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CHAPTER 4 – ENVIRONMENTAL IMPACT ASSESSMENT

4.1 AESTHETICS

Would the project:	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	❒	❒	☑	❒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	❒	❒	☑	❒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	❒	❒	☑	❒
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	❒	❒	☑	❒

4.1.0 Introduction

Visual or aesthetic resources are generally defined as both the natural and built features of the landscape that can be seen and that contribute to the public's experience and appreciation of the environment. Visual resource or aesthetic impacts are generally defined in terms of a project's physical characteristics, potential visibility, and the extent to which its presence will alter the perceived visual character and quality of the environment. In general, the Sierra Pacific Power Company (SPPCo) 625 and 650 Line Upgrade Project (project) will involve incremental and minor changes to a predominantly sparsely settled landscape. With the implementation of the applicant-proposed measures (APMs), it is anticipated that visual impacts will be less than significant**.**

4.1.1 Methodology

The analysis of potential visual effects associated with the project is based on a review of technical data, including maps and drawings provided by SPPCo, aerial and ground-level photographs of the project area, local planning documents, and computer-generated visual simulations. Specific project data includes pole design configurations, pole heights and pole locations as presented in Attachment 3-B: Transmission Pole Summary, Attachment 3-C: Transmission Pole Typical Drawings, and Attachment 3-D: Substation Plot Plans and Elevation Drawings in Chapter 3 – Project Description. In addition, Attachment 3-A: Detailed Route Maps presents the project layout on scaled aerial photographs.

During field observations conducted in August and November 2007, November 2008, and September and October 2009, existing visual conditions in the project area were documented and potentially affected sensitive viewing locations were identified. A set of photographs documenting existing conditions is included as Photographs 1 through 48. These photographs portray summer and fall visual conditions. Attachment 4.1-A: Photographs of the Project Area in Winter Conditions presents several additional photographs that show the existing winter landscape conditions with snow cover.

This visual study employs assessment methods based, in part, on the United States (U.S.) Department of Transportation (DOT) Federal Highway Administration (FHWA), U.S. Department of Agriculture Forest Service, and other accepted visual analysis techniques, as summarized by Smardon et al. (1986). This study also addresses the California Environmental Quality Act (CEQA) Guidelines for visual impact analysis.

A large portion of the project is located on lands managed by the U.S. Forest Service (USFS). Scenic resource management on National Forests is guided by the USFS's Scenery Management System (SMS), which provides an overall framework for the inventory, analysis, and management of the visual environment (U.S. Department of Agriculture [USDA] 1995). For the Tahoe National Forest (TNF) and in the Lake Tahoe Basin Management Unit (LTBMU), lands have been evaluated using available data based on the USFS's older Visual Management System (VMS) (USDA 1988). This analysis takes into account approximate equivalencies between management classifications in the two systems. Portions of the project are on lands within the jurisdictional boundaries of the Tahoe Regional Planning Agency (TRPA), which oversees land development in the Lake Tahoe Basin. This area of the project was evaluated using USFS and TRPA visual resources management criteria and guidelines. Included are systematic documentation of the visual setting and an evaluation of visual changes associated with the project.

The impact analysis describes change to existing visual resources and assesses viewer response to that change. Central to this analysis is an evaluation of representative views from which the project will be visible to the public. In order to document the visual change that will occur, visual simulations show the project from a subset of the existing conditions photographs, representing key viewpoints. The visual simulation views, presented as before and after images, were selected in consultation with the TRPA and USFS. A memo employed in the viewpoint consultation process with the TRPA and USFS is included as Attachment 4.1-B: Briefing Memo – Visual Simulation Viewpoints.

Visual Simulation Methods

As part of the project visual resources analysis, Environmental Vision produced a set of 14 visual simulations to illustrate before and after visual conditions in the project area. The simulations illustrate the location, scale, and appearance of the project as seen from representative public viewpoints. With the exception of Figure 4.1-11 and Figure 4.1-12, the visual simulation photographs were taken using a digital single lens reflex camera with a 50 millimeter equivalent lens which represents a horizontal view angle of 40 degrees. A 28 millimeter equivalent lens representing a 65-degree horizontal view angle was employed to shoot the Figure 4.1-11 and

Figure 4.1-12 simulation photographs in order to portray a wider angle view of the project that includes elements in the surrounding landscape context.

