

B.5 ALTERNATIVES OVERVIEW AND SCREENING

B.5.1 CEQA Requirements for Alternatives

One of the most important aspects of the environmental review process is the identification and assessment of reasonable alternatives that have the potential for avoiding or minimizing the impacts of a proposed project. In addition to mandating consideration of the No Project Alternative, CEQA Guidelines [Section 15126(d)] emphasize the selection of a reasonable range of technically feasible alternatives and adequate assessment of these alternatives to allow for a comparative analysis for consideration by decision makers.

CEQA requires consideration of a range of alternatives to the project or project location that: (1) could feasibly attain most of the basic project objectives; and (2) would avoid or substantially lessen any of the significant impacts of the proposed project. An alternative cannot be eliminated simply because it is more costly or could impede the attainment of all project objectives to some degree. However, CEQA Guidelines declare that an EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote or speculative.

Unlike the National Environmental Policy Act (NEPA), CEQA does not require that discussion of alternatives be at the same level of detail as the proposed action. However, CEQA does require that an EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project.

This screening analysis does not focus on relative economic factors of the alternatives (as long as they are feasible) since the CEQA Guidelines require consideration of alternatives capable of eliminating or reducing significant environmental effects even though they may impede to some degree the attainment of project objectives or would be more costly.

B.5.2 Alternatives Screening Methodology

In an EIR, alternatives are evaluated in a screening process for two overall purposes: (1) to eliminate alternatives that do not conform to CEQA requirements (as defined in Section B.5.1 above); and (2) to distinguish alternatives to the project from other EIR elements (such as suggested mitigation measures).

Alternatives to the proposed project were selected based on the input from the public and local jurisdictions during the EIR scoping meetings. The alternatives screening process consisted of three steps:

Step 1: Define the proposed project and the alternatives to allow comparative evaluation

Step 2: Evaluate each alternative using the following criteria:

- Potential for reduction of significant adverse impacts of the proposed project

- Technical and regulatory feasibility
- Consistency with PG&E Co.'s basic objectives, as well as public policy objectives.

Step 3: Determine suitability of the proposed alternative for analysis in the EIR. If the alternative is unsuitable, eliminate it from further consideration.

Feasible alternatives that did not clearly offer the potential to reduce significant environmental impacts, and infeasible alternatives were removed from further analysis. In the final phase of the screening analysis (Step 3), the environmental advantages and disadvantages of the remaining alternatives were carefully weighed with respect to potential for overall environmental advantage, technical feasibility, and consistency with project and public objectives. These criteria are discussed in the following sub-sections.

B.5.2.1 Project Objectives

The objectives of the proposed project is discussed in Section A.6 (Purpose and Need) and summarized as follows:

- To increase the capacity of the transmission system in northeast San Jose area in response to rapidly growing demand for electric service, thereby increasing system reliability
- To provide 230kV service closer to the load center in the northeast San Jose, Milpitas, Fremont, and Santa Clara area, increasing the capacity of the 115kV distribution system in the northeastern San Jose area
- To reduce overloadings on the 230/115kV transformers at Newark and Metcalf Substations and reduce the overloaded 115kV lines within the San Jose area.

This screening analysis does not focus on relative economic factors of the alternatives (as long as they are economically feasible) since the CEQA Guidelines require consideration of alternatives capable of eliminating or reducing significant environmental effects even though they may "impede to some degree the attainment of project objectives or would be more costly."

B.5.2.2 Significant Environmental Effects of the Proposed Project

If an alternative clearly does not provide any environmental advantages as compared to the proposed project, it is eliminated from further consideration. At the screening stage, it is not possible to evaluate potential impacts of the alternatives or the proposed project with absolute certainty. However, it is possible to identify elements of an alternative that are likely to be the sources of impact and to relate them to general conditions of the subject area. In this alternatives analysis, a preliminary assessment of potential significant effects of the proposed project was completed, resulting in identification of the following impacts:

- Visual impacts in scenic and recreation areas, the Don Edwards San Francisco Bay National Wildlife Refuge (Refuge), and from properties adjacent to the proposed facilities
- Potential impacts to biological resources, including threatened and endangered species along the transmission line route
- Construction impacts and operational disturbances impacts to adjacent property owners
- Loss of agricultural land at the proposed Los Esteros Substation.

B.5.2.3 Feasibility

For the screening analysis, the technical and regulatory feasibility of various potential alternatives was assessed at a general level. Specific feasibility analyses are not needed for this purpose. The assessment of feasibility was directed toward reverse reason, that is, an attempt was made to identify anything about the alternative that would be infeasible on technical or regulatory grounds. According to CEQA case law (*Citizens of Goleta Valley, et al. v. Board of Supervisors of the County of Santa Barbara, et al.*) 52 Cal.3d 553, 801 P.2d 1161, 276 Cal. Rptr. 410 (1990)), the Court stated that a feasible alternative "...is one which can be accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social and technological factors."

For the proposed Northeast San Jose Transmission Reinforcement Project, feasibility issues relate to:

- Availability of adequate right-of-way for the transmission line and land for the substation in a rapidly developing area
- Potential for receipt of necessary permits, especially potential permitting obstacles related to the jurisdiction of the Refuge (see Section A.3)
- Ability to provide the reliable electric service by the summer of the year 2002 due to the projected growth in local demand in the northeast San Jose area.

It should be noted that, under CEQA, an alternative being more expensive than the proposed project is not sufficient to eliminate it from consideration. The additional cost must be sufficiently severe as to render it impractical (i.e., infeasible) to proceed with the project.

B.5.3 SUMMARY OF SCREENING RESULTS

Alternatives identified by PG&E Co., local jurisdictions, and the public are listed in Table B.5-1 according to the determination made for analysis. Those listed in the first column have been eliminated from further consideration (see rationale in Section B.5.4), and those in the second column are evaluated within each issue area of Part C of this EIR and described in Section B.6.

Alternatives considered included alternative transmission line route alignments and substation sites, alternatives that could replace the proposed project as a whole, and the No Project Alternative.

B.5.4 Alternatives Eliminated from Further Consideration

As discussed in Section B.5.2, alternatives were assessed for their ability to reasonably achieve the project objectives and reduce the significant environmental impacts of the Proposed project. Also, their technical and regulatory feasibility was evaluated. Based on these screening criteria, the alternatives listed in the first column of Table B.5-1 were eliminated from detailed EIR consideration. The rationale for elimination of each of those alternatives is described in the following sections.

Table B.5-1 Summary of Alternative Screening Results

Alternatives Eliminated From Consideration	Alternatives Fully Evaluated in this EIR
230kV Transmission Line Alternatives	
<ul style="list-style-type: none"> • I-880 Route West of Freeway • East of I-880 Route Alternatives • Newby Island Route • Union Pacific RR Route • West of Fremont Airport 	<ul style="list-style-type: none"> • I-880-A Alternative • I-880-B Alternative • Underground Through Business Park • Westerly Route Alternative • Westerly Upgrade Alternative
230kV Substation Site Alternatives	
<ul style="list-style-type: none"> • Substation Site A • Substation Site C 	<ul style="list-style-type: none"> • Northern Receiving Station Alternative • Zanker Road Alternative
Alternatives to Trimble-Montague 115kV Upgrade	
<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Barber Lane 115kV Alternative • Underground Trimble-Montague 115kV Alternative
System Alternatives	
<ul style="list-style-type: none"> • New Local Generation with 115kV Upgrades • Distributed Generation • Upgrading Existing 115 kV Lines and Substations 	<ul style="list-style-type: none"> • No Project Alternative

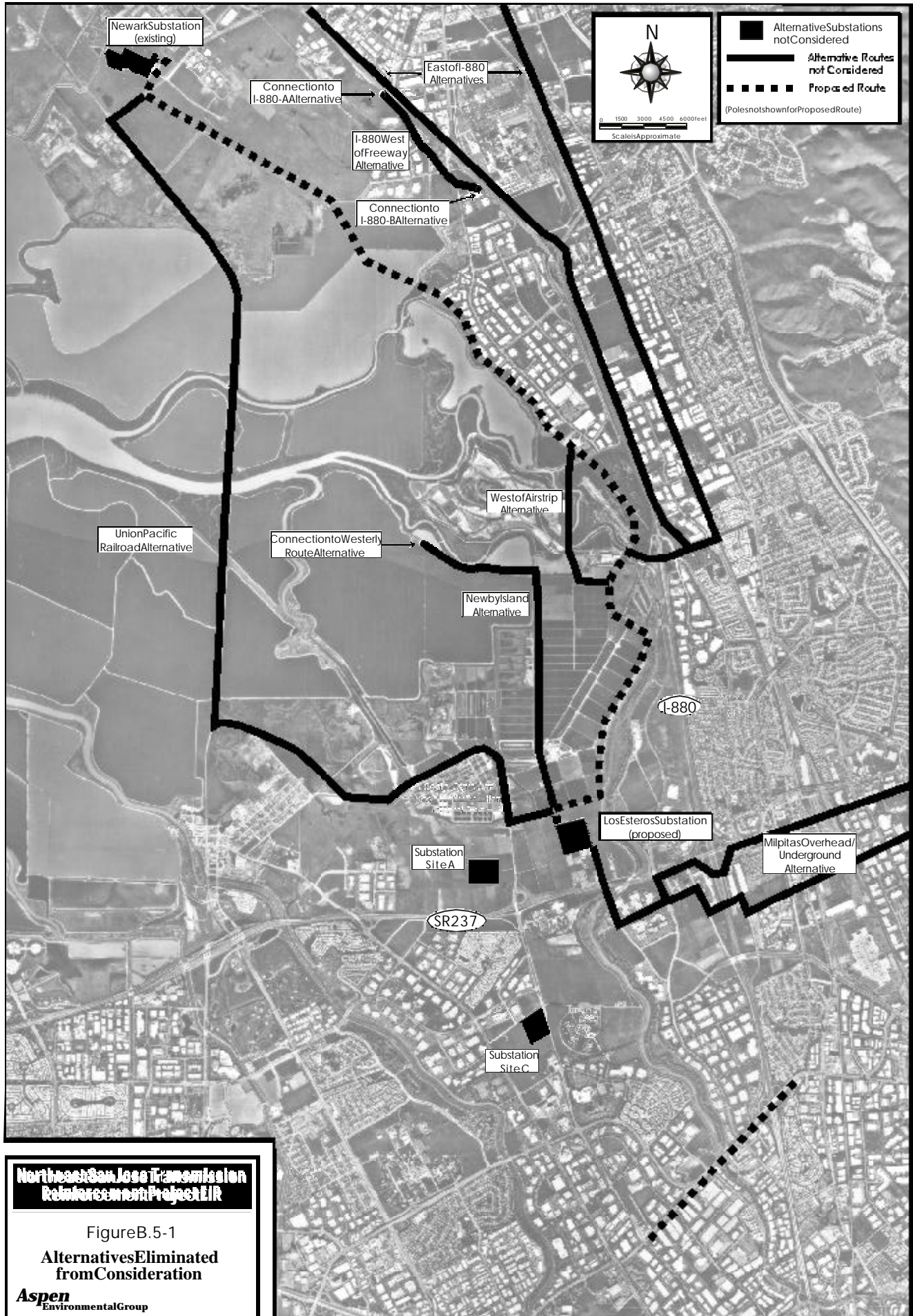
B.5.4.1 230kV Transmission Line Alternatives Eliminated

Figure B.5-1 shows the transmission line alternatives or corridors considered for EIR analysis but eliminated due to environmental or engineering/feasibility reasons. Note that some of these alternatives include discussion of underground 230kV transmission lines as part of the alternatives; Appendix 4 includes a summary of underground transmission line construction techniques.

