

3.13 Public Services and Utilities

This section describes the environmental and regulatory setting for public services (schools, fire protection and emergency medical services, police protection, and libraries) and utilities (water, wastewater, storm drainage, solid waste, and electricity). It also describes impacts on public services and utilities that would result from implementation of the Proposed Project, and mitigation measures for significant impacts where feasible and appropriate.

3.13.1 Existing Conditions

3.13.1.1 Regulatory Setting

This section summarizes the state and local regulations relevant to public services and utilities as applicable to the Proposed Project. There are no pertinent federal regulations.

State

California Public Utilities Commission

The California Public Utilities Commission (CPUC) has safety and security regulatory authority over all transit agencies in California. The CPUC's Rail Transit Safety Section (RTSS) focuses on verification of the system safety and security plans of each rail transit agency to ensure these plans meet all state and federal rules and regulations.

Rules established by the CPUC are called General Orders (GOs). The following GOs are related to rail transit safety and security (California Public Utilities Commission 2007).

- **GO 26-D:** Clearances on Railroads and Street Railroads as to Side and Overhead Structures, Parallel Tracks and Crossings. This order is relevant to providing physical clearances around railroad tracks and operations.
- **GO 95:** Overhead Electric Line Construction. This order is relevant to providing electrical clearances around overhead lines. However, this order does not provide any specific guidance for 25 kVA systems proposed for use for the Proposed Project.
- **GO 118-A:** Construction, Reconstruction and Maintenance of Walkways, and Control of Vegetation adjacent to Railroad Tracks. This order is relevant to providing safe access and vegetation control but does not discuss electrical safety.
- **GO 164-D:** Rules and Regulations Governing State Safety Oversight of Rail Fixed Guideway Systems. This order is relevant to providing system safety oversight.

The CPUC initiated new rule-making (13-03-009) in 2013 pursuant to Petition 12-10-011 concerning a new GO governing safety standards for the use of 25 kVA electrical lines to power high speed trains. The rules are intended to establish uniform safety requirements governing the design, construction, operation, and maintenance of 25 kVA overhead contact systems (OCSs), which are to be constructed for the operation of high-speed trains in California. CPUC meetings on the draft GO has resulted in discussions about the GO being specific to a fully grade-separated dedicated high-speed rail system. The draft GO addresses performance requirements, clearances and protection

1 against electric shock, grounding and bonding, strength requirements, safe working practices, and
2 reporting requirements. Because the OCS to be constructed for the Proposed Project would be used
3 in the future by both Caltrain and high-speed rail, some of the issues addressed in the draft GO may
4 apply to the Proposed Project's OCS. It also appears additional CPUC rule-making proceedings will
5 be needed for the Proposed Project because it would not be a fully grade-separated shared system.
6 As the draft GO proceeds through rule-making, JPB will coordinate with CPUC concerning the
7 applicability of the GO to the Proposed Project and will apply any requirements in the adopted order
8 (as well as additional requirements to be determined) during the final design of the Proposed
9 Project.

10 **Local**

11 As described in Section 2.5, *Required Permits and Approvals*, pursuant to SamTrans' enabling
12 legislation (Public Utilities Code Section 103200 et seq.) and the 1991 Interstate Commerce
13 Commission's approval of the JPB acquisition of the Caltrain line, JPB activities within the Caltrain
14 ROW are exempt from local building and zoning codes and other land use ordinances.

15 The local policies described below provide a context for the analysis of potential impacts on public
16 services and utilities serving areas adjacent to the Caltrain ROW.

17 **City and County of San Francisco**

18 No relevant public services and utilities policies applicable to the Proposed Project were identified
19 in the Community Facilities Element. The following other local requirements are relevant to solid
20 waste.

21 ***Ordinance No. 27-06***

22 The City adopted an ordinance (No. 27-06) effective on July 1, 2006, that creates a mandatory
23 program to maximize the recycling of mixed construction and demolition (C&D) debris. The
24 Ordinance requires that mixed C&D debris must be transported off-site by a Registered Transporter
25 and taken to a Registered Facility that can process and divert from landfill a minimum of 65 percent
26 of the material generated from construction, demolition or remodeling projects. The SFGBO would
27 require a 75 percent diversion of C&D material for some projects.

28 ***Mandatory Recycling and Composting Ordinance***

29 Adopted in 2009, this ordinance amended the San Francisco Environment Code by adding Chapter
30 19, entitled "Mandatory Recycling and Composting Ordinance" and amending the San Francisco
31 Public Works Code and the San Francisco Health Code. The purpose of the ordinance is to: 1) require
32 all persons located in San Francisco to separate recyclables, compostables and landfilled trash and
33 participate in recycling and composting programs; 2) provide enforcement mechanisms and
34 penalties for violations; 3) ensure that all properties subscribe to refuse collection service; and 4)
35 authorize a Department of Public Health inspection fee of \$167 per hour.

36 ***Zero Waste Goal***

37 The City has adopted goals of 75 percent landfill diversion by 2010 and zero waste by 2020.²⁰
38 Currently, San Francisco recovers 72 percent of the materials it discards. The City is well on its way
39 to meeting its diversion goals. Ultimately, the City will need to look beyond recycling and

1 composting to get to zero waste, including passing legislation to increase producer and consumer
2 responsibility.

3 **County of San Mateo**

4 The *San Mateo County General Plan* includes the following relevant policies:

5 **Solid Waste Policy 13.1** Management of Solid Waste Disposal: Provide management of solid waste
6 in the most efficient and economical manner which will provide adequate services, protect the
7 public health, prevent the creation of nuisances, reduce waste generation and provide for maximum
8 resource recovery.

9 **Solid Waste Policy 13.22:** Efforts by the Private Sector: Encourage resource recovery efforts by the
10 private sector including: (1) separation of materials at the source and at transfer facilities; (2)
11 methane recovery at landfills; and (3) energy recovery through waste conversion

12 **City of Brisbane**

13 The following policy within the Community Health and Safety element of the *City of Brisbane 1994*
14 *General Plan* is relevant to the Proposed Project.

15 **Policy 161:** Continue to ensure a 3 minute emergency response average and a 10 minute average
16 response to other calls for service.

17 **City of South San Francisco**

18 The *South San Francisco General Plan* contains the following relevant policies:

19 **Policy 8.3-G-1:** Reduce the generation of solid waste, including hazardous waste, and recycle those
20 materials that are used, to slow the filling of local and regional landfills, in accord with the California
21 Integrated Waste Management Act of 1989.

22 **Policy 8.3-G-2:** Minimize the risk to life and property from the generation, storage, and
23 transportation of hazardous materials and waste in South San Francisco. Comply with all applicable
24 regulations and provisions for the storage, use and handling of hazardous substances as established
25 by federal (EPA), State (DTSC, RWQCB, Cal OSHA, Cal EPA), and local (County of San Mateo, City of
26 South San Francisco) regulations

27 **City of San Bruno**

28 The following policies within the Public Facilities and Services element of the *San Bruno General*
29 *Plan* are relevant to the Proposed Project.

30 **Policy PFS-E:** Ensure that the City's solid waste collection agency provides clean and convenient
31 garbage and recycling service.

32 **Policy PFS-F:** Provide adequate public safety services for all San Bruno properties—including police
33 protection, fire suppression, emergency medical care and emergency management.

34 **City of Millbrae**

35 The following policy from the Safety element of the *City of Millbrae General Plan* is relevant to the
36 Proposed Project.

1 **Policy S2.4:** Adequate police and fire services. The City shall continue to maintain police and fire
2 departments adequate manpower, equipment and resources to respond to any fire or other
3 localized emergency within the City. Use of supplemental volunteers should be considered.

4 **City of Burlingame**

5 A review of the *City of Burlingame General Plan* did not identify any relevant policies concerning
6 public services and utilities that are applicable to the Proposed Project.

7 **City of San Mateo**

8 The Land Use Element of the General Plan contains the following goals and policies related to
9 utilities:

10 **Goal 1e:** Provide adequate transportation, utilities, cultural, educational, recreational, and public
11 facilities, and ensure their availability to all members of the community. Establish San Mateo as the
12 cultural center of San Mateo County.

13 **Goal 4a:** Facilities. Seek to provide a safe and predictable supply of water, and provide storm
14 drainage, sewer and flood control facilities adequate to serve existing needs, the projected
15 population and employment growth and to reduce the associated life safety and health risks to
16 acceptable levels.

17 **Goal 4b:** Public Facilities. Support the provision and maintenance of adequate sites and public
18 facilities owned and/or operated by the City or other government agencies to meet existing needs
19 and the projected 2030 population and employment including, schools, post office facilities,
20 recreation facilities, libraries, art centers, museums, and offices. Encourage joint use and public-
21 private partnerships where feasible.

22 **Policy LU 4.31:** Solid Waste Disposal. Continue to support programs to reduce solid waste materials
23 in landfill areas in accordance with State requirements.