Selection of the simulation viewpoints was determined in consultation with representatives of SPPCo, the California Public Utilities Commission (CPUC), USFS, and TRPA. This consultation process included the preparation of a Briefing Memo, included as Attachment 4.1-B: Briefing Memo – Visual Simulation Viewpoints, which was submitted to TRPA and USFS staff. In addition, simulation viewpoints were discussed with USFS and CPUC representatives in the field.

The computer-generated visual simulations are the result of an objective analytical and computer modeling process described briefly as follows. Geographic information system (GIS) data of existing conditions and digital aerial photographs supplied by SPPCo engineers provided the basis for developing an initial digital model. A three–dimensional model of the proposed transmission poles and substation structures and equipment was also developed using engineering design data and GIS project data supplied by SPPCo. The three-dimensional computer model of the proposed project components was combined with the digital site model to produce a complete computer model of the project. A set of computer-generated perspective plots were then produced to represent the selected viewpoints.

For each of the simulation viewpoints, 5 feet above grade was used as the assumed eye level. Computer wireframe perspective plots were overlaid on photographs to verify scale and viewpoint location. Digital visual simulation images were then produced, based on computer renderings of the three–dimensional model combined with digital versions of the selected site photographs.

Existing views and computer-generated visual simulations that portray the location, scale, and appearance of the project were produced in color on 11- by 17-inch sheets, and are presented as Figures 4.1-5 through 4.1-17. Table 4.1-1: Summary of Simulation Views summarizes the location of simulation views; the vantage point locations are delineated on Figure 4.1-1: Photograph Viewpoints – Overview and Figure 4.1-2: Photograph Viewpoints – Details.

4.1.2 Existing Conditions

Regulatory Background

The following section describes public plans and policies related to visual quality in the project area. As outlined in Section 4.9 Land Use and Planning, the project is not subject to local discretionary land use and zoning regulations. However, as part of the environmental review process, SPPCo has considered relevant county land use plans and policies, including those pertaining to visual quality.

The project is located within and near overlapping jurisdictions that have policies regarding scenic resources. More than half of the project components are located on USFS lands—in the TNF and the LTBMU—and much of the project area is within the TRPA Plan Area.

Table 4.1-1: Summary of Simulation Views

Viewpoint (VP) Number (See Figures 4.1-1 and 4.1-2)	Viewpoint Description	Project Component	Figure Number
VP 2	State Route (SR) 89 at William B. Layton Park entrance	Tahoe City Substation	4.1-5
VP 6	Pedestrian bridge over Truckee River	625 Line	4.1-6
VP 8	SR 89 west of Fairway Drive	625 Line	4.1-7
VP 9	Tahoe Rim Trail	625 Line	4.1-8
VP 11	Mount Watson Road (otherwise known as the Fiberboard Highway) west of Mount Watson	625 Line	4.1-9
VP 14	Mount Watson Road north of Mount Watson Note: Attachment 4.1-C: Visual Simulation in Winter Conditions – Mount Watson Road (VP 14) is a winter conditions visual simulation at VP 14.	625 Line	4.1-10 and Attachment 4.1-C
VP 16	Mount Watson Road west of SR 267	625 Line	4.1-11 and 4.1-12
VP 19	Cambridge Drive	625 and 650 lines	4.1-13
VP 23	SR 267 near Tahoe Rim Trail	650 Line	4.1-14
VP 24	Tahoe Rim Trailhead	650 Line	4.1-15
VP 25	SR 267 near Brockway Summit	650 Line	4.1-16
VP 30	SR 267 in Martis Valley	650 Line	4.1-17
VP 36	Martis Creek Trail	650 Line	4.1-18