B.5.4.1.1 I-880 Route West of Freeway at Cushing Parkway

As discussed in Section B. 6, two connecting route segments west of I-880 are evaluated in detail in this EIR. Their routes are shown in Figures B.6-2 and B.6-3. Another route segment was evaluated that would follow the western edge of I-880 from the Pacific Commons Preserve (using the first five pole locations of the I-880-A Alternative), and connecting with the I-880-B Alternative immediately south of the Cushing Parkway off-ramp.

Environmental Advantages. This route would be nearly one-half mile shorter than the combined I-880-A and I-880-B routes, so would have fewer construction impacts and would be adjacent to fewer businesses.



Northeast San Jose Transmission Reinforcement Project EIR

Figure B.5-1
 Alternatives Eliminated from Consideration

Aspen
 Environmental Group

Rationale for Elimination. An office building and motel are located immediately north of the Cushing Parkway off-ramp on the west side of the I-880 freeway. These facilities are so close to the freeway, and its elevated off-ramp, that there is not adequate space for the 230kV transmission line right-of-way. Immediately west of these buildings is an Alameda County Flood Control Channel, which would further limit availability of right-of-way in this area.

B.5.4.1.2 *Alternative Routes Primarily East of I-880*

Milpitas Overhead/Underground Alternative. This alternative would connect the proposed 230 kV Los Esteros Substation to the existing Newark to Metcalf 230 kV Transmission Line (which runs north/south east of the San Francisco Bay area) via a new double-circuit 230 kV electric transmission line. This new line would be connected to the Newark to Metcalf 230 kV Transmission Line near the southern end of the Calaveras Reservoir as an overhead line, traverse the Diablo Range, and the new line would be placed into two underground trenches (one for each circuit of the 230kV transmission line) at a transition station east of the developed portion of the City of Milpitas, as shown in Figure B.5-1. An overhead to underground transition station would require a minimum area of 13,000 square feet, or with landscaping, an area of approximately 24,000 square feet. Two separated trenches would be required because the heat of the buried transmission line requires separation from each other and from other buried utilities. This alternative would traverse residential and commercial areas of Milpitas and cross Coyote Creek, Interstates 680 and 880, and State Route 237 before entering the proposed Los Esteros Substation Site. The new 230 kV transmission line would require 3 miles of overhead line and 9.9 miles of underground line in two separate trenches. In the summer months, this new 230 kV transmission line would be capable of delivering 800 MW of power (in other seasons, the capability of the line would be higher due to cooler temperatures). This alternative would result in some degradation of reliability to the existing Newark-Metcalf 230kV line, which serves as a major 230kV link surrounding the San Jose area.

Environmental Advantages. This alternative route would eliminate all impacts to the Refuge and in areas where bird collision and sensitive plant species would be likely to occur.

Rationale for Elimination. This alternative is believed to have potentially greater impacts than the proposed project for the following reasons:

- Short-term construction impacts during installation of the underground cables would include noise, dust, and traffic impacts would occur in residential, commercial, and industrial neighborhoods, as well as adjacent schools.
- There is a potential for encountering hazardous materials along the underground route portion, primarily in areas that have had heavy industry and under the Union Pacific Railroad lines east of Interstate 880.

- Flowing sands at Coyote Creek would present difficulty in trenching for underground installation. Trenching could also affect the riparian habitat. Known historical liquefaction and lateral spreading from a large earthquake could damage a trenched or directionally bored installation, resulting in possible leaks of the cooling oil required for the underground line (if an oil-cooled line were used) .
- Potentially significant visual changes to the open space would occur from installation of transmission towers and lines where no development currently exists. Some residences near the transmission line could perceive significant visual impacts while others may view the lines through a filter of trees or from such a distance that the visual change is minimal. The transition station at the base of the hill adjacent to a residential area would be visible from nearby residences and from Piedmont Road. Residences on the hillside would also have direct views of the transition station.
- The hillside area also has the potential for seismic activity. The transition station would be located on or adjacent to the Evergreen fault or other faults in the Fremont Subzone of the Hayward fault. In the event of ground surface rupture, the transition station and oil-insulated underground lines could be damaged, resulting in oil leaks (unless a dielectric cable was used).
- Underground transmission lines have the potential to be out of service for a considerable period of time in the event of a failure of the cable insulation, splices, or terminations.
- There is the potential for degradation of system reliability resulting from an extended outage to, or increased exposure on the Newark-Metcalf 230kV line.

230kV Line to Milpitas Substation; Expansion of Substation

This alternative is a variation on the Overhead/Underground Alternative described above. The route would start from the Newark-Metcalf 230kV line, but run south to the Milpitas Substation rather than due west to the proposed Los Esteros Substation. Milpitas Substation is about a half-mile east of the Montague Substation and is already connected to the Newark Substation, Montague Substation, and Dixon Landing Substation. If 230kV power could be brought to this location from the Newark Metcalf 230kV transmission line (located east of the ridge/open space east of the developed portions of Milpitas), and if the substation could be expanded to accommodate 230/115kV transformers, this alternative would reduce the length of the 230kV transmission line and eliminate all impacts to the Refuge and baylands.

Environmental Advantages. Similar to the Milpitas Overhead/Underground Alternative, this route would eliminate impacts to the Refuge and bay margin habitats.

Rationale for Elimination. This alternative was not considered because the Metcalf Substation has insufficient space available for the 230kV transformers. The adjacent vacant lot is smaller than 4 acres, which would not provide space for the 230 kV/115 kV transformers. Also the station is about four miles southeast of the center of the load to be served by the power provided by the proposed project. The surrounding areas (through which the 230 kV and 115 kV transmission lines would pass) are relatively densely developed.

Other Routes East of I-880

In addition to the Milpitas Overhead/Underground and Milpitas Substation Alternatives, several transmission line routes were evaluated east of the I-880. These routes were considered in order to eliminate the proposed project's impacts to the Refuge, wetlands habitats, visual impacts in areas of panoramic views, and impacts on recreationists along the Bay margin. However, most of the area east of I-880 is currently densely developed, and the wide corridor required for clearance below and adjacent to a 230kV transmission line is not available.

B.5.4.1.3 *Newby Island Route*

This alternative uses the same alignment as the Westerly Route Alternative (see Section B.6.1.4) from Newark Substation to the western tip of Newby Island at Milepost 3.8. From the tip of Newby Island, the route turns east, crosses the parallel 115 kV power lines, and follows the south levee road of Newby Island for 0.9 mile on the outboard side of the levee. West of the recycling center on the south edge of Newby Island, the route turns south, crosses the Coyote Creek Flood Bypass Channel, and follows a levee road before entering the Water Pollution Control Plant (WPCP) property. The alignment follows a road between the sludge ponds or lagoons, passes a maintenance facility, and enters the proposed Los Esteros Substation. The total length of the line is 6.7 miles, slightly shorter than the proposed route.

Environmental Advantages. Impacts from the northern portion of the route would be the same as those for the Westerly Route Alternative; however the route follows dry land to a greater extent than the Westerly Route Alternative and to a lesser extent than the proposed transmission line route.

Rationale for Elimination. This alternative would require filling wetlands at five or six transmission tower positions on the outboard side of the south levee of the Newby Island Landfill. Also, according to WPCP personnel, an overhead transmission line that passed through the center of the sludge ponds would interfere with operational activities because cranes are used for maintenance of the ponds. The use of cranes near high-voltage transmission lines can be a safety hazard.

B.5.4.1.4 *Union Pacific Railroad Route*

The 230kV transmission line could be installed along the Union Pacific railroad tracks west of the Westerly Route Alternative. This route was considered because the presence of the railroad as an existing utility corridor presents an opportunity to consolidate utility land uses.

Environmental Advantages. This route would not affect the business park along the central part of the proposed route.

Rationale for Elimination. This route was eliminated from further consideration because it would cause significant impacts to wetlands, would require construction activity in a sensitive historic resource area (the former town of Drawbridge), and would be difficult to access for construction, operation, and maintenance of the line. It would be difficult, if not impossible, to obtain the required biological resource agency permits for wetland impacts, successfully consult with the State Office of Historic Preservation, and gain approval from the U.S. Fish and Wildlife Service to construct a line through extensive parts of the San Francisco Bay National Wildlife Refuge.

B.5.4.1.5 West of Fremont Airport Route

This alternative segment was considered by PG&E Co. in its original application as a means of avoiding the potential impacts of the proposed route as it passed through the wetlands and potential endangered species habitat of the Fremont Airport property.

Rationale for Elimination. Subsequent to PG&E Co.'s original application, a business park was proposed for the Fremont Airport property, and a plan was developed which will set aside the western portion of the property for endangered species and wetlands mitigation. PG&E Co.'s currently proposed 230kV route design therefore follows the proposed extension of Fremont Boulevard, avoiding the future mitigation area. The alternative segment would be adjacent to the mitigation area, resulting in increased impacts to habitat and increased likelihood of bird collision.

B.5.4.2 230 kV Substation Site Alternatives Eliminated

The rapid development of the north San Jose area makes it very difficult to find a parcel of vacant land large enough for a substation. Campus-style industrial and business parks are being constructed in many areas, resulting in the elimination of nearly all parcels appropriate for a substation. In addition to the proposed Los Esteros site and the two alternatives evaluated in this EIR, two other sites were considered.

B.5.4.2.1 Substation Site A

Alternative Substation Site A was suggested by PG&E Co. It is located on lands administered by the City of San Jose and is part of the Water Pollution Control Plant (WPCP) property. Site A is located about 3,000 feet west of Zanker Road, east of the BayTech Business Park and north of State Route 237. PG&E Co. began evaluating the site for development of the Los Esteros Substation but learned from the City of San Jose that the site is unavailable for use as a substation. The City opposes siting the substation on its property because the land is currently being used for the disposal of excess treated wastewater as mandated by the Regional Water Quality Control Board. This use is an established operation necessary for the management of treated wastewater and preservation of endangered species habitat. The City of San Jose has dedicated and uses the property for a public purpose. Thus, as the property has an existing public use,

it cannot be acquired by eminent domain. Because the property is not available for development, it was not analyzed further in this EIR.

B.5.4.2.2 Substation Site C

Alternative Substation Site C was evaluated by PG&E Co.. It is a privately owned parcel located along the west side of Zanker Road and is located about 4,000 feet south of State Route 237. It is located in an area undergoing development with campus-type offices and is planned for high-density residential development according to the City of San Jose 2020 General Plan. The current use of the site is agricultural and it is planted with alfalfa. The 230 kV transmission line route to Site C is the same as that for Site B but would continue south on Zanker Road before crossing the roadway to Site C. This site was considered for a potential substation in PG&E Co.'s Original Application for a CPCN and has since been slated for development for high-density residential housing. Because use of this site for a substation would conflict with established plans to develop high density housing, this site has been dropped from further consideration as a substation site.

