

## **E. OTHER CEQA CONSIDERATIONS**

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### **E.1 GROWTH INDUCING EFFECTS**

The California Environmental Quality Act (CEQA) requires a discussion of the ways in which a Proposed Project could be an inducement to growth. The *CEQA Guidelines* [Section 15126.2 (d)] identify a project to be growth-inducing if it fosters economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. New employees from commercial and industrial development and new populations from residential development represent direct forms of growth. The expansion of urban services into a previously unserved or under-served area, the creation or extension of transportation links, or the removal of major obstacles to growth are examples of projects that are growth-inducing. It is important to note that these direct forms of growth have a secondary effect of expanding the size of local markets and attracting additional economic activity to the area.

Typically, the growth-inducing potential of a project would be considered significant if it fosters growth or a concentration of population above what is assumed in local and regional land use plans, or in projections made by regional planning authorities such as the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission. Significant growth impacts could also occur if the project provides infrastructure or service capacity to accommodate growth levels beyond those permitted by local or regional plans and policies.

It cannot be assumed that the creation of growth-inducing potential automatically leads to growth. Growth occurs through capital investment in new economic opportunities by the private or public sectors. These investment patterns reflect, in turn, the desires of investors to mobilize and allocate their resources to development in particular localities and regions. These and other pressures serve to fashion the local politics of growth and the local jurisdiction's posture on growth management and land use policy (such as the recent passage of Measure D in Alameda County, which is discussed in Section A.2.1). These factors, combined with the regulatory authority of local governments in California in relation to land use, serve to mediate the growth-inducing potential or pressure created by a project.

Potential growth-inducing impacts of the proposed Tri-Valley Capacity Increase 2002 Project could be manifested in two fundamental manners:

- Growth resulting from the direct and indirect employment needed to construct and operate the Proposed Project
- Growth resulting from the additional power that would be transmitted by the Proposed Project.

#### **E.1.1 GROWTH CAUSED BY DIRECT AND INDIRECT EMPLOYMENT**

As documented in Section C.10.2.4.1, the construction and operation of the project itself would not affect the employment patterns in the area. Construction personnel would come from the existing labor pool in the Bay Area, most likely from PG&E Co.'s current employees. Operation of the project

would require no full-time personnel, and maintenance would be done by PG&E Co.'s employees responsible for the many existing PG&E Co. facilities in the same project area.

### **E.1.2 GROWTH RELATED TO PROVISION OF ADDITIONAL ELECTRIC POWER**

As documented in Section C.10 (Socioeconomics and Public Services), the nine county Bay Area is one of the largest and most dynamic metropolitan areas in the country. Its employment and population have grown and are expected to continue to grow at a substantial rate. Between 1990 and 2000, Bay Area population is estimated to have grown by more than 900,000 people to a nine county total of approximately 6.9 million. At the same time, regional employment grew from 3.2 million to approximately 3.7 million, matching the 15 percent increase in population growth. Projections (by the Association of Bay Area Governments) suggest an employment growth rate of 27 percent between 2000 and 2020, or the addition of one million new jobs.

Alameda will be one of the leading Bay Area counties in this job growth, and although its percentage increase forecast from 2000 to 2020, at 30 percent, is not the highest, the projected absolute growth of 219,500 is second only to Santa Clara's projected job growth of 231,000. The forecast 141,000 net new jobs in Contra Costa between 2000 and 2020 represents a 39 percent increase. Dublin's anticipated employment growth of 80 percent from 2000 to 2020, along with growth rates of 54 percent for Livermore and Pleasanton, will be substantially higher than Alameda County as a whole. Likewise, the 58 percent employment growth anticipated in San Ramon is greater than the expected Contra Costa County growth rate.

All industrial sectors are expected to increase their employment with manufacturing and services employment showing the most growth. Dublin and Livermore are also expecting substantial growth in retail jobs. The Tri-Valley cities of Alameda County (Dublin, Livermore, Pleasanton) are growing faster than the remainder of the County. In 2000, 15.2 percent of Alameda County jobs were in the three cities, a ratio expected to increase to 18.8 percent by the year 2020. The construction industry within the county is large and growing as well. In Alameda County, there are approximately 38,500 persons employed in the construction industry in 2000, a 17 percent increase since 1995.

This employment growth, along with the associated population and housing growth, is the driving force behind the need to expand the electrical service capacity of the Tri-Valley area. As shown in Table E.3-1 and Figure E.3-1 (cumulative projects scenario), there are several large development projects in the agency review process. Many other large projects are already under construction or have recently been completed in the area. The Proposed Project did not cause this growth to occur; rather it has resulted from the economic success of the Bay Area, and more particularly, the growth of high tech businesses that are rapidly occupying a central place in the Tri-Valley business community (spilling over from Silicon Valley). PG&E Co. is responding to growth that is occurring and planned, based on city and county planning documents. Given the projections by ABAG, it is extremely difficult to conclude that the Proposed Project could foster growth beyond these already high levels.

