 | C |
| L Street | Hilltop Dr. to I-805 | Class I Collector | 4 | 22,000 | 20,407 | 0.93 | E |
| J Street | Bay Blvd to Broadway | Major | 4 | 30,000 | 19,024 | 0.63 | B |
| Bay Boulevard | Palomar St to SB I-5 Ramps | Class II Collector | 2 | 12,000 | 6,830 | 0.57 | A |
| Bay Boulevard | SB I-5 Ramps to L St | Class II Collector | 3 | 18,000 | 11,986 | 0.67 | B |
| Bay Boulevard | L St to J St | Class II Collector | 2 | 12,000 | 3,600 | 0.30 | A |

| Freeway | Segment | Classification | Number of Lanes | Directional Peak Hour Volume | Average Daily Volume | LOS |
|-----------------|------------------------------|----------------|-----------------|------------------------------|----------------------|-----|
| Interstate 5 NB | Main St to Palomar St | Freeway | 4 | 7350 | 162,000 | D |
| Interstate 5 SB | Palomar St to Main St | | 4 | 8100 | | E |
| Interstate 5 NB | Palomar St to Bay/Industrial | Freeway | 4 | 7,340 | 161,000 | D |
| Interstate 5 SB | Bay/Industrial to Palomar St | | 4 | 8,050 | | E |
| Interstate 5 NB | Bay/Industrial to J St | Freeway | 4 | 7,714 | 170,000 | D |
| Interstate 5 SB | J St to Bay/Industrial | | 4 | 8,500 | | E |
| Interstate 5 NB | J St to H St | Freeway | 4 | 7,850 | 173,000 | E |
| Interstate 5 SB | H St to J St | | 4 | 8,650 | | E |

| On/Off-Ramp | Segment | Average Daily Volume | Peak Hour Volume | LOS |
|-----------------|--------------------------|----------------------|------------------|-----|
| Interstate 5 NB | Palomar St off Ramp | 8,400 | 420 | D |
| Interstate 5 NB | Palomar St on Ramp | 8,400 | 420 | C |
| Interstate 5 SB | Palomar St off Ramp | 8,000 | 240 | E |
| Interstate 5 SB | Palomar St on Ramp | 9,200 | 275 | D |
| Interstate 5 NB | Industrial Blvd off Ramp | 4,500 | 225 | D |
| Interstate 5 NB | Industrial Blvd on Ramp | 8,800 | 440 | D |
| Interstate 5 SB | Bay Blvd off Ramp | 8,500 | 255 | E |
| Interstate 5 SB | Bay Blvd on Ramp | 3,850 | 115 | D |
| Interstate 5 NB | J St off Ramp | 4,450 | 225 | D |
| Interstate 5 NB | J St on Ramp | 5,900 | 295 | C |
| Interstate 5 SB | J St off Ramp | 5,600 | 170 | E |
| Interstate 5 SB | J St on Ramp | 3,950 | 120 | D |

Sources:

City of Chula Vista. October 1, 2003. Traffic Volume Book.

City of Chula Vista. July 2002. Subdivision Manual.

City of Chula Vista. December 2005. Final Environmental Impact Report.

Caltrans Traffic and Vehicle Data Systems Unit. 2004. Traffic Volumes.

Transportation Research Board. 2000. Highway Capacity Manual.

Note:

V/C – traffic volume (demand) / roadway capacity ratio

LOS during the evening peak hours on I-5 and ramps in the vicinity of Project site range from LOS C to LOS E. Southbound I-5 from Main Street to H Street and northbound I-5 from J Street to H Street operate at LOS E. Northbound I-5 from Main Street to J Street operates at LOS D. Southbound off ramps at Palomar Street, Bay Boulevard and J Street operate at LOS E. The remaining ramps operate at LOS C and LOS D.

8.10.3.3 Truck Routes—Weight and Load Limitations

In addition to the Caltrans and CVC Sections 35550-35559, the City of Chula Vista Municipal Code Chapter 10.64 establishes truck routes and load limitations for the city roads identified within the Project area. The movement of all motor vehicles having a maximum gross weight in excess of 10,000 pounds is confined to the following streets in the Project vicinity:

- Palomar Street from Bay Boulevard to Third Avenue
- L Street from Bay Boulevard to Hilltop Drive
- J Street from Bay Boulevard to Broadway
- Bay Boulevard from E Street to south city limits
- Industrial Boulevard from L Street to Main Street

8.10.3.4 Other Projects

8.10.3.4.1 Future Plans and Projects

The City of Chula Vista General Plan and the Chula Vista Bayfront Master Plan describe developments in the vicinity of the SBRP. Palomar Gateway District and the Bay Front are two areas which are projected to experience growth in the near future. Proposed projects are shown on Figure 8.10-3.

The Palomar Gateway District is located in the immediate vicinity of the Palomar Trolley Station, near the southeast quadrant of Palomar Street and Industrial Boulevard. This area is envisioned to be the southern gateway into the City of Chula Vista. Proposed projects include high density residential and retail developments within walking distance of the Palomar Trolley Station. Over 2,000 new residential units are anticipated by 2030.

The Chula Vista Bay Front is generally bound by the Sweetwater Marsh National Wildlife Refuge to the north, Palomar Street to the south, San Diego Bay to the west, and Bay Boulevard to the east. The Chula Vista Bay Front Master Plan includes the development of 2,000 multi-family residential units, development of a resort/conference center, mixed-use office/commercial/hotel uses, and civic, marina, and park uses. In addition, the Bay Front Master Plan also includes the SBRP and relies, in part, on the demolition of the existing SBPP to make way for redevelopment within the Bay Front. It is likely that some of the Palomar Gateway District and Bay Front developments will coincide with the construction of SBRP; however, additional details are not available at this time.

8.10.3.4.2 Local Comprehensive Transportation Plans

The City of Chula Vista General Plan Update FEIR and the current Regional Transportation Plan (RTP), called MOBILITY 2030, provide a general description of transportation improvements for the City of Chula Vista. The nearest roadway improvement is on H Street between Broadway and Hilltop Drive and it entails reduction of travel lanes from six to four. With this Project, H Street will be reclassified as urban arterial to better serve multimodal trips with wider sidewalks, transit station curb bulb-outs, and pedestrian amenities. While this will

reduce vehicular capacity, H Street currently operates below capacity and will continue to operate below capacity even with this Project. The nearest transit improvements include Bus Rapid Transit along I-5 and a Light Rail Line connecting the Palomar Trolley Station and areas to the east. Proposed projects are shown on Figure 8.10-3.

8.10.3.5 Pedestrian/Bicycle Facilities

The City of Chula Vista Bikeway Master Plan identifies existing facilities and bicycle deficiencies throughout the City. An existing Class II bicycle path runs along Bay Boulevard, connecting Marina Parkway to the north and Main Street to the south. Existing Class III bike paths are located on F Street, J Street, Palomar Street, Fourth Avenue, Fifth Avenue, and many other roads in the vicinity. A Class I bike path along Bay Boulevard, north of Marina Parkway, a Class II bike path along Industrial Boulevard, and a Class III bike path along Silver Strand Boulevard are some of the major proposed bikeways. Existing and planned facilities are shown on Figure 8.10-4.