B.5.4.3 System Alternatives Eliminated

B.5.4.3.1 New Local Generation with 115kV Upgrades

Evaluation of growing electricity demands requires consideration of generation as well as transmission. If power could be generated in the area in which it is used, the inefficiencies associated with electricity transmission and the environmental impacts associated with long transmission lines would be eliminated. However, consideration of both generation and transmission alternatives can be difficult if the electricity is needed relatively urgently. Both power plants and major transmission facilities require lengthy agency review and approval processes. The time required from agency review through construction of both power plants and transmission facilities can be several years, and includes applicant siting studies, application preparation, application review by the California Energy Commission (CEC, for power plants) or CPUC (for transmission facilities). No application for a power plant in this area is currently under review by the CEC. However, because PG&E Co.'s application for the transmission line/substation project CPCN was originally filed in 1998, at this point, the proposed project would be available to meet demand before new local generation could be constructed.

In addition to the separation of State agency oversight over transmission lines (CPUC) and power plants (CEC), an additional complication is the responsibility of the California Independent System Operator (ISO) to assure reliability of the transmission grid. The ISO evaluates transmission reliability, including potential effects of local generation.

Rationale for Elimination. New generation alternatives do not appear feasible at this time for the following reasons. First, there is currently no application pending before the CEC for a centralized

generation plant that could reduce the need for this project to be constructed by 2002. While several generation developers have announced their intention to construct generation facilities in the Bay Area, none have been publicly announced in the north San Jose area. There is an Application for Certification (proposed by Calpine/Bechtel) currently being evaluated by the CEC for a 600 MW “Metcalf” facility in south San Jose near PG&E Co.’s Metcalf Substation, but due to its location (approximately 20 miles south of the project area), that facility would not reduce the need for an additional 230kV and 115kV substation and associated transmission to/from northeast San Jose. In order to best serve project objectives and efficiently provide power to northeast San Jose, Milpitas, Fremont, and Santa Clara, a generation facility would have to be located within a few miles of the proposed Los Esteros Substation site.

Secondly, large generating stations would likely require 230kV transmission outlets to the electric system grid (in addition to those available) and would not replace the proposed project. The proposed project could, in fact, serve as an outlet for large generation projects and would encourage generation development because power could be sold (by transmission along the proposed project’s lines) outside of the area during off-peak periods.

B.5.4.3.2 *Distributed Generation/Local Generation*

The previous section addressed the possible development of a single generation facility (500 to 800 MW) which could offset the need to import (transmit) power from outside of the northeast San Jose area. Another alternative is the development of dispersed, smaller generation facilities that serve an individual customer or facility, termed “distributed generation.” In addition, local generation, where small generating facilities support the transmission system, can reduce the need for transmission. Distributed generation offers a variety of potential benefits:

- Deferral of the need for new transmission and distribution facilities
- Elimination of transmission/distribution electrical line losses
- Cost-effective source of new peak demand power
- Potential for cogeneration (combined generation of heat and power)
- Increased facility self-reliance, or a potential source of emergency or standby power
- Potential source of high-reliability power for sensitive facilities when coupled with uninterruptible power supply (UPS) systems

There are ongoing research and regulatory efforts underway in distributed generation. The CPUC has a process (under an “Order Instituting Rulemaking”) that was set forth in Decision (D.) 99-10-065. The objective is to develop policies and rules regarding the deployment of distributed generation, such as interconnection standards, and rules for participation in these new markets. The CPUC is collaborating with the CEC and the Electricity Oversight Board (EOB), as well as with the Legislature, to develop these policies and rules.

Local generation in the San Jose area currently includes the following:

Gilroy Cogeneration	130 MW
Agnews Cogeneration	26 MW
City of Santa Clara	38 MW
Gianera peaking units	50 MW
Zanker	6 MW
FMC (peaking only)	45 MW
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Total	295 MW

In addition, PG&E Co. is working on a pilot program to solicit generation solutions for small transmission problems (25 MW-50 MW). However, the process has not been developed to the degree necessary to solve the type of demand problems that PG&E Co. is facing in the greater San Jose area.

Rationale for Elimination. Distributed generation does not appear to be a viable alternative to the proposed project at this time because none of the large industrial customers that have been or plan to be connected to the PG&E Co. grid have indicated any plans to install on-site generators to provide power to their loads. The customers continue to expect PG&E Co. to deliver energy to their facilities on a firm basis.

In addition, the installation of small generation stations may not be cost-effective. In order to generate the 800 MW that would be provided by the proposed project, about 16 individual generating units of 50 MW each would be needed. Each 50 MW unit could cost as much as \$20 million to construct, so the cost of 16 units would greatly exceed the cost of the proposed project. In addition, there are significant environmental and siting concerns, such as air quality and noise, especially if all 16 units were running at the same time.

B.5.4.3.3 *Upgrading Existing 115kV Lines and Substations*

Reconductoring of PG&E Co.'s existing 115kV lines between the Newark Substation and the north San Jose area, as well as existing 115kV lines in Santa Clara and San Jose could provide sufficient power to meet most of the project objectives. This reconductoring would also require addition of new (or upgraded) transformers at the Newark and Metcalf Substations, because the existing 230kV to 115 kV transformer capacity is not adequate to serve the upgraded 115 kV Lines

Electrically, this alternative could partially meet project objectives because it could provide electric service capacity of about 640 MW (compared to the 840 MW that would be provided by the proposed project). However, implementation of this alternative would require substantial construction, both in the area of the proposed project (between the Newark Substation and SR 237) and south of SR 237. Some of this construction would occur in environmentally sensitive areas. For example, it would involve reconductoring the 115kV lines through the San Francisco Bay National Wildlife Refuge (the lines from

the Newark Substation to the Scott and Kifer Substations in Santa Clara) and several 115 kV lines leaving the Montague, Dixon Landing, Trimble, and Nortech Substations in the urban areas of northern and central San Jose. This alternative was not pursued for EIR analysis because it does not meet CEQA's requirement for elimination of significant project impacts. The following specific additional impacts could occur:

- The 115 kV reconductoring alternative would not provide the same long term capacity for the greater San Jose area as the proposed project, so additional upgrades would be required within a few years. Based on PG&E Co.'s load forecast, the provision of 230kV power to the northern San Jose area is considered to be required at some point within the next five years, even with the 115kV reconductoring.
- Most 115kV lines in the area are heavily loaded and would require construction of a temporary circuit to carry the load while the permanent circuits are being reconnected. The construction impacts of this process could be substantial. In addition some of the older tower structures may not be able to support the heavier conductors, so new tower structures might be needed.
- This alternative would require construction along many more miles of lines than the proposed project. The proposed project includes a total of 14 circuit miles (one 7-mile double circuit tower line), while the reconductoring alternative could require construction along up to 70 circuit miles.

B.6 ALTERNATIVE TRANSMISSION LINE ROUTES AND SUBSTATION SITES ANALYZED IN THE EIR

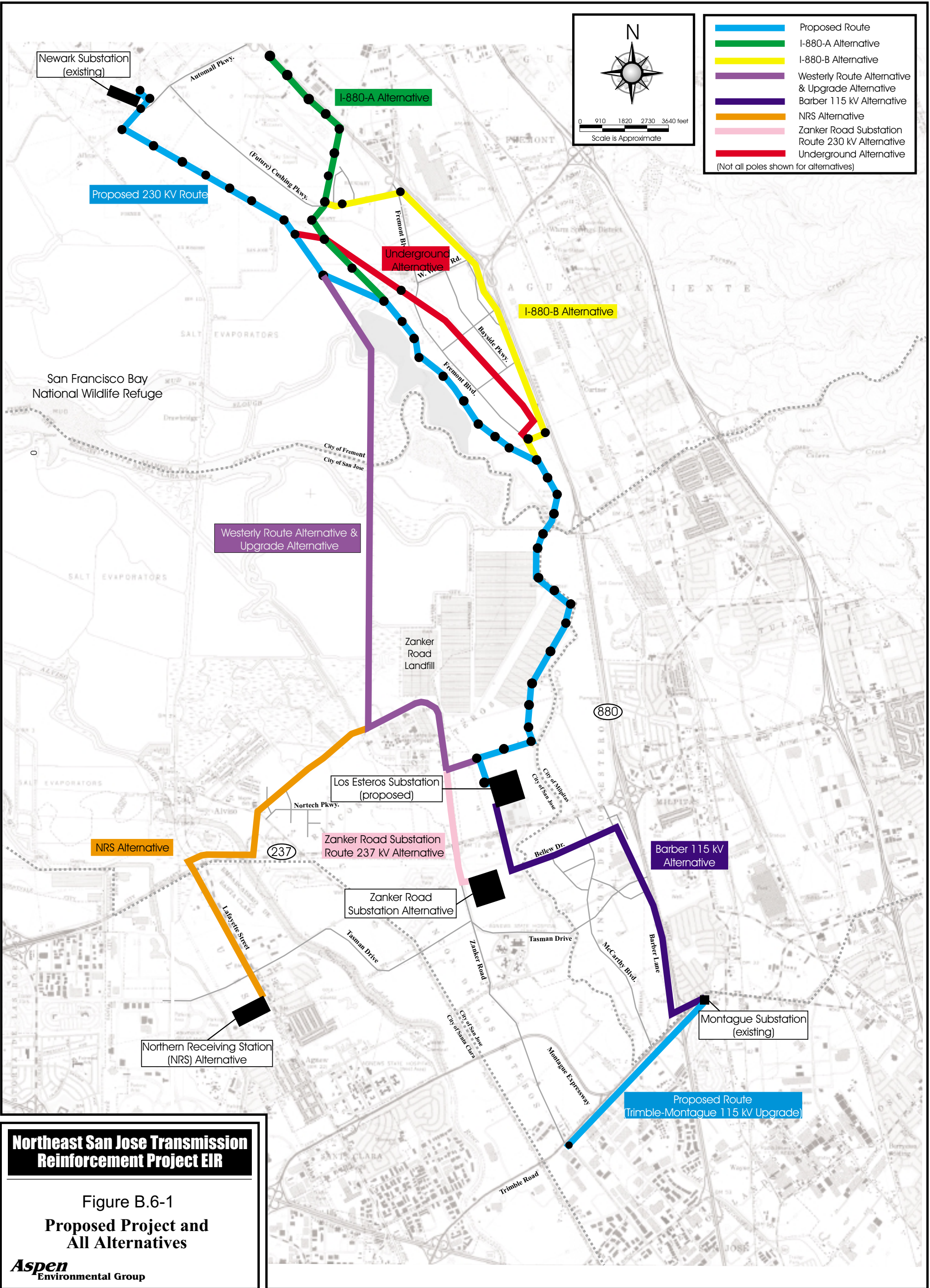
An alternative transmission line route could replace a portion of the proposed transmission line route or the entire route. Alternative routes and substation sites would not affect the ability of the proposed project to achieve the desired project objectives. Therefore, these alternatives were considered in context of their ability to reduce the significant environmental impacts of the proposed project and their technical and regulatory feasibility.