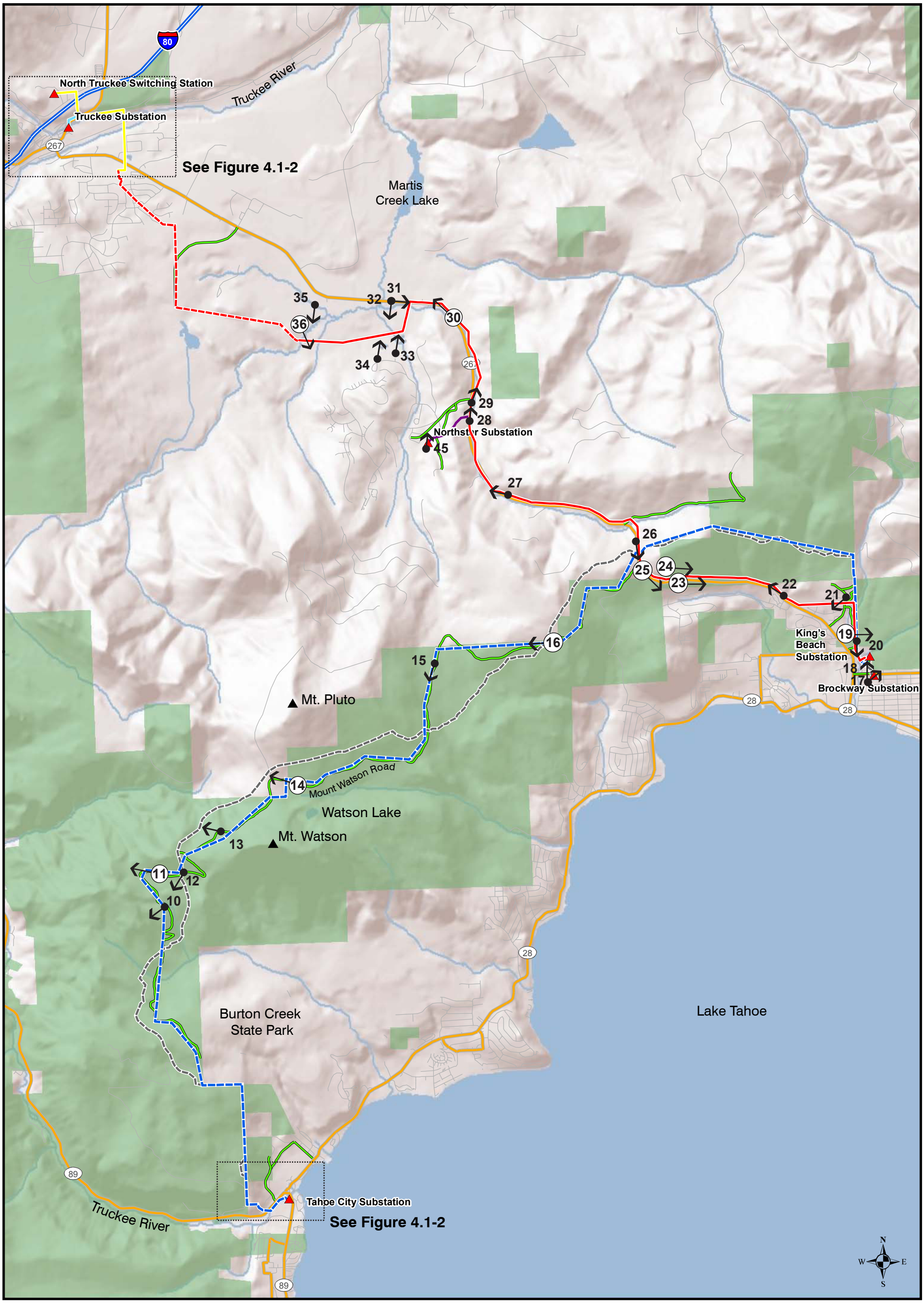

Figure 4.1-1: Photograph Viewpoints - Overview

625 and 650 Line Upgrade Project

- Substation
- New 625 Line
- Existing 625 Line
- 650 Line
- Northstar Fold
- 650 Line Previously Upgraded
- 650 Line to be Removed
- 132/650 Double-Circuit
- USFS Lands
- Paved Access Road
- Limited Access
- Highway
- Major Road
- Local Road
- 3 → Photograph Viewpoint
- (1) → Simulation Viewpoint