8.10.3.6 Public Transportation

Public transportation in the area is provided by Chula Vista Transit and San Diego Trolley, Inc. The Chula Vista Bus Routes 701, 702, 703, and 712 and the San Diego Trolley Blue Line operate in the vicinity of the Project site. Routes 701, 702 and 703 connect the Palomar Trolley Station to the H Street Trolley Station and areas north, east and south of the Project site. Route 712 connects the Palomar Trolley Station and areas to the east of the Project site. Additionally, this is the closest bus route to the SBRP, with a stop at Bay Boulevard and Palomar Street. The Blue Line connects the Project site to San Ysidro, Imperial Beach, National City, downtown San Diego and Mission Valley via the Palomar Trolley Station located near Palomar Street and Industrial Boulevard. Existing public transportation routes are shown on Figure 8.10-5.

SANDAG has adopted Regional Transit Vision and Transit First! Strategy as part of the current RTP, called MOBILITY 2030. The plan incorporates Bus Rapid Transit (BRT) vehicles into Chula Vista's circulation system. One of the studied alignments would connect the Palomar Trolley Station to the communities west of the Project site. BRT and other transit alternatives are still in the preliminary planning.

8.10.3.7 Rail Traffic

The San Diego coastal region (including Chula Vista) and national railway systems are linked via the Burlington Northern Santa Fe (BNSF) and the San Diego and Imperial Valley (SDIV) railroads. BNSF maintains a freight easement over the 62 miles of San Diego County coastal mainline that terminates at the National City Marine Terminal north of Chula Vista. BNSF also interchanges freight with the SDIV. The SDIV operates freight service on the SANDAG-owned railway in the southwestern part of the County, including Chula Vista, where it is known as the San Diego and Arizona Eastern (SD&AE) Railway. Freight hauling occurs during night-time hours when the trolley is not in service. The SDIV operates "short haul" railroad service south through Tijuana to the eastern areas of Tecate, Mexico and California's Imperial Valley. Railroads in the Project vicinity are shown on Figure 8.10-2.

8.10.3.8 Air Traffic

Lindbergh Field, San Diego's international airport (passenger and freight traffic) and Brown Field Municipal Airport, a general aviation facility with one runway, serve Chula Vista's commercial air transportation needs. Airports in the Project vicinity are shown on Figure 8.10-2.

Lindbergh Field (SAN) is approximately 13 miles north of the Project site. The Brown Field Municipal Airport (SDM) is approximately 9 miles southeast of the Project site. Additional airports in the Project vicinity include the Ream Field Airport (NRS), approximately 4 miles southwest of the Project site and the Montgomery Field Airport (MYF), approximately 22 miles north of the Project site.

8.10.3.9 Marine Traffic

The Tenth Avenue Marine Terminal in San Diego and the National City Marine Terminal in National City are two major marine terminals near the City of Chula Vista. The City of Chula Vista's marina at the south end of San Diego Bay, located at the west end of J Street in the Bayfront, is used for recreational boating and also has some boating-related light industrial uses. Marine terminals in the Project vicinity are shown on Figure 8.10-2.

8.10.3.10 Project Description

8.10.3.10.1 Project Site Access

The Project site will use about 19.4 acres of the 33-acre parcel with the remaining 13.6 acres being dedicated to an existing 300 foot SDG&E utility easement on the east side and a pending 100-foot buffer zone on the bay side of the Project site.

The 19.4 acres also includes approximately 6.5 acres for the new SDG&E substation associated with the final electrical interconnection strategy. The site is located northwest of the intersection of Palomar Street and Bay Boulevard. The new facilities will be served by off-site public roads and a system of on-site roads. A temporary construction entrance and a permanent site entrance will be constructed west from Bay Boulevard. A road for facility maintenance and fire equipment access will loop around the plant facilities. Permanent site roads and parking areas will be asphalt paved except where only incidental traffic is anticipated. The temporary access road will be aggregate surfaced and will be completely removed after major construction is complete. See Section 2.0, Project Description, for further discussion of the Project site. Construction laydown areas will be located on the existing SBPP site.

8.10.3.10.2 Linear Facilities

The Project includes an interim and final electrical interconnection, a 3,400-foot natural gas line, and short water and sewer pipelines. Of these linear features, only the water and sewer lines affect a publicly accessible roadway (Bay Boulevard).

8.10.4 Environmental Analysis

This subsection discusses potential traffic-related environmental impacts of the proposed SBRP Project. Subsection 8.10.4.1 presents the significance criteria; Subsection 8.10.4.2 discusses construction phase impacts; Subsection 8.10.4.3 presents the impacts related to plant operation; and Subsection 8.10.4.4 discusses transport of hazardous materials.

Potential traffic impacts during construction of the plant, as well as plant operation after construction, have been considered and analyzed. Significance criteria were developed based upon Appendix G of the *CEQA Guidelines*, which identifies significant impacts to be caused by a project if it results in an increase in traffic that is substantial relative to the amount of existing traffic and the capacity of the surrounding roadway network. In addition, impacts are assessed in accordance with the criteria used by the City of Chula Vista, San Diego County, SANDAG, and Caltrans. The more stringent criteria were used to determine project-related impacts.

During the peak construction phase lasting approximately 5 months, the Project is expected to generate approximately 698 average daily construction worker trips. When completed, the operational phase of the proposed Project will generate approximately 34 additional vehicle trips. The demolition of the existing SBPP will occur after the SBRP becomes operational and the Must-Run status of the SBPP is rescinded. To analyze the “worst-case” scenario, traffic impacts associated with peak construction traffic were analyzed. A quantitative traffic analysis was not conducted for the long-term operations phase since it will generate a low volume of peak hour trips. This will not have a measurable impact on the study area roadways. Facility demolition will have a measurable impact on the study area roadways; however, the impacts will not be as significant as the construction phase impacts and thus were not analyzed.

8.10.4.1 Significance Criteria

The significance criteria have been developed using guidance provided in the California Environmental Quality Act (CEQA), Appendix G (Title 14 California Code of Regulations 15000 et seq.) and relevant local policies. Impacts of the proposed Project to transportation and circulation will be considered significant if the following criteria are met:

- Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system
- Exceed, either individually or cumulatively, a LOS standard established by the county congestion management agency for designated roads or highways
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks
- Substantially increase hazards due to a design feature or incompatible uses
- Result in inadequate emergency access
- Result in inadequate parking capacity
- Conflict with adopted policies, plans, or programs supporting alternative transportation

Additionally, the City of Chula Vista’s General Plan interprets the foregoing criteria more specifically to mean the following:

- Impacts of the proposed Project to transportation and circulation will be considered significant if the following criteria are met:
 - A roadway segment that currently operates at LOS C or better would operate at LOS D or worse with the proposed changes

- A roadway segment that currently operates at LOS D or LOS E would operate at LOS E or LOS F with the proposed changes
- A roadway segment that currently operates at LOS D, LOS E or LOS F would worsen by 5 percent or more with the proposed changes

8.10.4.2 Summary of Construction/Demolition Phase Impacts

Table 8.10-4 indicates the total daily construction and demolition related vehicle trip generation based on the estimated peak workforce and truck traffic for the site and linears construction and site demolition. During the peak construction lasting approximately 5 months, the Project is expected to generate approximately 698 daily construction worker round trips. Construction will also generate approximately 3 daily heavy haul truck trips and a peak of 125 other daily truck trips. Demolition of SBPP is estimated to take approximately 25 months including 17 months for the structures and 8 months for the foundations and site grading/restoration. During the peak demolition, the Project is expected to generate approximately 174 daily worker round trips. Additionally, demolition phase is expected to generate approximately 85 peak daily truck trips and a peak of 3 daily heavy haul truck trips.