Through the alternatives screening process described in Section B.5, several alternative route alignments and substation sites have been chosen for detailed analysis in this EIR. These alternatives are illustrated in Figure B.6-1 and are described in Sections B.6.1 through B.6.3. Each alternative is evaluated within each environmental issue area of Part C of this EIR. The alternative route alignments and substation sites eliminated from further consideration are described in Section B.5.4. The proposed project is described in detail in Sections B.2, B.3, and B.4.

B.6.1 230kV Transmission Line Alternatives

The following routes for the 230kV transmission line are evaluated in this document and described in Sections B.6.1.1 through B.6.1.5 below:

- I-880-A Alternative
- I-880-B Alternative
- Underground Through Business Park Alternative
- Westerly Route Alternative
- Westerly Route Upgrade Alternative.



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Figure B.6-1
Proposed Project and All Alternatives

B.6.1.1 I-880-A Alternative

This alternative, illustrated on Figure B.6-2, would replace the first 2.7 miles of the proposed route. Rather than starting at the Newark Substation, it would start about a mile east of the substation from PG&E Co.'s existing Newark-Metcalf 230kV line, which crosses Auto Mall Parkway (in a northeasterly to southwesterly direction) at a point about 1,000 feet west of I-880. The alternative would then follow the west side of I-880 along the edge of a business park and along the eastern edge of soon-to-be-created Pacific Commons Preserve for about 0.75 mile, where a single angle structure would be located in the Preserve. The route would cross the westerly edge of an I-880 inspection and weigh station about one mile southeast of the Auto Mall Parkway interchange. From the angle point located in the Preserve, the alternative route would then turn southwest so the next pole would be located in the back (northwestern edge) of the parking lot of an industrial building on Northport Loop West. Three poles would be located in the parking lots behind Northport Loop West buildings (see the dots, which represent approximate pole locations, on Figure B.6-2). The third pole would be located in a landscaped area just north of Cushing Parkway; four transmission line poles would be located in the salt ponds to the south. At Milepost 2.7, this alternative would re-connect with the proposed route. This alternative would require removal of some trees on the west side of the parking lots behind Northport Loop West.

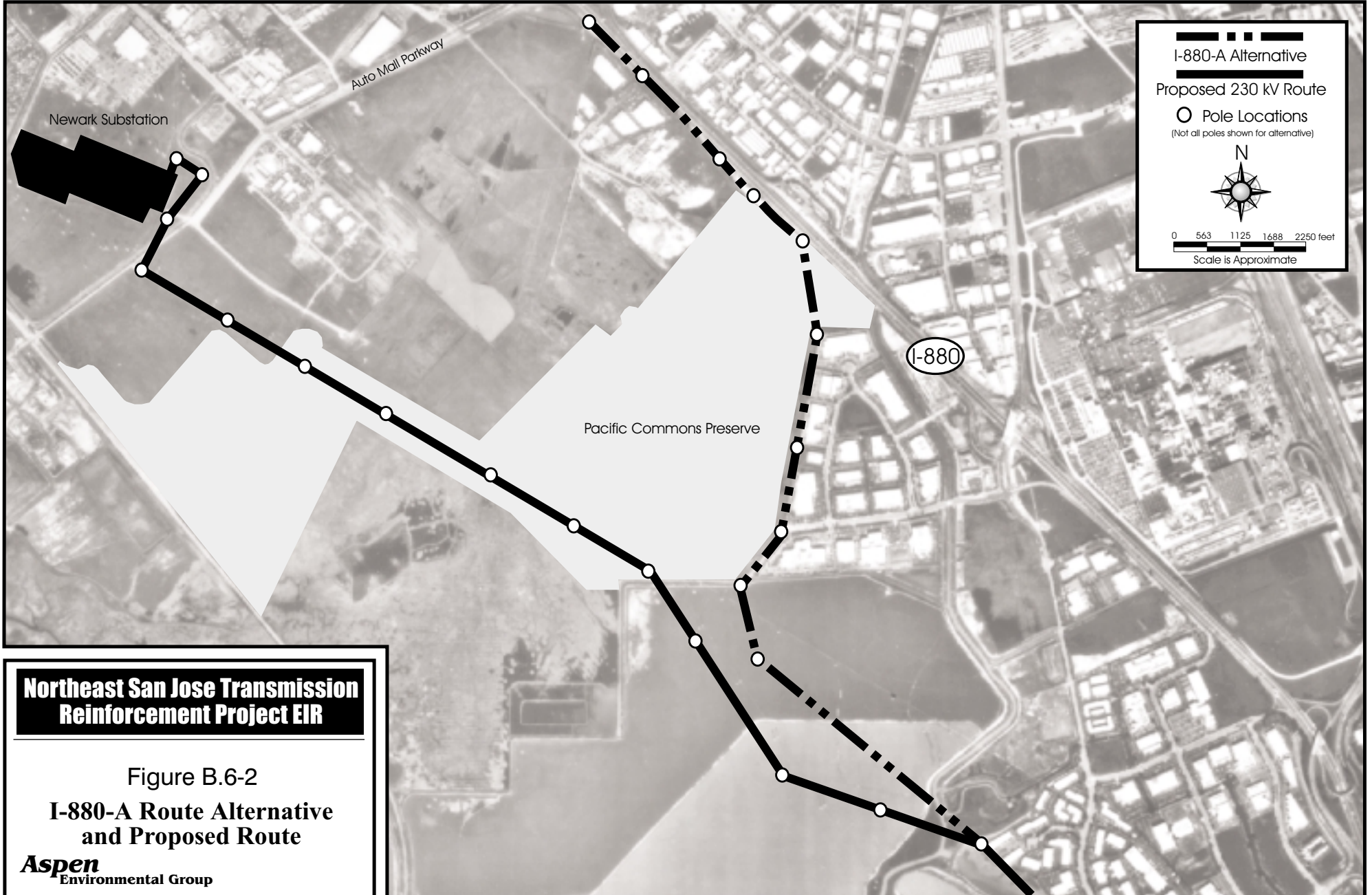
Note that if this alternative were connected with the underground alternative described in Section B.6.1.2.3, this I-880-A route would connect to that alternative in the salt ponds southwest of Cushing Parkway. If this alternative were connected with the I-880-B route, the connection would occur at the corner of Cushing Parkway and Northport Loop West, where the I-880-B alternative begins.

As described in Section B.5.4.1.1, this alternative route cannot follow the east side of I-880 between the Pacific Commons Preserve and Cushing Parkway because there are commercial buildings (a motel and office building) immediately adjacent to the elevated I-880 off-ramp at Cushing Parkway. As a result, in this area there is not adequate space for the transmission line right-of-way past that off-ramp.

According to PG&E Co., this alternative would cost about 10% more than the proposed project. The additional cost results from the need to purchase right-of-way along the I-880 frontage where there is a larger number of private parcels and land acquisition costs are higher than they would be along the northern half of the proposed route.

B.6.1.2 I-880-B Alternative

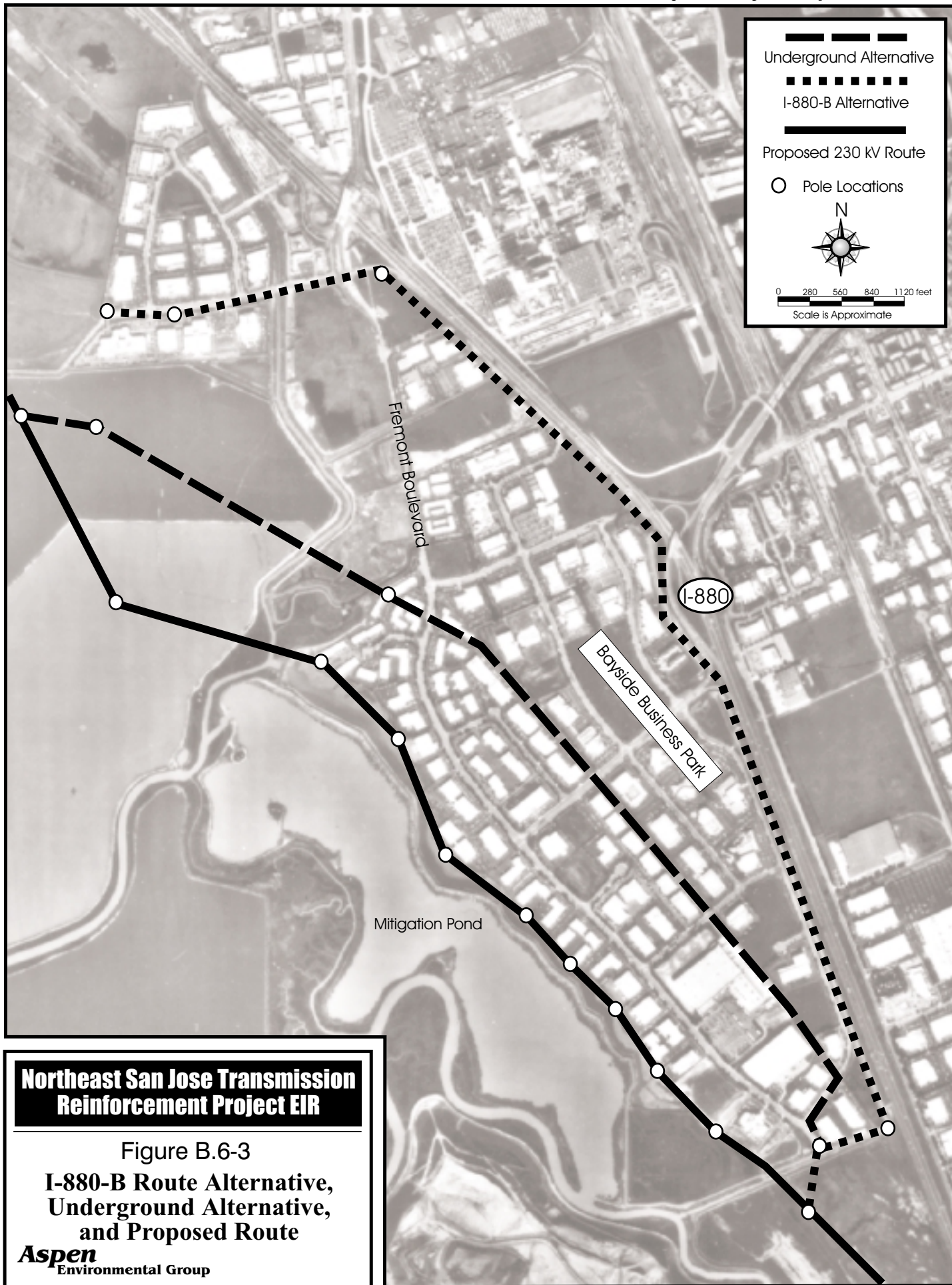
This alternative is illustrated on Figure B.6-3 and would replace the first 4.3 miles of the proposed route. Up to the crossing of Cushing Road, this alternative is the same as I-880-A (Section B.6.1.1 and Figure B.6-2). When the alignment reached Cushing Parkway, the pole position in the landscaped area on the north side of Cushing Parkway at the west edge of the business park would be an angle pole, and the line would make a sharp turn east on Cushing Parkway. The line would follow Cushing Parkway on the south



**Northeast San Jose Transmission
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Figure B.6-2
**I-880-A Route Alternative
and Proposed Route**

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Figure B.6-3
**I-880-B Route Alternative,
Underground Alternative,
and Proposed Route**

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side of the street (existing trees would need to be removed and replaced with trees that don't grow so high) to the point where the Parkway on-ramp meets the I-880 freeway. At that point, the route would turn south, immediately west of the freeway and behind the new hotels that are located south of Cushing Road, east of Fremont Boulevard, and west of the I-880. Between Cushing Parkway and West Warren Avenue, the line would be primarily in parking lots behind buildings on Landing Drive. After crossing West Warren Avenue, the line would be located in parking lots behind the buildings on Lakeview Drive, as close as possible to the freeway. South of Gateway Boulevard, Lakeview Drive runs immediately west of the freeway; in this segment, the transmission line would be located in the landscaped area just west of the street. Where Lakeview Drive turns west, the alternative route would continue south along the freeway to the end of the business park property, where it would turn west to Fremont Blvd., then it would turn south, re-connecting with the proposed route at the pole at Milepost 4.3.