24 The *San Mateo General Plan*, Safety Element contains the following relevant policy:

25 **Policy S 4.2:** Evacuation Routes. Maintain adequate evacuation routes as identified by arterial
26 streets shown in the Circulation Element, Figure C-1.

27 **City of Belmont**

28 A review of the City of San Belmont's General Plan did not identify any relevant policies concerning
29 public services and utilities that are applicable to the Proposed Project.

30 **City of San Carlos**

31 The following goal and policies within the Community Safety and Services element of the *San Carlos*
32 *2030 General Plan* are relevant to the Proposed Project.

33 **Goal CSS-7:** Ensure adequate public services and high quality design of public facilities to make San
34 Carlos a safe, enjoyable and quality community in which to live, work and shop.

35 **Policy CSS-7.4:** Establish and regularly monitor levels of service of San Carlos' public facilities and
36 services.

1 **Policy CSS-7.12:** Support the dedication and preservation of rights-of-way for future transit service
2 along the rail corridor.

3 **City of Redwood City**

4 The following goal and policies within the Public Safety element of the *Redwood City General Plan*
5 are relevant to the Proposed Project.

6 **Goal PS-11:** Provide a high level of public safety services.

7 **Policy PS-11.1:** Work with the Police Department to determine and meet community needs for law
8 enforcement services.

9 **Policy PS-11.2:** Work with the Fire Department to determine and meet community needs for fire
10 protection and related emergency services.

11 **Town of Atherton**

12 The following policy within the Safety element of the *Town of Atherton General Plan* is relevant to
13 the Proposed Project.

14 **Policy 6.330:** Minimum road widths and clearances around structures shall be in accordance with
15 generally recognized minimums consistent with fire protection.

16 **City of Menlo Park**

17 The following policies within the Safety element of the *City of Menlo Park General Plan* is relevant to
18 the Proposed Project.

19 **Policy S1.9:** Community safety services and facilities. In coordination with other agencies, maintain
20 adequate and cost-effective levels of safety services, facilities and programs to address safety
21 concerns in Menlo Park.

22 **Policy S1.29:** Fire equipment and personnel access. Require adequate access and clearance, to the
23 maximum extent practical, for fire equipment, fire suppression personnel and evacuation for high
24 occupancy structures in coordination with the Menlo Park Fire Protection District.

25 **Policy S1.38:** Emergency vehicle access. Require that all private roads be designed to allow access
26 for emergency vehicles as a prerequisite to the granting of permits and approvals for construction.

27 **City of Palo Alto**

28 Revised in 2007, the City of Palo Alto Comprehensive Plan Natural Environment Element contains
29 policies related to utilities and service systems. Relevant policies are as follows.

30 **Policy N-23:** Reduce the discharge of toxic materials into the City's sanitary sewer collection system
31 by promoting the use of Best Management Practices.

32 **Policy N-24:** Improve storm drainage performance by constructing new system improvements
33 where necessary and replacing undersized or otherwise inadequate lines with larger lines or
34 parallel lines.

1 **Policy N-34:** Reduce the amount of solid waste disposed in the City’s landfill by reducing the
2 amount of waste generated and promoting the cost-effective reuse of materials that would
3 otherwise be placed in a landfill.

4 **Policy N-35:** Reduce solid waste generation through salvage and reuse of building materials,
5 including architecturally and historically significant materials.

6 **Policy N-37:** Ensure the environmentally sound disposal of solid waste.

7 **City of Mountain View**

8 The following goal and policies within the Infrastructure and Conservation element of the *Mountain*
9 *View 2030 General Plan 2030* are relevant to the Proposed Project.

10 **Goal INC-1:** Citywide infrastructure to support existing development and future growth.

11 **Policy INC 1.6:** Utility service. Coordinate with all utility providers to ensure safe and adequate
12 utility services.

13 **City of Sunnyvale**

14 The following goal within the Safety and Noise element of the *City of Sunnyvale General Plan* is
15 relevant to the Proposed Project.

16 **Goal SN-3:** Safe and secure City. Ensure a safe and secure environment for people and property in
17 the community by providing effective public safety response and prevention and education services.

18 The following goals and policies from the Environmental Management element of the *City of*
19 *Sunnyvale General Plan* are relevant to the Proposed Project.

20 **Goal EM-1:** Adequate water supplies. Acquire and manage water supplies so that existing and future
21 reasonable demands for water, as projected in the 20-year forecast, are reliably met.

22 **Goal EM-6:** Effective wastewater collection system. Continue to operate and maintain the
23 wastewater collection system so that all sewage and industrial wastes generated within the City are
24 collected and conveyed under safe and sanitary conditions to the water pollution control plant.

25 **Policy EM 8.3:** Ensure that storm water measures and best management practices (BMPs) are
26 implemented to reduce discharge of pollutants in storm water to the maximum extent practicable.

27 **City of Santa Clara**

28 The following policies within the Land Use element of the *City of Santa Clara 2010–2035 General*
29 *Plan* are relevant to the Proposed Project.

30 **Policy 5.3.1-P17:** Promote economic vitality by maintaining the City’s level of service for public
31 facilities and infrastructure, including affordable utilities and high quality telecommunications

32 **Policy 5.3.1-P27:** Encourage screening of above-ground utility equipment to minimize visual
33 impacts.

1 **City of San Jose**

2 The following policy within the Thriving Community element of the *Envision San Jose 2040 General*
3 *Plan* is relevant to the Proposed Project.

4 **Policy FS-5.6:** When reviewing major land use or policy changes, consider the availability of police
5 and fire protection, parks and recreation and library services to the affected area as well as potential
6 impacts of the project on existing service levels.

7 The following policy within the Environmental Leadership element of the *Envision San Jose 2040*
8 *General Plan* is relevant to the Proposed Project.

9 **Policy MS-7.2:** Collaborate with providers of solid waste collection, recycling, and disposal services
10 to ensure a level of service that promotes a clean environment.

11 **State and Local Regulations and Ordinances Regarding Construction and**
12 **Demolition Debris**

13 In addition to the above listed goals and policies, in order to comply with Assembly Bill (AB) 939
14 and Senate Bill (SB) 1016, most of the cities and towns that intersect with the Caltrain corridor have
15 developed local ordinances regulating construction and demolition debris. These ordinances require
16 construction and/or demolition projects to divert 50–100 percent of construction debris from
17 entering the waste stream.

18 **3.13.1.2 Environmental Setting**

19 **Public Services**

20 Public services located in the Caltrain corridor include police, fire, medical, educational, and other
21 public facilities like libraries.

22 **Public Facilities Adjacent to the Caltrain ROW**

23 Only those public facilities that abut or are adjacent to the Caltrain right-of-way (ROW) or proposed
24 traction power facilities (TPFs) are included in this impacts analysis. Therefore, only the public
25 facilities within 0.25 mile of the Caltrain corridor are included in the table and discussion. These are
26 summarized in Table 3.13-1. Recreational facilities are discussed separately in Section 3.10, *Land*
27 *Use and Recreation*.

28 **Table 3.13-1. Public Facilities within 0.25 Mile of the Caltrain Corridor**

City	Facility Name	Address
San Francisco	Bayview Branch Library	5075 3rd Street
	Daniel Webster Elementary School	465 Missouri Street
	Charles R. Drew Elementary	50 Pomona Street
	San Francisco Fire Station 44	1298 Girard Street
	Kipp Bayview Academy	1060 Key Avenue
	San Francisco Fire Station 8	36 Bluxome Street
	San Francisco Police Department – Bayview Station	201 Williams Avenue

City	Facility Name	Address
	San Francisco Public Defender	555 7th Street
	UCSF Medical Center at Mission Hill (Opening 2/1/15)	600 16th Street
	U.S. Post Office	68 Leland Avenue
	U.S. Post Office	2111 Lane Street
	U.S. Post Office	460 Brannan Street
	Visitacion Valley Branch Library	201 Leland Avenue
Brisbane	Brisbane City Hall	50 Park Place
	Brisbane Fire Department	3445 Bayshore Boulevard
	Brisbane Police Department	50 Park Place
South San Francisco	State Lottery	820 Dubuque Avenue
	U.S. Post Office	1070 San Mateo Avenue
	U.S. Post Office	322 Linden Avenue
	U.S. Post Office	844 Dubuque Avenue
San Bruno	Belle Air Elementary School	450 3rd Avenue
	Lomita Park Elementary School	200 St. Helena Avenue
	San Bruno Police Station	1177 Huntington Avenue
Millbrae	Millbrae City Fire Department	511 Magnolia Avenue
	U.S. Post Office	501 Broadway
Burlingame	Burlingame City Hall	501 Primrose Road
	Burlingame Fire Station 34	799 California Drive
	Burlingame High School	1 Mangini Way
	Burlingame Police Department	1111 Trousdale Drive
	Burlingame Public Library	480 Primrose Road
	Central County Fire Department	1399 Rollins Road
	U.S. Post Office	220 Park Road
	Washington Elementary School	801 Howard Avenue
San Mateo	Women Infants & Children (WIC) Food Program	32 W 25th Avenue, Suite 203a
	County Fairgrounds	2495 South Delaware Street
	San Mateo Fire Station 21	120 S. Ellsworth Avenue
	San Mateo Fire Station 23	31 27th Avenue
	San Mateo Police Department	2000 S Delaware Street
	San Mateo Union High School	506 N Delaware Street
	Sunnybrae Elementary School	1031 S Delaware Street
	U.S. Post Office	1630 S Delaware Street
	U.S. Post Office	210 S Ellsworth Avenue