The project also includes construction of the relocated 69 kV/138 kV substation on 6.5 acres of the 33-acre former LNG site. As the relocation of the substation is an SDG&E action, the timing for the construction of the relocated substation is not known nor is it under the control of the Applicant. However, as discussed in Section 8.10.1 above, it is anticipated that the construction of the relocated substation will occur after SBRP achieves commercial operations. During the approximate 6 month construction period for the relocated substation, there will be a peak of 30 workers per day and 5 trucks per day. Due to the limited nature of construction related traffic associated with the relocation of the substation, this construction related vehicle trips and the short time period for construction (i.e., 6 months), the construction of the relocated substation will not have a significant effect on local roadways or intersections and no additional analysis is provided.

TABLE 8.10-4
Total Daily Construction and Demolition-Related Vehicle Trip Generation at the Project Site^a

| Workforce Trips | Average Workforce | Average Daily Vehicle Trips | Peak Month | Peak Workforce | Peak Daily Vehicle Trips |
|------------------------|--------------------------|------------------------------------|-------------------|-----------------------|---------------------------------|
| Construction | 230 workers | 400 | 15-19 | 401 workers | 698 |
| Demolition | 70 workers | 121 | 22 | 100 workers | 174 |

| Truck Trips | Heavy Haul | | | Other Trucks | | | | |
|--------------------|----------------------|-------------------|-----------------------|---------------------|----------------------|-------------------|-----------------------|--------------------|
| | Daily Average | Peak Month | Peak Workforce | Peak Trucks | Daily Average | Peak Month | Peak Workforce | Peak Trucks |
| Construction | <1 ^b | 11-17 | 401 | 3 ^c | 24 | 2-5 | 7 | 125 |
| Demolition | <1 | 10 | - | 3 | 10 | 27 | 77 | 85 |

Note: Workforce refers to the peak workforce during truck trip peak months

^a This analysis assumes a 1.15 average vehicle occupancy (AVO).

^b Based on 12 trucks per month on average

^c Based on 19 trucks per month during the peak period

8.10.4.2.1 SBPR Construction and SBPP Demolition

8.10.4.2.1.1 Trip Generation

SANDAG data indicate a typical vehicle occupancy rate of 1.15 persons per vehicle. To provide a “worst-case” analysis, it is assumed that workers will not use public transit and that most of the construction personnel will commute to the Project site in private automobiles using a typical vehicle occupancy rate of 1.15 persons per vehicle. It is reasonable to expect some level of carpool use given the high level of congestion in the region, and the travel time savings offered by carpool lanes (although there are no carpool lanes immediately adjacent to the Project).

The occupancy calculation results in a forecast of 349 construction worker vehicles entering and exiting the site during the peak construction period (401 workers / 1.15 workers per vehicle = 349 vehicles) and 87 worker vehicles entering and exiting the site during the peak demolition period (100 workers / 1.15 workers per vehicle = 87 workers). These peak daily construction worker vehicles will be arriving and departing during a single shift beginning at 6:00 a.m. and ending at 2:00 p.m., resulting in 698 daily peak construction vehicle trips and 174 daily peak demolition vehicle trips. Should the schedule require the addition of a second shift, or of using around-the-clock construction, the traffic impacts will be less than those analyzed because the peak work force commute will avoid travel during peak commute hours.

The morning and afternoon peak commute hours of the adjacent street system occur during the typical morning peak period of 7:00 a.m. to 9:00 a.m. and the afternoon peak period of 4:00 p.m. to 6:00 p.m. Traffic attributable to the Project construction and demolition traffic will arrive and depart the site before the typical adjacent street system morning and afternoon peak periods begin and thus will not affect the typical adjacent street system morning and afternoon peak traffic.

The average and maximum daily heavy haul truck traffic at the site during construction are estimated to be less than one and three trucks per day, respectively. These trips will occur from Month 11 to Month 17. The average and maximum daily other truck traffic at the site during construction are estimated to be approximately 24 and 125 trucks per day, respectively. The peak, 125 trucks per day, will occur from Month 2 to Month 5, when the workforce at the site will average 7 people. Truck deliveries of construction materials and equipment will generally occur on weekdays between 6:00 a.m. and 2:00 p.m. Materials such as concrete, pipe, wire and cable, fuels, reinforcing steel, and small tools and consumables will be delivered to the site by truck. Most of the heavy equipment items will be transported by rail to rail unloading areas at the Port. Rail deliveries will be offloaded and transported to the site by heavy haul truck using approved routes and with applicable heavy and oversize permits.

The demolition activities and site restoration will require materials to be transported on and off the site. Some of the export material will be salvage equipment and components, recycled material, or waste for disposal. It is anticipated that approximately 10 trucks a day will be transporting waste and recycled materials offsite, arriving at the site empty and leaving full. In addition, it is anticipated that there will be a peak of 3 heavy haul truck trips per day during demolition. During the final demolition grading phase, which will last 50 days, approximately 75 trucks per day will be used to bring imported soil to the site. It is possible that during the first 25 days of this phase additional 10 trucks per day will haul

waste and debris offsite for disposal. Truck deliveries will be spread throughout the 8-hour workday with few deliveries occurring during the peak hour. Therefore, their contribution to overall traffic impacts will be negligible.

8.10.4.2.1.2 Linears Construction Traffic

Construction of transmission lines and natural gas, water and sewer pipelines will be conducted within the site limits or in the immediate vicinity. Thus, linears construction workforce has been included in the total peak workforce calculations.

Construction of the transmissions lines will require a peak workforce of approximately 20 people, and will be completed over a period of 4 months. During the peak construction period, using a 1.15 AVO for commuting, construction workers will generate an estimated 34 daily trips.

Construction of the natural gas pipeline will require a peak workforce of approximately 36 people, and will be completed over a period of 5 months. During the peak construction period construction workers will generate an estimated 62 daily trips.

Construction of the potable water pipelines and related facilities will require a peak workforce of approximately 18 people, and will be completed over a period of 5 months. During the peak construction period workers will generate an estimated 32 daily trips.

Construction of the sewer pipelines and related facilities will require a peak workforce of approximately 18 people, and will be completed over a period of 5 months. During the peak construction period construction workers will generate an estimated 32 daily trips.