This transmission line route would be located along I-880, whose off-ramps in this area are the gateway to the Cities of Milpitas and Fremont. The alternative would require removal of approximately 145 ornamental trees along Cushing Road and Interstate 880. About 210 trees would require periodic trimming for electrical clearances.

A transmission line along the freeway would be a compatible land use. However, because development in the Caltrans right-of-way is discouraged, the right-of-way would probably have to be acquired from adjoining private property owners. The line would also cross the Garden of Noah Cemetery (a small pet cemetery) south of West Warren Avenue and adjacent to the I-880. PG&E Co. has stated that construction of towers could interfere with existing land uses (unless an easement can be voluntarily acquired, land rights cannot be obtained by eminent domain).

It appears that this route could be constructed on private land easements (which are more expensive to obtain). However, depending on the exact placement of structures, implementation of this alternative may require obtaining an easement from Caltrans if encroachment onto the I-880 right-of-way is required. In addition, easement from the Alameda County Public Works Department would be required for encroachments onto existing flood control channels. Existing PG&E Co. natural gas pipelines may need to be relocated across parking lots along segments of the alignment, because they are located in areas where towers would be placed.

According to PG&E Co., this alternative (including both the I-880-A and I-880-B transmission line segments) would cost about 35 percent more than the proposed project. This alternative is slightly shorter than the proposed route (about 7.0 miles versus 7.2 miles of 230kV line), but the additional cost results from the need to purchase several miles of right-of-way along the I-880 frontage where there is a larger number of private parcels and land acquisition costs are higher than they would be along the northern half of the proposed route. This alternative may result in some degradation of reliability in comparison with the proposed route. This alternative connects directly with the Newark-Metcalf 230 kV line which is a major link between the 230 kV substations north and south of the San Jose Area.

B.6.1.3 Underground Through Business Park

This alternative would replace the portion of the proposed route between Milepost (MP) 1.8 and 4.1 (see Figure B.6-3). The route is the same as the proposed route between the Newark Substation and MP 1.8. South of that point, in this alternative, the overhead line would turn easterly and cross the westerly pair of 115kV lines (the proposed route is going nearly due south at this point). The overhead lines would then follow a straight line to the point immediately adjacent to (and west of) the location where the two easternmost existing 115kV lines (the Newark-Montague 115kV and the Newark-Milpitas/Dixon Landing 115kV) enter the business park. In the back of the parking lot at this point, there would be two transition structures (one for each circuit of the 230kV line) that would take the lines underground.

In PG&E Co.'s evaluation of this alternative, a fenced area of land approximately 100 feet by 100 feet is the minimum area required for a conventional transition station (oil filled, pipe type cable) between overhead and underground 230 kV circuits. The only location meeting this criterion along the northerly edge of the business park is in wetlands. PG&E Co., therefore, considered using a solid dielectric cable installation with overhead transition structures requiring significantly less space as an alternative to a conventional transition station. The solid dielectric cables would enter the two transition structures (where the overhead lines would end) at the north edge of the business park and traverse the Bayside Business Park using the existing overhead 115 kV corridor. The corridor would then include two 115 kV overhead lines (Newark-Milpitas and Newark-Montague; see Figure B.2-7) and one underground 230kV line. The underground route would follow streets and parking lots to a southerly transition site near Milepost 4.1 of the proposed route. The overhead/underground transition structures would be similar to those shown in Figure B.6-4, although the 230kV structures would be larger than the 115 kV transition structures pictured.

The underground route through the business park would follow the route of PG&E Co.'s existing 115kV lines. These lines pre-date the business park, so the buildings were constructed around them. The right-of-way (ROW) cuts through the middle of the business park, primarily through parking lots that are located behind industrial buildings. PG&E Co. says that each of the two circuits of the undergrounded line would be installed outside of the existing lattice steel tower line (one trench west of the line and one trench east of the line). At the south end of the business park, where the ROW meets Lakeview Boulevard, the underground line would turn southwest on Lakeview Blvd., then south on Fremont Blvd. Two transition structures would be constructed in the southwest corner of the property located on the eastern corner at the (current) end of Fremont Blvd. From the transition structures, the overhead line would then connect to the pole at MP 4.3 of the proposed route. From that point south, the route would follow the proposed route to the Los Esteros Substation.

B.6.1.4 Westerly Route Alternative

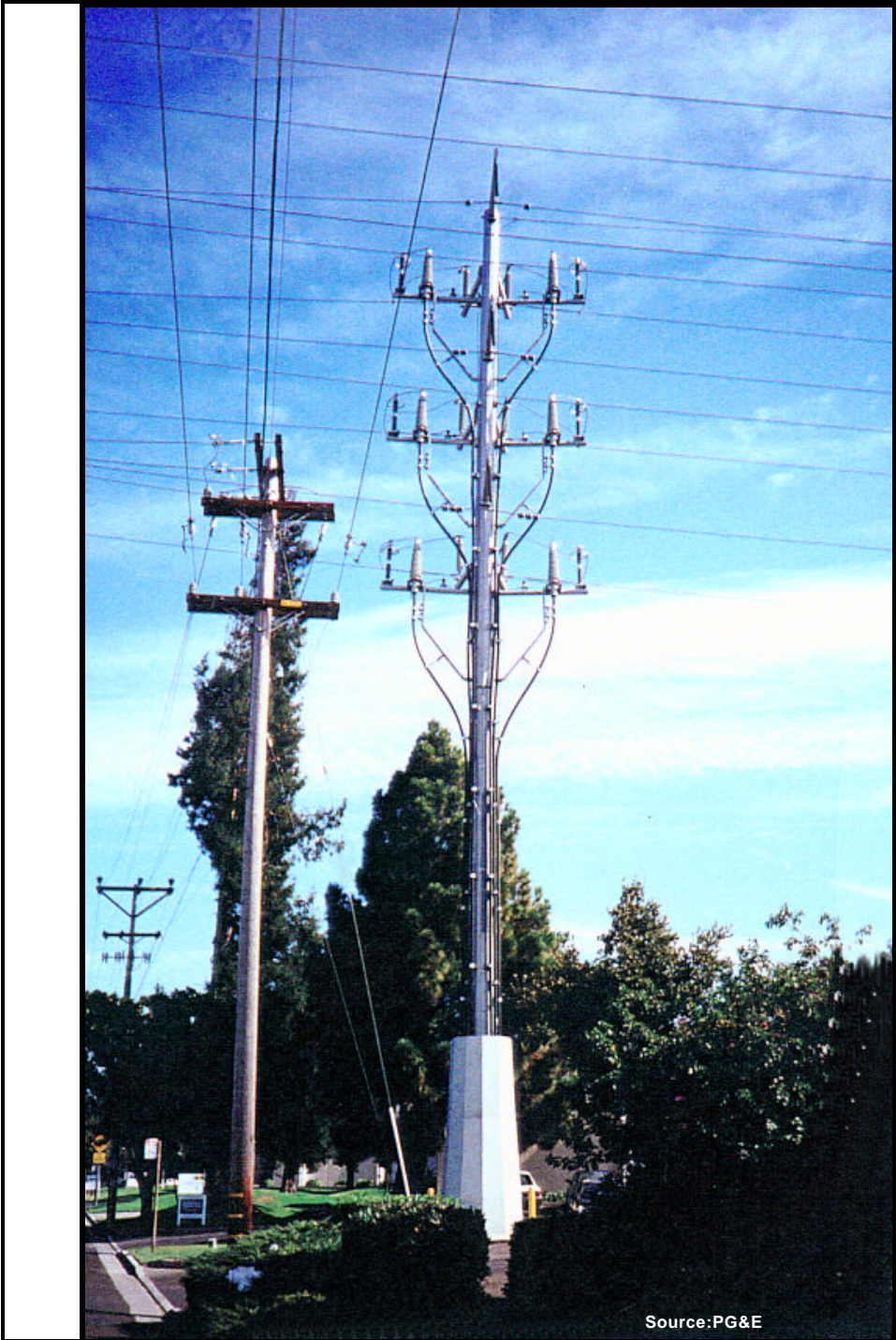
As shown on Figure B.6-1, this route (PG&E Co.'s proposed route in the original PEA) is the same as the proposed transmission line route until Milepost 2.2, where it continues parallel to two existing PG&E Co. 115 kV power lines. It parallels the power lines for approximately 5 miles of its 7-mile length and crosses water and salt ponds for about half of its length. The route crosses four Cargill Corporation (Cargill) salt ponds and the Bayside Business Park wetland mitigation pond between Cushing Road and the WPCP boundary north of Los Esteros Road.

From Newark Substation, the Westerly Route Alternative is the same as the proposed route, turning southwest and crossing the Auto Mall Parkway and PG&E Co.'s existing 115 kV power line corridor. On the south side of Auto Mall Parkway, at Milepost 0.3, the route turns southeast and parallels the existing 115 kV power line corridor on its west side, about 85 feet from the center line of the westerly power line.

Further southeast, the Westerly Route crosses Salt Ponds A22 and A23 and diverges from the proposed route at Milepost 2.2 continuing on a parallel position with the two 115 kV transmission lines and entering a corner of the wetland mitigation pond adjacent to the Bayside Business Park at Milepost 2.8. The Bayside Business Park wetland mitigation pond is located between Salt Ponds A23 and A19. Water enters the mitigation pond from Agua Caliente Creek, which is subject to tidal action at its confluence with Mud Slough. A levee road and steel bridge allow light vehicle access to supporting structures of the existing twin PG&E Co. 115 kV power lines that cross the pond.

At Milepost 2.8, the route turns south and remains parallel with and about 200 feet west of the existing westerly 115 kV power line. The route crosses Mud Slough, Salt Pond A19, Coyote Creek, the westerly end of the Newby Island Landfill (Milepost 3.8), and the Coyote Creek Flood Bypass Channel. Between Agua Caliente Creek and the Coyote Creek Flood Bypass Channel, the route crosses the Don Edwards San Francisco Bay National Wildlife Refuge, which is administered by the U.S. Fish and Wildlife Service (USFWS). South of the Coyote Creek Flood Bypass Channel, the route crosses Salt Pond A18. At the south end of the salt pond and west of the Zanker Road Landfill, the route leaves its parallel position to the existing power lines, crosses them, and enters the WPCP property. At Milepost 5.4, the alignment turns 90 degrees to the east and passes the southerly edge of the Zanker Road Landfill. At Milepost 6.1, the route turns south, parallels Zanker Road, and then turns east just south of the WPCP sludge drying beds. The alignment then turns south into the proposed Los Esteros Substation.