There is potential for the Proposed Project's provision of electric service infrastructure to the currently under-developed North Dublin and North Livermore areas (via the new Dublin and North Livermore Substations) to accommodate growth levels in these areas beyond those currently permitted by local or regional plans and policies. As already noted, such potential is mediated/mitigated by the local politics of growth and the local jurisdiction's posture on, and regulatory authority over, growth management and land use policy (such as the recent passage of Measure D in Alameda County, discussed in Section A.2.1). However, the potential for growth-inducement in these two relatively undeveloped areas of eastern Alameda and Contra Costa Counties was one factor in the development of certain alternatives to these components of the Proposed Project (D1 and L2), in order to move the substations closer to the customer load already represented in approved plans and permits. The cumulative impact scenario (Section E.3) reflects the weighting of planned development closer to the I-580 and I-680 corridors, rather than at the northern edge of the Tri-Valley area, where the Proposed Dublin and North Livermore Substations are sited. Clearly, the passage of Measure D to place more substantive restrictions on the nature and size of development in these areas casts the potential for significant impact in higher relief.

In its recent filing with the CPUC on the effect of Measure D on the projected load demand for the Tri Valley project area, and specifically for the Livermore distribution planning area (see Section A.2.1), PG&E Co. avers that its projection of demand (and need) for the Proposed Project is based on approved projects only, and not on growth which Measure D now prohibits. For the Livermore-Las Positas Distribution Planning Area (DPA), reflecting actual load in the past two years and the growth associated with these approved projects, PG&E Co. projects a shortfall in 2002 at its existing capacity of about 18 MW (or roughly 14%). While the exceedance of capacity in the Livermore-Las Positas DPA is clearly of concern, the question is whether the 230 kV substation and transmission system proposed by PG&E Co. in North Livermore (and in North Dublin) is necessary to address this relatively small, projected overrun. Will the additional, surplus capacity (much larger than the deficit these additions are proposed to address) resulting from construction of both of these new substations and transmission lines induce growth beyond that which is currently permitted? The answer seems to be that it is quite possible, barring sharper escalation in demand by existing customers than the 10 % reflected in the actual load figures for the past two years that PG&E Co. cites in its recent filing.

There are a couple of different approaches to avoiding this significant impact:

1. Scale back the North Area capacity increases to be more commensurate with the projected, approved growth (e.g., 18 MW in the Livermore-Las Positas DPA), such as distributed generation. This could be considered part of the No Project Alternative (see Section 13.3).
2. CPUC approval of Alternatives D1 and L2, which would move this additional capacity (and associated footprint) south, toward the I-580 corridor where development is largely focused. However, Alternative L2 is not the Environmentally Superior Alternative for the North Livermore Area, so at least part of this method is not effective in reducing overall environmental impacts.

A mitigation possibility would be to limit the number of distribution connections served by the Proposed Project's Dublin and North Livermore Substations to that currently permitted by the relevant local jurisdiction. However, such limits could be very difficult to quantify (e.g., for commercial developments where the number of potential tenants is generally not set in plans, and whose demand for electric service will be substantially different from residential service) and even more unwieldy to administer and enforce, and therefore are not recommended.

Therefore, this would remain a significant, unavoidable impact (**Class I**) for the Proposed Project in the North Area (Dublin and North Livermore).

## E.2 SIGNIFICANT IRREVERSIBLE CHANGES

The *CEQA Guidelines* [Section 15126.2(c)] require an evaluation of significant irreversible environmental changes that would be caused by a project if implemented. In general, the *CEQA Guidelines* refer to the need to evaluate and justify the consumption of nonrenewable resources and the extent to which the project commits future generations to similar uses of nonrenewable resources. In addition, CEQA also requires that irreversible damage resulting from an environmental accident associated with the project be evaluated. Pursuant to Section 15126.2(c) of the *CEQA Guidelines*, significant irreversible environmental changes must be identified and may include the following:

- Use of nonrenewable resources during the initial and continued phases of the project that would be irreversible because a large commitment of such resources makes removal or nonuse thereafter unlikely
- Primary impacts and, particularly, secondary impacts which commit future generations to similar uses (such as a highway improvement that provides access to a previously inaccessible area)
- Irreversible damage that may result from environmental accidents associated with the project.

The transmission line construction phase would require an irretrievable commitment of natural resources from direct consumption of fossil fuels, construction materials, the manufacture of new equipment that largely cannot be recycled at the end of the project's useful lifetime, and energy required for the production of materials. Furthermore, construction of the transmission line would necessitate some vegetation and habitat removal, as evaluated in Section C.3 (Biological Resources). Assuming implementation of the mitigation measures recommended in this EIR, permanent loss of biological resources would be confined to project structure locations.

During the project's operational phase, the transmission line would allow for the transport of additional electrical power generated from nonrenewable resources (e.g., natural gas, large hydroelectric, coal), as well as an increasing proportion of renewable resources (e.g., wind, solar, small hydroelectric). While the construction of the Proposed Project (substations and transmission lines) does commit the future use of some amounts of nonrenewable resources, the Project is indifferent to whether the energy it transports is nonrenewable or renewable. Another way to look at the Project's potential is that it could also facilitate the distribution of renewable resources.

The occupation of PG&E Co.'s currently-vacant easement across the open space at the north edge of the Tri-Valley area, as well as through the Altamont Hills east to the Tesla Substation (in Phase 2), and the construction of a new transmission line corridor in open space south of Pleasanton, would commit future generations to this visual impact, as witnessed by the continued presence of a pair of steel towers in the Stanislaus Corridor almost 100 years after they were first built, and years after they were last used to deliver electricity. Similarly, while EMFs have not been conclusively determined to have adverse health impacts on humans, the Proposed Project's undergrounding in residential streets of Pleasanton would commit future generations to relative proximity to the 230 kV line, while the sophistication of scientific knowledge and technology to assess the impact of EMFs on humans continues to progress.