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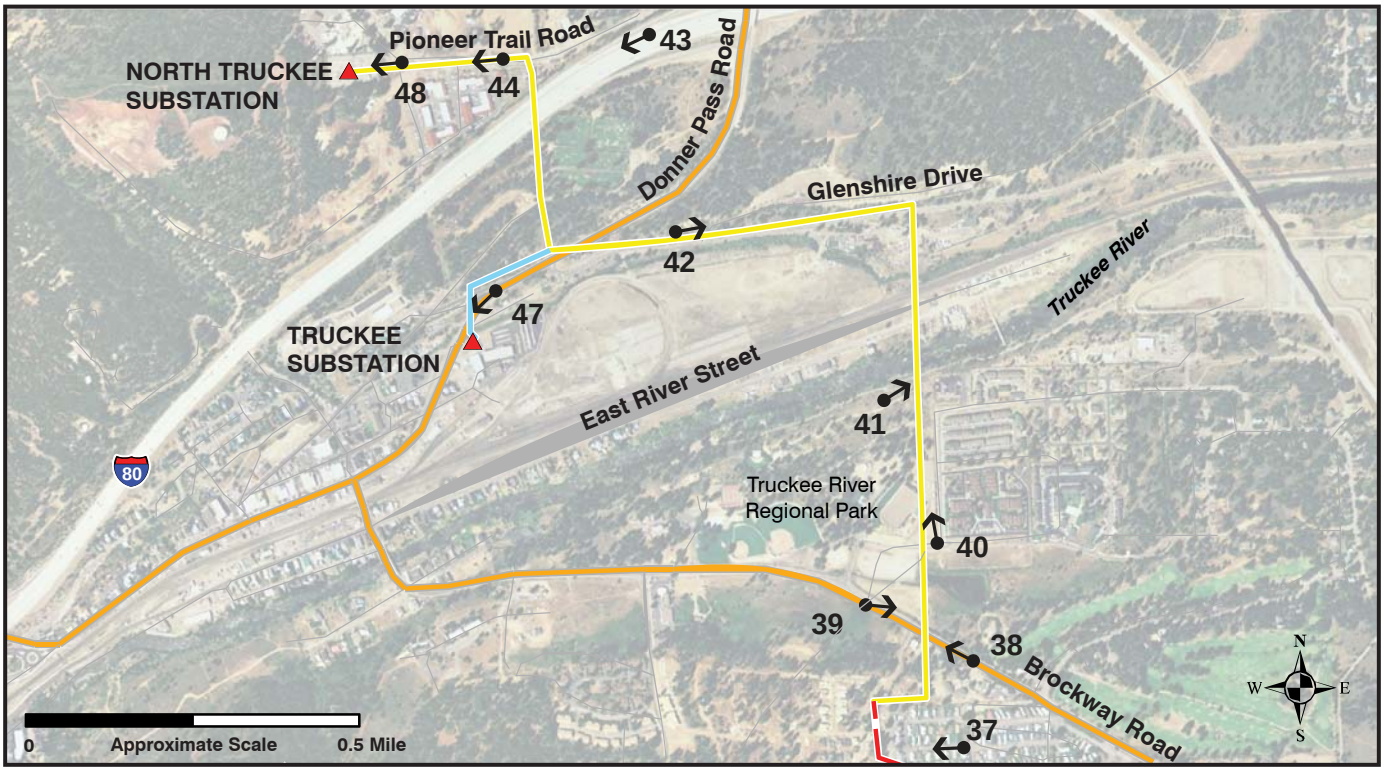