8.10.4.2.1.3 Trip Distribution

There will be an average and peak construction workforce of approximately 230 and 400, respectively, consisting of construction craft people, supervisory, support, and construction management personnel onsite during construction of the plant. The peak and average demolition phase workforce will consist of 100 and 70 workers, respectively. It is anticipated that most of the construction workforce will be drawn from the San Diego County. Approximately 40 percent of all construction and demolition related trips will originate north of the Project site and will use I-5, Bay Boulevard, southbound Bay Boulevard off-ramp, northbound Palomar Street on-ramp, and northbound J Street on-ramp to commute to and from the Project site. Approximately 40 percent of trips will originate east of the Project site and will use L Street and Bay Boulevard to access the Project site. Remaining 20 percent of the trips will originate south of the Project site and will use I-5, Bay Boulevard, northbound Palomar Street off-ramp, and southbound Palomar Street on-ramp to commute to and from the Project site. Trip distribution is shown on Figure 8.10-6.

8.10.4.2.1.4 Existing Plus Project Traffic Impacts

The LOS analysis for roadways in the study area was performed by adding the Project's ADT volumes during peak construction and demolition periods to the existing ADT and peak volumes, as presented in Table 8.10-5. The addition of the forecasted peak Project traffic (698 daily vehicles) is not anticipated to result in a significant change to operations of most roadways throughout the day. Segments of I-5 are the exception, mostly because they already

TABLE 8.10-5
Construction/Demolition Traffic Characteristics for Roadways Serving SBRP

| Local Roadway | Segment | Classification | Number of Lanes | Capacity | Average Daily Volume | V/C | LOS |
|----------------|-------------------------|--------------------|-----------------|----------|----------------------|------|--------------------|
| Palomar Street | Bay Blvd to I-5 | Class I Collector | 4 | 22,000 | 5,079 | 0.23 | A |
| Palomar Street | I-5 to Industrial Blvd | Arterial | 6 | 50,000 | 35,639 | 0.71 | C |
| L Street | I-5 to Broadway | Class I Collector | 4 | 22,000 | 16,008 | 0.73 | C* (from B) |
| L Street | Broadway to Hilltop Dr. | Class I Collector | 4 | 22,000 | 16,199 | 0.74 | C |
| L Street | Hilltop Dr. to I-805 | Class I Collector | 4 | 22,000 | 20,965 | 0.95 | E |
| J Street | Bay Blvd to Broadway | Major | 4 | 30,000 | 19,303 | 0.64 | B |
| Bay Boulevard | Palomar St to SB I-5 | Class II Collector | 2 | 12,000 | 7,528 | 0.63 | B* (from A) |
| Bay Boulevard | SB I-5 Ramps to L St | Class II Collector | 3 | 18,000 | 12,684 | 0.70 | B |
| Bay Boulevard | L St to J St | Class II Collector | 2 | 12,000 | 3,740 | 0.31 | A |

| Freeway | Segment | Classification | Number of Lanes | Directional Peak Hour Volume | Average Daily Volume | LOS |
|-----------------|---------------------------|----------------|-----------------|------------------------------|----------------------|--------------------|
| Interstate 5 NB | Main St to Palomar St | Freeway | 4 | 7490 | 162,000 | D |
| Interstate 5 SB | Palomar St to Main St | | 4 | 8240 | | E |
| Interstate 5 NB | Palomar St to | Freeway | 4 | 7445 | 161,000 | D |
| Interstate 5 SB | Bay/Industrial to Palomar | | 4 | 8050 | | E |
| Interstate 5 NB | Bay/Industrial to J St | Freeway | 4 | 7854 | 170,000 | E* (from D) |
| Interstate 5 SB | J St to Bay/Industrial | | 4 | 8779 | | E |
| Interstate 5 NB | J St to H St | Freeway | 4 | 8129 | 173,000 | E |
| Interstate 5 SB | H St to J St | | 4 | 8929 | | F* (from E) |

| On/Off-Ramp | Segment | Average Daily Volume | Peak Hour Volume | LOS |
|-----------------|--------------------------|----------------------|------------------|--------------------|
| Interstate 5 NB | Palomar St off Ramp | 8,400 | 560 | E* (from D) |
| Interstate 5 NB | Palomar St on Ramp | 8,400 | 560 | C |
| Interstate 5 SB | Palomar St off Ramp | 8,000 | 240 | E |
| Interstate 5 SB | Palomar St on Ramp | 9,200 | 415 | D |
| Interstate 5 NB | Industrial Blvd off Ramp | 4,500 | 225 | D |
| Interstate 5 NB | Industrial Blvd on Ramp | 8,800 | 440 | D |
| Interstate 5 SB | Bay Blvd off Ramp | 8,500 | 534 | E |
| Interstate 5 SB | Bay Blvd on Ramp | 3,850 | 115 | D |
| Interstate 5 NB | J St off Ramp | 4,450 | 225 | D |
| Interstate 5 NB | J St on Ramp | 5,900 | 435 | D* (from C) |
| Interstate 5 SB | J St off Ramp | 5,600 | 170 | E |
| Interstate 5 SB | J St on Ramp | 3,950 | 120 | D |

Sources:

City of Chula Vista. October 1, 2003. Traffic Volume Book.

City of Chula Vista. July 2002. Subdivision Manual.

City of Chula Vista. December 2005. Final Environmental Impact Report.

Caltrans Traffic and Vehicle Data Systems Unit. 2004. Traffic Volumes.

Transportation Research Board. 2000. Highway Capacity Manual.

Notes:

LOS* indicates change in LOS

V/C – traffic volume (demand) / roadway capacity ratio

operate at unacceptable LOS. Addition of the construction worker trips will result in significant impacts at the following locations:

- Northbound I-5 from Bay Boulevard/Industrial Boulevard to J Street: LOS D to LOS E
- Southbound I-5 from J Street to H Street: LOS E to LOS F
- Northbound I-5 Palomar Street off-ramp: LOS D to LOS E
- Northbound I-5 J Street on-ramp: LOS C to LOS D

The Project's contribution to northbound I-5 from Bay Boulevard/Industrial Boulevard to J Street will be less than 2 percent. The Project's contribution to southbound I-5 from J Street to H Street will be less than 3 percent. The Project's contribution to northbound I-5 Palomar Street off-ramp and J Street on-ramp will be approximately 140 trips for each ramp. Since many of these locations are over capacity, anything that adds a significant number of trips may be considered an impact.

This comparison is conservative, because the Project's peak arrival times will not coincide with the morning and afternoon peak periods. However, since traffic patterns vary from day to day (both for background traffic and the project-related traffic), a conservative assumption was used to evaluate impacts.

8.10.4.3 Operation Phase Impacts

Permanent access to the site will be provided via Bay Boulevard through the east side of the Project parcel.

Workers will generate an estimated 34 daily trips, none of which will occur during the morning and the evening peak. (See Section 8.8 – Socioeconomics) There will be 22 full-time employees working at the plant; however, not all of the workers will be onsite at the same time since the operators will work in shifts. Eleven operators will work 12-hour rotating shifts, 2 operators per shift, with 1 relief operator (7 a.m. to 7 p.m. and 7 p.m. to 7 a.m.), 7 days per week. The standard shift for the maintenance technicians and administrative positions will be 8 hours per day (7 a.m. to 3:30 p.m.), 5 days per week, with unscheduled days and hours as required (i.e., weekends). During the day, 14 staff will be at the plant.