City	Facility Name	Address
Belmont	Belmont City Hall	1 Twin Pines Lane
	Belmont Fire Station 14	911 Granada Street
	Belmont Police Department	1 Twin Pines Lane
	Central Elementary School	525 Middle Road
	Mae Nesbit Elementary School	500 Biddulph Way
	U.S. Post Office	640 Masonic Way
San Carlos	Proposed South Community School	1390 El Camino Real
	San Carlos City Hall	600 Elm Street
	San Carlos Fire Department	1250 San Carlos Avenue
	San Carlos Fire Department	525 Laurel Street
	U.S. Post Office	809 Laurel Street
Redwood City	Fair Oaks Branch Library	2510 Middlefield Road
	Orion Elementary School	815 Allerton Street
	Redwood City City Hall	1017 Middlefield Road
	Redwood City Library	1044 Middlefield Road
	Redwood High School	1968 Old County Road
	San Mateo County Courthouse	400 County Center
	San Mateo County Courthouse/Health Department	800 N Humboldt Street
	San Mateo County Law Library	710 Hamilton Street
U.S. Post Office	855 Jefferson Avenue	
North Fair Oaks (San Mateo county)	Fair Oaks Community Center	2600 Middlefield Road
	Garfield Charter Elementary School	3600 Middlefield Road
Atherton	Atherton Library	2 Dinkelspiel Station Lane
	Atherton Police Department	83 Ashfield Road
	Atherton Town Hall	3 Ashfield Road
	US Post Office	91 Ashfield Road
Menlo Park	Menlo Park Fire Protection District Station 6	700 Oak Grove Avenue
	Menlo Park City Hall	701 Laurel Street
	Menlo Park Library	800 Alma Street
	Menlo Park Police Department	701 Laurel Street
	U.S. Post Office	655 Oak Grove Avenue
Palo Alto	Santa Clara County Courthouse and Jail	270 Grant Avenue
	El Carmelo Elementary School	3024 Bryant Street
	Heffalump Preschool	3990 Ventura Court
	Palo Alto Downtown Library	270 Forest Avenue
	Palo Alto Fire Department & Fire Station 1	250 Hamilton Avenue
	Palo Alto High School	50 Embarcadero Road
	Palo Alto Police Department	275 Hamilton Avenue
U.S. Post Office	265 Cambridge Avenue	
Mountain View	Edith Landels Elementary School	115 W Dana Street

City	Facility Name	Address
	Mountain View Fire/Policy Department	1000 Villa Street
	Mountain View Teen Center	298 Escuela Avenue
	Mountain View Senior Center Community Garden	Escuela Avenue (between Crisanto Avenue and Villa Street)
	Slater School	325 Gladys Avenue
	U.S. Post Office	211 Hope Street
Sunnyvale	U.S. Post Office	155 S Taaffe Street
	Vargas Elementary School	1054 Carson Drive
Santa Clara	Adrian Wilcox High School	3250 Monroe Street
	Bracher Elementary School	2700 Chromite Drive
	Institute For Business & Tech	2400 Walsh Avenue
	Santa Clara Fire Department	777 Benton Street
	Santa Clara Police Station	601 El Camino Real
	Scott Lane Elementary School	1925 Scott Boulevard
San Jose	Foundry Community Day School	258 Sunol Street
	Gardner Community Center	520 W Virginia Street
	Gardner Elementary School	502 Illinois avenue
	San Jose Fire Department, Station 7	800 Emory Street
	San Jose Unified School District	855 Lenzen Avenue

Source: Compiled by ICF from Google Earth and web searches of areas adjacent to the Caltrain ROW.

1

2 **Police and Fire Protection Services**

3 Police protection and traffic enforcement in the Caltrain corridor are provided by the cities of San
 4 Francisco, South San Francisco, Brisbane, Millbrae, San Bruno, Burlingame, San Mateo, Belmont, San
 5 Carlos, Redwood City, Menlo Park, Palo Alto, Mountain View, Sunnyvale, Santa Clara, and San Jose;
 6 the Town of Atherton; the sheriff’s departments of the counties of San Mateo and Santa Clara; and
 7 the California Highway Patrol. There are 11 police stations and/or departments and 16 fire stations
 8 and/or departments within 0.25 mile of the Caltrain corridor.

9 **Hospitals and Emergency Medical Services**

10 No hospitals or other major medical facilities other than the Palo Alto Medical Foundation (795 El
 11 Camino Real in Palo Alto) are within 0.25 mile of the Caltrain corridor. However, the future
 12 University of California, San Francisco (UCSF) Medical Center at Mission Hill is scheduled to open on
 13 February 1, 2015 (University of California, San Francisco 2013), and this facility is within 0.25 mile
 14 of the Caltrain corridor.

15 **Schools**

16 Seven high schools, seventeen elementary schools, two intermediate schools, and one school district
 17 office are within 0.25 mile of the Caltrain corridor.

1 **Libraries and Other Public Facilities**

2 There are 10 libraries and 36 other public facilities within 0.25 mile of the Caltrain corridor. For
3 purposes of this analysis, “other public facilities” include government facilities (e.g., U.S. Post Offices,
4 city and town halls, social services, and other government facilities), community centers, and
5 fairgrounds.

6 **Solid Waste Landfills**

7 As explained in the EIR for Plan Bay Area (MTC/ABAG 2013), 12 of the current 17 major landfills in
8 the Bay Area will still be open through ~~2020~~ 2019, including the Guadalupe Sanitary landfill and
9 Kirby Canyon Landfill (both in Santa Clara County) but all but four of those 17 landfills in the San
10 Francisco Bay Area have an estimated closure date before the year 2040.

11 **Utilities**

12 The utilities within the Caltrain corridor include storm drain and sanitary sewer systems, water
13 service, gas and electric service, and telecommunications services. These utility systems frequently
14 cross the Caltrain ROW, and some telecommunication services are located along the Caltrain ROW,
15 using it as a primary transmission corridor on the Peninsula.

16 Table 3.13-2 provides a general summary of the utilities by city, defining the utility provider and the
17 approximate number of locations of interest. Table 3.13-3 summarizes the utilities at the proposed
18 traction power substation (TPS) locations. It is acknowledged that the information on utilities
19 presented in Tables 3.13-2 and 3.13-3 may be incomplete; however, as part of the Proposed
20 Project’s final design, Caltrain will coordinate with all appropriate local jurisdictions and utility
21 providers to ensure that all utilities that cross or run longitudinally along the Caltrain ROW are
22 identified. The following paragraphs discuss the utility setting, describing storm drain and sanitary
23 sewer systems, water service, gas and electric service, and telecommunications services.

24 **Table 3.13-2. Summary of Existing Utilities within the Caltrain Corridor Right-of-Way**

ID	Utility Type and Locations	Owner
1	Underground fiber-optic cable. They typically run parallel to the ROW.	MCI, Sprint, AT&T, Qwest, and Brook Fiber, Level 3
2	Cable service. Provides cable service throughout the Peninsula corridor, excluding the cities of San Bruno, San Carlos, Palo Alto, and San Jose.	AT&T Cable
3	Telephone service. Aerial fiber-optic cables are parallel and cross the Caltrain ROW within numerous cities.	Pacific Bell, AT&T, local city cable TV, traffic control
4	Gas and electricity. Excluding the cities of Palo Alto and Santa Clara, Pacific Gas and Electric Company (PG&E) provides electricity to all Peninsula corridor cities. Gas is provided to all cities. Underground gas lines and overhead electrical wires cross and are parallel to the Caltrain ROW at numerous locations.	PG&E
5	Jet fuel. Pipe crosses ROW near San Francisco/San Mateo County line. This facility also follows the ROW in South San Francisco. It is carried on the Caltrain bridge over Colma Creek and goes underground on both approaches on the east side of the tracks.	Kinder Morgan