### E.3 CUMULATIVE SCENARIO

Section 15130 of the *CEQA Guidelines* requires a discussion of cumulative environmental impacts when they are evaluated as being significant. The definition of cumulative projects that are included in CEQA analysis is based on CEQA's requirement that these projects be under agency review at the time the Notice of Preparation (NOP) is issued. For this project, the list was developed in July of 2000.

Cumulative impacts are defined as those impacts that are created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. The *CEQA Guidelines* require that the discussion reflect the severity of the impacts and the likelihood of their occurrence, but need not provide as much detail as the discussion of the impacts attributable to the Proposed Project alone.

The *CEQA Guidelines* also mandate two different ways in which cumulative impacts may be evaluated. One of these mandated approaches is to summarize growth projections in an adopted general plan or in a prior certified environmental document. The second method involves compilation of a list of past, present, and probable future projects producing related or cumulative impacts [Guidelines, Section 15130 (b)1(A)]. This second method has been utilized for the purposes of this Draft EIR.

The cumulative scenario consists of projects that are reasonably foreseeable and that would be constructed or operated during the life of the project. This list was developed by consulting with local and regional agencies with jurisdiction in the area, and requesting that they provide information on projects that are being considered in their planning processes. The criteria for selection of cumulative projects includes a range of project types from small single family housing developments and road improvements to large commercial developments, rail and highway projects. Proposed and pending projects are presented that would have at least some portion of their area within close proximity to the proposed route and facilities or alternative routes and facilities. Table E.3-1 lists the various projects comprising the cumulative scenario. The cumulative projects considered for this study are presented by jurisdiction, with their approximate geographic locations. Figure E.3-1 is a map showing the location of each of the projects listed in this section.

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**Table E.3-1 Cumulative Projects**

Site No.	Project	Project Type	Project Location	Project Size	Proximity	Permitting Status/Schedule
<b>CITY OF SAN RAMON</b>						
1	Alcosta Community Park Canine Facility	Park (Fenced unleashed Dog Park)	West of Del Mar in PG&E Right-of-Way	0.8 acre site	Adjacent to D2 Reconductor (San Ramon Substation)	City of San Ramon approved; PG&E approved/ construction 50%
2	EBMUD Reservoir Tank Maintenance	Reservoir Maintenance	North of Old Ranch Road, East of Alcosta Boulevard		Just south of D2 Alternative	Planning/Design
<b>CITY OF PLEASANTON</b>						
3	Ruby Hill	Residential Subdivision	Generally southwest of intersection of Ruby Hills Boulevard and Vineyard Avenue	850 lot subdivision on 1,303 acres	South of S2 and S1 (Vineyard Avenue) Alternatives	As of 1/1/00, 125 unit under construction, 293 units without permits, 432 units built
4	Vineyard Avenue Specific Plan Area	Subdivision, school, trail, park, and road realignment	East and west side of Vineyard Avenue, between (approximately) the Ruby Hill subdivision and Montevino Drive	189 lot subdivision on 384 acres, new public school, new public trail, new park, and realignment of Vineyard Avenue	Adjacent to S2 Alternative	Specific Plan was approved in June 1999. Proposed subdivisions are currently being processed. Construction likely to start after the year 2000.
5	LDS Church	Residential Subdivision	By intersection of Bernal Avenue and Vineyard Avenue	6 lot subdivision on 2 acres	Just south of the Proposed route and the first portion of S1 & S4 Alternatives	Tentative map is approved. Still need final map approval as of 1/1/00.
6	Temple Beth	Synagogue and school	2500 Stanley Boulevard. Southeast of intersection of Stanley Boulevard and Bernal Avenue	166 lot subdivision on 222 acres	East of Vineyard Substation and adjacent to the first portion of the S1 Alternative	Preliminary review. Formal proposal likely to be submitted by Fall 2000.
7	McDonalds Corporation	Gas station and restaurant	3000 Bernal Avenue. Southwest of intersection of Stanley Boulevard and Bernal Avenue	76,093 square foot site	Just west of the Proposed route (MP 5) and south of the Vineyard Substation	Preliminary review. Formal proposal likely to be submitted by Fall 2000.
8	UAE	45 MW electrical generation facility	3200 Busch Avenue. Facility proposed on southern part of site	1 acre	South of D1 Alternative and north of S1 Alternative	Preliminary review. Formal proposal likely to be submitted by Fall 2000.
9	Bernal Avenue Bridge at Arroyo Valle	Road widening	Bernal between Vineyard and Del Valle Parkway	Intersection modifications, bridge construction	Adjacent/west of Proposed route (MP 5) and S2 & S4 Alternatives	Construction 2001
10	St. Mary's Creek Diversion	Pipeline construction	Kottinger to 1 <sup>st</sup> Street to Arroyo del Valle	New storm drain pipeline	West of the Proposed route between MPs M4 and M5	Construction 2001
11	Stanley Boulevard Widening	Roadway widening	Stanley Blvd. at Valley	Add travel lanes	Adjacent to D1 and S1 Alternatives, just north of Vineyard Substation	Construction 2001
12	Vineyard Sewer	Roadway construction	Along Vineyard between Petronave and Bernal	New sanitary sewer line	Runs parallel to the first portion of S2 & S4 along Vineyard Av.	Construction 2001