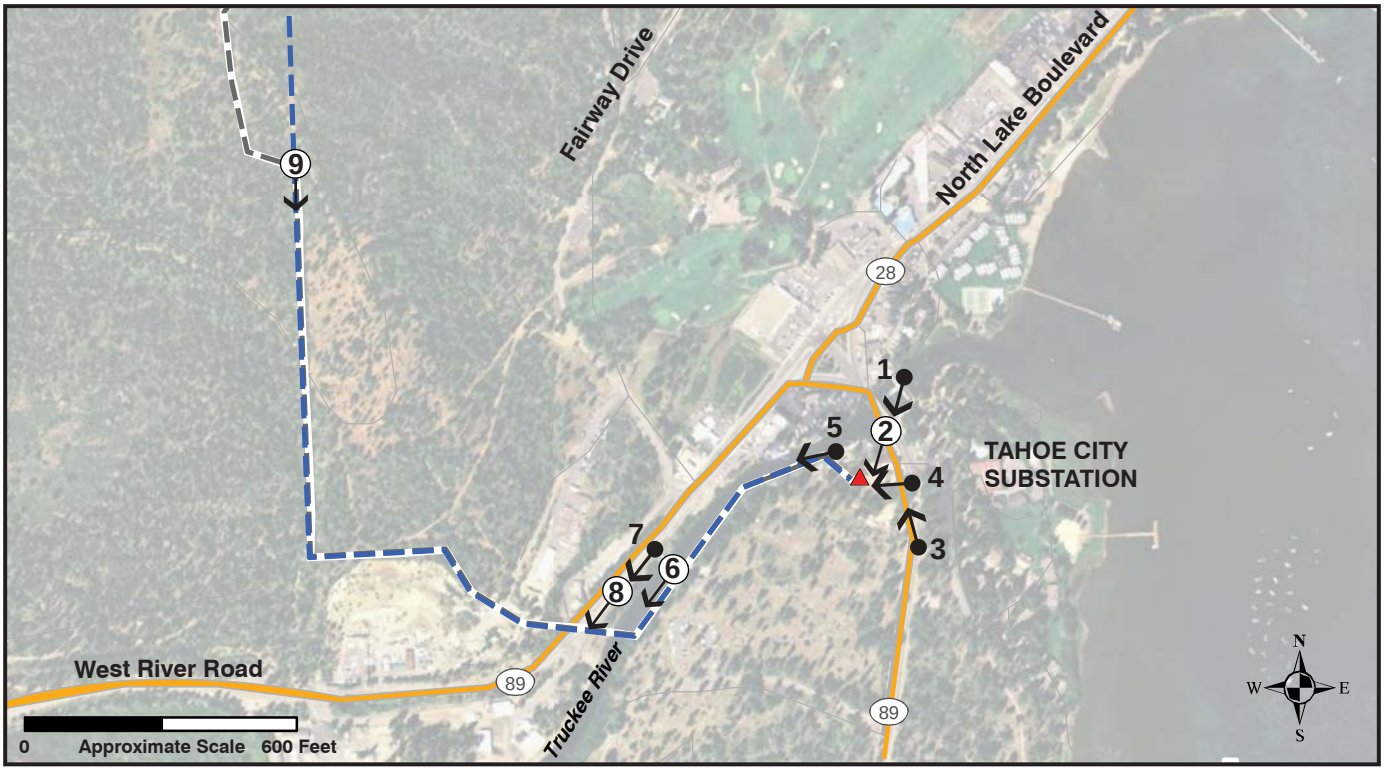

Figure 4.1-2: Photograph Viewpoints - Details **625 and 650 Line Upgrade Project**

- 3 → Photograph Viewpoint
- (1) → Simulation Viewpoint
- Substation
- New 625 Line
- Existing 625 Line
- Northstar Fold
- 650 Line
- 650 Line Previously Upgraded
- 650 Line to be Removed
- 132/650 Double-Circuit
- Limited Access
- Highway
- Major Road
- Local Road

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The project is located in Placer and Nevada counties. Various communities and local planning area jurisdictions also have policies that address visual quality in the project area. Attachment 4.9-A: Policies Consistency Analysis includes the relevant aesthetic resource policies and goals from each document and identifies any potential conflicts with these policies.