Transportation impacts associated with power plant operations will not be significant for the following reasons:

- Visits by trade persons, vendors, consultants, and other non-plant personnel are expected to be minimal and will likely occur primarily during non-peak commute periods.
- Deliveries of hazardous materials will be limited. Delivery of these materials will occur over prearranged routes and will be in compliance with all LORS governing the safe transportation of hazardous materials.

Additionally, the Project will generate less trips than the existing SBPP, given that the number of employees will be reduced from approximately 75 to 22 and number of truck deliveries will be reduced as shown in Table 8.10.6.

8.10.4.4. Transport of Hazardous Materials

Construction of SBRP and demolition of the existing SBPP will generate hazardous wastes consisting primarily of batteries, asbestos containing materials, and various liquid wastes

(e.g., cleaning solutions, solvents, paint and antifreeze). Based on the results of the Phase 1 Environmental Site Assessment for the SBRP site, contaminated soils are not expected to be encountered during construction of SBRP. In the event currently unknown contaminated soils are encountered during construction of SBRP, such soils would be managed in accordance with applicable LORS and with the appropriate coordination with applicable agencies.

Generally, only small quantities of hazardous materials will be used during the construction of SBRP. They may include gasoline, diesel fuel, motor oil, hydraulic fluid, solvents, cleaners, sealants, welding flux, various lubricants, paint, and paint thinner. Because of the small quantities of hazardous materials involved, shipments will likely be consolidated. Multiple truck deliveries of hazardous materials during construction are unlikely. During construction, a minimal number of truck trips per month will be required to haul waste for disposal. Because the transport of hazardous wastes will be conducted in accordance with the relevant transportation regulations no significant impact is expected.

Operation of the SBRP Project will result in the generation of additional waste including lubricants, water treatment chemicals, and sludge. In addition, operation of the Project will require transportation of aqueous ammonia, a regulated substance. Aqueous ammonia will be delivered to the plant by truck transport using designated truck routes (see discussion below). Small quantities of various other hazardous materials will also be used in project operations. According to Division 13 Section 31303 of the CVC, the transportation of regulated substances and hazardous materials will be on the state or interstate highways that offer the shortest overall transit time possible.

Aqueous ammonia is considered a potential inhalation hazard. Division 14.3 Section 32105 of the CVC specifies that unless there is not an alternative route, every driver of a vehicle transporting inhalation hazards shall avoid, by prearrangement of routes, driving into or through heavily populated areas, congested thoroughfares, or places where crowds are assembled.

A potential aqueous ammonia supplier is Airgas Specialty Products based in the City of La Mirada, California. The preferred ammonia transportation route is from I-5 south, exit at J Street, travel west along J Street, south on Bay Boulevard to the SBRP site. This route requires a left turn at J Street and Bay Boulevard intersection, which is controlled by four-way stop signs. An alternative ammonia transportation route is from I-5, exit at Bay Boulevard. Travel south along Bay Boulevard to SBRP. The alternative route requires a left turn from the off ramp to Bay Boulevard. This intersection is not signalized and the only stop sign is located at the off ramp.

Table 8.10-6 summarizes expected truck trips for the SBRP operations, including delivery of hazardous materials and removal of wastes, and current deliveries of hazardous materials and removal of waste from the existing operations of SBPP. On average, there will be three truck trips to the SBRP per day. For further information on the management of hazardous materials and waste products, see Sections 8.12 and 8.13, respectively.

TABLE 8.10-6
Estimated Truck Traffic During the SBRP Operation and Existing Truck Traffic at the SBPP

| Delivery Type | Number and Occurrence of Trucks for SBRP | Number and Occurrence of Trucks for SBPP |
|----------------------------------|---|---|
| Aqueous ammonia | 1 to 2 per month | 2 per month |
| Cleaning chemicals | 1 per month | 0 |
| Trash pickup | 1 per week | 1 per week |
| Lubricating oil | 1 per month | 4 per year |
| Lubricating oil filters | 4 per year | 4 per year |
| Laboratory analysis waste | 4 per year | 4 per year |
| Oily rags | 4 per year | 4 per year |
| Oil absorbents | 4 per year | 4 per year |
| Water treatment chemicals | 1 per week | 1 per month |
| Sodium Hypochlorite | 1 per month | 1 per month |
| Hydrogen | 2 per month | 2 per month |
| Nitrogen | 1 per month | 1 per month |
| Jet-A (for the SBPP CT) | 0 | 9-12 deliveries per year |
| Diesel (for emergency fire pump) | 4 per year | 0 |

Transporters of inhalation hazardous or explosive materials must contact the CHP and apply for a Hazardous Material Transportation License. Upon receiving this license, the shipper will obtain a handbook that will specify the routes approved to ship inhalation hazardous or explosive materials. The exact route of the inhalation or explosive material shipment will not be determined until the shipper contacts the CHP and applies for a license. Transportation impacts related to hazardous materials associated with power plant operations will not be significant since deliveries of hazardous materials will be limited. Delivery of these materials will occur over prearranged routes and will be in compliance with all LORS governing the safe transportation of hazardous materials.

Standards for the transport of hazardous materials are contained in the Code of Federal Regulations, Title 49 and enforced by the U.S. Department of Transportation. Additionally, the State of California has promulgated rules for hazardous waste transport that can be found in the California Code of Regulations, Title 26. Additional regulations for the transportation of hazardous materials are outlined in the California Vehicle Code (Sections 2500-505, 12804-804.5, 31300, 3400, and 34500-501). The two state agencies with primary responsibility for enforcing federal and state regulations governing the transportation of hazardous wastes are the CHP and Caltrans. Transport of hazardous materials to and from the SBRP will comply with applicable requirements.

For those materials that require offsite removal, a licensed hazardous waste transporter will move these substances to one of three Class I hazardous waste landfills in proximity to the Project site. Access by waste haulers to the Project site will be via I-5. Specific outbound truck routes from the Project site to I-5 are as follows:

1. Project site (Bay Boulevard) to J Street – northbound
2. J Street to northbound I-5 J Street on-ramp – eastbound
3. Northbound I-5 J Street on ramp to northbound I-5 – northbound

Specific inbound truck routes to the Project site from I-5 are as follows:

1. Southbound I-5 to southbound I-5 Bay Boulevard off-ramp – southbound
2. Southbound I-5 Bay Boulevard off-ramp to Bay Boulevard – westbound
3. Bay Boulevard to Project site – southbound

Outbound trucks will proceed north on I-5. I-5 and I-10 provide access to California's three Class I hazardous waste facilities including:

- Safety Kleen, Buttonwillow (Kern County)
- Safety Kleen, Westmorland (Imperial County)
- Chemical Waste Management, Kettleman Hills (Kings County)

The major highways and interstates that will be used to carry hazardous wastes from the Project site to the appropriate landfills contain adequate capacity to accommodate these vehicle trips. Hauling will be carried out in accordance with local, state, and federal regulations that include the Resource Conservation and Recovery Act (42 U.S. Code 6901et seq.), the California Integrated Waste Management Act (Public Resources Code Sections 40000 et seq.).