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Site No.	Project	Project Type	Project Location	Project Size	Proximity	Permitting Status/Schedule
13	Del Valle Parkway Extension	Roadway construction	Northerly of Arroyo del Valle	Extend Del Valle Parkway westerly to Stanley	West of Vineyard Substation (approximately ½ mile)	Construction 2001
14	Auf der Maur Property	Commercial auto service building	3295 Bernal Avenue, northwest of the intersection of Bernal Avenue and Del Valle Parkway	14,000 square feet	Just west of the Proposed route (MP 5) and south of the Vineyard Substation	Approved. Likely to be under construction in 2000.
14a <sup>1</sup>	Firestation	Public Building	South west corner of Del Valle and Bernal	20,000 square feet	Adjacent to Proposed route (MP 5)	Approved in December 2000. Scheduled to begin construction in January 2001.
<b>City of Dublin</b>						
15	Dublin Ranch Development Project	High and Medium Density Residential, General Commercial	North of 580, between Tassajara Rd. and Fallon Rd. extension	Approximately 1,333 acre site	Adjacent to D1 substation	First phase of four phases is under construction as of September 2000.
<b>City of Livermore</b>						
16	North Livermore Specific Plan	Planned Development	The Livermore-Amador Valley, north of I-580 and south of May School Road	13,500-acres with more than 10,000 acres permanent open space and the remaining 3,000-plus acres housing and community facilities	East of the L2 Substation Site Area and south of the Proposed Livermore Substation	Draft EIR release May 2000; Final EIR still to be released (See Section A.2.1.)
17	Planned Unit Development	Residential	Northeast corner of Holmes Street and Wetmore Road	24 residential lots	North about 750 feet of the aboveground section of S1 & S2, adjacent to northeast corner of Sycamore Grove Regional Park	Waiting for info.
18	Pacific Union Ventures	Residential	Northeast corner of South Vasco Road and Tesla Road	68 acres into 20 residential lots	North of Stanislaus Corridor Alternative, east of the Contra Costa-Newark Corridor	Application approved by Planning Commission on 6/20/00
19	Shea Center	Commercial	Southeast corner of North Canyons Parkway and Collier Canyon Road	15.14 acre site	Adjacent to the north and west of the L2 Alternative	Approved by Planning Commission 8/1/00
20	Bertolero Entities	Residential	Southeast corner of East Stanley Blvd. and Murdell Lane	6 acre site into 51 residential lots	East 1,100 feet of S1 Alternative	Application received 3/23/00
21	Signature Properties, Inc.	Mixed use commercial	Southeast corner of Isabel and Vineyard Avenues	41,877 sq. ft. (restaurant, bocce courts, retail space, office space, and a gas station)	Just south of underground portion of S1 & S2, northwest of Highway 84 and southeast of Isabel Avenue	Approved by staff 6/10/00

<sup>1</sup> The City of Pleasanton advised us of this project on December 15, 2000, as the EIR was being published, therefore we have been unable to evaluate it.

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Site No.	Project	Project Type	Project Location	Project Size	Proximity	Permitting Status/Schedule
<b>Alameda County</b>						
22	Repowering a Portion of the Altamont Pass Wind Resource Area	Repower or replace existing windmills.	North and South of I-580 in the Altamont Hills of eastern Alameda and Contra Costa Counties near the boundary of San Joaquin County.	Within the Wind Resource Area.	Northeast of Tesla Substation, near Proposed Project Phase 2.	Project is currently underway.



Insert Figure E.3-1 Cumulative Projects (11x17, b/w) Page 1 of 2

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## E.4 CUMULATIVE IMPACT ANALYSIS

Cumulative impacts of each issue area are analyzed in the following sections.

### E.4.1 AIR QUALITY

Future and proposed single-site and linear projects in close proximity to construction of the Proposed Project could have cumulative air quality impacts on the study area. The majority of the projects are residential (e.g., Ruby Hill, Vineyard Avenue Specific Plan Area, Dublin Ranch Development Project), commercial (e.g., Shea Center, Signature Properties, Inc.), and infrastructure (Bernal Avenue and Stanley Boulevard Road Widening, St. Mary's Creek Diversion storm drain pipeline) projects. The pollutants generated from these projects would have an impact on ambient air quality if they were constructed in close proximity and at the same time as the Proposed Project.

Construction of the cumulative projects could further exacerbate the potentially adverse exhaust emission impacts and the potentially adverse PM<sub>10</sub> emission impacts estimated for the Proposed Project or alternatives construction.

Cumulative impacts during the operation of the Proposed Project or alternatives are not expected since limited amounts of emissions would be generated by the Proposed Project. The impacts to air quality may be adverse, but less than significant.

### E.4.2 BIOLOGICAL RESOURCES

Cumulative impacts to biological resources could effect both vegetation and wildlife resources. Cumulative impacts to vegetation resources include all impacts by projects that are planned or projected to be built during the life of the Proposed Project. Projects were considered in the cumulative analyses if their potential impacts considered together with the impacts of the Proposed Project would be additive and compound or increase the vegetation impacts assessed above.