Federal

Overview – United States Forest Service Approach to Scenic Management

For purposes of managing visual resources of lands within their jurisdiction, the USFS applies an inventory and assessment system known originally as the VMS. Adopted in 1995, the Scenery Management System (SMS) incorporates and updates aspects of the original methods (USDA 1995). Currently the LTBMU and the TNF (USDA 1988 and USDA 2005) employ aspects of the VMS methods, but current projects are being evaluated under the SMS procedures.

As background, under the original VMS, the USFS established management goals to describe the level of modification associated with land use activity that is acceptable in a given area. These standards or Visual Quality Objectives (VQO) range from Preservation, which is typically applied only to highly sensitive landscapes such as wilderness areas or special classified areas, to Maximum Modification, a standard that allows land use activity that may appear dominant in relationship to the natural landscape while not completely harmonizing with the natural setting. Under the current SMS, Scenic Integrity Objective (SIO) classifications range from "Very High" to "Very Low" (USDA 1995).

Only one SIO class applies to any given area. It is important to note that the SIO does not necessarily represent current scenery conditions, but instead is a guideline for forest management objectives over time.

A map of the project area with VQOs designations shown for USFS land is presented in Figure 4.1-3: Visual Quality Objectives within USFS Land. This figure indicates that Partial Retention is the primary VQO for USFS land crossed by the project. The project also crosses some USFS land with a Retention designation, as well as a limited area designated as Modification. Table 4.1-2: USFS Scenery Management System Terminology Changes provides an explanation of equivalent terminology changes between the VQOs and SIOs applicable to USFS lands along the project route (USDA 1995, p. 2-4 and p. A-1).

Land Resource Management Plan: Lake Tahoe Basin Management Unit

The LTBMU oversees USFS land within the Lake Tahoe Basin. Most of the 625 Line and a portion of the 650 Line pass through this area.

The project lies within parts of three LTBMU Management Areas: the Lower Truckee River, Martis, and Watson (USDA 1988, pp. IV-110, IV-122, and IV-172). The VQO standards applicable to those aboveground portions of the project area, which lie within USFS jurisdiction, range from Modification to Retention (USDA 2009).

Concern for visual quality in the "intensively-viewed" Lower Truckee River area—the area around Tahoe City—is high (USDA 1988, p. IV-12). Martis and Watson area concerns are more focused toward managing dispersed recreation, such as hiking and cross-country skiing.

Table 4.1-2: USFS Scenery Management System Terminology Changes

VQO	SIO and Characteristics
Retention	**High** Landscapes where the valued landscape character "appears intact." Deviations may be present but they must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such scale that they are not evident.
Partial Retention	**Moderate** Landscapes where the valued landscape character "appears slightly altered." Noticeable deviations must remain visually subordinate to the landscape character being viewed.
Modification	**Low** Landscapes where the valued landscape character "appears moderately altered." Deviations begin to dominate the valued landscape character being viewed but they borrow value attributes such as size, shape, edge effect and pattern of natural openings, vegetative type changes, or architectural styles outside the landscape being viewed. They should not only appear as valued character outside the landscape being viewed but compatible or complimentary to the character within.

Source: USDA, 1995

Tahoe National Forest Land and Resource Management Plan

Portions of the 650 Line and a small portion of the 625 Line pass through the TNF. In addition to forest-wide management goals, the TNF and Land Resource Management Plan (LRMP) provide standards and guidelines pertinent to aesthetics and visual resources for specific Management Areas (USDA 2005).

Portions of the project that lie within the TNF and LRMP are within the Donner Management Area—area 053, an area stretching from the edge of the Lake Tahoe Basin to north of the City of Truckee (p. 430). The VQO for this area is Retention. In particular, management goals for this area include maintaining the scenic quality of the area as seen from Interstate 80 (I-80), SR 89, and SR 267, and preserving "the character of their scenic backdrops" (p. 431).

State

California State Scenic Highway Program

California's Scenic Highway Program was created by the Legislature in 1963. Its purpose is to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. The State Scenic Highway System includes highways that are either eligible for designation as scenic highways or have been designated as such. The status of a state scenic highway changes from eligible to officially designated when the local jurisdiction adopts a scenic corridor protection program, applies to the DOT for scenic highway approval, and receives the designation. A city or county may propose adding routes with outstanding scenic elements to the list of eligible highways; however, state legislation is required for them to become designated.