ID	Utility Type and Locations	Owner
6	Water service. Provides water service for South San Francisco, San Mateo, San Carlos, unincorporated areas of Redwood City, and Sunnyvale. Water mains vary from 6 to 24 inches and run parallel with streets that cross the Caltrain ROW.	California Water Service Company (CWSC)
7	Combined storm drain and sanitary system. This system crosses the ROW at approximately 21 locations. The system parallels the ROW near Townsend Street, Pennsylvania Avenue, and Tunnel Avenue.	San Francisco Department of Public Works
8	Water service. Provides retail water service to San Francisco and wholesale water service to 28 suburban <u>26 water</u> agencies in Alameda, Santa Clara, and San Mateo Counties.	San Francisco Water Department
9	Sanitary sewers. Maintains sanitary sewers in Redwood City. Sanitary sewers cross the ROW at approximately four locations. An abandoned sewer line is parallel to the ROW at one location.	County of San Mateo Public Works Department
10	The City provides water service and maintains <u>storm drains and sewers</u> .	City of Brisbane
11	CWSC provides water service.	City of South San Francisco
12	The City maintains water and cable service. In 2001, as a result of the BART to SFX extension project, sewers and storm drains have been installed parallel to the right-of-way between I-380 and Angus Avenue. NEXTLINK, Williams Communications, Level III, and Pacific Bell fiber-optic cables cross the ROW at Euclid Avenue.	City of San Bruno
13	The City provides water service.	City of Millbrae
14	The City provides water service.	City of Burlingame
15	The City maintains sewer system. California Water Service Company (CWSC) provides water service. The City and CWSC will provide locations of sewer and water mains that cross the Caltrain ROW, respectively.	City of San Mateo
16	City provides water service and maintains sewer system.	City of Belmont
17	CWSC provides water service. The City maintains storm drains and sewer system.	City of San Carlos
18	CWSC provides water service in unincorporated Redwood City. City provides water service for remaining areas.	City of Redwood CWSC
19	The City provides and maintains storm drain system.	City of Atherton
20	The City provides water service and maintains storm drain system.	City of Menlo Park
21	The City provides water, electricity, and cable service. It also maintains the storm drain and sewer systems.	City of Palo Alto
22	The City provides water service and maintains sewer and storm drains. Water mains crossing the ROW at approximately 7 locations, including an 8-foot include a 16-inch transmission main at the Stevens Creek Freeway. Water mains are parallel to the ROW, and Central Expressway, and Evelyn Avenue. Sanitary sewers cross the ROW at approximately 13 locations. The sanitary sewers are parallel to the ROW, Central Expressway, and Evelyn Avenue and Alma Street. Storm drains cross the ROW at approximately nine locations. The storm drains are parallel to the ROW, and Central Expressway, and Evelyn Avenue.	City of Mountain View
23	The City provides water service.	City of Sunnyvale

ID	Utility Type and Locations	Owner
24	<p>The City provides water and electric services and maintains sanitary sewer and storm drain systems.</p> <p>Water mains ranging from 8 to 24 inches in diameter cross the ROW at approximately 7 locations. A 27-inch main for recycled water crosses the ROW at 1 location.</p> <p>Overhead electrical wires cross the ROW at approximately seven locations. The wires have 12-kilovolt (kV) capacity.</p> <p>Sanitary sewers ranging from 8 to 27 inches in diameter cross the ROW at approximately 11 locations.</p> <p>Storm drains ranging from 12 to 60 inches in diameter cross the ROW at approximately eight locations. A 54-inch by 66-inch elliptical pipe is located approximately 600 feet east of Bower Avenue.</p>	City of Santa Clara
25	<p>The City provides water and cable service. San Jose Water Company and Great Oaks Water (privately owned) also provide water service. The City maintains sewers.</p>	City of San Jose

Note: The CBOSS project is installing fiber optic in the Caltrain ROW and will be completed by 2015.
Source: Peninsula Corridor Joint Powers Board 2013.

1 **Table 3.13-3. Utilities near Proposed Traction Power Facility Locations**

No.	Proposed TPF	Size (feet)	City and Location	Utility Description
1	PS1	40 x 80	San Francisco, near Mariposa Street at Pennsylvania Avenue	12-foot reinforced concrete pipe storm drain, underground fiber-optic cables
2	PS2	40 x 80	San Francisco, near Blanken Avenue at Bayshore Boulevard	Underground fiber-optic cables
3	TPS1 Option 1	150 x 250	South San Francisco, north of Airport Boulevard	Adjacent to PG&E 115-kV substation, 115-kV transmission lines cross over are or in the vicinity of TPS1
4	TPS1 Option 2	150 x 250	South San Francisco, north of Airport Boulevard	25-kV transmission lines are in the vicinity of TPS1
5	TPS1 Option 3	150 x 250	South San Francisco, north of Airport Boulevard	115-kV transmission lines cross over are or in the vicinity of TPS1
6	TPS1 Option 4	150 x 250	South San Francisco, east of Dubuque Avenue	36-inch concrete pipe (service unknown)
7	PS3 Option 1	40 x 80	Burlingame, between Summer and Lincoln. In ROW.	Underground fiber-optic cables
8	PS3 Option 2	40 x 80	Burlingame, south end of Star Way	Underground fiber-optic cables
7	PS4 Option 1	40 x 80	San Mateo, north of the Hillsdale and El Camino Real intersection	Aerial fiber-optic cables
8	PS4 Option 2	40 x 80	San Mateo, south corner of Hillsdale Station parking lot	Aerial fiber-optic cables, underground fiber-optic cables
10	PS4 Option 3	40 x 80	San Mateo, south of Hillsdale Boulevard	Aerial fiber-optic cables.
9	SWS1 Option 1	60 x 150	Redwood City, between Buckingham and Nottingham	Underground fiber-optic cables
12	SWS1 Option 2	60 x 150	Redwood City, east of Woodside Road	Underground fiber-optic cables
13	PS5 Option 1	40 x 80	Palo Alto, adjacent to Alma Street near Greenmeadow Way Mountain View, near West Meadow Drive	Aerial fiber-optic cables, underground fiber-optic cables
14	PS5 Option 1B	40 x 80	Palo Alto, adjacent to Alma Street near Ferne Avenue	Aerial fiber-optic cables, underground fiber-optic cables
15				

No.	Proposed TPF	Size (feet)	City and Location	Utility Description
<u>11</u> <u>16</u>	PS5 Option 2	40 x 80	Palo Alto, south of California Avenue Station	Aerial fiber-optic cables, underground fiber-optic cables, 12-5kV distribution power aerial, City storm water system
<u>12</u> <u>17</u>	PS6 Option 1	40 x 80	Sunnyvale, Murphy Avenue	Aerial fiber-optic cables, underground fiber-optic cables
<u>13</u> <u>18</u>	PS6 Option 2	40 x 80	Sunnyvale, north corner of Sunnyvale Station parking lot	Aerial fiber-optic cables, underground fiber-optic cables
<u>14</u> <u>19</u>	TPS2 Option 1	150 x 250	Santa Clara, north of Newhall Street in VTA/BART property	Adjacent to PG&E 115-kV substation, 115-kV transmission lines cross over or are in the vicinity, aerial fiber-optic cables
<u>15</u> <u>20</u>	TPS2 Option 2	150 x 250	Santa Clara, south of Stockton Avenue, east of Highway 880 in private property	115-kV transmission lines cross over are or in the vicinity, aerial fiber-optic cables
<u>16</u> <u>21</u>	TPS2 Option 3	150 x 250	San Jose, at Lenzen Avenue in JPB property	115-kV transmission lines cross over are or in the vicinity.
<u>17</u> <u>22</u>	PS7	40 X 80	San Jose, near Curtner Avenue in ROW	Underground fiber-optic cables
<u>23</u>	<u>PS7, Variant A/B</u>	<u>40 X 80</u>	<u>San Jose, near West Alma Avenue in ROW</u>	<u>Underground fiber-optic cables</u>

Source: Information compiled by JPB based on ~~35 percent~~ preliminary design and known utilities in Caltrain corridor.

PS = paralleling station

SWS = switching station

TPF = traction power facility

TPS = traction power substation

1 Each city and county department of public works jurisdiction through which Caltrain passes
2 maintains a storm drain and sanitary sewer system. The systems vary by age, size, and type
3 depending on the municipality. The City and County of San Francisco Department of Public Works
4 maintains a combined storm drain and sewer system that consists of vitrified clay pipe (VCP); older
5 iron/steel pipe (ISP); very old brick collector sewers; medium-sized reinforced concrete interceptor
6 sewers, and large reinforced concrete consolidation sewers. Reinforced concrete pipe facilities
7 generally used for storm drain and sewer systems also cross the project alignment at a number of
8 locations.

9 Depending on the municipality, water service also varies within the Peninsula corridor. The San
10 Francisco Public Utilities Commission (SFPUC) provides ~~water service~~ wholesale water supply to the
11 City and County of San Francisco. The SFPUC also owns and operates the Regional Water System,
12 which supplies water to the City and County of San Francisco, as well as many cities on the
13 Peninsula. The Regional Water System draws approximately 85 percent of its water from the Upper
14 Tuolumne River Watershed, collected in Hetch Hetchy Reservoir in Yosemite National Park, using an
15 aqueduct system that delivers water by gravity to Bay Area reservoirs and customers. The
16 remaining water supply is drawn from local surface waters in the Alameda and Peninsula
17 watersheds (SFPUC 2011).