In addition, the federal government prescribes regulations for transporting hazardous materials. These regulations are described in the Code of Federal Regulations, Title 49, Section 171. These laws and ordinances place requirements on various aspects of hazardous waste hauling, from materials handling to vehicle signs, to ensure public safety. Transporting and handling of chemicals and wastes are discussed in Section 8.5, Hazardous Materials Handling, including the transport of ammonia.

8.10.4.5 Public Safety

Construction-related traffic is not expected to cause safety impacts because it will not be routed through residential areas. The anticipated peak daily increase in vehicle trips from commuting during construction is 698 (349 round trips). During demolition and operation the increase in the number of daily commuter trips will be 174 (87 round trips) and 17 (34 round trips) respectively. This increase in traffic will not significantly increase the congestion-related safety effects.

The only other anticipated increase in traffic during Project construction, demolition and operation will be truck trips, including delivery of hazardous materials and removal of wastes. As stated in Subsection 8.10.2 and 8.10.4.4 the aqueous ammonia transporter will be required to obtain a Hazardous Material Transportation License in accordance with California Vehicle Code Section 32105 and will be required to follow appropriate safety procedures at railroad crossings.

8.10.5 Cumulative Impacts

It is likely that construction of portions of the Palomar Gateway District and the Bay Front projects will coincide with the construction of SBRP. The Palomar Gateway District and Bay

Front developments will likely generate high volumes of construction and, later, residential and other traffic. Generally, it can be assumed that the majority of traffic related to Palomar Gateway District Project will use I-5 and Palomar Street to access the area. Bay Front development will likely generate traffic along I-5, J Street and adjacent I-5 ramps. Since portion of the SBRP construction traffic will use the same roadways, it is possible that the SBRP traffic will coincide with Palomar Gateway District and Bay Front construction or residential traffic. Details such as number of workers, number of residents and other occupants and construction commencement and duration are not available for Palomar Gateway District and Bay Front projects.

The exact extent of cumulative impacts cannot be determined at this time, but an estimate of the effects can be made. For the construction of the SBRP, there will be temporary changes in LOS (e.g., on L Street and I-5) associated with construction traffic. Since the Palomar Gateway District and Bay Front projects will involve high volumes of construction and delivery traffic (likely even more than the SBRP construction), it is reasonable to expect similar degradations in LOS. The impacts may be on the same roadways, or other roadways, depending on traffic patterns. If the construction activities are simultaneous, then the number of roadways with impacts will increase.

For both the Palomar Gateway District and Bay Front projects alone, and the cumulative impacts, mitigation measures similar to those discussed in Section 8.10.6 are expected, because impacts will be temporary. Construction worker traffic will cause most of the impacts, so measures to control that traffic will be needed. Also, it is likely that permanent traffic impacts associated with the new developments are likely, so other mitigation measures, including local roadway and freeway improvement projects may be necessary. If these occur in the early phases of the Palomar Gateway District and Bay Front project construction, they may help to mitigate the cumulative impacts associated with construction of the SBRP and other nearby projects.

Traffic volumes generated by the SBRP during the operations phase will be low enough so that there should be no significant cumulative impacts during operation.

8.10.6 Mitigation Measures

To address any potential traffic issues during construction, the construction contractor will be required to prepare a construction traffic control plan and construction management plan, also known as a Traffic Management Plan (TMP). The TMP should address timing of heavy equipment and building material deliveries, potential street and/or lane closures, signing, lighting, and traffic control device placement. Damage to any roadway by construction of SBRP or demolition of SBPP will be restored to or near its preexisting condition. The construction contractor will work with the local agency's engineer to prepare a schedule and mitigation plan for the roadways along the construction routes.

Construction of SBRP and the demolition of the SBPP will add a moderate amount of traffic to local roadways. In most cases project-related traffic increases will not result in significant impacts since existing roadway capacities are adequate. However, as previously described, significant impacts may occur on segments of I-5. To mitigate those impacts, a construction and demolition TMP will be prepared to address potential mitigation measures, including trip reduction and routing for workers. Given that these roadways already operate at

unacceptable LOS it is likely that impacts will be unmitigable. However, they will also be temporary lasting up to 5 months during construction of SBRP and 2 to 3 months during demolition of SBPP.

The operations-related and maintenance-related traffic associated with SBRP is considered to be minimal; consequently, no operations-related mitigation measures are required for SBRP.

8.10.7 Permits and Permitting Schedule

For informational purposes, the list of applicable permits, including permits that would be required, out for the CEC's exclusive siting jurisdiction, are shown on Table 8.10-7.

TABLE 8.10-7
Permits and Permit Schedule for SBRP Traffic and Transportation

| Permit | Administering Agency | Schedule |
|---|--|---|
| Single/Annual-Trip Transportation Permit for Oversized Loads and Oversized Vehicles | Caltrans – South Region Transportation Permits Office Permit Office on Duty (909) 383-4637 | Obtain when necessary, 2-hour processing time (single trip) to 2 weeks (annual trip). |
| Hazardous Materials Transportation License | California Highway Patrol HM Licensing Program (916) 327-5039 | Obtain when necessary, approximately 2-week processing time |
| Moving Permit for moving any extra-legal load which is overweight and/or oversized | San Diego County Department of Public Works 858-694-2055 | Obtain when necessary, most moving permits can usually be issued over the counter |
| Transportation Permit for the transportation of oversize and overweight loads through the City of Chula Vista | City of Chula Vista Engineering Department Ellen Vistro 691-619-5024 | Obtain when necessary, same-day processing if the insurance certificate is on file; otherwise, processed as soon as the insurance certificate is provided |

The vehicles used to transport heavy equipment and heavy construction materials will require transportation permits when they exceed the size, weight, width, or length thresholds set forth in Section 35780 of the CVC, Sections 117 and 660-711 of the California SHC, and Sections 1411.1 to 1411.6 of the California Code of Regulations. Affected vehicles will be required to obtain transportation permits from Caltrans, San Diego County and the City of Chula Vista.

Transport route arrangements would be required with Caltrans and CHP officials for permitting and escort, as applicable. Transportation of hazardous materials to and from SBRP will be conducted in accordance with CVC Section 31303.