Cumulative impacts to wildlife resources include all impacts that are planned or projected to be built during the life of the Proposed Project. Although planned or Proposed Projects in central and eastern Alameda and Contra Costa counties will not impact the same special status species at the same levels or in the same way; cumulatively, wildlife habitat is degraded or lost as a result of these activities. The Tri-Valley Project contributes to the degradation of wildlife habitat in the region. This is considered a significant impact, mitigated by the implementation of the Applicant's Proposed Measures and Mitigation Measures B-3, B-5, B-6, and B-8 to B-11 (**Class II**).

### E.4.3 CULTURAL RESOURCES

The areas affected by the Proposed Project, generally linear corridors and areas for substations, are small in relation to the general Bay Area. However, any cultural resources exposed in the project area as a result of construction could provide significant information important to interpreting the regional prehistory and/or history. Many potentially significant sites have been destroyed or damaged by

development and other activities in the greater Bay Area prior to systematic study. At least ten future projects consisting of residential subdivisions and commercial developments (Ruby Hill, Vineyard Avenue Specific Plan Area, Dublin Ranch Development Project, North Livermore Specific Plan, Planned Unit Development (near Sycamore Grove Regional Park), Pacific Union Ventures, Shea Center, Bertolero Entities, and Signature Properties) could be facilitated by adequate and reliable electric power. The completion of project specific cultural resources studies for planning and environmental compliance documents and the development of appropriate mitigation measures could help reduce the cumulative effects of development (**Class II**). If project construction operations were to expose a large, stratified, buried prehistoric or historic archaeological site, the severity of cumulative impacts would rise because such sites are highly significant. Any potential impacts to an unknown archaeological site would be minimized by evaluation and the development of a treatment plan to mitigate project effects (**Class II**).

#### E.4.4 GEOLOGY, SOILS, AND PALEONTOLOGY

Potential cumulative geologic impacts are limited to loss of unique geologic features and alteration of the topography from the Proposed Project and one or more future projects. Seismic impacts comprise the impact of the geologic environment on the project and are not cumulative. Construction of the Proposed Project would contribute only a negligible increase to the potential cumulative geologic impacts (**Class III**). Any future impacts associated with cumulative projects in the immediate vicinity of the project would be primarily attributable to future projects.

#### E.4.5 HYDROLOGY AND WATER QUALITY

Impacts from the projects listed in Table E.3-1 that could generate cumulative hydrological impacts with the Proposed Project are related to construction activities and locally increased runoff due to the increase of impervious surfaces. The type and size of these projects reveal that the project region is an area of rapid residential, industrial and commercial expansion. The larger project sites, including sites 3, 15, and 16 involve large residential and urban development projects of 1,303, 1,333, and 3,000 acres and occur in areas previously undeveloped. As seen in Figure E.3-1, these larger project sites are found in the Pleasanton Area (Project #3), South Dublin Area (Project #15), and North Livermore Area (Project #16) portions of the project area. The replacement of these relatively undeveloped parcels with suburban residential neighborhoods and office-park type developments would result in increased stormflow related runoff. Increased runoff generated by the proposed Dublin and North Livermore substations contributes to this cumulative impact but is reduced to non-significance (**Class II**) through the application of Mitigation Measures H-2, H-3, H-10, and H-13. Several of the projects are concentrated near or around the existing Vineyard Substation. Since the modifications to the Vineyard Substation are relatively minor, in that they occur within the existing substation footprint, detrimental cumulative hydrologic impacts due to the added modifications at the Vineyard Substation are not expected.

#### E.4.6 LAND USE AND RECREATION

The primary type of cumulative impacts that could result from implementation of the Proposed Project would be disruption from construction in combination with other projects in the vicinity. Such disturbances are primarily related to the generation of noise and dust, but can also pertain to temporarily blocked access or other interference with normal use of a property. Due to the nature of the Proposed Project, it does not have the potential to generate more typical cumulative operational impacts that can occur with other types of development projects, including conversion of cumulatively significant areas of vacant or agricultural land to urban use.

While a number of large development projects and numerous smaller projects are planned or already underway in the vicinity of the Proposed Project alignment, it is not anticipated that the Proposed Project would contribute to significant cumulative land use impacts (**Class III**).

##### **Pleasanton Area**

The Alternative S2 alignment would pass by the Ruby Hill subdivision (Project #3), where construction of 850 homes has been approved. More than half of the project has already been completed, while the remaining areas currently under construction or yet to be built are sufficiently distant from the alternative transmission line alignment that there is no potential for cumulative construction impacts. Alternative S2 would also pass through the approved *Vineyard Avenue Corridor Specific Plan* area (Project #4), which will include development of 189 single-family homes, an elementary school, and public park. It is anticipated that construction of the Proposed Project would be completed prior to occupancy of these homes, while existing homes near Vineyard Avenue are sufficiently set back from the potential construction zones that significant cumulative construction impacts would not be anticipated, regardless of the timing of the two projects. A potential project impact has been identified in the unlikely event that the elementary school is completed and occupied by the time the transmission line project is constructed, but this would not represent a cumulative impact.