18 ~~Its water source is from snow falling on more than 650 square miles of watershed land in Yosemite~~
19 ~~National Park and the Stanislaus National Forest. As the snow melts, it collects in the Hetch Hetchy~~
20 ~~storage reserves. From the storage reserves, water flows by gravity through 150 miles of pipeline~~
21 ~~and tunnels from the crest of the Sierras to the Crystal Springs Reservoir on the Peninsula.~~

22 Nearly all cities in San Mateo County provide water service to customers through their public works
23 or utilities departments. Water service in South San Francisco, San Mateo, San Carlos, and
24 unincorporated areas of Redwood City is provided by the privately owned CWSC. Water sources for
25 cities in San Mateo County are from the SFPUC and local wells. A public works or utilities
26 department also provides water service in most cities in Santa Clara County. A combination of public
27 and private water service is provided in the cities of Sunnyvale and San Jose. In Sunnyvale, service is
28 provided by the Public Works Department and by CWSC. The San Jose Municipal Water System and
29 two privately owned companies (San Jose Water Company and Great Oaks Water) provide service to
30 the City of San Jose. For cities in Santa Clara County, the water source can vary from well water, to
31 the Los Gatos Creek watershed, Santa Clara Valley Water District, and SFPUC. Water pipelines range
32 between 2 and 30 inches in diameter in most municipalities.

33 PG&E provides electricity and gas service to all but two cities within the project corridor. The cities
34 of Palo Alto and Santa Clara provide electricity for their customers. Gas, however, is provided by
35 PG&E. Overhead power and underground gas lines cross and run parallel and perpendicular to the
36 Caltrain ROW. The City and County of San Francisco owns and operates the Hetch Hetchy water and
37 power hydroelectric generating facilities that provide power to San Francisco via PG&E's electrical
38 transmission and distribution system. Excluding Palo Alto and Santa Clara, power is sold to all
39 Peninsula corridor cities by PG&E. Palo Alto gets its power from the Western Area Power
40 Administration (WAPA). Santa Clara buys 40 percent of its power from WAPA and 20 percent from
41 the market. The remaining 40 percent is provided by local power plants that are owned by the City.
42 Electricity service is provided primarily from underground reinforced concrete vaults through a
43 network of buried conduit and duct banks. Along the Peninsula corridor, PG&E maintains older, low-
44 pressure cast iron natural gas lines (San Francisco), as well as new, high-pressure plastic lines.

1 Communication networks typically run underground fiber-optic cable parallel to the Peninsula
2 corridor.

3 **3.13.2 Impact Analysis**

4 **3.13.2.1 Methods for Analysis**

5 A combination of geospatial analysis and internet research was used to determine public services
6 and facilities within 0.25 mile of the Caltrain corridor from San Francisco to Caltrain's Tamien
7 Station in San Jose. For utilities in the Caltrain ROW and near TPSs, information was obtained from
8 Caltrain (Peninsula Corridor Joint Powers Board 2013). After determining the locations and
9 character of public services, public facilities, and utilities in the project area, the analysis determined
10 whether project construction or operation and maintenance would affect these services, facilities,
11 and utilities.

12 The requirements of CPUC GO 26-D related to OCS clearances for freight rail operations are
13 discussed separately in Section 3.14, *Transportation and Traffic*.

14 JPB would construct and operate the Proposed Project consistent with applicable CPUC general
15 orders (including GOs 95, 118-A, 143-B, and 164-B) and with the new rule-making on 25 kVA
16 systems used for high-speed rail (as and if applicable to the Caltrain system). JPB has consulted with
17 CPUC periodically in development of the Proposed Project and would continue to consult to ensure
18 compliance with applicable GO requirements. Consequently, the impact analysis below does not
19 discuss the details of compliance with the specific requirements in the CPUC GOs, which would be
20 part of final design coordination with the CPUC.

21 **3.13.2.2 Thresholds of Significance**

22 In accordance with Appendix G of the State CEQA Guidelines and professional judgment, the
23 Proposed Project would be considered to have a significant effect if it would result in any of the
24 conditions listed below. The last two criteria regarding utilities are based on professional judgment
25 and were added to ensure that all possible impacts to utilities are analyzed. The remaining criteria
26 are from Appendix G of the State CEQA Guidelines.

27 **Public Services**

- 28 • Result in substantial adverse physical impacts associated with the provision of new or physically
29 altered governmental facilities or a need for new or physically altered governmental facilities,
30 the construction of which could cause significant environmental impacts, in order to maintain
31 acceptable service ratios, response times, or other performance objectives for any of the
32 following public services:¹
 - 33 ○ Fire protection?
 - 34 ○ Police protection?
 - 35 ○ Schools?
 - 36 ○ Other public facilities?

¹ The CEQA guideline thresholds include parks in this criterion. However impacts on parks and recreation are addressed separately in Section 3.10, *Land Use and Recreation*.

Utilities

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (Regional Water Board).
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed.
- Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments.
- Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs.
- Comply with federal, state, and local statutes and regulations related to solid waste.
- Construction would result in a substantial disruption to utility service systems.
- Require or result in the construction of new utility facilities or expansion of existing utility facilities, the construction of which could cause significant environmental effects.

3.13.2.3 Impacts and Mitigation Measures

Changes resulting from Project Variant 1 are described below each impact analysis, as necessary.

Impact PSU-1 Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: fire protection, police protection, schools, or other public facilities

Level of Impact Less than significant

This impact concerns the potential for the Proposed Project to result in the need for new public facilities, the construction of which might then have secondary physical impacts on the environment. This impact is analyzed in two different aspects: 1) whether Proposed Project’s facilities would displace or physically affect public facilities, and 2) whether the Proposed Project would increase the demand for public services such that additional public facilities would be necessary.

Impacts related to emergency response are discussed separately in Section 3.8, *Hazards and Hazardous Materials*.

Construction

The Proposed Project would involve installation of OCS poles and associated wires. Most OCS poles would be placed within the Caltrain ROW, unless there are locations where there is insufficient

1 right-of-way. Where OCS poles must be placed outside the Caltrain ROW, they would need to be
2 placed only several feet beyond the existing Caltrain ROW. Review of aerial photographs of the areas
3 where the OCS poles would be outside the Caltrain ROW did not identify the need for removal of
4 structures; thus, displacement of existing public facilities is not expected.

5 In addition to the OCS poles and associated wiring, the Proposed Project would construct two TPSs
6 (TPS1 and TPS2), one SWS (SWS1), and seven PSs (PS1 to PS7). All of these facilities would be
7 within the Caltrain ROW with the exception of TPS1 (Options 1 through 3; Option 4 would be within
8 the Caltrain ROW) and TPS2 (Options 1 and 2) (TPS2 Option 3 would be within the Caltrain ROW).
9 The TPSs are proposed in commercial/industrial areas and their construction would not affect any
10 public facilities, including schools, and police or fire services. Overbridge protection structures on 47
11 roadway bridges would also be enhanced or constructed but would not affect any of the public
12 facilities noted in Table 3.13-1.

13 As discussed in Section 3.12, *Population and Housing*, construction would temporarily increase
14 employment along the San Francisco Peninsula and workers are expected to be drawn from the
15 greater San Francisco Bay Area and possibly beyond. Where workers already reside in the Bay Area,
16 there would be no increase of population. Where drawn from beyond the San Francisco Bay Area, it
17 is possibly there could be minor increases in local populations. However, new workers to the area
18 are likely to be widely distributed across the Bay Area and, thus, not result in any substantial
19 changes in local populations that might otherwise result in an increased demand for police, fire,
20 school, or other facilities.

21 Because the Proposed Project would neither directly displace public facilities nor result in
22 substantial changes in local population and demand for public services, construction of the
23 Proposed Project would have less-than-significant impacts on public facilities.

24 **Operations**

25 Once constructed, operations of the OCS and TPFs would not affect adjacent or nearby existing
26 public or community facilities.

27 As discussed in Section 3.10, *Land Use and Recreation*, the placement of some OCS poles outside the
28 Caltrain ROW and land use restrictions due to electrical safety zone (ESZ) requirements would limit
29 some uses of adjacent land. As discussed in Section 3.10, *Land Use and Recreation*, the placement of
30 these facilities could constrain the ability in some areas to develop new structures or new vegetation
31 to the property line. However, given the small amount of restricted area, this would be a less-than-
32 significant land use impact. The vegetation clearance portion of the ESZ area may still be used for
33 non-structural uses, such as walkways, landscaped park, and parking. Consequently, this is
34 considered a less-than-significant impact on public facilities.

35 Contact between structures, vegetation or individuals and live wires of the OCS could cause a fire or
36 accident. However, the Caltrain ROW would be maintained to ensure adequate structural and
37 vegetation separation, as required by applicable CPUC requirements, in order to provide for fire
38 safety for structures and people. TPFs could be subject to fire or other accidents that may require
39 emergency response services. However, all facilities would be designed in compliance with existing
40 building safety codes to provide for safe operation. As a result, project facilities are not expected to
41 increase demand for fire and emergency services, which might otherwise result in a demand for
42 additional fire or emergency facilities.

