

D.14 Public Services and Utilities

This section addresses the environmental setting and impacts of public services and utilities for the Proposed Project and the alternatives identified in Section C. This analysis focuses on the capacities and capabilities of existing public services and utilities and examines how the project would affect these systems.

D.14.1 Environmental Setting for the Proposed Project

The public service and utility systems analysis examines the utility and service provisions along the proposed and alternative routes, providing an overview of the types and general locations of utilities in relation to the pipeline corridors, and specifically evaluates the utilities and services required by the project. Because government agencies, such as the U.S. Department of Transportation Office of Pipeline Safety, have recently categorized data pertaining to utility systems (including their location, capacity, and type) as sensitive, critical infrastructure information, public access to this data has become restricted for security reasons. As such, only information that continues to be made public and is readily accessible is presented in this section. With the exception of natural gas, water, and electric transmission line information for the southern segment of the proposed route, information on existing underground utilities is no longer publicly available. Therefore, generalizations have been made to allow for rudimentary analysis in absence of detailed, specific data. While this specific data would provide a better picture of the existing utilities along the pipeline corridors, in large part, this level of detail is unnecessary for the level of analysis needed to determine the impacts generated by the Proposed Project and alternatives.

The Proposed Project would affect public service and utility systems within San Mateo County, the Cities of Brisbane, Daly City, San Bruno, and South San Francisco, and the Towns of Hillsborough and Colma. A variety of local purveyors in this area provide and maintain utility and service system facilities associated with electricity, water, stormwater and wastewater, solid waste, communications, and natural gas. Public utilities such as these run parallel to, or cross, most of the ROW of the transmission line routes in the form of water mains, sewer pipes, storm drains, power lines, gas mains, telephone and fiber optic lines, and other petroleum product pipelines. Also, Underground Service Alert (also known as USA or “Dig Alert”), a non-profit organization supported by utility firms, provides specific information on the location of underground utilities to contractors upon request, shortly prior to construction after preparation of the final project designs. Each municipality has its own fire and police departments as well as its own school districts, parks and recreational areas, and other public services.

Utilities

The exact location of the transmission line corridor would be determined during the development of the detailed construction plans. Table D.14-1 lists the jurisdictions crossed by the Proposed Project and alternatives and the utility and service providers within each jurisdiction. Where necessary, encroachment permits would be obtained for installation in the public ROW. After construction, the underground transmission line location would be identified through Underground Service Alert, which maintains a computer database system of companies with buried utilities, so any utility providers planning subsurface excavation can find exact locations of buried transmission lines.

Table D.14-1. Utility and Service Providers by Jurisdiction

Jurisdiction	Utility or Service System – Provider	
San Mateo County	Natural gas & electricity – PG&E Water – San Francisco Public Utilities Commission Wastewater – San Mateo Co Dept of Public Works Solid waste – Ox Mountain Sanitary Landfill, Hillside Class III Disposal Site Telephone – Pacific Bell	Fire protection – California Dept of Forestry and Fire Protection Police protection – San Mateo Co Sheriff's Office Hospitals – San Mateo County General Hospital and Health Center
City of Brisbane	Natural gas & electricity – PG&E Water & wastewater – Brisbane Public Works Dept Solid waste – South San Francisco Scavenger Co, Inc. Telephone – Pacific Bell	Fire protection – Brisbane Fire Dept Police protection – Brisbane Police Dept School districts – Brisbane Elementary District
City of Daly City	Natural gas & electricity – PG&E Water & wastewater – Daly City Public Works Solid waste – BFI Peninsula Telephone – Pacific Bell	Fire protection – Daly City Fire Dept Police protection – Daly City Police Dept School districts – Brisbane Elementary District, Jefferson Union High School and Elementary School District, Bayshore School District, South San Francisco Unified School District Hospitals – Seton Medical Center, North County Medical Center
City of San Bruno	Natural gas & electricity – PG&E Water – San Bruno Public Works Dept Water Division Wastewater – San Bruno Public Works Dept Wastewater Division Solid waste – San Bruno Garbage Company, Inc. Telephone – Pacific Bell	Fire protection – San Bruno Fire Dept Police protection – San Bruno Police Dept School districts – Laguna Salada Elementary School District, San Bruno Park Elementary District, San Mateo Union High School District, South San Francisco Unified School District
City of South San Francisco	Natural gas & electricity – PG&E Water – California Water Service Company's Mid-Peninsula District Wastewater – South San Francisco Public Works Dept Water Treatment Division Solid waste – South San Francisco Scavenger Company, Inc. Telephone – Pacific Bell	Fire protection – South San Francisco Fire Dept Police protection – South San Francisco Police Dept School districts – South San Francisco Unified School District Hospitals – Kaiser Permanente Hospital and Home Health, St. Luke's Hospital
Town of Hillsborough	Natural gas & electricity – PG&E Water – Burlingame Public Works Dept Water Division Wastewater – Burlingame Streets & Sewer Division Solid waste – BFI Peninsula Telephone – Pacific Bell	Fire protection – Hillsborough Fire Dept Police protection – Hillsborough Police Dept School districts – Hillsborough School District Hospitals – Mills Hospital
Town of Colma	Natural gas & electricity – PG&E Water – California Water Service Company's Mid-Peninsula District Wastewater – Daly City Public Works Dept Solid waste – BFI Peninsula Telephone – Pacific Bell	Fire protection – Colma Fire Protection District Police protection – Colma Police Dept School districts – Jefferson Union High School and Elementary School Districts

As described in Section B.3.3.2, where the underground transmission line would cross or run parallel to other substructures, the line would be installed with a minimum one foot clearance distance to all other structures. Additionally, a 5-foot minimum clearance distance is required where the transmission line would cross another heat-radiating substructure at right angles, and a 15-foot minimum clearance distance would be required between the electrical transmission duct bank and any paralleling substructures with operating temperatures significantly above normal earth temperature, such as underground transmission circuits, primary distribution cables, steam lines, or heated oil lines.

The Proposed Project and alternatives would require potable or reclaimed water to be purchased from local water districts for dust suppression during construction activities, construction uses such as mixing cement, and site restoration. Water service is provided to cities along the Proposed Project and alternative routes by a variety of water purveyors, which are shown in Table D.14-1.

City-operated lines provide sewer services in each of the jurisdictions along the Proposed Project and alternative routes. Similarly, stormwater flows are conveyed by the flood control facilities of each respective jurisdiction. Additionally, each jurisdiction provides waste management services through regional landfills and permitted treatment and disposal facilities. Wastewater, stormwater, and waste management service providers for each of the jurisdictions are shown in Table D.14-1.

As described in Section B.2, the Proposed Project would primarily follow existing utility, roadway, and BART ROW corridors from the Jefferson Substation to the Martin Substation. Utilities of various types would parallel the transmission line throughout almost the entire length of the route. Public utilities would also cross the transmission line corridor at most street intersections along the ROW. These utilities, which include sewer mains, storm drains, water mains, gas mains, telephone, fiber optic, and power lines, serve local land uses. Natural gas and water lines would parallel the southern portion of the Proposed Project route in the utility ROW. Table D.14-2 lists information by milepost for major utility types that would likely share utility corridor space with the Proposed Project. As described above, due to security concerns, exact locations of other existing utilities along the Proposed Project corridor would not be determined until preparation of the final transmission line designs and development of the detailed construction plans.

Table D.14-2. Utilities Along the Proposed Project Route

Segment	Milepost	ROW Description	Jurisdiction	Natural Gas	Electrical Transmission	Water	Wastewater / Sewer	Telephone / Fiber Optic Cable
Jefferson Substation to Ralston Substation	0.0–5.1	Transmission corridor	San Mateo County	●	●	●		●
Ralston Substation to Carolands Substation	5.1–8.6	Transmission corridor	San Mateo County, Town of Hillsborough	●	●	●		●
Carolands Substation to Transition Station	8.6–14.7	Transmission corridor	San Mateo County, City of San Bruno	●	●	●		●
San Bruno Avenue	14.7–16.6	San Bruno Avenue	City of San Bruno	●	●	●	●	●
BART ROW	16.6–19.6	BART ROW	City of San Bruno, City of South San Francisco	●	●	●	●	●
Colma to Martin Substation	19.6–21.8	Proposed McClellan Boulevard Extension / Hillside Boulevard	City of South San Francisco, City of Colma	●	●	●	●	●
	21.8–22.3	Hoffman Street	City of Colma, City of Daly City	●	●	●	●	●
	22.3–22.5	Orange Street	City of Daly City	●	●	●	●	●
	22.5–26.2	Guadalupe Canyon Parkway	San Bruno Mountain State Park, City of Brisbane	●	●	●	●	●
	26.2–26.9	Bayshore Boulevard	City of Brisbane	●	●	●	●	●

Public Services

The Proposed Project has the potential to place a demand on public services during construction and operation. Construction of the project could create a demand for, or disruption to, public services in the immediate vicinity of the transmission line route. Table D.14-1 also lists the public service providers for each jurisdiction crossed by the Proposed Project and alternatives. During operation, a significant public service demand could be placed on emergency service providers in the event of a major accident.