##### **North Livermore Area**

Residential and commercial development on over 3,000 acres in the North Livermore area (Project # 16) is proposed. This project has yet to receive final approvals and the timing of construction is unknown at this time. The Proposed Project's north alignment or one of the North Livermore Area alternatives would likely be completed before substantial construction in North Livermore is underway. Even if North Livermore construction has begun prior to completion of the Proposed Project or one of the alternatives, there will be no adjacent occupied development to be adversely affected by some simultaneous construction activities.

##### **Dublin-San Ramon Area**

In the City of Dublin, the first phase of construction has begun on a 1,300-acre planned development project (Project #15) that includes office, commercial, and medium- and high-density residential development in the vicinity of the Alternative D1 substation site. However, it is anticipated that

construction of the substation would be completed before the Project #15 construction in the vicinity of the D1 substation site were initiated.<sup>2</sup> Consequently, no cumulative construction impacts would be expected at this location.

#### **E.4.7 NOISE**

Future and proposed single-site and linear projects in close proximity to construction of the Proposed Project could have adverse cumulative noise impacts on the study area. The majority of the projects are residential (e.g., Ruby Hill, Vineyard Avenue Specific Plan Area, Dublin Ranch Development Project), commercial (e.g., Shea Center, Signature Properties, Inc.), and infrastructure (Bernal Avenue and Stanley Boulevard Road Widening, St. Mary's Creek Diversion storm drain pipeline) projects.

With regards to project operation, noise levels associated with the operation of the Vineyard Substation and the Local Generation Project in Pleasanton could combine to create adverse cumulative noise impacts to the residents at the Mobile Home Park southeast of the Vineyard Substation.

#### **E.4.8 PUBLIC HEALTH, SAFETY, AND NUISANCE**

There are no conclusively known cumulative impacts from transmission line and substation EMFs. No EMF mitigation measures are required or recommended beyond the no-cost, low-cost measures incorporated by PG&E. Operation of the proposed transmission lines increases the possibility for induced currents and shock hazards. These impacts are not cumulative and can be mitigated through proper grounding techniques on large metal objects in the vicinity of the lines. Operation of the proposed transmission lines increases the possibility for radio/television/equipment interference in the vicinity of the line. These impacts are not cumulative and can be mitigated by designing conductors and equipment to limit corona and gap discharges, correcting through maintenance any gap discharges from worn hardware, and by using software or installing magnetic field shielding on sensitive equipment. Therefore, no significant cumulative impacts are anticipated (**Class III**).

#### **E.4.9 SOCIOECONOMICS AND PUBLIC SERVICES**

As evidenced by Table E.3-1, there are a variety of anticipated public facility, residential, and commercial development projects anticipated for the Tri-Valley area. However, the major development projects are either consistent with local and regional plans, or the focus of plan amendments which include provisions to extend required public services. Labor force shortages are not anticipated during the construction phase. The Proposed Project is a by-product of the cumulative development anticipated in the Tri-Valley. While rapid cumulative development of additional housing could result in temporary shortages of school space or strain upon public service agencies, such as police or fire departments, the development and operation of the Proposed Project should not contribute to this problem.

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<sup>2</sup> Dennis Carrington, Senior Planner/Zoning Administrator, City of Dublin, personal communication, October 26, 2000.

#### E.4.10 TRAFFIC AND TRANSPORTATION

As presented in Table E.3-1, a number of projects both proposed and underway have been identified within the study area. The projects consist of proposed commercial and residential land uses, and planned infrastructure improvements such as road widening and creek diversion. Some of these projects could potentially exacerbate the construction impacts of the Proposed Project and project alternatives depending on location, intensity and scheduling, as follows.

##### **Proposed Project**

Five local projects were identified that could potentially affect the construction of the proposed transmission line project. Three would not likely affect or worsen the impact of the Proposed Project: a six-lot subdivision, an auto service building and a creek diversion (storm drain pipeline) project. A commercial gas station and restaurant project has been proposed for a 76,000 square foot site at the intersection of Bernal Avenue and Stanley Boulevard, would generate construction worker and truck trips to and from the area. In the event that this project is approved and that PG&E project construction activities overlap there will be a need for coordination between the two actions and the appropriate agencies to ensure that safe vehicle, pedestrian and bicycle access and circulation is maintained. The Proposed Project would not require additional mitigation measures beyond those identified (**Class III**).

The other significant project in the area is the planned road widening of Bernal Avenue at Arroyo Valle. This project would widen Bernal Avenue south of Stanley Boulevard from two lanes to four lanes with the construction of a new bridge. According to City of Livermore staff, this project has been delayed until funding is available. The project will not likely start construction for several years and would not coincide with the Proposed Project.

##### **Pleasanton Area**

A total of eight projects have been identified as potentially worsening the impacts associated with constructing the Vineyard-Isabel-Stanley (S1) Alternative. The majority of these projects are residential construction, with the most significant being the Ruby Hill development and a proposed mixed use commercial project (41,800 square feet) located at the southeast corner of Isabel and Vineyard Avenues. The Proposed Project will require coordination of construction activities with these two developments in the event the construction schedules overlap. The third project that could exacerbate Proposed Project impacts would be the Stanley Boulevard roadway widening improvements project. This project, scheduled for construction in 2001, would possibly overlap with the stringing of overhead transmission lines in the area. Coordination between the City of Livermore and PG&E Co. would serve to mitigate and manage the combined impacts of these two projects.