Line Removal as Mitigation. In PG&E Co.'s original 1998 Application in which the Westerly Route was designated as its proposed route, PG&E Co. proposed to remove 5.7 miles (subsequently increased to 6.1 miles) of an existing 115 kV power line, the Newark-Ames 3 and 4 (formerly Sierra 1 and 2) Tower Line, a portion of which crosses 2.9 miles of the Refuge between Newark Substation and the northern Mountain View area. The Newark-Ames 3 and 4 Tower Line is the middle line of three parallel power lines that cross the Cargill salt ponds, Coyote Creek, and the mouth of Guadalupe Slough. The circuits are needed



Source: PG&E



Note: These examples illustrate 115kV transition structures so 230kV structures would be larger.

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Figure B.6-4
Examples of Overhead to Underground Transition Structures

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for service to the southern San Francisco Peninsula and can only be removed after the adjacent line, the Newark-Ames 1 and 2 (formerly S.F. 1 and 2) Tower Line is reinforced by replacing the existing conductors with higher capacity conductors. As part of this alternative, PG&E Co. would remove approximately 44 lattice steel towers along this line. Additionally, PG&E Co. proposed to underground 2.4 miles of distribution line within the Refuge. The combined land acquisition and construction cost for installing a 230 kV transmission line along the Westerly Route, reconductoring the Newark-Ames 1 and 2 Tower Line, removing 6.1 miles of the Newark-Ames 3 and 4 Tower Line as well as undergrounding 2.4 miles of existing distribution line is approximately \$28,600,000.

Construction Activities Required for Line Removal. The removal of the Newark-Ames 3 and 4 line is dependent on the prior reconductoring of the adjacent Newark-Ames 1 and 2 line between Newark Substation and Ames Substation so that capacity is increased to allow the removal from service of the circuits. When existing lines are reconductored, the existing conductors can be used to pull the new conductor through the sheaves attached to the ends of the insulators at each tower. The first step in the removal process of the Newark-Ames 3 and 4 line would be to remove the existing conductors from the towers. The conductors would be detached from the insulators, put in sheaves, and pulled out using a puller. The second step would be to remove insulators and other hardware from the crossarms on the towers.

The tower removal process would depend on conditions at the time. A helicopter could be used if the adjacent circuits can be taken out of service during the removal process. Otherwise, a crane would be used to remove the towers. In either case, the towers would be placed in a laydown area and dismantled at that location.

Concrete piers supporting the towers would be removed by attaching ropes and pulleys to the tops and using a winch to break them from the pilings. If the winch process is not successful in removing the piers, they will be jack-hammered out to below the mud line. The waste material would be removed and taken to a disposal area. The piles and subsurface concrete will remain in place.

The equipment required for line removal would be: two 10-ton trucks, a 5-ton truck, five $\frac{3}{4}$ ton trucks, a conductor puller, a wire reel trailer, a semi-tractor trailer, mobile cranes, a barge, and a helicopter.

It would take four to six months to complete the removal of 5.7 miles of tower line. Most of the work would take place during the months of September, October and November because of endangered species' nesting periods and low loading on the electric system.

B.6.1.5 Westerly Upgrade Alternative

In this alternative, PG&E Co. would replace the two westernmost existing double circuit 115kV lines that leave the Newark Substation in the existing corridor (the Newark-Scott and Newark-Trimble/Kifer lines

as shown in Figure A.2-1) with two new double circuit 230kV lines. One line would go from Newark Substation to the proposed Los Esteros Substation, and the other line would go from Newark Substation to the Northern Receiving Station (NRS) Substation in Santa Clara.

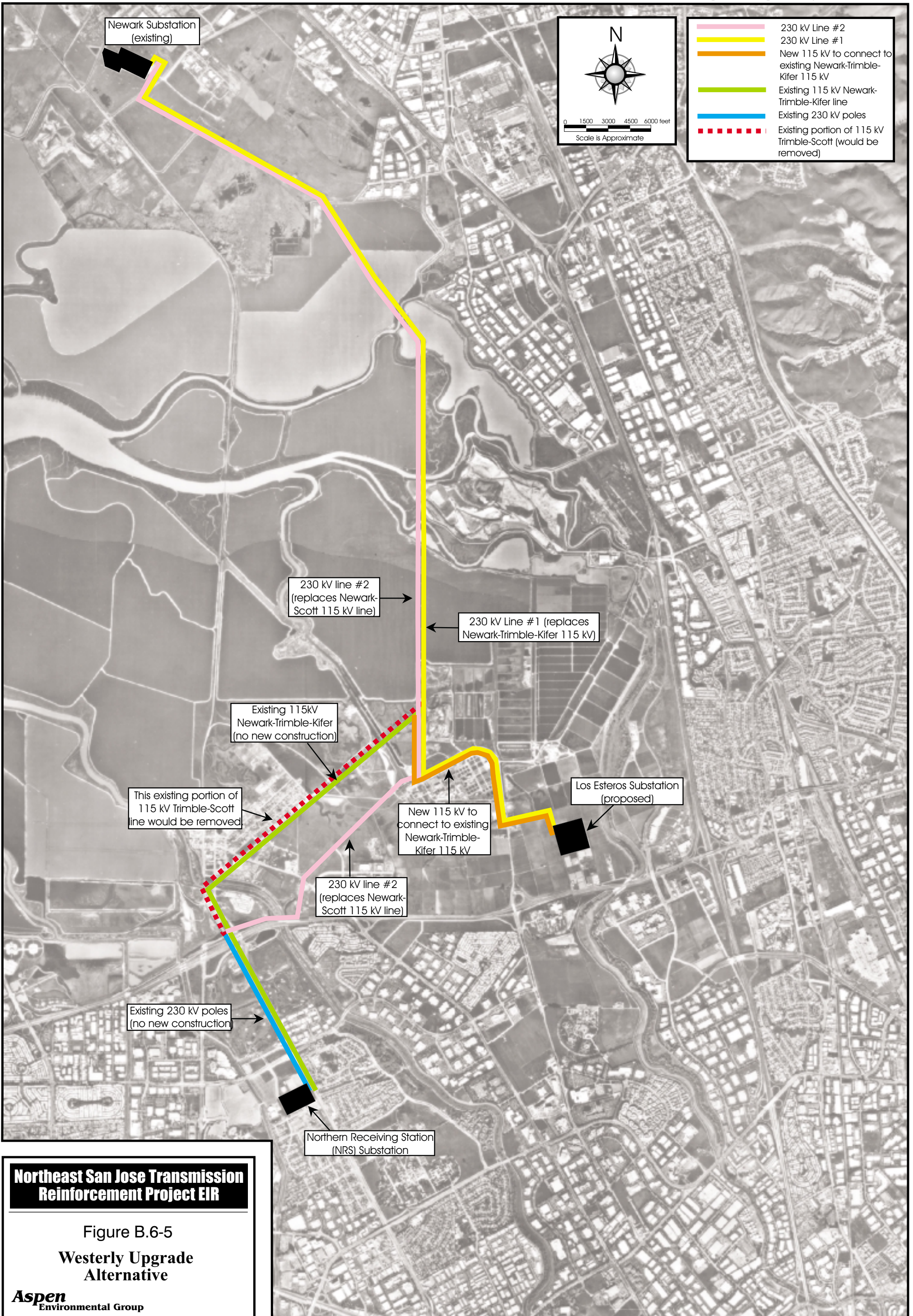
Between the Newark Substation and approximately Milepost 5.3 of the Westerly Route, this alternative would result in two new sets of structures would be installed west of the existing lines. After construction is finished, the old 115kV towers would be removed. The advantage of this alternative is that, south of MP 1.7, the new transmission lines (through the Refuge and salt ponds) would be the same height and construction type, so the potential impacts to birds would be minimized – birds can be killed or injured by collision with transmission lines and a variety of line heights (as would occur with the Westerly Route Alternative) would be more difficult for birds to avoid. Also, construction of two new double circuit pole lines (each capable of carrying two 230kV circuits) would minimize future construction required within the Refuge and provide for additional electric service to this rapidly growing region.

It has been forecasted by Silicon Valley Power, the City of Santa Clara's municipal utility, that subsequent to the completion of the proposed project, additional 115 kV and/or 230 kV line capacity would be required. This alternative would serve that need.

Figure B.6-5 illustrates the components of this alternative, which are described below:

- 230kV Line 1 (the easterly of the two lines) would follow the same route shown for the Westerly Route Alternative (see Figure B.6-1), which diverges from the existing Newark-Scott line southwest of the Zanker Road Landfill, turning east along Los Esteros and turning south on Zanker Road, into the Los Esteros Substation.
- 230kV Line 2 (the westerly of the two) would follow the current route of the Newark-Scott 115kV line (also shown on Figure A.2-1) to the NRS substation site in Santa Clara. This route follows the Westerly Route for over five miles, but turns southwest where the western edge of the Zanker Road Landfill meets Los Esteros Road, passing south of Alviso, and turning south, crossing SR 237, and following Lafayette Road to the City of Santa Clara's Northern Receiving Station substation site (this is the same route that would be used to reach the NRS Substation under the NRS Alternative, described below). South of SR 237, the poles are already built to support a double circuit 230kV line, so no new poles would be needed from that point into NRS.
- A new double circuit 115kV line, about 1.5 miles long, would be needed from the Los Esteros Substation back to the point west of the Zanker Road Landfill, where the remainder of the Newark-Trimble-Kifer 115kV line would be located (where the transmission line corridor turns to the southwest). This line would also follow a segment of the same route used by the easterly 230kV line to the Los Esteros Substation, which also follows the southernmost segment of the Westerly Route Alternative.

Once the project using this alternative was built and energized, PG&E Co. could remove the two old 115kV lines through the Refuge and one of the 115kV double circuit lines passing Alviso.



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Figure B.6-5
 Westerly Upgrade
 Alternative

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This alternative would be constructed in two phases. Only Phase I would be included as an alternative to the proposed project; the second phase would be constructed when growth in demand justified its addition, and CEQA compliance would be completed at that time.

- **Phase 1:** Construct two 230kV transmission line structures (poles, wires, and insulators) and remove existing 115kV lines. Energize one double circuit line at 230kV and construct only one 230kV substation (Los Esteros). Construct a new double circuit 115kV line to connect the Los Esteros Substation with the existing (partially rebuilt at 230kV) Trimble-Kifer 115kV line west of Los Esteros Road (these lines would no longer be connected to Newark Substation). (Note: PG&E Co. may want to construct this at 230kV for future use as well, and initially energize only at 115kV.)
- **Phase 2:** This phase would not be evaluated as part of this project and it would not be installed for several years, when system load requires it. Energize the conductors on the Newark-Scott 115kV line at 230kV, and construct the NRS 230kV substation adjacent to Santa Clara's NRS 115kV substation. Allocation of cost for this phase would be subject to negotiation between PG&E Co. and Silicon Valley Power.