8.10.8 References

California Department of Motor Vehicles. California Vehicle Code.
<http://www.dmv.ca.gov/pubs/vctop/vc/vc.htm>

Caltrans and Federal Highway Administration. 2003. Manual on Uniform Traffic Control Devices. <http://svhqsg4.dot.ca.gov/hq/traffops/signtech/signdel/trafficmanual.htm>

Caltrans. 2004. Traffic Volumes on the California State Highways.
<http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/2004all.htm>

Caltrans. 2004. Annual Average Daily Truck Traffic on the California State Highway System.
<http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/truck2004final.pdf>

Caltrans. 2004. Ramp Volumes on the California State Freeway System.
<http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/04ramps/D112004RAMP.PDF>

City of Chula Vista. September 2005. City of Chula Vista General Plan.
http://www.chulavistaca.gov/City_Services/Development_Services/Planning_Building/General_Plan/Draft_GPU.asp

City of Chula Vista. December 13, 2005. City of Chula Vista Municipal Code.
<http://www.codepublishing.com/ca/chulavista.html>

City of Chula Vista. October 1, 2003. Traffic Volume Book.
http://www.chulavistaca.gov/City_Services/Development_Services/Engineering/Traffic/Default.asp

City of Chula Vista. July 2002. Subdivision Manual.
http://www.chulavistaca.gov/City_Services/Development_Services/Engineering/Land/manual.asp

City of Chula Vista. December 2005. Final General Plan Update Environmental Impact Report.
http://www.chulavistaca.gov/City_Services/Development_Services/Planning_Building/General_Plan/DEIR.asp

San Diego Council of Governments (SANDAG). February 2005. Mobility 2030, The Transportation Plan for the San Diego Region.
<http://www.sandag.org/index.asp?projectid=197&fuseaction=projects.detail>

San Diego Council of Governments (SANDAG). July 2004. Final 2004 Regional Transportation Improvement Program (RTIP).
<http://www.sandag.org/index.asp?projectid=228&fuseaction=projects.detail>

San Diego County. 2004. Draft CEQA Traffic Guidelines of Significance.
http://www.sdcounty.ca.gov/dplu/Resource/docs/3~pdf/Draft_Traffic.pdf

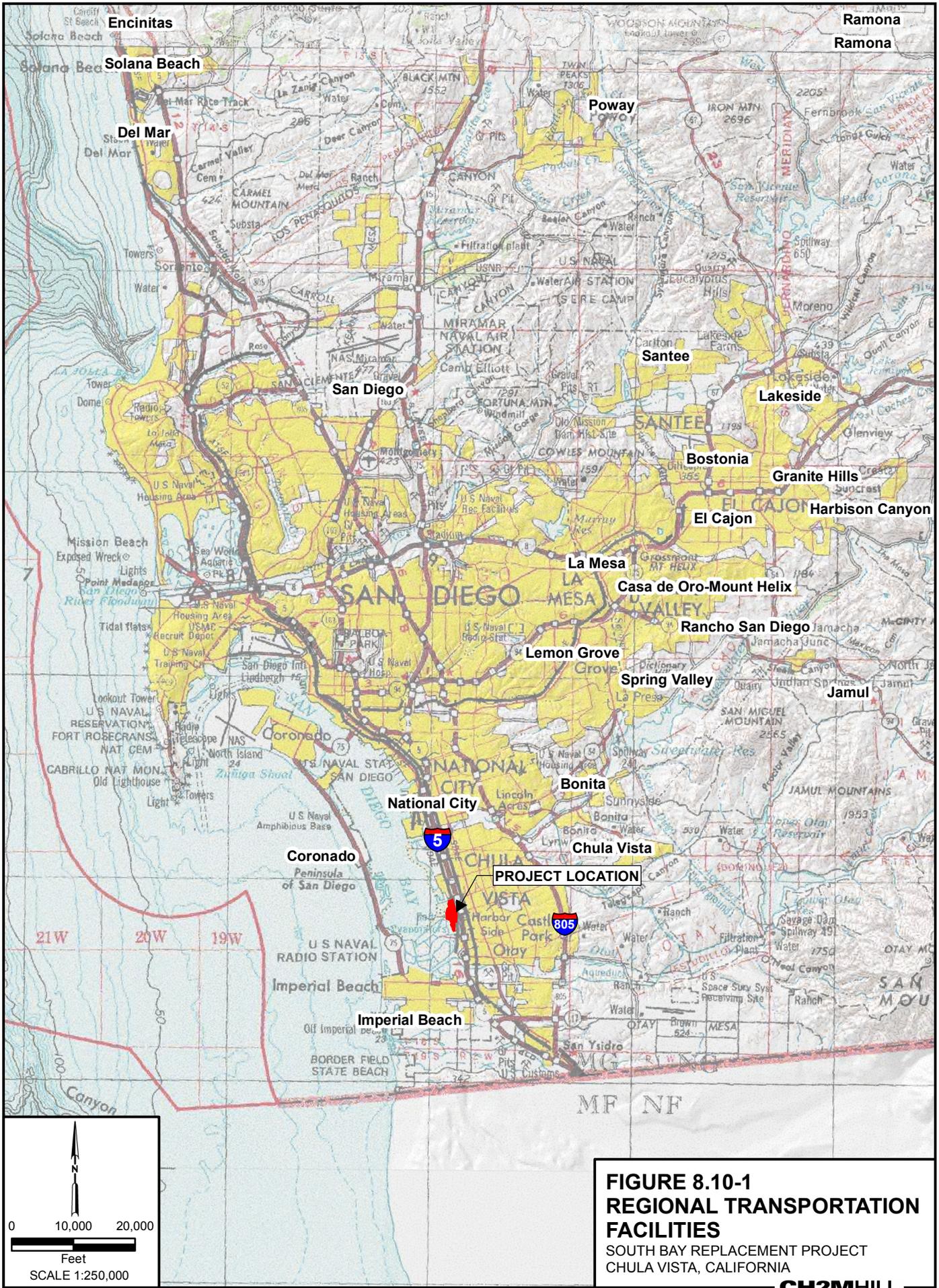
San Diego County. 2001. Traffic Guidelines.
<http://www.sdcounty.ca.gov/dpw/roads/trficguide.pdf>

San Diego Unified Port District. January 2006. Chula Vista Bayfront Master Plan.
<http://www.portofsandiego.org/projects/cvbmp/overview.asp>

State of California Legislative Counsel. California Streets and Highways Code.
http://www.leginfo.ca.gov/.html/shc_table_of_contents.html

Transportation Research Board. 2000. Highway Capacity Manual.

Wolfe, D. 2006. Personal communication between Denis Wolfe of City of Chula Vista Traffic section and Bojana Maric of CH2M HILL. June 8.