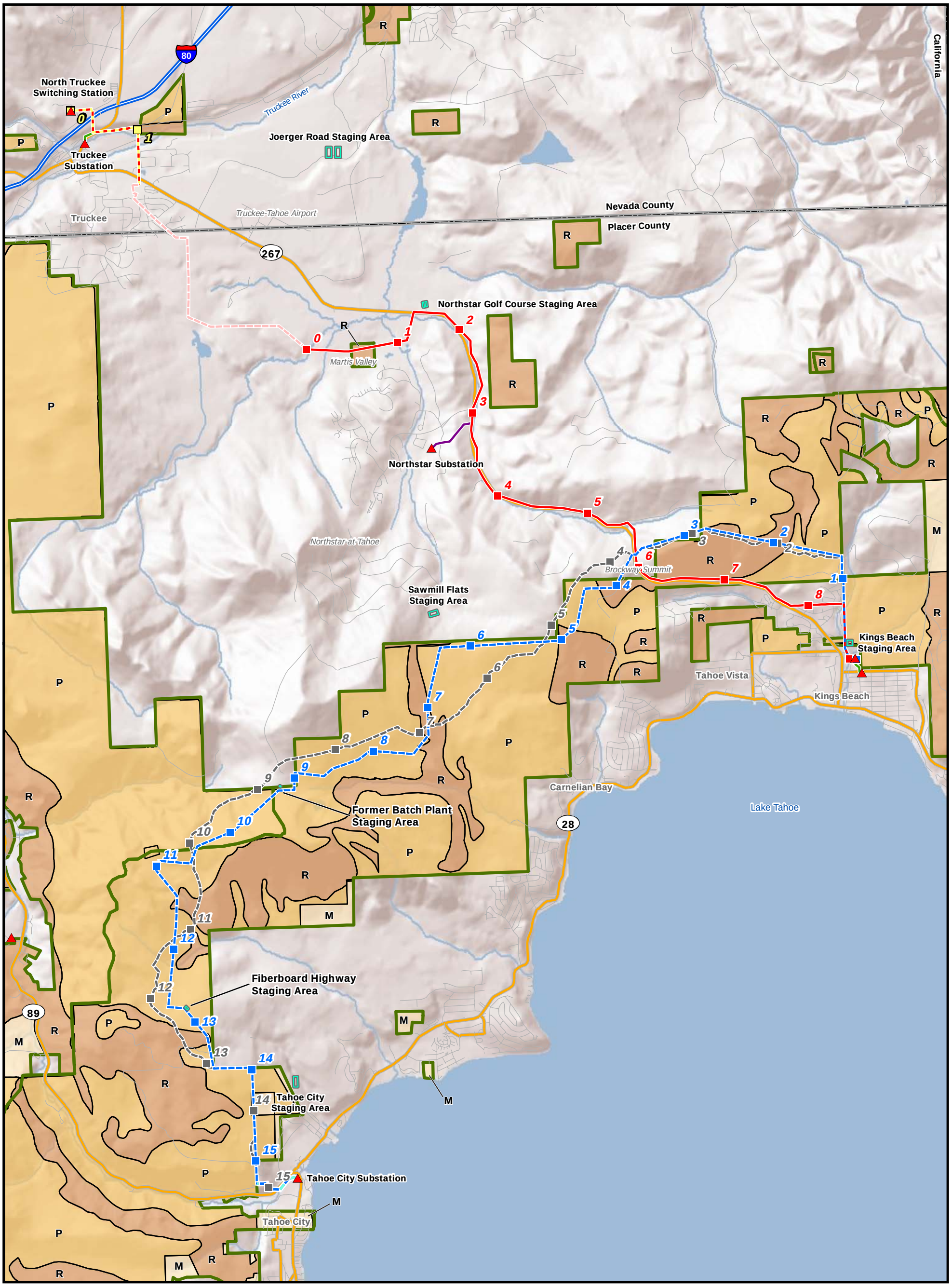

Figure 4.1-3: Visual Quality Objectives within USFS Land — **625 and 650 Line Upgrade Project**