The Vineyard Avenue (S2) Alternative would likely encounter the most significant impacts related to proposed actions in the area. Project activity along Vineyard Avenue other than PG&E Co. trenching could include further development of Ruby Hill (residential construction), the realignment of a 1.2 mile segment of Vineyard Avenue (east of Ruby Hill) as part of the Vineyard Avenue Corridor Specific Plan

and the installation of new sewer lines along Vineyard between Petronave Lane and Bernal Avenue. This type of invasive road work would likely result in extended lane and road closures if it were to overlap. If Alternative S2 were to be built it would be necessary to develop a comprehensive traffic management plan (similar to Mitigation Measure T- 3) and to coordinate project schedules in order to mitigate significant impacts (**Class II**).

#### **Dublin-San Ramon Area**

The South Dublin (D1) Alternative would potentially be impacted by the planned widening of Stanley Boulevard and the construction of Phase 1 of the Dublin Ranch Development (residential construction). Coordination between PG&E Co. and the Cities of Dublin and Pleasanton with implementation of Mitigation Measures T-1 to T-3 would allow construction of this alternative to occur (with minimized cumulative impacts). The identified projects in this area would not affect the construction of the D2 Alternative and no further mitigation would be required.

#### **North Livermore Area**

The Hartman Road (L2) Alternative would potentially be impacted by development of the North Livermore Specific Area Plan and the Shea Center, a commercial development that would be located on the southeast corner of North Canyons Parkway and Collier Canyon Road. Coordination between projects and appropriate agencies and implementation of Mitigation Measures T-1 to T-3 would reduce potential impacts to less than significant status (**Class II**).

### **E.4-11 VISUAL RESOURCES**

Cumulative impacts to visual resources would occur where project facilities occupy the same field of view as other built facilities or impacted landscapes. It is also possible that a cumulative impact could occur if a viewer's perception is that the general visual quality of an area is diminished by the proliferation of visible structures (or construction effects such as disturbed vegetation), even if the new structures are not within the same field of view as existing structures. The significance of the cumulative impact would depend on the degree to which (1) the viewshed is altered; (2) visual access to scenic resources is impaired; (3) scenic character is diminished; or (4) the project's visual contrast is increased. In the following subsections, projects from the Cumulative Projects List (Table E.3-1) are discussed by project geographic area in terms of their visibility within the same viewshed as some component(s) of the Proposed Project and/or Alternatives.

#### **Pleasanton Area**

Within the Pleasanton area, several projects would be visible within the same viewshed as that of the Proposed Project and alternatives. Project #3 – Ruby Hill will be within the same viewshed as the combined S1/S2/L2 Alternatives segment along Vineyard Avenue, the S2 Alternative along Vineyard Avenue, and the S4 Alternative through the hills to the west of the Ruby Hill development. To the extent that cumulative impacts with the S2/S2/L2 common segment (as well as S2A) and S2 segment along Vineyard occur, they would be short-term if construction of the selected alternative occurs during



on-going construction of Ruby Hill. Longer term, the selected alternative would be underground and not visible so an on-going cumulative impact would not occur. The short-term cumulative impact during construction would be adverse but not significant (**Class III**). A short-term cumulative impact during construction would also occur between the Ruby Hill development and the S4 Alternative if construction of the two projects coincides. This short-term impact would be considered adverse but not significant (**Class III**). A longer-term cumulative visual impact could occur if the S4 Alternative is selected and Mitigation Measure V-2 is not implemented, resulting in the long-term visibility of the S4 Alternative in the same viewshed as the Ruby Hill development. This impact would be significant and unmitigable (**Class I**).

Project #'s 4, 5, 6, 7, 9, 10, 11, 12, 13, and 14 would be located within the vicinity of the Proposed Project underground segment and the S2/S4 common underground segment. To the extent that any of these projects are constructed at the same time as the project or alternative, and they are within the viewshed of the construction activities, a short-term cumulative visual impact would occur. However, this impact would be adverse but not significant (**Class III**). Due to the underground nature of the Proposed Project and alternatives in this area and the inconspicuous nature of the modifications to the existing Vineyard Substation, there would be no long-term cumulative visual impact.

Project #17 (Planned Unit Development at the northeast corner of Holmes Street and Wetmore Road) would be constructed within the same viewshed as that of the S1/S2/L2 common segment. If the S1/S2/L2 common segment is selected and constructed at the same time as Project #17, a short-term cumulative visual impact would occur. However, this impact would be adverse but not significant (**Class III**). If Mitigation Measure V-1 is not implemented, resulting in the long-term visibility of the S1/S2/L2 in the same viewshed as Project #17, a significant and unmitigable (**Class I**) cumulative visual impact would occur.

Project #20 (Bertolero Entities at the southeast corner of East Stanley Boulevard and Murdell Lane) would be constructed within the same viewshed as that of the S1 Alternative along Stanley Boulevard. If the S1 Alternative is selected and constructed at the same time as Project #20, a short-term cumulative visual impact would occur. However, this impact would be adverse but not significant (**Class III**). The long-term visibility of the S1 in the same viewshed as Project #20 would also occur, but the existing suburban residential landscape would not be noticeably changed with the addition of Project #20. Combined with the minimal overlap of viewsheds for the S1 Alternative and Project #20, the resulting cumulative impact between the S1 Alternative and Project #20 would be adverse but not significant (**Class III**).