Fire and police protection are provided by the County of San Mateo and by municipal departments in the project study area. Fire protective services are provided by eight California Department of Forestry and Fire Protection stations in San Mateo County and 17 municipal fire stations. The San Mateo County Sheriff's Office serves unincorporated San Mateo County and also patrols the Eichler Highlands. The Cities of Brisbane, Daly City, San Bruno, South San Francisco, and the Towns of Hillsborough and Colma all have their own police departments. Additionally, the San Francisco Public Utilities Commission (SFPUC) Land Resource Management Section (LRMS) monitors and enforces uses within the Peninsula Watershed. Fire and police services for each jurisdiction in the study area are listed in Table D.14-1.

Schools, hospitals, parks and recreation facilities, and other public services are provided throughout the study area. Nine public school districts and 14 private schools provide school services for a total of 35,103 students in the study area. Six hospitals/medical centers are located within the study area, and neighboring cities have additional hospitals and health care centers. Convalescent homes are located in Daly City and San Bruno. Table D.14-1 also shows the school districts and hospitals in each jurisdiction in the study area. Section D.9, Recreation, provides details on parks and recreational facilities in the study area.

D.14.2 Applicable Regulations, Plans, and Standards

The following section presents the State, regional and local utility and service system regulations, plans, and standards that are directly applicable to the Proposed Project and alternatives.

D.14.2.1 State

The responsibilities of utility operators and other excavators working in the vicinity of utilities are detailed in Section 1, Chapter 3.1 "Protection of Underground Infrastructure", Article 2 of California Code 4216. This law requires that an excavator must contact a regional notification center at least two days prior to excavation of any subsurface installations. The center for northern California is Underground Service Alert. Any utility provider seeking to begin an excavation project can call Underground Service Alert's toll-free hotline. Underground Service Alert, in turn, will notify the utilities that may have buried lines within 1,000 feet of the excavation. Representatives of the utilities are required to mark the specific location of their facilities within the work area prior to the start of excavation. The excavator is required to probe and expose the underground facilities by hand prior to using power equipment.

D.14.2.2 Regional and Local

The municipal plans for cities and towns in the study area, as well as plans for a number of the parks and recreational facilities, have a variety of goals and policies related to utilities and public service

systems and generally describe the municipalities' provision and management of fire and police protection services and activities, water and sewer systems, and the visual and safety aspects of the location of utilities, in particular the burial of utility lines to reduce visual impacts. The location, safety, and visual issues are discussed in Section D.2, Land Use, Section D.8, Public Health and Safety, and Section D.3, Visual Resources, respectively. While the provision of fire and police protection services is described within the plans for local jurisdictions and general goals and policies are laid out for these services, none directly address the public service issues associated with this project in particular.

D.14.3 Environmental Impacts and Mitigation Measures for the Proposed Project

D.14.3.1 Significance Criteria

Compiled from analyses completed for previous environmental documents, significant impacts to public services and utilities would occur under the following conditions:

- The project would disrupt the existing utility systems or would cause a collocation accident;
- The project would preclude emergency access or access to public facilities, or would increase the need for police, fire, or school facilities; or
- The project would require water, or would generate solid waste or wastewater that exceeds the ability of existing facilities to accommodate the new capacities.

D.14.3.2 Applicant Proposed Measures

There are no specific Applicant Proposed Measures (APMs) in PG&E's Proponent's Environmental Assessment that specifically address impacts on public services or utilities. Three APMs would reduce construction impacts on schools (APMs 5.2, 5.9, and 5.11); these are listed in Table D.2-8 in Section D.2, Land Use. These measures are incorporated in that section and are required as part of the Proposed Project to reduce potential impacts. The mitigation measures recommended in this EIR supplement these APMs. Both will be monitored during construction of the project, if approved.

D.14.3.3 230 kV/60 kV Overhead Transmission Line

Three impacts have been identified along the overhead segment of the Proposed Project. Each is addressed below.

Impact U-1: Utility System Disruptions

Approximately 14.7 miles of overhead transmission line would be installed from Jefferson Substation to the new transition station along an existing utility corridor. Natural gas and water pipelines are buried in the utility easement underneath the existing double-circuit 60kV transmission line. During construction of the Proposed Project, the existing transmission towers would be removed and replaced with new steel towers and steel poles. Although the existing foundations would be left in place after the existing towers are removed, installation of the new towers would require drilling and excavation for new foundations.

As described above, the Applicant is required by State law to contact Underground Service Alert and manually probe for existing buried utilities in the Proposed Project corridor prior to any powered-equipment drilling or excavation. After probing within the corridor for existing utilities, exact placement of the tower and pole foundations would be determined so that they would not conflict with other co-located utilities.

Section B.3.4 of the Project Description describes potential electrical service interruptions during construction. The Applicant plans on sequencing the construction of the new line in sections, taking only one or two connections out of service at a time to ensure that minimal interruptions to the existing line occur. It is expected that the Crystal Springs Watershed Tap would temporarily lose service. Because this location powers the Crystal Springs pumps, generators would be installed to provide service during construction.

As shown in Table D.14-2, natural gas and water pipelines share the proposed right-of-way (ROW) with existing transmission lines. Therefore, there would be potential for service interruptions of these utilities during construction of the Proposed Project. While this segment of the Proposed Project would run parallel to natural gas and water pipelines, it is expected that there would be other utility crossings (e.g., water, sewer, electricity, natural gas, telecommunications, etc.) along the proposed route, particularly near residential areas or public ROWs in urbanized areas. Excavation and drilling along the proposed overhead segment would be in specific locations along the existing 60kV transmission line ROW where there would be a need for tower replacements. Therefore, since construction along this segment would not require continuous trenching, potential for accidental disruption of utilities is relatively low. During construction, service disruptions may be unavoidable. While they would be expected to be temporary in nature, these disruptions would hinder activities in the surrounding area. These impacts are considered potentially significant, but they can be mitigated to a level that is less than significant. Implementation of Mitigation Measure U-1a would inform those affected by planned utility service outages and would reduce impacts to less than significant levels (Class II).

Mitigation Measure for Impact U-1: Utility System Disruption Impacts

U-1a Notification of Utility Service Interruption. Prior to construction in which a utility service interruption is known to be unavoidable, the Applicant shall notify members of the public affected by the planned outage by mail of the impending interruption, and shall post flyers informing the public of the service interruption in neighborhoods affected by the planned outage. Copies of notices and dates of public notification shall be provided to the CPUC.

Impact U-2: Public Service System Disruption

Fire protection or other emergency service providers could be required at a project construction site in the event of a construction accident. The likelihood of an accident requiring such a response would be low. Overall, project construction would not occur in dangerous areas; the biggest potential hazard would be fire associated with the dry habitat along the route in the southern overhead segment. However, the watering associated with dust suppression would make this potential for accident low. Therefore, the service capacities of local fire departments in which accidents could occur would not be affected. Since the potential for a construction accident is low and the respective fire departments are prepared to respond to accidents across their jurisdictions, this would represent an adverse, but less than significant impact (Class III) and mitigation measures would not be required.

As discussed in Section D.13, Socioeconomics, neither construction nor operation of the Proposed Project is expected to result in an increase in the local population. Few workers are expected to

relocate to the area temporarily for construction and no new workers are required for operation of the project. Therefore, the Proposed Project would not increase any demands on schools or lower the long-term level of service for fire protection or police protection. There would be no long-term impacts to schools, fire, or police departments.

Impact U-3: Project-Required Utility Demands

The overhead segment of the Proposed Project would require water on a daily basis at construction sites for dust suppression, and would generate waste largely in the form of soil, concrete from existing foundations, and scrap metal from the existing towers.