PG&E Co. is concerned that this alternative, because it would result in fewer overall circuits between Newark Substation and San Jose/Santa Clara, would result in less reliability than PG&E Co.'s proposed project. In order to enhance reliability, some 115kV upgrades may be required in central San Jose/Santa Clara.

B.6.2 Alternative Substation Sites

As alternatives to the Los Esteros Substation that is part of the Proposed project, two other substation sites are being considered: the Northern Receiving Station (City of Santa Clara) and the Zanker Road Site (due south of the Los Esteros Substation). The locations of both substations are illustrated on Figure B.6-1.

B.6.2.1 Northern Receiving Station Alternative (City of Santa Clara)

This alternative would use either the proposed (Easterly) or the Westerly Route Alternative (or the Westerly Upgrade Alternative) as described above. The 230kV route to the Northern Receiving Station (NRS), as shown on Figure B.6-1, would follow Los Esteros Road to the southwest, continuing in the same direction (southwest) where the road turns due west, to the point where that line would intersect SR 237. Because the City of Santa Clara (Silicon Valley Power) and PG&E Co., have over-built the two existing 115kV circuits of the Newark to Scott tower line between SR 237 and the substation location in the 1980s, the 230kV line south of SR 237 could be placed on the existing taller poles. Therefore, the only 230kV transmission line construction south of SR 237 would be conductor on existing poles and connection to the substation. A double circuit 115kV transmission line would need to be constructed between the north side of SR 237 and the NRS site prior to conversion of the Newark to Scott circuits to a 230kV line, to allow for continuous electric service to the City of Santa Clara and to replace the Newark to Scott 115kV circuits. This alternative would require a nearly 50 percent longer 230kV transmission line (about 11 miles, whereas the proposed project would require 7.0 miles).

The construction of a 115kV distribution substation by the City of Santa Clara at the NRS site has been previously evaluated in an EIR addressing a variety of development proposals for the northern part of the City of Santa Clara. This proposal has been approved by the City Council; however construction of the 115kV substation has not started because the City's municipal power agency, Silicon Valley Power, is studying the City's growing power needs to determine the appropriate approach to serving the City's needs.

B.6.2.2 Zanker Road Substation Alternative

This alternative substation is located on Zanker Road (between the road and Coyote Creek to the east), just south of the Santa Clara Valley Transportation Authority's maintenance facility (which is on the southeast corner of Zanker Road and SR 237) and immediately north of the Cisco Systems campus. This alternative site is described in PG&E Co.'s Supplemental PEA as "Site B". Along with this substation site, the analysis must include the approximately 1-mile extension of the transmission line route down the east side of Zanker Road (from either the proposed Easterly or the Westerly corridor), as shown on Figure B.6-1.

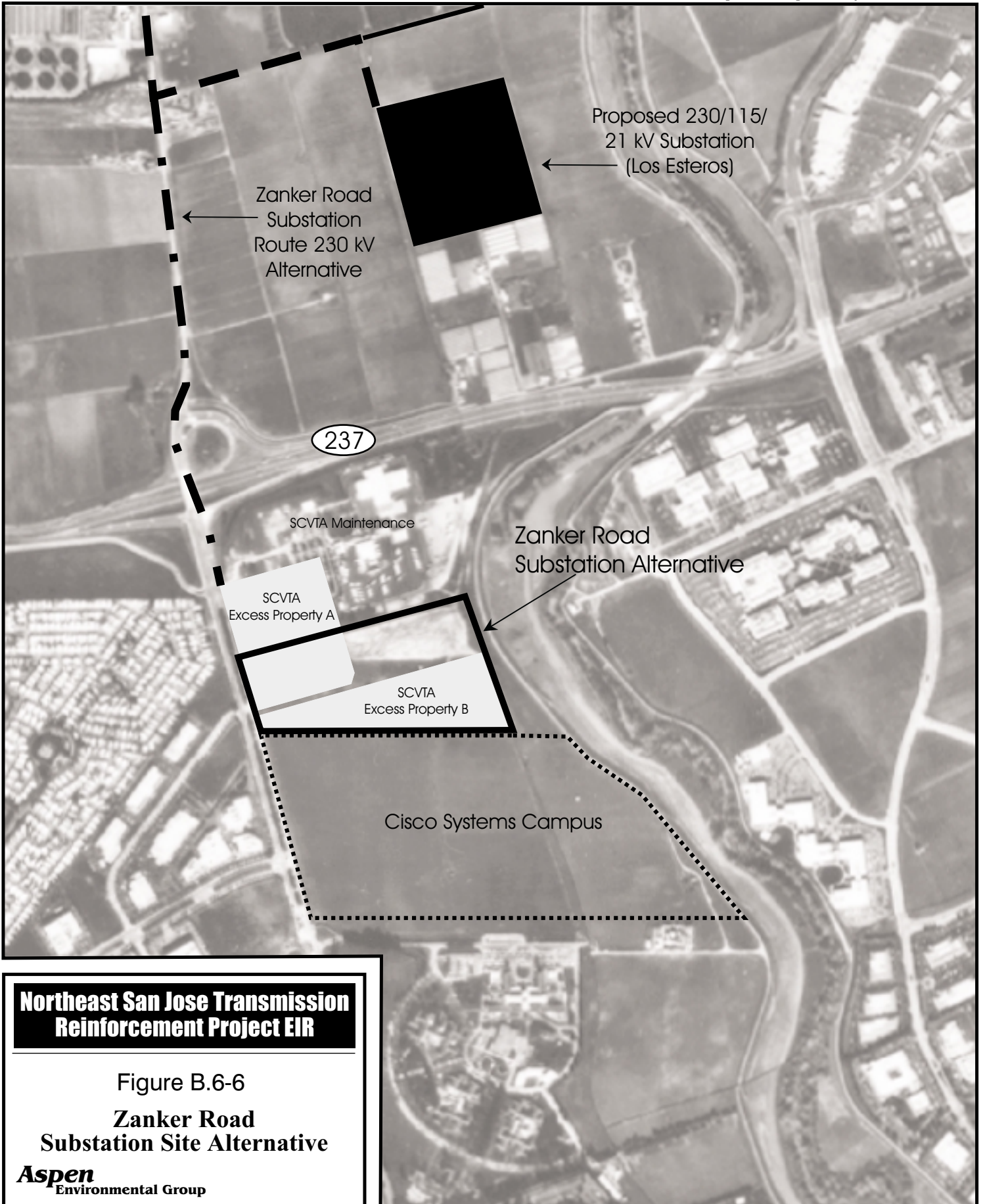
The property is owned by Santa Clara Valley Transportation Authority (VTA), which has prepared plans to expand its adjacent Cerone Complex bus maintenance facility into this same site. In the "Final Design Criteria Cerone Complex Master Plan Study" released in July 1999, the VTA defines its plans for expansion, shown on Figure B.6-6. The parcels identified as "excess property" are those that the VTA would not use in its expansion, so those parcels would be available to PG&E Co. for a substation site.

PG&E Co. has stated that Excess Parcel A (12.69 acres) could be used as a substation site for this project, but it would not offer the same capabilities as the proposed site because the distribution facilities (21kV) could not be collocated with the 230 and 115kV facilities. The other parcel, Excess Parcel B, would not be usable for a substation due to its shape and narrow width.

The configuration of the A parcel would require that the 230kV line from the Newark Substation enter the site near the mid-point of the 620-foot width, requiring at least one structure in the parking area of the existing VTA Cerone Complex. The 230kV line would also cross the Trimble to Nortech 115kV line (approved and to be constructed during 2000; see Figure A.2-1), requiring that the adjacent structures be taller than otherwise would be required to allow for the crossing. The small size of the 12.69 acre site would have very little space for landscaping opportunities due to its proximity to Zanker Road and the Cerone development.

B.6.3 Trimble-Montague 115kv Upgrade Alternatives

Two alternatives to the Trimble-Montague 115kV Upgrade, which is part of the proposed project, are evaluated: a 115kV route that directly connects the new Los Esteros Substation with the Montague



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Figure B.6-6

**Zanker Road
Substation Site Alternative**

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Substation (Barber Lane 115kV Alternative), and an underground alternative that follows the 115kV upgrade route proposed by PG&E Co. Each is described below.

B.6.3.1 *Barber Lane 115kV Alternative*

This alternative route is shown in magenta and labeled as “115kV Circuit Alternative” on Figure B.2-7. It would start directly south from the substation, following the route of the existing Agnews 115kV Tap Line (shown on Figure B.2-2 and on Figure B.6-1), but it would turn east about 1,500 feet south of SR 237, crossing Coyote Creek at a point due west of the end of Technology Drive (which becomes Bellew Drive). The route would continue east to Technology Drive/Bellew Drive, then turn south on Barber Lane, past the Tasman overcrossing, to the Montague Expressway/I-880 interchange. The line would cross the interchange from northwest to southeast, and into the substation, which is immediately southeast of the interchange. Note that this alternative is almost entirely within the City of Milpitas (no other parts of the proposed project or alternatives were previously in Milpitas).

B.6.3.2 *Underground Trimble-Montague 115kV Alternative*

In this alternative, the Trimble-Montague single-circuit 115kV line from Los Esteros Substation to Montague Substation would be installed underground in the streets, along the same route as currently proposed (see Section C.1). Solid dielectric cable would be used; six cables would be installed in a 9-conduit box. A single transition structure (as described in Section B.6.1.3 previously) would be required at the corner of Zanker Road and Trimble Road, then a trench would be dug in the roadways on Trimble Road and Montague Expressway. Another transition structure would be required west of the I-880 where the lines would be brought back aboveground, and the lines would cross I-880 overhead, as in the proposed project. Due to heavy traffic on these streets, construction in the roadway would likely occur at night.

If a new aboveground steel pole structure were constructed for this portion of the proposed project, as in the proposed Trimble-Montague 115 kV (aboveground) upgrade, the existing Trimble-Montague 115kV single-circuit line would also be installed on the steel poles and the existing wood poles would be removed. However, if the Trimble-Montague line were installed underground, the wood pole line would remain aboveground where it is, since that line is not part of the proposed project. This alternative assumes that the existing single-circuit 115kV line (connecting the Montague Substation with the Trimble Substation) along Trimble Road and Montague Expressway would remain.

B.7 NO PROJECT ALTERNATIVE

CEQA requires evaluation of the No Project Alternative to include (a) the conditions at the time of the Notice of Preparation (i.e., baseline environmental conditions) would not be changed, and (b) the events or actions that would be reasonably expected to occur in the foreseeable future if the project were not approved. These two scenarios are addressed below.

No Action Taken by PG&E Co. In this scenario, PG&E Co. would not implement any of the proposed facility upgrades to the electric transmission system, and no alternatives are assumed to be implemented. If no new facilities are in place by the year 2002, based on PG&E Co.'s transmission planning criteria, the electric transmission system will not be able to reliably serve customers in the northeast San Jose area. Interruption of electric service to customers would be necessary to relieve equipment overload in peak demand periods. The system will not be able to serve any new electric customers or the additional electric demands of existing customers in the area, even with all power system facilities in service.

According to PG&E Co., under the No Project Alternative, overloads of the existing electric transmission system could occur starting in 2001². These overloads would lead initially to equipment overheating, and eventually to electrical and/or mechanical failures. To prevent this from happening, it would be necessary to institute a program of controlled load shedding, which means that a portion of the system load would be disconnected to avoid equipment overload or failures. This would result in interruption of electric service to customers. As customer demand continues to grow in the greater San Jose area, electric service interruption could become more frequent and widespread due to worsening electric transmission system overloads.