1 As discussed in Section 3.12, *Population and Housing*, the Proposed Project would serve only existing
 2 developed areas and is not expected to induce population growth. As a result, the Proposed Project
 3 is not expected to result in increased demand for police, fire, school, or other public facilities due to
 4 population growth.

5 Requirements and standard procedures for emergency response will be developed as part of the
 6 PCEP. Current Caltrain rules and regulations will be modified to include procedures like those
 7 contained in AMTRAK’s AMT-2 Electrical Operating Instructions. This document will outline in
 8 detail how all abnormal situations are handled with the electrification system. Once these
 9 instructions and rules have been developed, training will be deployed to employees, first responders
 10 (e.g., Police, Fire, EMT etc.) adjacent transit agencies (i.e., BART, VTA, ACE, SamTrans, CCIPA,
 11 AMTRAK, UPRR) and other agencies as necessary and appropriate information disseminated to
 12 Caltrain riders and the public.

13 Significant impacts on public services and facilities would not result from operation of the Proposed
 14 Project.

Impact PSU-2	Exceed wastewater treatment requirements of the applicable Regional Water Board
Level of Impact	Significant
Mitigation Measure	HYD-1: Implement construction dewatering treatment, <u>if necessary</u>
Level of Impact after Mitigation	Less than significant

15 **Construction**

16 The project area lies within the jurisdiction of the San Francisco Bay Regional Water Quality Control
 17 Board. During construction, the Proposed Project would not generate substantial amounts of
 18 wastewater, except potentially during dewatering activities during sub-grade excavation for OCS
 19 pole installation and excavation for electrical ductbank installation or utility relocations. This impact
 20 is discussed under Impact HYD-1a in Section 3.9, *Hydrology and Water Quality*, and Mitigation
 21 Measure HYD-1 requires treatment to receiving water quality standards, including those of any
 22 receiving wastewater system.

23 **Operations**

24 As discussed under Impact HYD-1b in Section 3.9, *Hydrology and Water Quality*, the Proposed
 25 Project would result in minimal increases in impervious surfaces. Compliance with mandatory state
 26 and federal water quality regulations would minimize any potential increases in contaminated
 27 stormwater runoff such that potential runoff from new facilities would not have substantial effects
 28 on receiving wastewater treatment facilities.

29 The Proposed Project would also have a beneficial impact on water quality due to the reduction of
 30 diesel emissions and potential diesel fuel spills associated with diesel locomotives.

31 Thus, overall, the Proposed Project would have a less-than-significant impact on wastewater
 32 treatment requirements.

Impact PSU-3 Require or result in the construction of new water, wastewater, or stormwater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects

Level of Impact No impact

1 The Proposed Project would result in a very minimal, if any, increase in water demand and
 2 wastewater production. There may be a small increase associated with the small increase in
 3 operations (see Table 2-8) due to increased ridership (see Table 2-3) and associated water for hand-
 4 washing and toilet flushing. There may also be a small increase in water use associated with train
 5 washing due to the expansion of the train fleet. However, any increase would be negligible and likely
 6 indiscernible from existing water and wastewater needs for the existing facilities, and construction
 7 of new water and wastewater facilities would not be required. In addition, as noted under Impact
 8 PSU-2, due to the substantial reduction in diesel emissions, the loading of diesel particulates in
 9 downstream waters would be substantially reduced.

10 As discussed in Section 3.9 *Hydrology and Water Quality*, in compliance with state water quality
 11 regulations, runoff from TPFs would require treatment prior to discharge offsite. However, those
 12 stormwater treatment facilities would be located within the TPF footprints themselves and would
 13 not require additional stormwater treatment facilities offsite. Due to the location of the TPFs in
 14 highly urbanized and developed areas, the additional runoff is not considered substantial enough to
 15 change downstream drainage capacities and thus require additional offsite drainage facilities.

16 As discussed in Section 3.12, *Population and Housing*, the Proposed Project would serve only existing
 17 developed areas and is not expected to induce population growth. Therefore, the Proposed Project
 18 would not increase demand for new water, wastewater, or stormwater treatment facilities in other
 19 areas.

20 The Proposed Project would not require or result in the construction of new stormwater drainage
 21 facilities or expansion of existing facilities. Therefore, there would be no impact related to offsite
 22 drainage facilities.

Impact PSU-4 Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed

Level of Impact Less than significant

23 **Construction**

24 As indicated under Impact AQ-3 in Section 3.2, *Air Quality*, project construction would require dust
 25 control measures, which would likely include water, to minimize fugitive dust associated with
 26 grading and vehicular travel on unpaved areas. However, because of limited ground-disturbing
 27 activities (construction of poles and wires mostly within Caltrain’s ROW and the construction of
 28 TPFs) and the short-term nature of construction, the amount of water used would be negligible.
 29 Construction would otherwise not have large demands for water. Therefore, this impact would be
 30 less than significant.

31 **Operation**

32 The Proposed Project would not require new water supply entitlements and resources because it
 33 would not result in new potable water connections. As discussed in Section 3.12, *Population and*

1 *Housing*, the Proposed Project would serve only existing developed areas and is not expected to
 2 induce population growth and, thus, would not increase demand for new water supplies. As
 3 discussed for Impact PSU-3 above, any increase in water use at Caltrain facilities due to increased
 4 ridership would be negligible. Therefore, this impact would be less than significant.

Impact PSU-5 Result in a determination by the wastewater treatment provider that serves or may serve the Proposed Project that it has adequate capacity to serve the Proposed Project’s projected demand in addition to the provider’s existing commitments

Level of Impact Less than significant

5 As discussed for Impact PSU-3 above, if any increase in wastewater production results from the
 6 Proposed Project, the increase would be negligible and likely would be indiscernible from existing
 7 Caltrain operations. Therefore, wastewater treatment needs for the Proposed Project would be
 8 adequately served by existing wastewater treatment providers. Therefore, this impact would be less
 9 than significant.

Impact PSU-6 Be served by a landfill with sufficient permitted capacity to accommodate the Proposed Project’s solid waste disposal needs

Level of Impact Less than significant

10 **Construction**

11 Proposed Project construction would not require demolition of any structures, which would result
 12 in large amounts of solid waste to be disposed of at local landfills. The only solid waste expected to
 13 result from project construction would be soil resulting from grading and excavation associated
 14 with construction of TPFs and OCS pole foundations as well as general packaging and other
 15 materials associated with construction materials and construction workers. Any uncontaminated
 16 soil that is not reused onsite would be recycled in accordance with the various state and local
 17 ordinances governing recycling. Contaminated soil would be disposed at facilities approved to
 18 receive such soil, as discussed in Section 3.8, *Hazards and Hazardous Materials*. Other construction
 19 waste is expected to minimal and readily handled by existing landfill facilities in the region, which
 20 have ample remaining capacity for such material in the aggregate through at least 2020. Therefore,
 21 construction impacts on landfills would be less than significant.

22 **Operations**

23 Normal EMU operations would not result in substantial new generation of solid waste above that
 24 associated with servicing of diesel locomotives today. Similarly, maintenance of the OCS and TPFs
 25 would not involve the generation of large amounts of solid waste. There would be a minor increase
 26 in solid waste production associated with the Proposed Project from increased ridership (e.g.,
 27 disposable coffee cups, newspaper) but the volumes of waste would not be substantial relative to
 28 landfill capacity and would be waste that would be generated while using other modes of travel with
 29 or without the project. Therefore, Proposed Project operations would result in a less-than-
 30 significant impact on solid waste generation.

Impact PSU-7	Comply with federal, state, and local statutes and regulations related to solid waste
Level of Impact	Less than significant

1 **Construction**

2 Project construction would comply with all applicable regulatory requirements related to solid
 3 waste. As described for Impact HAZ-1 in Section 3.8, *Hazards and Hazardous Materials*, all hazardous
 4 materials handling during construction would be in accordance with applicable hazardous waste
 5 laws. Therefore, impacts related to solid waste generated by construction of the Proposed Project
 6 would be less than significant.

7 **Operations**

8 As discussed for Impact PSU-6, any increase in solid waste from proposed project operation would
 9 be negligible and would likely be indiscernible from existing Caltrain operations. Project operation
 10 would comply with all applicable regulatory requirements related to solid waste. In addition, refer
 11 to Impact HAZ-1 in Section 3.8, *Hazards and Hazardous Materials*, for information on hazardous
 12 materials handling during operation of the Proposed Project, as well as applicable hazardous waste
 13 laws and mandatory compliance with these laws. Impacts related to solid waste generated by
 14 operation of the Proposed Project would be less than significant.