Between 1,000 and 5,000 gallons of water per day would be used for dust suppression, depending on the length of access roads used, weather conditions, road surface conditions, and other site-specific conditions. The Applicant does not expect to use significant amounts of water for foundation construction or other activities. Water required for consumption by construction crews would be minimal. With an estimated 13 months of construction for the overhead segment, assuming a 5-day work week, the maximum total water required for the project would be approximately 1.4 million gallons. Once constructed, the Proposed Project would require no water. Because the SFPUC and California Water Service Company deliver a combined total of more than 276 million gallons of water per day to San Francisco and Peninsula residents (CalWater 2001, SFPUC 2003), the quantity used for the project would be relatively minor. The water demand for construction of the project would have an adverse but less than significant impact (Class III) on the regional water supply and mitigation measures would not be required.

As described in Section B.2.2 of the project description, approximately 100 existing 60 kV transmission towers are to be removed under the Proposed Project and replaced with new towers. Metal from the tower structures would be transported by truck or helicopter to staging areas and a contractor would dismantle the towers at the staging area and haul the metal debris to a recycling plant. The tower footings and foundations would be jack-hammered to 18 inches below grade and the debris would be removed before the hole would be backfilled with soil and revegetated. This material, along with packing crates, spare bolts, and other construction debris would be hauled off-site for recycling or disposal at local landfills. Soil from drilling or excavation for new tower foundations would be screened and separated for use as backfill materials at the site of origin to the maximum extent possible. Spoils unsuitable for backfill use would be disposed of at appropriate disposal sites. The Ox Mountain Sanitary Landfill serves the waste management agencies and waste haulers along the proposed route and has available capacity for materials generated from construction of the Proposed Project (CIWMB, 2002; County of San Mateo, 2003). The quantity of construction-related materials transported to Ox Mountain Sanitary Landfill would be minor relative to the daily volumes handled by the facility and would not substantially affect their remaining capacities. Project operations would not generate solid waste and would therefore not affect existing landfill capacities. Impacts to solid waste facilities would be adverse, but less than significant (Class III) and no mitigation measures would be required.

As discussed in Section D.7, Hydrology and Water Quality, the Proposed Project would not generate or increase wastewater or stormwater runoff. While the construction of the overhead segment of the Proposed Project would incrementally increase non-permeable surfaces along the proposed route with the construction of new tower foundations and new footings, the existing footings and foundations would be removed to 18 inches below grade and backfilled with soil, increasing the permeable surfaces in the immediate area of the existing tower locations. There would be little change in the amount of runoff resulting from the Proposed Project. Portable toilets brought to staging areas for construction crews

would be emptied into septic tanks or municipal sewage systems. No part of construction or operation of the overhead segment of the Proposed Project would generate wastewater in amounts exceeding the capacity of local facilities. Impacts due to demands on wastewater facilities would be adverse, but less than significant (Class III) and no mitigation measures would be required.

D.14.3.4 Transition Station

Excavation for the transition station foundation and underground vault would require the Applicant to contact Underground Service Alert and manually probe for existing buried utilities at the proposed site prior to any powered-equipment drilling or excavation. There is a potential for construction at the transition station to disrupt utilities such as water, electricity, natural gas, and telecommunications. The potential for accidental disruption of utilities at the proposed transition station site is relatively low because the site is not within the public ROW. However, as discussed above, utility service interruption may be unavoidable and without notification of the public, utility services could be disrupted in the surrounding area. Impacts are considered significant, but can be mitigated to a level that is less than significant (Class II) with implementation of Mitigation Measure U-1a.

Construction activities at the transition station would have the same public service system disruption impacts as those described for the 230 kV/60 kV Overhead Transmission Line (see Section D.14.3.3). Neither construction nor operation of the proposed transition station is expected to increase local population. Therefore, the transition station would not increase any demands on schools or raise the level of service for fire protection or police protection. There would be no long-term impacts to schools, fire, or police services.

Construction of the transition station would require between 500 and 1,000 gallons of water per day for dust suppression and would generate small amounts of construction waste, such as packing crates, spare construction materials, and construction debris. No wastewater is expected to be generated during construction. Impacts on utility demands (Impact U-3) associated with water supply, wastewater facilities, and area landfills would be adverse, but less than significant (Class III), and mitigation measures would not be required.

Operations of the transition station would require no water and would generate no solid waste or waste water and would have no impact on water supply, wastewater, and solid waste facilities.

D.14.3.5 230 kV Underground Transmission Line

Approximately 13 miles of underground 230 kV transmission line would be installed from the proposed transition station to the Martin Substation. Due to the trenching necessary for installation of the underground transmission line, and the large number of existing utilities in the proposed route corridor, utility and public service system disruption impacts would be greater for this segment than for the overhead segment, while project-required utility impacts would be similar or less than the overhead segment. Each of the three utility impacts defined for the overhead segment (U-1, U-2, and U-3), is addressed here for the underground segment.

Impact U-1: Utility System Disruption. Buried within many portions of the proposed ROW are sewer, water, telecommunications, and natural gas lines. Overhead electrical lines parallel and cross the ROW at many points along the proposed route. The Applicant would be required to contact Underground Service Alert prior to trenching the public ROW. After probing within the street or street shoulder, a route for the alignment within the easement would be defined that does not affect existing

utilities. Given the large number of utilities that are present in the proposed underground route corridor, some service disruptions during construction could be unavoidable at a few locations along the proposed ROW. These disruptions could occur while the transmission line and vaults are installed in the trench and the interrupted utility is reconnected around the new transmission line. Because the density of buried utilities is greater within the public ROW compared to the overhead route and the density of homes and businesses that could be affected by service disruption is greater, such service disruptions would affect areas adjacent to the underground alignment more severely than those along the overhead route.

As described above, intentional service interruption during construction could be unavoidable and without notification of the public would significantly hinder activities in the surrounding areas. These impacts are considered potentially significant, but can be mitigated to less than significant levels (Class II) with the implementation of Mitigation Measure U-1a (above).

Because underground line construction involves more construction in close proximity to existing utilities on a mile-per-mile basis than overhead construction, the chances of underground line construction activities causing an accidental utility service interruption are greater than for overhead construction. Trenching in the public ROW could accidentally damage one or more of existing utilities along the proposed underground route. Accidental service disruptions would be considered potentially significant impacts, but mitigable to less than significant levels (Class II) with implementation of Mitigation Measure U-1b (see below).

Mitigation Measure for Impact U-1: Utility System Disruption Impacts

U-1b Protection of Underground Utilities. Prior to construction of the underground transmission line, the Applicant shall submit to the CPUC written documentation, including evidence of review by the appropriate jurisdictions, including the following:

- Construction plans designed to protect existing utilities and showing the dimensions and location of the finalized alignment;
- Records that the Applicant provided the plans to affected jurisdiction for review, revision and final approval;
- Evidence that the project meets all necessary local requirements;
- Evidence of compliance with design standards;
- Copies of any necessary permits, agreements, or conditions of approval;
- Records of any discretionary decisions made by the appropriate agencies.

Impact U-2: Public Service System Disruption. Due to the location of trenching for the underground route primarily within the public ROW, proposed trenching activities could interfere with emergency service providers (e.g., ambulance, fire, paramedic, and police vehicles). The possibility exists that traffic congestion resulting from lane or road closures associated with underground line construction could impede emergency service providers. Mitigation Measure T-6a (see Section D.12.3.5 in Transportation and Traffic) includes requirements for the Applicant to coordinate in advance of construction with emergency service providers and to have provisions ready at all times to accommodate emergency services, such as plating over excavations and providing short detours when necessary. Impacts to emergency service providers (Impact U-2) would be potentially significant, but would be mitigated to a level that is less than significant (Class II) with implementation of that measure.

Due to the underground alignment's path alongside schools such as South San Francisco High School, El Camino High School, Susan B. Anthony High School, Pollicita Middle School, and John F. Kennedy Elementary School, and parallel to parks such as Orange Memorial Park, Bayshore Circle Park, Herman Tot Lot, and San Bruno Mountain State Park, the Proposed Project would have the potential to temporarily impede access to these public facilities. Due to the expected rate of construction activities, individual access points to these facilities would likely be blocked for a maximum of only a few days. APMs 5.2, 5.9, and 5.11 would reduce construction impacts to the school facilities. Implementation of Mitigation Measure R-3a (see Section D.9, Recreation) would ensure that construction would avoid peak use periods for recreational areas and provide on-site notification of recreational access closures at least 2 weeks in advance, through the posting of signs and/or notices. Impacts would be potentially significant, but mitigable to less than significant levels (Class II).

As with the overhead segment and the transition station, operation of the transmission line within the San Bruno Avenue ROW would not increase demand on schools or raise the level of service for fire or police protection. There would be no long-term impacts to schools, fire, or police services. Impacts would be adverse, but less than significant (Class III), and no mitigation measures would be required.