Reasonably Foreseeable Actions by PG&E Co. If neither the proposed project nor any alternative is approved by the CPUC, PG&E Co. would be forced to evaluate alternative courses of action that could be implemented to solve the near-term electricity shortages in the Cities of Fremont, Milpitas, San Jose, and Santa Clara. The most likely scenario in this case would be upgrading of existing 115kV lines, since most re-conductoring can be completed without CPUC permits or CEQA compliance. Reconductoring may also require installation of some new structures, since the older structures may not be able to support the heavier conductors; this issue would require evaluation by PG&E Co.

This scenario would be similar to the "Upgrading Existing 115kV Lines and Substations" alternative discussed (and eliminated from EIR analysis) in Section B.4.3.3. As discussed in that section, this alternative could provide sufficient additional power to serve several years of growth. However, this reconductoring would be relatively expensive, could affect sensitive habitats in and around the San

² This situation may occur even in the absence of the proposed project because the project would not be operational until 2002.

Francisco Bay National Wildlife Refuge, and ultimately (in approximately five years), 230kV lines would still be required to serve the area's demand.

B.8 CUMULATIVE DEVELOPMENT 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 December, 1999 and updated in May 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 inquiring 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. Table B.8-1 lists the various projects comprising the cumulative scenario. Existing projects are included as part of the environmental setting for individual issue areas and analyzed in Part C. The cumulative projects considered for this study are presented by jurisdiction, with their approximate geographic locations. Figure B.8-1 is a map showing the location of each of the projects listed in this section.

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 and 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.

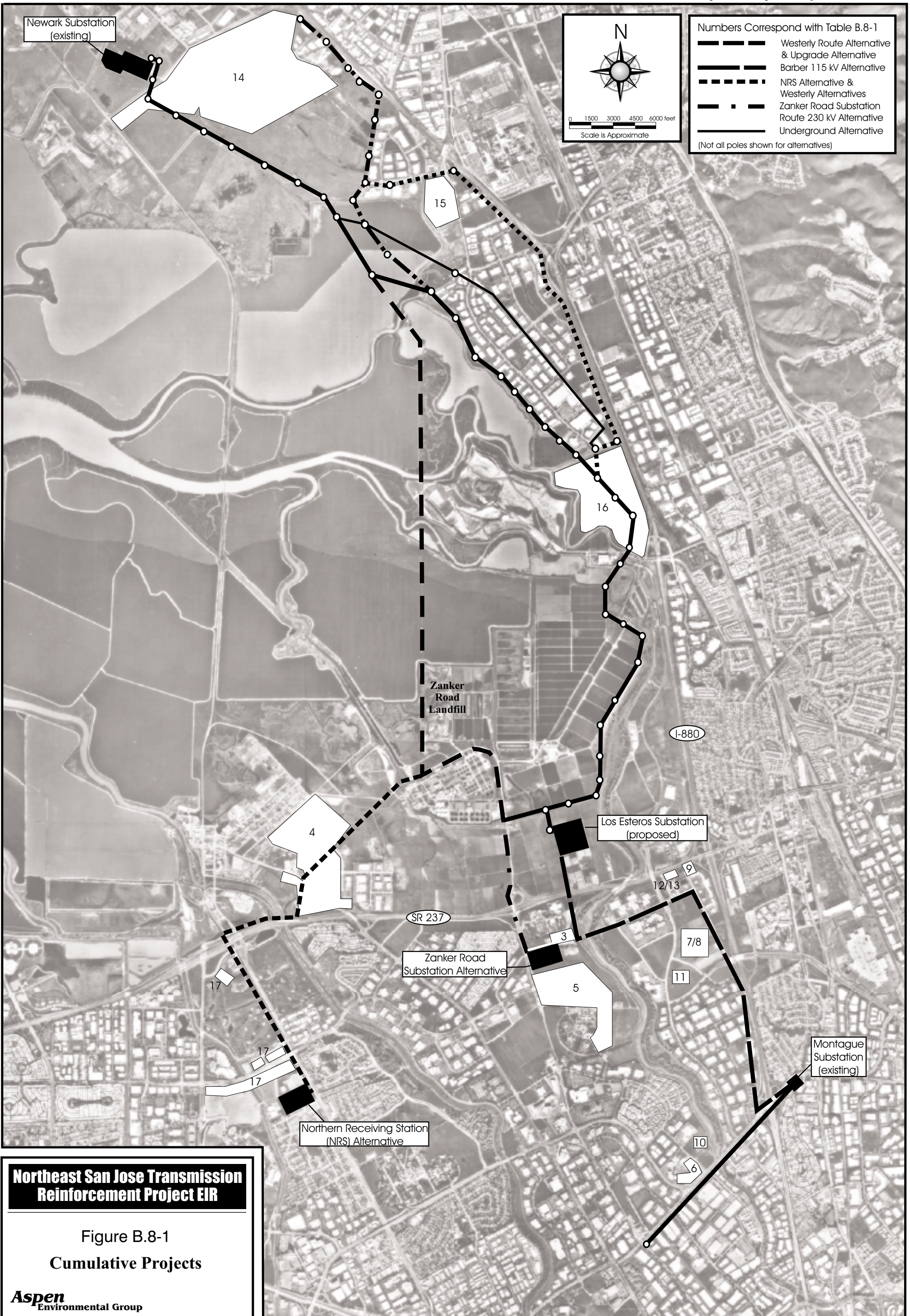
**Table B.8-1 Cumulative Scenario - Approved and Pending Projects
for the Proposed Route and Alternatives**

Site No.	Project	Project Type	Project Location	Project Size	Proximity to Project or Alts.	Permitting Status/Schedule
REGIONAL PROJECTS						
1*	Bay Trail	Recreational Trail	Adjacent to Bayside Business Park (Fremont) and Water Pollution Control Plant (San Jose); see Figure C.7-3	see Figure C.7-3	see Figure C.7-3	Undergoing interagency review (City of San Jose, Santa Clara County, BCDC, Alameda County)
2*	Juan Bautista de Anza National Historic Trail	Historical and Recreational Trail		see Figure C.7-3	see Figure C.7-3	FEIS completed by National Park Service; to be constructed concurrent with Bay Trail
REGIONAL TRANSPORTATION AUTHORITY						
3	Santa Clara Valley Transportation Authority (VTA) Cerone Complex	Industrial	South of Highway 237 and east of Zanker Road adjacent to Coyote Creek	Approximately 8 acres	Approximately 4500 feet from proposed Los Esteros Substation; same location as the Zanker Road Substation Alternative	Final Design Criteria Cerone Complex Master Plan Study released July 1999
CITY OF SAN JOSE						
4	Cisco Systems, Inc. Site 6	Industrial	North of Highway 237/ South of Grand Boulevard and Los Esteros Road	2,350,000 s.f.	NRS Alternative Route would pass through the site	Environmental Review: Draft EIR issued late 1999; not yet certified
5	Cisco Systems	Industrial	East of Zanker Road on both sides of Tasman	3,300,000 s.f.	Approximately 3,000 feet south of proposed Los Esteros Substation	Under Construction
6	Cadence Design (bldgs 9 and 10)	Industrial	North of Montague Expressway opposite of Trimble Road	250,000 s.f.	Adjacent to the north of Proposed Route (Trimble-Montague 115 kV segment)	Building 9 is under construction and Building 10 is approved
CITY OF MILPITAS						
7	Cisco	R&D campus	South of Bellew Drive between Barber Lane and Alder Drive	1+ million s.f. on 75 acres	Approximately 500 feet from Barber 115 kV Alternative route	Under construction
8	Cisco Daycare	450 child daycare facility	South of Bellew Drive between Barber Lane and Alder Drive	55,000 s.f.	Approximately 500 feet from Barber 115 kV Alternative route	Under construction
9	Hampton Inn	Hotel	Barber Court, south of Highway 237	.5 acres	Approximately 300 feet from Barber 115 kV Alternative route	Under construction
10	Fleming Business Park	R&D and warehousing	Montague Expressway	79,000 s.f.	Just north of Proposed Route (Trimble-Montague 115 kV segment) and just east of the Barber 115 kV Alternative	Partially constructed

NESJ TRANSMISSION REINFORCEMENT EIR
B. Description of Proposed Project and Alternatives

Site No.	Project	Project Type	Project Location	Project Size	Proximity to Project or Alts.	Permitting Status/Schedule
11	Peery	R&D office complex	McCarthy/Tasman/Alder	397,000 s.f.	Approximately 1100 feet from Barber 115 kV Alternative route	Approved
12	Hawthorne Suites	Hotel	Cypress Drive, south of Highway 237	1.4 acres	Adjacent to Barber 115 kV Alternative route	Approved, soon to start construction
13	Homestead Village expansion	Hotel expansion	Cypress Drive	1 acre	Adjacent to Barber 115 kV Alternative route	Approved, soon to start construction
CITY OF FREMONT						
14	Catellus Pacific Commons	Business Park	east of I-880 and south of Automall Parkway on both sides of Automall Circle/Cushing Parkway (planned construction will connect the two roads)	840 acres total; 370 acres to be developed	Adjacent to Proposed Route (segment near the existing Newark Substation)	Supplemental Draft EIR review period ends March 1, 2000; Planning Commission March 23, 2000; City Council April 11, 2000
15	Baccarrat Fremont Developers	Industrial and Retail	south of Cushing Parkway and west of Fremont Boulevard	31 acres (340,000 s.f. of industrial and 10,000 s.f. of retail)	Approximately 3,500 feet east of Proposed Route; Adjacent to the south of Alternative I-880-B Alternative Route	Application for Grading Plan and Environmental Assessment submitted but not approved, applicant is required to revise grading plan and wetland mitigation in addition to adding a drainage plan before it can be reviewed for approval
16	Bayside Business Park Grading Plan Project (King & Lyons Project)	Industrial	East of I-880 and just south of the Bayside Business Park and north of the San Jose/Santa Clara Water Pollution Control Plant	159 acres	Proposed Route passes through site	EIR completed, expected to write an addendum with changes for less development and more wetland mitigation
CITY OF SANTA CLARA						
17	Bayshore North Redevelopment Program	office space, hotel, multi-level and surface parking facilities, soccer complex, relocation of two golf course holes, electrical station	The project area boundary is Route 237 to the north, Lafayette Street and Aquino Creek to the east, Highway 101 to the south, and Calabazas Creek to the west	1,045,000 s.f. of office space, 300 room and 150 room hotel, soccer complex with 3 soccer fields and 100 parking spaces, 10 acres of parking facilities, electrical station	Adjacent to the north of Northern Receiving Station (NRS) Alternative Substation	Final EIR completed August 1999; approved by City Council
COUNTY OF ALAMEDA						
	No relevant projects					
COUNTY OF SANTA CLARA						
	No relevant projects					

* See Figure C.7-3 for locations of both proposed trails. Trails would be in the same location.



Northeast San Jose Transmission Reinforcement Project EIR

Figure B.8-1
 Cumulative Projects

Aspen
 Environmental Group