Impact PSU-8	Construction activities would result in a substantial disruption to utility service systems
Level of Impact	Significant
Mitigation Measures	PSU-8a: Provide continuous coordination with all utility providers PSU-8b: Adjust OCS pole foundation locations PSU-8c: Schedule and notify users about potential service interruptions
Level of Impact after Mitigation	Less than significant

15 Known existing utilities within the Caltrain ROW and around TPFs are provided in Tables 3.13-2 and
 16 3.13-3. Constructing OCS pole foundations, overhead facilities, TPSs, the switching station, and
 17 paralleling stations would have the potential to encroach upon existing overhead utilities and
 18 utilities that run underground longitudinally within or along the ROW. Under Project Variant 1,
 19 there would be less construction south of Tamien Station and less potential utility disruption than
 20 the Proposed Project. However, Mitigation Measures PSU-8a, PSU-8b, and PSU-8c would still apply
 21 and this impact’s level of significance determination would not change.

22 The JPB would coordinate with all utility providers and local jurisdictions during the design phase of
 23 the Proposed Project to confirm the location of all subsurface and overhead utilities so that effective
 24 design treatments and construction procedures can be developed to avoid adverse impacts on
 25 existing utilities and prevent disruptions in service.

26 There is low to moderate potential for the Proposed Project facilities to affect underground utilities
 27 that cross the Caltrain ROW, and pole placement can generally be modified to avoid them.
 28 Underground utilities would be relocated if required to accommodate the installation of OCS and
 29 TPS equipment and facilities. Underground utilities and longitudinally running utilities would be
 30 avoided to the extent possible by design modifications.

1 Overhead utility conflicts would be avoided by raising the existing utility wires over OCS wires or
2 relocating them under the tracks pursuant to federal, state and local code requirements. If relocation
3 of overhead wires were required, a taller pole would be installed. Pursuant to CPUC GO 95 and other
4 CPUC requirements, adequate separation and clearance would be provided between the new OCS
5 facilities and other overhead electrical overhead transmission facilities where overhead utilities can
6 be accommodated. Some overhead utility crossings will have to be relocated underground. If
7 relocation underground is required, the overhead wires will be removed once the underground
8 service is established.

9 In most cases, the JPB has reserved the right to have utilities relocated if they interfere or conflict
10 with planned railroad facilities. In the event that a longitudinal or transverse utility line is in conflict
11 with a proposed electrification facility, the utility owner would be requested to relocate it. If the
12 responsibility for utility relocations lies with the JPB, then the utility relocation would be included as
13 part of Proposed Project construction.

14 The JPB will give each utility owner advance warning of the Proposed Project to provide time to plan
15 for relocation to minimize disruptions. No interference with existing utility service is anticipated
16 during installation of connections to existing high-voltage power transmission facilities because the
17 utility would put customer loads on alternate feeders during the connection activity.

18 The disruption of existing utilities would be a significant impact. Mitigation Measure PSU-8a would
19 require that the JPB continuously coordinate with utility providers from preliminary engineering
20 through final construction to ensure that potential conflicts are identified and disruption is
21 minimized. As prescribed in Mitigation Measure PSU-8b, if unanticipated underground utilities are
22 discovered, OCS pole foundations will be adjusted to avoid them. Additionally, Mitigation Measure
23 PSU-8c would require that any short-term, limited service interruptions would be scheduled well in
24 advance and appropriate notification provided to users. Implementation of these mitigation
25 measures would reduce the impact to a less-than-significant level.

26 **Mitigation Measure PSU-8a: Provide continuous coordination with all utility providers**

27 The JPB will initiate coordination with all utility providers and local jurisdictions during
28 engineering design and will continue coordination with these entities through final design and
29 construction to ensure that all potential utility location conflicts are identified. To prevent
30 damage to utility systems and minimize disruption or degradation of utility service to local
31 customers, utilities will be avoided while constructing OCS pole foundations, TPFs, and
32 overhead facilities where possible. Coordination efforts will focus on identifying potential
33 conflicts, planning utility reroutes, and formulating and implementing strategies to address any
34 problems that arise.

35 **Mitigation Measure PSU-8b: Adjust OCS pole foundation locations**

36 If underground utilities are discovered at proposed OCS pole foundation locations prior to
37 construction, the JPB will assess the location of the underground utility and will adjust the
38 location of the OCS pole foundations to avoid the utility wherever feasible. If the OCS pole
39 foundation cannot be relocated to avoid the utility (which is unlikely), then the JPB will
40 coordinate with the owner of the utility to identify feasible relocation options.

1 **Mitigation Measure PSU-8c: Schedule and notify users about potential service**
2 **interruptions**

3 The JPB will coordinate with all utility providers to schedule any short-term, limited service
4 interruptions at least 30 days in advance and will notify all appropriate users accordingly.

Impact PSU-9	Construction activities would result in the construction of new utility facilities or expansion of existing utility facilities, the construction of which could cause significant environmental effects
Level of Impact	Significant
Mitigation Measure	PSU-9: Require application of relevant construction mitigation measures to utility relocation and transmission line construction by others
Level of Impact after Mitigation	Less than significant

5 As described in Impact PSU-8, certain utilities crossing the ROW, at the locations of the two TPSs,
6 along the ductbank connections from the TPSs to the Caltrain ROW, or along the route of electrical
7 connections between the PG&E substations and the TPSs may need to be relocated. There would
8 also be potential impacts due to the installation of transmission lines from PG&E to the TPSs. In
9 addition, increased electrical demand of the Proposed Project could require PG&E to install
10 additional facilities. These potential impacts are each discussed below.

11 **Secondary Environmental Impacts of Utility Relocations**

12 The OCS facility would be the lowest overhead line and other utility lines would have to be installed
13 above the OCS facility with the appropriate clearances. For utility line relocations, construction
14 would involve installation of taller poles within and potentially along the Caltrain ROW as necessary
15 to achieve the appropriate height clearance. Construction impacts would be similar to the
16 construction impacts described throughout this EIR for OCS installation and would include
17 temporary air quality, noise, soil disturbance, and traffic effects but the effects would be limited to
18 the area of the relocated utility itself. Mitigation is available to reduce construction period impacts to
19 a less-than-significant level. Where the JPB is responsible for the utility relocation, relocation is
20 considered part of the Proposed Project and all mitigation applicable to the Proposed Project would
21 apply to JPB-initiated utility relocations. Utility owners will in most cases be the responsible party
22 for completing the utility relocation. In those instances and pursuant to Mitigation Measure PSU-9,
23 the JPB will require the same construction mitigation measures identified in this EIR for the OCS
24 construction to be applied to utility relocation efforts by the utility owner within the Caltrain ROW
25 or on Caltrain owned property. Outside the ROW the JPB would recommend the mitigation
26 measures to the relevant city or county jurisdiction in their permitting for the relocation effort.

27 As described above under Impact PS-8, relocation of existing underground utilities is a low-order
28 probability but may occur. For any underground utility relocations that may be necessary, the
29 construction activity would involve excavation and removal of the existing underground facility and
30 placement of the utility in an alternative alignment compatible with Proposed Project features. In
31 addition, existing overhead utility lines that cannot be feasibly relocated above the OCS alignment
32 would need to be relocated underground; electrical transmission or phone lines may be installed
33 with either trenching or directional drilling. Temporary construction impacts would be associated
34 with air quality, noise, soil disturbance, potential dewatering, and traffic and can also be addresses
35 through the construction mitigation measures identified in this EIR and pursuant to Mitigation

1 Measure PSU-9, the JPB will require their application within the Caltrain ROW (and recommend
2 them for use outside the ROW).

3 Operationally, relocated utilities would have little to no secondary impacts. Relocated overhead
4 utilities might have a somewhat more observable character because they would be located at a
5 higher elevation. However, given that these overhead utilities are already part of the existing visual
6 character, they would not be expected to have a significant impact on local visual character or scenic
7 views. Underground utilities would have no aesthetic impacts.

8 With Project Variant 1, there would be less need for utility relocation due to less OCS construction.

9 **Secondary Environmental Impacts of Transmission Line Connections from PG&E**

10 As described in Section 2.3.3, *Traction Power Substations, Switching Stations, and Paralleling*
11 *Stations*, PG&E will be requested to provide power connections from its existing substations to the
12 two proposed TPSs. All the potential TPS sites are located relatively close to their source PG&E
13 substation, as discussed below.

- 14 • TPS1: The TPS1 Option 1 site is directly adjacent to the 115 kV PG&E East Grand substation in
15 South San Francisco. The TPS1 Option 2 site is across the street and approximately 400 to 500
16 feet from the East Grand substation. The TPS1 Option 3 site is about 1,100 feet from the East
17 Grand substation. TPS1 Option 4 is approximately 850 feet from the East Grand substation.
18 Connection to the substation busbar is the preferred method of supply in comparison with a
19 transmission line tap. In each case, connection to PG&E power could be via overhead line or
20 underground ductbank.
- 21 • TPS2: The TPS2 Option 1 site is adjacent to a 115 kV PG&E Newhall Street substation in San Jose.
22 The TPS2 Option 2 site is located approximately 400 feet from the Newhall Street substation
23 across I-880. The TPS2 Option 3 site is approximately 1 mile from the Newhall Street substation.
24 In each case, connection to PG&E power could be via overhead line or underground ductbank. In
25 the case of TPS2 Option 2, it is probable that connection to the Newhall Street substation would
26 be via a 115 kV ductbank under I-880.