Impact U-3: Project-Required Utility Demands. For underground duct bank construction, water would be required for street cleaning, and construction debris, asphalt, concrete and trenching spoils would be generated as wastes. No wastewater is expected to be generated during construction along this segment and because the majority of the trenching would be in existing paved roads, little additional runoff would result from the project.

Approximately 500 to 1,000 gallons of water per day would be required for street cleaning during underground trenching over a course of approximately 12 months of construction, for a maximum total of 260,000 gallons. Besides water for street cleaning, small amounts of water would be used during underground construction activities. Compared to the total daily volume of water delivered to the Peninsula, the water required for this segment would be a relatively minor amount. The water demand for construction of the project would have an adverse, but less than significant impact (Class III) on the regional water supply and mitigation measures are not required.

Asphalt, concrete, trenching spoils, and other excavated material would be reused on site to the greatest extent feasible. Material that cannot be reused would be hauled to local asphalt manufacturers, recyclers, or transported to disposal facilities. As described above, the quantity of construction-related materials transported to the Ox Mountain Sanitary Landfill would be minor relative to the daily volumes handled at those facilities and would not substantially affect their remaining capacities. Project operation would not generate solid waste and would therefore not affect existing landfill capacities. Impacts would be adverse, but less than significant (Class III) and mitigation measures would not be required.

D.14.3.6 Substations, Switchyards, and Taps

Because construction for the substations, switchyards, and taps would occur in locations where the Applicant has previously installed equipment, the location of existing utilities on the sites should be known. Therefore, the potential for accidental utility system disruption is very low, and would be a less than significant impact (Class III). As described above in discussion of the 230 kV/60 kV Overhead Transmission Line segment, the Applicant plans on sequencing the construction of the new line in sections, taking only one or two connections out of service at a time to ensure that minimal interruptions would occur. Temporary structures would be built near the location of the substation and

existing tap locations and the conductors would be temporarily moved to these structures. Use of these temporary structures would minimize interruption of utility service. Impacts associated with utility system disruptions (Impact U-1) would be adverse, but less than significant (Class III).

Similar to utility system disruptions, because construction and modification of the substations, switchyards, and taps would occur on the Applicant’s property or easements, it is unlikely that construction at any of these locations would disrupt public services (Impact U-2), or restrict access to emergency vehicles or to public facilities. Impacts would be adverse, but less than significant (Class III) and mitigation measures would not be required.

Operation of these facilities would not increase demands on public facilities. There would be no long-term impacts to schools, fire, or police services.

Project-required utility impacts (Impact U-3) for the substations, switchyards, and taps would be the same as those described for the proposed transition station (see Section D.14.3.4). Impacts would be adverse, but less than significant (Class III), and no mitigation measures would be required.

D.14.4 Southern Area Alternatives

This section presents the environmental analysis for the Southern Area Alternatives retained after the alternatives screening analysis.

D.14.4.1 PG&E Route Option 1B – Underground

This alternative is an underground option to the first 11.2 miles of the southern overhead segment of the Proposed Project along the I-280 corridor. This alternative was suggested by PG&E in its PEA as Route Option 1B.

Environmental Setting

The study area for this alternative is largely the same as for the Proposed Project, although it would also include the Cities of Burlingame and Millbrae in addition to passing through Hillsborough, San Bruno, and County of San Mateo lands in the southern part of the route. Table D.14-1 lists the utility and service providers for Hillsborough, San Bruno, and County of San Mateo. Table D.14-3 provides the utility and public service providers for the Cities of Burlingame and Millbrae.

Table D.14-3. Utility and Service Providers for the Cities of Burlingame and Millbrae

Jurisdiction	Utility or Service System – Provider	
City of Burlingame	Natural gas & electricity – PG&E Water – Burlingame Public Works Dept Water Division Wastewater – Burlingame Public Works Dept, Streets and Sewer Division Solid waste – BFI Peninsula Telephone – Pacific Bell	Fire protection – Burlingame Fire Dept Police protection – Burlingame Police Dept School districts – Burlingame School District Hospitals – Peninsula Hospital, Mills Peninsula Home Health Agency
City of Millbrae	Natural gas & electricity – PG&E Water – Millbrae Public Works Dept Wastewater – Millbrae Public Works Dept, Wastewater Treatment Division Solid waste – BFI Peninsula Telephone – Pacific Bell	Fire protection – Millbrae Fire Dept Police protection – Millbrae Police Dept School districts – Millbrae Elementary School District, San Mateo Union High School District

For the majority of this alternative alignment, the route would be significantly different from the proposed overhead route. Section C.2.4.1 describes the route alignment for this alignment and Table D.14-4 lists information by milepost for major utility types that would likely share utility corridor space with the alternative. As described previously for the proposed route, due to security concerns, exact locations of some existing utilities along the route would not be determined until preparation of the final transmission line design and development of the detailed construction plans.

Table D.14-4. Utilities Along the PG&E Underground Route Option 1B

Segment	Milepost	ROW Description	Jurisdiction	Natural Gas	Electrical Transmission	Water	Wastewater / Sewer	Telephone / Fiber Optic Cable
Jefferson Substation to Highway 92	0.0–5.0	Cañada Road	SFPUC Watershed, San Mateo County					
Highway 92 to Skyline Boulevard	5.0–5.7	Highway 92	San Mateo County					
Skyline Boulevard to Golf Course Road	5.7–8.3	Skyline Boulevard	San Mateo County			●		●
Golf Course Road to Carolands Substation	8.3–8.7	Golf Course Road / Skyline Boulevard	San Mateo County, Town of Hillsborough	●	●	●	●	●
Carolands Substation to Trousdale Drive	8.7–11.3	Skyline Boulevard	Town of Hillsborough, City of Burlingame	●	●	●	●	●
Trousdale Drive to El Camino Real	11.3–13.0	Trousdale	City of Burlingame	●	●	●	●	●
El Camino Real to Huntington Drive	13.0–16.0	El Camino Real	City of Burlingame, City of Millbrae, City of San Bruno	●	●	●	●	●

Environmental Impacts and Mitigation Measures

Although it is not expected that a large number of utilities would share the underground corridor with this alternative along Cañada Road or the southern end of Skyline Boulevard, as the alignment enters Hillsborough, Burlingame, Millbrae, and San Bruno, the transmission line would have to share the corridor with a large number of other utilities. Trousdale Avenue and El Camino Real, in particular, have large numbers of utilities installed within their ROWs and are considered by the Burlingame Public Works Department to be crowded (City of Burlingame, 2003).

As with the Proposed Project, the Applicant would be required to contact Underground Service Alert prior to trenching along this alignment. After probing within the street or street shoulder, a route for the alignment within the easement can usually be defined that does not affect existing utilities. Given the large number of utilities that are present in this alternative underground route corridor, service disruptions during construction could be unavoidable at a few locations along the ROW. As described above, intentional service interruption during construction could be unavoidable and without notification of the public would significantly hinder activities in the surrounding areas. These impacts are

considered potentially significant, but can be mitigated to less than significant levels (Class II) with the implementation of Mitigation Measure U-1a (see Section D.14.3.3).

Because underground line construction involves more construction in close proximity to existing utilities on a mile-per-mile basis than overhead construction, the chances of underground line construction activities causing an accidental utility service interruption are greater than for overhead construction. Trenching in the public ROW could accidentally damage one or more of existing utilities along the proposed underground route. Accidental service disruptions would be considered potentially significant impacts, but mitigable to less than significant levels (Class II) with implementation of Mitigation Measure U-1b (see Section D.14.3.5).

Due to the location of trenching for the underground route primarily within the public ROW, proposed trenching activities could interfere with emergency service providers (e.g., ambulance, fire, paramedic, and police vehicles). The possibility exists that traffic congestion resulting from lane or road closures associated with underground line construction could impede emergency service providers. Mitigation Measure T-6a (see Section D.12.3.5 in Transportation and Traffic) includes requirements for the Applicant to coordinate in advance of construction with emergency service providers and to have provisions ready at all times to accommodate emergency services, such as plating over excavations and providing short detours when necessary. Impacts to emergency service providers (Impact U-2) would be potentially significant, but would be mitigated to a level that is less than significant (Class II) with implementation of that measure.