**FIGURE 8.10-2
LOCAL TRANSPORTATION
FACILITIES**

SOUTH BAY REPLACEMENT PROJECT
CHULA VISTA, CALIFORNIA

CH2MHILL

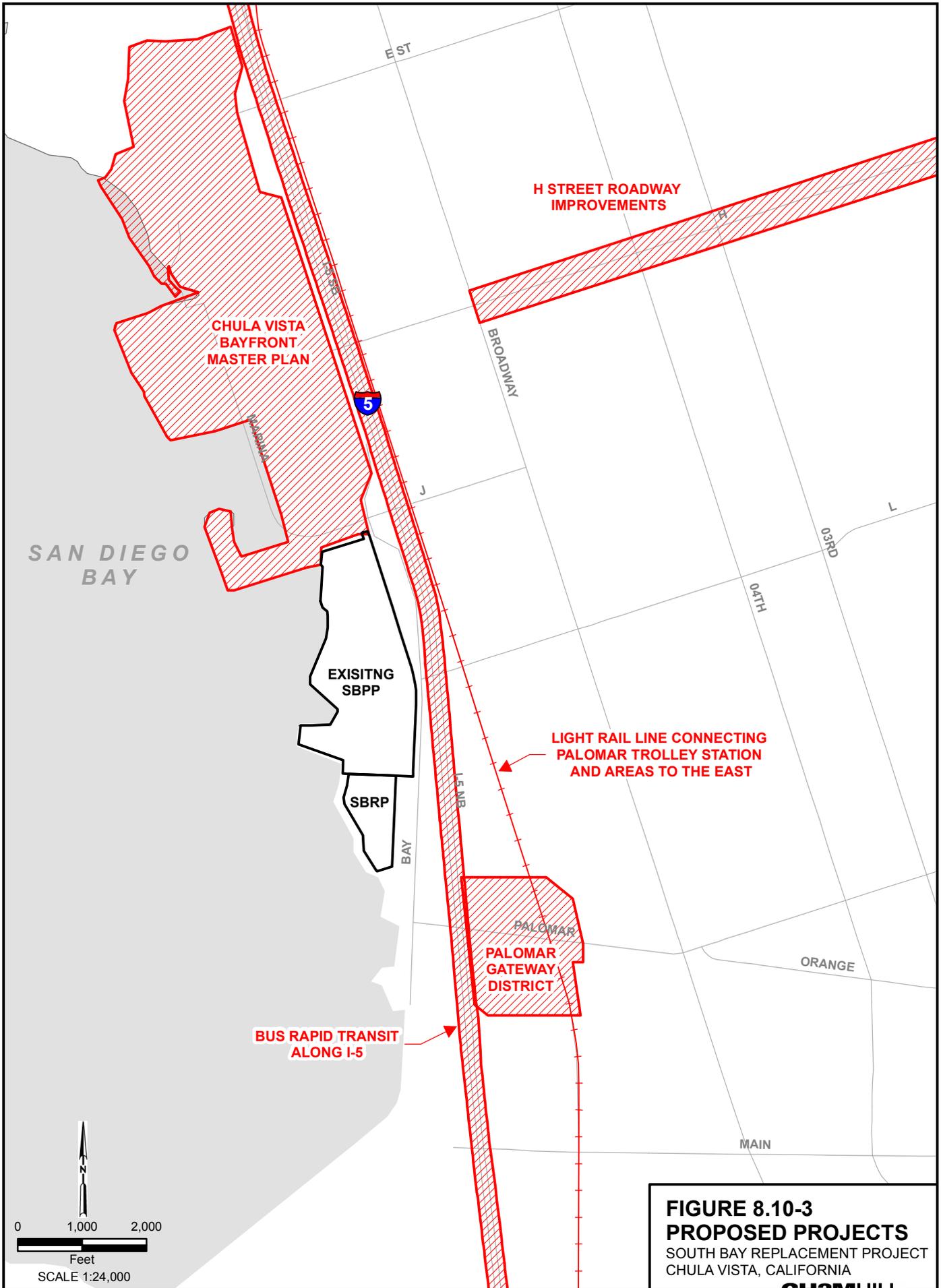


FIGURE 8.10-3
PROPOSED PROJECTS
 SOUTH BAY REPLACEMENT PROJECT
 CHULA VISTA, CALIFORNIA

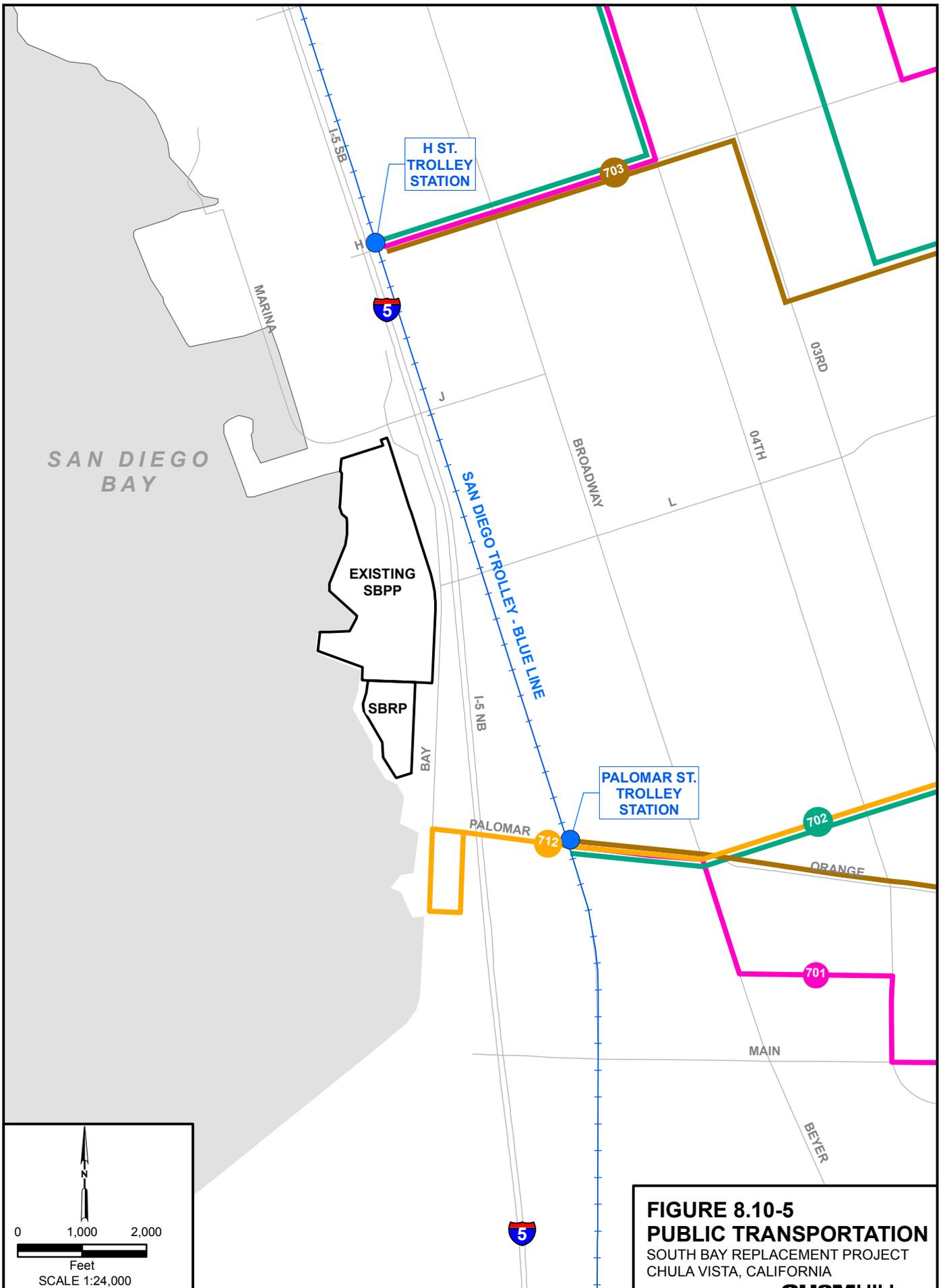


FIGURE 8.10-5
PUBLIC TRANSPORTATION
 SOUTH BAY REPLACEMENT PROJECT
 CHULA VISTA, CALIFORNIA
CH2MHILL