27 These new transmission facilities would be installed in existing commercial and industrial areas or
28 in or above existing roadways with the possible exception of the transmission line connection from
29 PG&E to TPS2 Option 3. For TPS2, Option 3, the alignment of the connection to PG&E would be
30 particularly lengthy and the routing is unknown at this time. It is likely that if a new overhead
31 transmission line is needed, it would run along the Caltrain ROW or east of the ROW along adjacent
32 streets in commercial and industrial areas. However, it is possible that it might be routed in or
33 adjacent to residential areas east of the California ROW east of Chestnut Avenue. Overhead power
34 lines are already located along most of the local streets where a new alignment might be routed,
35 including along Chestnut Avenue.

36 Construction impacts for new overhead lines would be similar to the construction impacts described
37 throughout this EIR for OCS installation and would include temporary air quality, noise, soil
38 disturbance, and traffic effects, but the effects would be limited to the area of the overhead line itself.
39 Temporary construction impacts for underground ductbank installation would be associated with
40 air quality, noise, soil disturbance, potential dewatering, and traffic. In both cases, construction
41 impacts can be addressed through the construction mitigation measures identified in this EIR, and,
42 pursuant to Mitigation Measure PSU-9, the JPB will require their application for construction within
43 the Caltrain ROW and recommend them for use by PG&E outside the ROW.

1 Operationally, new transmission lines from PG&E to the TPSs would have limited to no secondary
2 impacts other than aesthetic impacts. Relocated overhead utilities might have a somewhat more
3 observable character because they would be located at a higher elevation. However, given that these
4 overhead utilities are already part of the existing visual character in the areas where they would be
5 installed, they would not be expected to have a significant impact on local visual character or scenic
6 views. Underground utilities would have no aesthetic impacts.

7 Project Variant 1 would not change the need for TPS connections to PG&E.

8 **Secondary Environmental Impacts of Potential Electrical Transmission Facilities** 9 **Due to Increased Electrical Demand**

10 Under the Proposed Project, use of EMUs for approximately 75 percent of Caltrain's fleet for service
11 between San Francisco and San Jose would increase electricity demand. As described in Section
12 ~~2.4.5.32.3.7.3~~ *Energy Consumption*, and Section 4.5, *Energy*, the Proposed Project would require
13 approximately ~~83~~ 88 million kWh of electricity per year (in 2020) for train operation and idling.
14 This represents an increase of ~~79~~ 84.6 million kWh of electrical demand over the existing system
15 demand of ~~3.9~~ 4.2 million kWh (used for idling when diesel trains are plugged into station power).
16 With fully electrified operations between San Francisco and San Jose service by 2040, the total
17 electricity consumption would rise to 112 ~~105~~ million kWh.

18 To contextualize this demand, one can compare the Proposed Project's demand to the total
19 electricity consumption with San Mateo and Santa Clara Counties in 2012 ~~2011~~ as shown in Table
20 3.13-4. These two counties were selected instead of San Francisco because the TPSs would be
21 located in these two counties and would draw electricity from PG&E's transmission system in these
22 two counties. As shown, the Proposed Project's electricity demand in 2020 would be less than 0.4%
23 of the total electricity demand in both counties in 2012 ~~2011~~. With full electrification, the electricity
24 demand in 2040 would be approximately 0.5% of the total electricity demand in the two counties in
25 2012 ~~2011~~.²

26 Project Variant 1 would not change the operational electricity demand because train operations
27 would not change.

28 In 2008, Caltrain requested a study of the impact of Caltrain electrification on the PG&E power
29 system to identify if new transmission or other facilities would be necessary due to the increase in
30 electricity demand (LTK 2008). The results of the study showed that the PG&E transmission and
31 generation system would support the traction electrification system loads under normal operating
32 conditions and under various system contingencies, including transmission line, generator, and
33 traction power system outages. No remedial measures to the PG&E system were proposed in the
34 study.

² By way of comparison, the estimated annual electricity demand of the Facebook Menlo Park campus project would be 27 million kWh/year (City of Menlo Park 2011). The Apple Campus 2 project in Cupertino would have a projected electricity demand of 142 million kWh/year, but expects to supply the majority of this power from on-site photovoltaic and fuel cell systems with the remainder from off-site renewable energy direct access power (City of Cupertino 2013 ~~2012~~).

1 **Table 3.13-4. Electricity Consumption by County, 2007–2011 (million kwh)**

County	Sector	<u>2012</u>	2011	2010	2009	2008	2007
Santa Clara	Non-Residential	<u>12,615</u>	12,359	12,627	12,484	13,069	12,791
Santa Clara	Total	<u>16,492</u>	16,384	16,564	16,452	17,088	16,694
San Mateo	Non-Residential	<u>2,935</u>	2,919	3,131	3,354	3,474	3,282
San Mateo	Total	<u>4,502</u>	4,535	4,756	4,968	5,116	4,876
Both	Non-Residential	<u>15,550</u>	15,279	15,758	15,839	16,543	16,073
Both	Total	<u>20,994</u>	20,919	21,320	21,420	22,204	21,570

Source: California Energy Commission, 2013/~~2014~~. Energy Consumption Data Management System, <http://ecdms.energy.ca.gov/elecbycounty.aspx>

2
3 The study did identify the need for power factor correction capacitors to be incorporated in the new
4 Caltrain TPSs as needed to handle the anticipated traction load growth. The TPSs are being designed
5 to provide space for these facilities.

6 While the study was completed in late 2008, it is worth noting that, as shown in Table 3.13-4,
7 electricity consumption from 2008 to 2011 (the latest year available from the California Energy
8 Commission [CEC]) has slightly declined in both San Mateo and Santa Clara Counties. The general
9 conditions of electricity demand in the project vicinity do not appear to have substantially changed.

10 At this time, there does not appear to be any need for additional PG&E transmission line facilities
11 upstream of the PG&E substations that would connect to the TPSs. Consequently, other than the
12 local connections from the PG&E substations to the TPSs, there would be no secondary
13 environmental impact due to additional transmission line construction in the local area.

14 It should be noted that there are on-going meetings with the PG&E to continue coordinating on the
15 Proposed Project. JPB will confirm its strategy for obtaining electricity from PG&E and submit a
16 formal PG&E application to put the necessary electricity provider agreement in place. The
17 application process will include reevaluation of the facility improvement assumptions.

18 The most recent CEC forecast of California energy demand was completed in 2012 and projected
19 demand out to 2022 and estimated mid-range growth in demand from 2010 to 2020 of 1.3% per
20 year (CEC 2012).

21 It is not possible to separate Caltrain’s demand for electricity from other expected increases in
22 demand created by population and economic growth in the Bay Area. As part of the process of
23 developing detailed plans for the Proposed Project, the JPB would approach power suppliers much
24 like any other major user to discuss power requirements. The suppliers would make proposals to
25 the JPB for providing electricity; part of the analysis completed by these companies would be
26 determining how and where the electricity would be produced and how it would be transported to
27 Caltrain. Historically, California electricity supply has been able to keep up with demand. Given the
28 Proposed Project’s demand relative to overall electricity demands in the project area, the Proposed
29 Project alone would not likely result in the need for additional power plants to be built.

1 However, as part of cumulative increases in electricity, the Proposed Project would contribute to the
2 need for increased electricity generation in the future and transmission lines to connect new power
3 plants to load centers. Should it be necessary to build new power plants or distribution facilities to
4 meet this cumulative demand, these would be planned by the power production and distribution
5 companies, not by JPB. Any environmental analysis of these new facilities would be completed by
6 these companies because Caltrain would be only one of many customers for the new services and
7 would only constitute a fraction of the overall electricity load served by providers. It would be
8 speculative for Caltrain to analyze precisely where the cumulative impact would result in the
9 construction of a new power plant and/or transmission lines and thus to analyze the secondary
10 environmental impacts of that construction. Because such an analysis cannot be completed without
11 speculation, no conclusion can be reached about the significance of the Proposed Project's
12 contribution to potential cumulative secondary impacts of future power plant and transmission
13 construction.

14 **Mitigation Measure PSU-9: Require application of relevant construction mitigation**
15 **measures to utility relocation and transmission line installation by others**

16 The JPB will require that all relevant construction mitigation measures identified in this EIR be
17 applied to utility relocation and transmission line efforts. Within the Caltrain ROW or Caltrain-
18 owned property, the JPB can mandate the implementation of such measures. Outside the
19 Caltrain ROW, the JPB will recommend their use by utility owners and/or inclusion in any
20 encroachment permits required by local jurisdictions.