The alternative passes alongside a number of public facilities, including Franklin Elementary school and Mills Peninsula Hospital in Burlingame, and parks and recreational facilities such as the Cañada Road Bikeway, Pulgas Water Temple, Skyline Frontage Road Bikeway, and the Sawyer Camp Trail. Construction of this alternative would have the potential to temporarily cause the closure of traffic lanes which may impede access to these facilities. Due to the expected rate of construction activities, individual access points would likely be blocked for a maximum of only a few days. APMs 5.2, 5.9, and 5.11 would reduce impacts to Franklin Elementary School. Implementation of Mitigation Measures L-6a and L-6b (see Section D.2, Land Use) would ensure that access impacts to public facilities resulting from construction would be reduced to less than significant levels (Class II).

As with the other segments described previously, operation of the transmission line along the PG&E Route Option 1B would not increase any demands on schools or raise the level of service for fire protection or police protection. There would be no long-term impacts to schools, fire, or police services.

Because the distance traversed by the PG&E Route Option 1B is roughly comparable to the underground segment of the Proposed Project, the project-required utility impacts (Impact U-3) for installation and operation of this alternative would be similar to the combined impacts of the Proposed Project's 230 kV underground transmission line (see Section D.14.3.5). While quantities of water required for street cleaning and amounts of waste generated would likely be slightly more for this alternative, it is not expected that these quantities would exceed the capacities of the area water suppliers or Ox Mountain Sanitary Landfill. Impacts would be less than significant (Class III) and no mitigation would be required.

Comparison to Proposed Route Segment

Due to the installation of the transmission line duct bank within roads in the Route Option 1B Alternative versus overhead lines for the equivalent segment of the Proposed Project, the potential for utility disruption and public service disruptions would be greater for the alternative. However, the demand for project-required utilities would be similar to the Proposed Project. Although all impacts identified for the PG&E Route Option 1B could be mitigated to less than significant levels, this alternative would have a greater potential for impacts to public services and utilities than the Proposed Project due to the fact that the southern segment would be entirely underground.

D.14.4.2 Partial Underground Alternative

Environmental Setting

The study area for this alternative is the same as for the Proposed Project (see Section D.14.1). Table D.14-1 lists the utility and service providers for Hillsborough, San Bruno, and County of San Mateo. The route under this alternative would be largely the same as the Proposed Project, with major differences in the route alignment at the beginning of the route, from Jefferson Substation to Tower 2/13, approximately 2.8 miles, and from Tower 9/61 to Tower 10/69, approximately 1.1 miles. Additionally, the route from Tower 5/27 to Tower 6/37 and from Tower 7/39 to Tower 8/50 (approximately 2.9 miles) would be installed underground along the existing 60 kV alignment ROW. Underground construction would not occur in paved roadways.

Table D.14-2 lists the utilities along the majority of the Partial Underground Alternative route, with the exception of the Jefferson Substation to Tower 2/13 and Tower 9/61 to Tower 10/69 segments. The portion of the Partial Underground Alternative from Jefferson Substation to Tower 2/13 follows Cañada Road overhead on the east side of the road in SFPUC Watershed Lands. Table D.14-3 lists the utilities that could be found in the Cañada Road alignment. From Tower 9/61 to Tower 10/69, the Partial Underground Alternative would be on SFPUC Watershed Lands west of I-280 along an access road with no apparent utility alignments.

Environmental Impacts and Mitigation Measures

Trenching required for installation of the underground portions of this alternative would have some potential for utility disruptions (Impact U-1), but due to its location outside the public ROW, they would be less than for alternatives requiring construction in roadways. Potential system disruptions would be less than those described above for PG&E Route Option 1B because more construction would occur in undeveloped areas. Implementation of Mitigation Measures U-1a and U-1b would ensure that accidental utility disruptions are reduced to less than significant levels (Class II).

Fire protection or other emergency service providers could be required at a project construction site in the event of a construction accident. The likelihood of an accident requiring such a response would be low. Mitigation Measure T-6a (see Section D.12, Transportation and Traffic) would be required to ensure that impacts to emergency service providers (Impact U-2) are reduced to less than significant levels (Class II).

The project-required utilities impacts (Impact U-3) for this alternative would be slightly greater than those required for the overhead segment of the Proposed Project, because of the greater length of underground construction. The amount of waste generated in the form of asphalt, concrete, soil, and trenching spoils would be more than the Proposed Project. This alternative is not expected to exceed the

capacities of area water suppliers or Ox Mountain Sanitary Landfill. No wastewater would result from or be generated by construction or operation of this alternative.

Comparison to Proposed Route Segment

The potential for utility disruption impacts for the Partial Underground Alternative is greater than for the proposed overhead segment because this alternative would include underground segments. The Partial Underground Alternative would generate more waste during construction than the Proposed Project overhead route segment.

D.14.5 Northern Area Alternatives

The following section presents the environmental analysis for the Northern Area Alternatives retained in the screening analysis.

D.14.5.1 West of Skyline Transition Station

This alternative transition station would be located west of Skyline Boulevard, across the street and southeast of the transition station location at the intersection of Skyline Boulevard and Glenview Drive. This transition station could be used with three possible underground transmission line routes: the Proposed Project route along San Bruno Avenue, along Sneath Lane to the BART ROW, or along Westborough Boulevard to the BART ROW.

Environmental Setting of the Alternative Transition Station

The West of Skyline Transition Station is approximately 1,000 feet southeast of the proposed station site. The alternative would affect public service and utility systems within the City of San Bruno, the study area for which is described in Section D.14.1.

Environmental Impacts and Mitigation Measures for the Alternative Transition Station

Excavation for the transition station foundation and underground vault would require the Applicant to contact Underground Service Alert and manually probe for existing buried utilities at the proposed site prior to any powered-equipment drilling or excavation. There is a potential for construction at the transition station to disrupt utilities such as water, electricity, natural gas, and telecommunications. The potential for accidental disruption of utilities at the proposed transition station site is relatively low because the site is not within the public ROW. However, as discussed above, utility service interruption may be unavoidable and without notification of the public, utility services could be disrupted in the surrounding area. Impacts are considered significant, but can be mitigated to a level that is less than significant (Class II) with implementation of Mitigation Measure U-1a.

Construction activities at the transition station would have the same public service system disruption impacts as those described for the 230 kV/60 kV Overhead Transmission Line (see Section D.14.3.3). Neither construction nor operation of the proposed transition station is expected to increase local population. Therefore, the transition station would not increase any demands on schools or raise the level of service for fire protection or police protection. There would be no long-term impacts to schools, fire, or police services.

Construction of the transition station would require between 500 and 1,000 gallons of water per day for dust suppression and would generate small amounts of construction waste, such as packing crates, spare

construction materials, and construction debris. No wastewater is expected to be generated during construction. Impacts on utility demands (Impact U-3) associated with water supply, wastewater facilities, and area landfills would be adverse, but less than significant (Class III), and mitigation measures would not be required.

Operations of the transition station would require no water and would generate no solid waste or waste water and would have no impact on water supply, wastewater, and solid waste facilities.

Comparison to Proposed Transition Station

There would be no substantial differences in impacts between the proposed transition station and the West of Skyline Boulevard transition station.

West of Skyline Transition Station with Proposed Underground Route

This alternative would run from a transition station west of Skyline Boulevard and travel north underground on Skyline Boulevard for 0.1 miles, turning east at San Bruno Avenue to join the Proposed Project route.

Environmental Setting

The alternative would affect public service and utility systems within the City of San Bruno, the study area for which is described in Section D.14.1.

Environmental Impacts and Mitigation Measures

This alternative would be approximately 0.1 miles longer than the Proposed Route segment, requiring slightly more trenching for underground installation of the transmission line duct banks prior to connecting to the proposed underground route along San Bruno Avenue. The increased length of trenching should not substantially increase impacts over those described for the proposed underground portion of the project. Impacts due to utility system disruptions (Impact U-1) would be mitigable to less than significant levels (Class II) with implementation of Mitigation Measures U-1a and U-1b.

Neither construction nor operation of the proposed transition station is expected to increase local population. Therefore, the transition station would not increase any demands on schools or raise the level of service for fire protection or police protection. There would be no long-term impacts to schools, fire, or police services.

Construction of the transition station would require water for dust suppression and would generate small amounts of construction waste, such as packing crates, spare construction materials, and construction debris. No wastewater is expected to be generated during construction. Impacts on utility demands (Impact U-3) associated with water supply, wastewater facilities, and area landfills would be adverse, but less than significant (Class III), and mitigation measures would not be required.

Operations of the transition station would require no water and would generate no solid waste or waste water and would have no impact on water supply, wastewater, and solid waste facilities.

Comparison to Proposed Route Segment

There would be no significant difference in impacts between this alternative and the Proposed Project.