Project #21 (Signature Properties, Inc. mixed use commercial development at the southeast corner of Isabel and Vineyard Avenues) would be constructed within the same viewshed as that of the S1/S2/L2 common underground segment and partially within the viewshed of the S1/L2 aboveground segment north of Vineyard Avenue. If any one of the S1, S2, or L2 Alternatives is selected and constructed at the same time as Project #21, a short-term cumulative visual impact would occur. However, this impact would be adverse but not significant (**Class III**). Due to the underground nature of the S1/S2/L2 common underground segment, there would be no long-term cumulative visual impact. Due

to the partial overlap of viewsheds of the S1/L2 above ground segment north of Vineyard Avenue and Project #21 south of Vineyard Avenue, a long-term cumulative impact would occur. However, because of the limited overlap of viewsheds, the resulting cumulative impact would be adverse but not significant (**Class III**).

### **Dublin Area**

Within the Dublin area, Projects #'s 1 and 2 would be located within the viewshed of that portion of the D2 Alternative at San Ramon Substation and immediately east of the substation. To the extent that the D2 Alternative (if selected) is constructed at the same time as Projects #1 and #2, a short-term cumulative visual impact would occur. However, this impact would be adverse but not significant (**Class III**). Due to the underground nature of the D2 Alternative east of San Ramon Substation, and the inconspicuous nature of the modifications to the existing Vineyard Substation and reconductoring of the Pittsburg-San Ramon transmission line, the resulting long-term cumulative visual impact would be adverse but not significant (**Class III**).

Project #8 (UAE 45 MW electrical generation facility at 3200 Busch Avenue) would be constructed within the same viewshed as the D1 overhead route north of Stanley Boulevard. However, given the existing industrial context of the mineral extraction and processing facilities in this area, and the minimal public visibility of this location, the resulting short-term construction cumulative impact and long-term operation cumulative impact are considered adverse but not significant, (**Class III**).

Project #15 (Dublin Ranch high and medium density residential and general commercial development) would be constructed within the same viewshed as the D2 South Dublin Substation Alternative. However, the substation site would be encompassed by the Dublin Ranch commercial and office development. To the extent that it is possible to differentiate between the two projects either during construction or at build out, the resulting cumulative visual impact would be adverse but not significant (**Class III**).

### **North Livermore Area**

Within the North Livermore project area, Projects #'s 16 and 19 would be located within the viewsheds of the Proposed Project and L2 Alternative. Project #16 (North Livermore Specific Plan urban development) would be constructed within the same viewshed as the proposed North Livermore Substation. To the extent that the North Livermore Substation (if selected) is constructed at the same time as a portion of Project #16, a short-term, adverse but not significant (**Class III**) cumulative visual impact would occur. However, over the longer term, it is probable that the northern location of the proposed substation relative to the probable location and direction of early development of Project #16 would result in a distinct separation between the two projects and a significant and unmitigable (**Class I**) cumulative visual impact would result.

Project #16 would also be within the viewshed of the L2: Hartman Road Alternative substation site. As with the proposed North Livermore substation site, to the extent that the North Livermore Substation (if selected) is constructed at the same time as a portion of Project #16, a short-term, adverse but not

significant (**Class III**) cumulative visual impact would occur. However, unlike with the proposed site, the L2 Alternative substation site is in a more southerly location relative to overall development of Project #16. As a result, the substation site would be encompassed by the North Livermore Specific Plan development much more quickly, and differentiation between the substation and surrounding development would be more difficult. The resulting cumulative visual impact would be adverse but not significant (**Class III**).

Project #19 (Shea Center commercial development) would be constructed within the viewshed of the L2 Alternative underground segment. To the extent that the L2 Alternative (if selected) is constructed at the same time as Project #19, a short-term, adverse but not significant (**Class III**) cumulative visual impact would occur. However, due to the underground nature of the L2 Alternative north of I-580, there would be no long-term cumulative visual impact.

### **Tesla Connection**

Within the Tesla Connection project area, Project #18 (Pacific Union Ventures residential development at the northeast corner of South Vasco Road and Tesla Road) would be located within the viewshed of the Stanislaus Corridor Alternative. If the Stanislaus Corridor Alternative is selected and constructed at the same time as Project #18, a short-term cumulative visual impact would occur. However, this impact would be adverse but not significant (**Class III**). The long-term visibility of the Stanislaus Corridor Alternative in the same viewshed as Project #20 would also occur, but the existing residential landscape would not substantially change with the addition of Project #18. Combined with the minimal overlap of viewsheds of the Stanislaus Corridor Alternative (located considerably south of Tesla Road) and Project #18 (located north of Tesla Road), the resulting cumulative impact between the Stanislaus Corridor Alternative and Project #18 would be adverse but not significant (**Class III**).

Project #22 (Repowering a portion of the Altamont Pass Wind Resource Area), would be located within the viewshed of the Proposed Project Phase 2 route through the Altamont Hills. To the extent that the Proposed Project Phase 2 route (if selected) is constructed at the same time as the repowering project, a short-term, adverse but not significant (**Class III**) cumulative visual impact may occur. The uncertainty lies within the extent to which activities associated with the repowering project significantly differ from routine operation and maintenance activities within the wind resource area. Over the longer term, the repowering of existing facilities would not likely result in cumulative visual impacts, in conjunction with the Proposed Project.