West of Skyline Transition Station with Sneath Lane Underground Route

This alternative would run from the transition station west of Skyline Boulevard and would travel north underground in Skyline Boulevard for 0.6 miles, turning east onto Sneath Lane to join the Proposed Project route in the BART ROW.

Environmental Setting

The alternative would affect public service and utility systems within the City of San Bruno, the study area for which is described in Section D.14.1. The utilities in Skyline Boulevard as the route proceeds northwest would be the same as those described in the road for the Underground Route Option 1B (see Table D.14-4). Utilities within the ROW in Sneath Lane would be similar to those in the San Bruno Avenue route (see Table D.14-2), but fewer in number.

Environmental Impacts and Mitigation Measures

As described for the West of Skyline Transition Station with Proposed Underground Route, this alternative would be slightly longer than the Proposed Route segment, but would replace a length of alignment of a roughly similar distance. Impacts due to utility system disruptions (Impact U-1) would be mitigable to less than significant levels (Class II) with implementation of Mitigation Measures U-1a and U-1b.

Neither construction nor operation of the proposed transition station is expected to increase local population. Therefore, the transition station would not increase any demands on schools or raise the level of service for fire protection or police protection. There would be no long-term impacts to schools, fire, or police services.

Construction of the transition station would require water for dust suppression and would generate small amounts of construction waste, such as packing crates, spare construction materials, and construction debris. No wastewater is expected to be generated during construction. Impacts on utility demands (Impact U-3) associated with water supply, wastewater facilities, and area landfills would be adverse, but less than significant (Class III), and mitigation measures would not be required.

Operations of the transition station would require no water and would generate no solid waste or waste water and would have no impact on water supply, wastewater, and solid waste facilities.

Comparison to Proposed Route Segment

This alternative would potentially have fewer impacts than the proposed route due to less utility crowding in Sneath Lane and a reduced distance of trenching in the BART ROW. Additionally, this route would avoid Bayshore Circle Park and the Herman Tot Lot and so would have fewer public facility impacts.

West of Skyline Transition Station with Westborough Boulevard Underground

This alternative would run from a transition station west of Skyline Boulevard and would travel north underground in Skyline Boulevard for 2.1 miles, turning east onto Westborough Boulevard to join the Proposed Project route in the BART ROW.

Environmental Setting

The alternative would affect public service and utility systems within the Cities of San Bruno and South San Francisco, the study area for which are described in Section D.14.1. The utilities found in Skyline Boulevard as the route proceeds northwest would be the same as those described in the road for the Route 1B Option (see Table D.14-4). Utilities within the ROW along Westborough Boulevard would be similar to those in the San Bruno Avenue route (see Table D.14-2) but, as with Sneath Lane, would be fewer.

Environmental Impacts and Mitigation Measures

As with the two previous West of Skyline Transition Station underground routes, this alternative would be longer than the proposed segment, adding approximately an additional 2.1 miles of trenching to the project. This route would pass Westborough High School, Westborough Park, and the California Golf Club of San Francisco, which could be impacted if construction activities restrict access to these facilities. APMs 5.2, 5.9, and 5.11 and Mitigation Measure R-3a (see Section D.9) would reduce service disruption impacts to these facilities to less than significant levels (Class II). While roughly the same distance as the proposed route, the Westborough Boulevard Underground route would potentially have fewer utility disruption impacts due to less utility crowding in Westborough Boulevard and a reduced distance to trench in the BART ROW.

Neither construction nor operation of the proposed transition station is expected to increase local population. Therefore, the transition station would not increase any demands on schools or raise the level of service for fire protection or police protection. There would be no long-term impacts to schools, fire, or police services.

Construction of the transition station would require water for dust suppression and would generate small amounts of construction waste, such as packing crates, spare construction materials, and construction debris. No wastewater is expected to be generated during construction. Impacts on utility demands (Impact U-3) associated with water supply, wastewater facilities, and area landfills would be adverse, but less than significant (Class III), and mitigation measures would not be required.

Operations of the transition station would require no water and would generate no solid waste or waste water and would have no impact on water supply, wastewater, and solid waste facilities.

Comparison to Proposed Route Segment

The West of Skyline Transition Station with Westborough Boulevard Underground Route would have similar public service impacts to the Proposed Project, but would potentially have fewer utility impacts than the proposed route segment. This route would also avoid impacts to South San Francisco High School, Orange Memorial Park, Bayshore Circle Park, and the Herman Tot Lot.

D.14.5.2 Sneath Lane Transition Station

The Sneath Lane Transition Station would require the new overhead 60/230 kV line to extend north/northwest along Skyline Boulevard for 0.6 miles past San Bruno Avenue to the Sneath Lane Substation. A transition station would be installed adjacent to the existing substation and an underground route to the Martin Substation would originate from this point. Like the West of Skyline Transition Station, the Sneath Lane Transition Station could be used with three possible underground transmission line routes: the Proposed Project route along San Bruno Avenue, along Sneath Lane to the BART ROW, or along Westborough Boulevard to the BART ROW.

Environmental Setting of the Transition Station Alternative

The alternative would affect public service and utility systems within the City of San Bruno, the study area for which is described in Section D.14.1. The utilities found in Skyline Boulevard as the route proceeds northwest would be the same as those described in the road for the Route 1B Option (see Table D.14-4).

Environmental Impacts and Mitigation Measures for the Transition Station Alternative

The Sneath Lane Transition Station's location adjacent to the existing Sneath Substation would be approximately 0.6 miles northwest of San Bruno Avenue along Skyline Boulevard. Because the station would be adjacent to PG&E's existing Sneath Substation, the Applicant would likely have knowledge of the utilities in the immediate vicinity, lowering the risks of accidental utility disruption impacts (Impact U-1). Implementation of Mitigation Measures U-1a and U-1b would ensure that impacts would be reduced to less than significant levels (Class II). Public service system disruption impacts (Impact U-2).

Neither construction nor operation of the proposed transition station is expected to increase local population. Therefore, the transition station would not increase any demands on schools or raise the level of service for fire protection or police protection. There would be no long-term impacts to schools, fire, or police services.

Construction of the transition station would require water for dust suppression and would generate small amounts of construction waste, such as packing crates, spare construction materials, and construction debris. No wastewater is expected to be generated during construction. Impacts on utility demands (Impact U-3) associated with water supply, wastewater facilities, and area landfills would be adverse, but less than significant (Class III), and mitigation measures would not be required.

Operations of the transition station would require no water and would generate no solid waste or waste water and would have no impact on water supply, wastewater, and solid waste facilities.

Comparison to Proposed Transition Station

There would be no substantial differences in impacts between the proposed transition station and the Sneath Lane Transition Station.

Sneath Lane Transition Station with Proposed Underground Route

The line from a transition station adjacent to the Sneath Lane Substation would travel south underground on Skyline Boulevard for 0.5 miles, turning east at San Bruno Avenue to join the Proposed Project route.

Environmental Setting

The alternative would affect public service and utility systems within the City of San Bruno, the study area for which is described in Section D.14.1. The utilities in Skyline Boulevard as the route proceeds northwest would be the same as those described in the road for the Underground Route Option 1B (see Table D.14-4).

Environmental Impacts and Mitigation Measures

The impacts for this alternative route would be largely the same as for the West of Skyline Transition Station with Proposed Underground route, although it would require an additional 0.5 miles of trenching along Skyline Boulevard. The increased length of trenching should not substantially increase impacts over

those described for the Proposed Project. Impacts due to utility system disruptions (Impact U-1) would be mitigable to less than significant levels (Class II) with implementation of Mitigation Measures U-1a and U-1b, and public service system disruptions (Impact U-2) would be less than significant (Class III), requiring no mitigation.

Neither construction nor operation of the proposed transition station is expected to increase local population. Therefore, the transition station would not increase any demands on schools or raise the level of service for fire protection or police protection. There would be no long-term impacts to schools, fire, or police services.

Construction of the transition station would require water for dust suppression and would generate small amounts of construction waste, such as packing crates, spare construction materials, and construction debris. No wastewater is expected to be generated during construction. Impacts on utility demands (Impact U-3) associated with water supply, wastewater facilities, and area landfills would be adverse, but less than significant (Class III), and mitigation measures would not be required.

Operations of the transition station would require no water and would generate no solid waste or waste water and would have no impact on water supply, wastewater, and solid waste facilities.

Comparison to Proposed Route Segment

The Sneath Lane Transition Station with Proposed Underground Route would have a greater potential for impacts than the Proposed Project due to the additional trenching necessary along Skyline Boulevard.

Sneath Lane Transition Station with Sneath Lane Underground Route

The line from a transition station adjacent to the Sneath Lane Substation would travel east underground along Sneath Lane to join the Proposed Project route at the BART ROW.

Environmental Setting

The alternative would affect public service and utility systems within the City of San Bruno, the study area for which is described in Section D.14.1. The utilities in Skyline Boulevard as the route proceeds northwest would be the same as those described in the road for the Underground Route Option 1B (see Table D.14-4). Utilities within the ROW in Sneath Lane would be similar to those in the San Bruno Avenue route (see Table D.14-2), but fewer in number.

Environmental Impacts and Mitigation Measures

The impacts for this alternative would be the same as for the West of Skyline Transition Station with Sneath Lane Underground route, but would require approximately 0.4 miles less trenching along Skyline Boulevard south of Sneath Lane. This decrease in trenching would not substantially decrease impacts compared to those described for the Proposed Project. Impacts due to utility system disruptions (Impact U-1) would be mitigable to less than significant levels (Class II) with implementation of Mitigation Measures U-1a and U-1b, and public service system disruptions (Impact U-2) would be less than significant (Class III), requiring no mitigation.

Neither construction nor operation of the proposed transition station is expected to increase local population. Therefore, the transition station would not increase any demands on schools or raise the level of service for fire protection or police protection. There would be no long-term impacts to schools, fire, or police services.

Construction of the transition station would require water for dust suppression and would generate small amounts of construction waste, such as packing crates, spare construction materials, and construction debris. No wastewater is expected to be generated during construction. Impacts on utility demands (Impact U-3) associated with water supply, wastewater facilities, and area landfills would be adverse, but less than significant (Class III), and mitigation measures would not be required.

Operations of the transition station would require no water and would generate no solid waste or waste water and would have no impact on water supply, wastewater, and solid waste facilities.

Comparison to Proposed Route Segment

The Sneath Lane Transition Station with Sneath Lane Underground Route would have less potential for impacts than the Proposed Project due to the reduced trenching necessary along the BART ROW as well as a lower potential for utility disruptions along Sneath Lane compared to San Bruno Avenue. Additionally, this route would have fewer public facility impacts due to avoidance of Bayshore Circle Park and the Herman Tot Lot.

Sneath Lane Transition Station with Westborough Boulevard Underground

The line from the Sneath Lane Transition Station would travel north underground in Skyline Boulevard for 1.6 miles, turning east in Westborough Boulevard to join the Proposed Project route in the BART ROW.

Environmental Setting

The alternative would affect public service and utility systems within the Cities of San Bruno and South San Francisco, the study area for which are described in Section D.14.1. The utilities found in Skyline Boulevard as the route proceeds northwest would be the same as those described in the road for the Route 1B Option (see Table D.14-4). Utilities within the ROW along Westborough Boulevard would be similar to those in the San Bruno Avenue route (see Table D.14-2) but, as with Sneath Lane, would be fewer.

Environmental Impacts and Mitigation Measures

The impacts of this alternative would be similar to those for the West of Skyline Transition Station with the Westborough Boulevard Underground route, although they would be slightly less due to this alternative route being 0.5 miles shorter than the Proposed Project. As with the two previous West of Skyline Transition Station underground routes, this alternative would be longer than the proposed segment, adding approximately an additional 2.1 miles of trenching to the project. This route would pass Westborough High School, Westborough Park, and the California Golf Club of San Francisco, which could be impacted if construction activities restrict access to these facilities. APMs 5.2, 5.9, and 5.11 and Mitigation Measure R-3a (see Section D.9) would reduce service disruption impacts to these facilities to less than significant levels (Class II). While roughly the same distance as the proposed route, the Westborough Boulevard Underground route would potentially have fewer utility disruption impacts due to less utility crowding in Westborough Boulevard and a reduced distance to trench in the BART ROW.

Neither construction nor operation of the proposed transition station is expected to increase local population. Therefore, the transition station would not increase any demands on schools or raise the level of service for fire protection or police protection. There would be no long-term impacts to schools, fire, or police services.

Construction of the transition station would require water for dust suppression and would generate small amounts of construction waste, such as packing crates, spare construction materials, and construction

debris. No wastewater is expected to be generated during construction. Impacts on utility demands (Impact U-3) associated with water supply, wastewater facilities, and area landfills would be adverse, but less than significant (Class III), and mitigation measures would not be required.

Operations of the transition station would require no water and would generate no solid waste or waste water and would have no impact on water supply, wastewater, and solid waste facilities.

Comparison to Proposed Route Segment

The Sneath Lane Transition Station with Westborough Boulevard Underground Route is expected to have fewer impacts on utilities and public services than the proposed route segment.

D.14.5.3 Cherry Avenue Alternative

This underground alternative route would diverge from the Proposed Project route at the intersection of San Bruno Avenue and Cherry Avenue. It would follow Cherry Avenue for 0.5 miles to the north to Sneath Lane, where it would turn east in El Camino Real or Huntington Avenue near the BART ROW.

Environmental Setting

The study area for this alternative is largely the same as for the proposed underground route and the West of Skyline Transition Station with Sneath Lane Underground Route alternatives. As opposed to following Skyline Boulevard to Sneath Lane in the Sneath Lane Underground Route alternative, in this alternative, the transmission line duct bank would run underneath San Bruno Avenue as in the Proposed Underground Route alternative, and turn north in Cherry Avenue to Sneath Lane, where it would follow the Sneath Lane Underground Route described above. Utilities within Cherry Avenue would be the same types as within the Sneath Lane ROW.

Environmental Impacts and Mitigation Measures

Utility disruption impacts would be slightly less than the proposed route segment because there are fewer utilities within the ROW corridor for Cherry Avenue and Sneath Lane than San Bruno Avenue and the BART ROW. This route passes Commodore Park on Cherry Avenue, which could be impacted if construction activities restrict access to the park. Implementation of Mitigation Measure R-3a would be required to ensure that service disruption impacts (Impact U-2) to Commodore Park resulting from construction would be reduced to less than significant levels.

Neither construction nor operation of the proposed transition station is expected to increase local population. Therefore, the transition station would not increase any demands on schools or raise the level of service for fire protection or police protection. There would be no long-term impacts to schools, fire, or police services.

Construction of the transition station would require water for dust suppression and would generate small amounts of construction waste, such as packing crates, spare construction materials, and construction debris. No wastewater is expected to be generated during construction. Impacts on utility demands (Impact U-3) associated with water supply, wastewater facilities, and area landfills would be adverse, but less than significant (Class III), and mitigation measures would not be required.

Operations of the transition station would require no water and would generate no solid waste or waste water and would have no impact on water supply, wastewater, and solid waste facilities.

Comparison to Proposed Route Segment

The Cherry Avenue Alternative would have fewer utility disruption impacts than the proposed route segment, but would have the potential for greater public service system impacts. The total level of impacts would be approximately equivalent to the proposed route segment. There is no substantial difference between this alternative and the Proposed Project in the areas of public services and utilities.

D.14.5.4 PG&E's Route Option 4B – East Market Street

This alternative would diverge from the Proposed Project route by continuing north on Hillside (where the Proposed Project turns east onto Hoffman). The route would follow Hillside for 0.4 miles, and then turn northeast into East Market Street, where it would rejoin the Proposed Project route at Orange Street. This alternative is a total of approximately 0.6 miles and would replace 0.8 miles of the Proposed Project route.

Environmental Setting

This alternative would affect public service and utility systems within the City of Colma, the study area for which are described in Section D.14.1. The utilities found in Hillside Drive as the route proceeds northwest would be the same as those described for the Proposed Project (see Table D.14-2). The route northeast along East Market Street would have similar types of utilities within the ROW as the proposed Hoffman Street route (see Table D.14-2).

Environmental Impacts and Mitigation Measures

The only substantial difference in impacts between PG&E's Route Option 4B – East Market Street Alternative and the proposed route is that Susan B. Anthony High School, on the corner of East Market Street and Hillside Drive, would be affected. Construction of this alternative would be closer to the elementary school than the proposed route and would be more disruptive to traffic due to greater traffic volumes at Hillside Drive and East Market compared to the proposed route, which could restrict access to the school. APMs 5.2, 5.9, and 5.11 would reduce the service disruption (Impact U-2) impacts of construction on Susan B. Anthony High School to less than significant levels (Class II).

Neither construction nor operation of the proposed transition station is expected to increase local population. Therefore, the transition station would not increase any demands on schools or raise the level of service for fire protection or police protection. There would be no long-term impacts to schools, fire, or police services.

Construction of the transition station would require water for dust suppression and would generate small amounts of construction waste, such as packing crates, spare construction materials, and construction debris. No wastewater is expected to be generated during construction. Impacts on utility demands (Impact U-3) associated with water supply, wastewater facilities, and area landfills would be adverse, but less than significant (Class III), and mitigation measures would not be required.

Operations of the transition station would require no water and would generate no solid waste or waste water and would have no impact on water supply, wastewater, and solid waste facilities.

Comparison to Proposed Route Segment

This alternative would have greater impacts than the Proposed Project segment due to construction potentially restricting access to the Susan B. Anthony High School.

D.14.5.5 Junipero Serra Alternative

This alternative would diverge from either of the Westborough Boulevard route alternatives at the intersection of Junipero Serra and Westborough Boulevards. The route would follow Junipero Serra Boulevard underground for 1.8 miles. The route would turn east into Serramonte Boulevard for approximately one mile to Hillside, where it would rejoin the Proposed Project route. This alternative would replace a similar distance of the Proposed Project.

Environmental Setting

This alternative would affect utility providers and public service system providers in the Cities of Colma and South San Francisco, for which the study areas are described in Section D.14.1. The route along Westborough, Junipero Serra, and Serramonte Boulevards would have similar types of utilities within the ROW as the San Bruno Avenue route, but, as described above for Westborough Boulevard, would be less congested in the utility corridors under the roads (see Section D.14.5.1). The utilities found in Hillside Drive as the route proceeds northwest would be the same as those described for the Proposed Project (see Table D.14-2).

Environmental Impacts and Mitigation Measures

The Junipero Serra Boulevard Alternative route would replace roughly the same distance of the Proposed Project route and would have similar impacts (see Section D.14.3.4). Junipero Serra Boulevard is a wide street, relatively uncongested with utilities. The route avoids the entrances to parks, hospitals, schools, and other public facilities. While the street is fairly wide, implementation of Mitigation Measure T-6a (see Section D.12) would be required to ensure that access-related impacts to emergency service providers are less than significant (Class II). Correspondence with the Town of Colma Public Works Department indicates that there would be no space constraint problems associated with existing utilities for the transmission line along this alignment (Town of Colma, 2003).

Neither construction nor operation of the proposed transition station is expected to increase local population. Therefore, the transition station would not increase any demands on schools or raise the level of service for fire protection or police protection. There would be no long-term impacts to schools, fire, or police services.

Construction of the transition station would require water for dust suppression and would generate small amounts of construction waste, such as packing crates, spare construction materials, and construction debris. No wastewater is expected to be generated during construction. Impacts on utility demands (Impact U-3) associated with water supply, wastewater facilities, and area landfills would be adverse, but less than significant (Class III), and mitigation measures would not be required.

Operations of the transition station would require no water and would generate no solid waste or waste water and would have no impact on water supply, wastewater, and solid waste facilities.

Comparison to Proposed Route Segment

Impacts associated with the Junipero Serra Boulevard Alternative route would be less than those described for the Proposed Project, since the alternative would avoid schools and other public facilities and would have a lower potential for utility disruption impacts.

D.14.5.6 Modified Existing 230 kV Underground ROW

This alternative is an underground alternative to the northern underground segment of the Proposed Project between the intersection of San Bruno Avenue and Huntington Avenue and the intersection of Guadalupe Canyon Parkway and Bayshore Boulevard. This alternative would use a portion of the existing underground 230 kV transmission line through the Cities of Millbrae, San Bruno, and Brisbane, and would incorporate a new route segment through South San Francisco and adjacent cities.

Environmental Setting

The study area for this alternative is largely the same as for the Proposed Project, although it would also include the City of Millbrae in addition to passing through San Bruno, South San Francisco, and Brisbane. Table D.14-1 lists the utility and service providers for San Bruno, South San Francisco, and Brisbane and Table D.14-3 lists the utility and service providers for Millbrae. For the majority of this alternative's alignment, the route would be significantly different from the proposed underground route. Section C.4.3.3 describes the route alignment for this alternative. The alignment passes entirely through urban areas, largely through industrial areas, office and hotel complexes, and a two-block section adjacent to residences. The alignment in all of these areas would share utility corridors with a variety of natural gas, electrical transmission, water, sewer, and telephone/fiber optic cable lines. According to the City of San Bruno, Huntington Avenue in the area of PG&E's existing 230 kV line is one of the most tightly packed utility corridors in the region (City of San Bruno, 2003).

Environmental Impacts and Mitigation Measures

While there would be space constraints in designing the transmission line's alignment through this area, and while the line would share other portions of the corridor with a variety of other utilities, space constraints in these areas would not limit the installation of the transmission line. Implementation of Mitigation Measures U-1a and U-1b would ensure that appropriate permits and review are acquired from the applicable jurisdictions to limit the potential for accidental utility disruption (Impact U-1), and reduce impacts to less than significant levels (Class II).

Siting this alignment through a largely industrial and commercial area reduces the potential for impacts to parks, schools, hospitals, and other public facilities, but construction within road ROWs could disrupt access for emergency vehicles (Impact U-2). Implementation of Mitigation Measure T-6a (see Section D.12) would reduce impedance of emergency access impacts resulting from this to less than significant levels (Class II).

The Modified Existing Underground 230 kV Alternative would eliminate 4.0 miles of construction from the Proposed Project's 13.0-mile alignment, would require a little more than approximately two-thirds of the amount of water necessary for the Proposed Project, and would generate a proportionally smaller amount of waste. Impacts to utility providers would be less than significant (Class III) under this alternative.

As with the Proposed Project, operation of the transmission line under this alternative would not increase demand on schools or raise the level of service for fire or police protection. There would be no long-term impacts to schools, fire, or police services. No water or waste would be generated during operation of the project that would impact water suppliers, wastewater facilities, or solid waste disposal facilities.

Comparison to Proposed Route Segment

This alternative would have similar types of utility disruption impacts to the proposed route segment, but the alternative route is substantially shorter than the Proposed Project. Therefore, it would decrease the extent of construction impacts in comparison to the Proposed Project.

D.14.6 Environmental Impacts of the No Project Alternative

Under the No Project Alternative, no adverse public service or utility impacts from construction or operation of the Proposed Project would occur. Because the Proposed Project is designed to increase electric transmission system reliability for San Francisco, the No Project Alternative could result in significant impacts to utilities and service systems.

Under the No Project Alternative scenario defined in Section C.6, new generation, load-dropping, and demand-side management could reduce the potential for utility disruption impacts and increase the reliability of the power supply, but the potential for utility disruption would remain. In this alternative, curtailment of electric service in the form of rolling blackouts could occur, with priority service continuing to be supplied to essential services. This method would, by definition, disrupt utility services to other locations in and around the City of San Francisco, severely hindering activities. Impacts would be significant (Class I). As essential services would not be interrupted, however, impacts to public facilities and emergency vehicle access would be adverse, but less than significant (Class III).

Under the No Project Alternative scenario there would be no additional need for public services, such as schools or fire and police protection. No additional water, wastewater treatment, or solid waste disposal facilities or supplies would be necessary.

D.14.7 Mitigation Monitoring, Compliance, and Reporting Table

Table D.14-5 presents the mitigation monitoring, compliance, and reporting table for public services and utilities.

Table D.14-5. Mitigation Monitoring Program – Public Services and Utilities

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
U-1: Utility System Disruption Impacts (Class II)	U-1a: Notification of Utility Service Interruption. At least 7 days prior to construction in which a utility service interruption is unavoidable, the Applicant shall notify members of the public affected by the planned outage by mail of the impending interruption, and shall post flyers informing the public of the service interruption in neighborhoods affected by the planned outage. Copies of notices and dates of public notification shall be provided to the CPUC.	Throughout proposed project area	Copy of notification and mailing list provided to CPUC	Proof of notification is sufficient.	CPUC	7 days prior to construction
U-1, cont.	U-1b: Protection of Underground Utilities. Prior to construction, the Applicant shall submit to the CPUC written documentation, including evidence of review by the appropriate jurisdiction, including the following: <ul style="list-style-type: none"> • Construction plans designed to protect existing utilities and showing the dimensions and location of the finalized alignment; • Records that the Applicant provided the plans to affected jurisdiction for review, revision and final approval; • Evidence that the project meets all necessary local requirements; • Evidence of compliance with design standards; • Copies of any necessary permits, agreements, or conditions of approval; • Records of any discretionary decisions made by the appropriate agencies. 	Throughout project alternative routes.	Written documentation as described in the mitigation measure provided to CPUC	Documentation provided is sufficient.	CPUC	Prior to construction