- 650 Line to be Removed
- Northstar Fold
- New 625 Line
- Existing 625 Line
- 625/629 Double-Circuit
- 650 Line to be Rebuilt
- 650 Line Previously Upgraded
- 132/650 Double-Circuit to be Rebuilt
- Milepost (Color Coded by Line)
- Substation/Switching Station
- Staging Area
- US Forest Service

Visual Quality Objectives

- Retention (R)
- Partial Retention (P)
- Modification (M)

(Visual Quality Objective data obtained from the US Forest Service Pacific Southwest Region GIS Clearinghouse)

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There are no officially designated State Scenic Highways within the project viewshed. However, SR 28 and SR 89 in Placer County and I-80 in both Placer and Nevada counties are eligible state scenic highways. Portions of the 132/650 Line Double-Circuit and the 625 Line cross these roadways. As discussed under Regional (Tahoe Regional Planning Agency), SRs 28, 89, and 267 are also considered scenic corridors by the TRPA.

Burton Creek State Park General Plan/Environmental Impact Report

The 2,000-acre Burton Creek State Park lies in the Lake Tahoe Basin on the northwest shore of Lake Tahoe, adjacent to Tahoe City. The existing and new 625 lines travel adjacent to the southern edge of the park between approximate milepost (MP) 13.5 and MP 14, and within 800 feet of established recreation trails. The 625 Line may be visible from publicly accessible locations within the park.

Regional (Tahoe Regional Planning Agency)

The Lake Tahoe Basin is located on the California-Nevada border between the Sierra Nevada Crest and the Carson Range. Approximately two-thirds of the Lake Tahoe Basin is located in California and one-third is located in Nevada. In total, the Lake Tahoe Basin comprises about 501 square miles, including the waters of Lake Tahoe, which measure 191 square miles. As described in Section 4.9 Land Use and Planning, the TRPA oversees and implements plans to manage environmental quality, including scenic resources. To this end, it has established environmental quality standards, called thresholds, and maintains ordinances designed to achieve the thresholds. Because the area's scenic attributes are a recognized and valued resource, plans produced by the TRPA typically include a specific focus on managing scenic resources.

Lake Tahoe Basin Scenic Resource Inventory

The Lake Tahoe Basin Scenic Resource Inventory (1982), prepared for the TRPA, established 79 scenic roadway and shoreline units for the entire Lake Tahoe Basin for the purpose of evaluating scenic quality in the region. The plan documented existing visual resources and critical views and rated each unit in terms of its level of scenic quality. Subsequent documents produced by the TRPA have built upon these ratings and established guidelines and policies for improving the ratings.

Components of the project fall within the following roadway units: 14 – Tahoe Tavern, 15 – Tahoe City, 20B – Tahoe Vista (encompassed by Kings Beach), 40 and 41 – Brockway Cutoff to Brockway Summit, and 42 – Outlet to Lower Truckee River, as well as shoreline unit 15 – Tahoe City. Attachment 4.1-B: Briefing Memo – Visual Simulation Viewpoints includes a discussion of the relationship of the project to TRPA views.

Regional Plan for the Lake Tahoe Basin: Goals and Policies

The goals and policies section of the TRPA Regional Plan for the Lake Tahoe Basin contains numerous references to preserving the area's scenic quality. In particular, the Community Design subelement of the Land Use Element and the Scenic Subelement of the Conservation Element contains goals and policies to maintain aesthetic resources. One of the long-term goals of the Scenic Subelement is to maintain or improve the numerical ratings established in the Scenic Resources Inventory (p. IV-21).

Tahoe Regional Planning Agency Regional Plan for the Lake Tahoe Basin: Scenic Quality Improvement Program

The TRPA Scenic Quality Improvement Plan includes goals and policies to maintain or improve scenic quality ratings for the roadway units described in the 1982 plan. It also encourages local jurisdictions to adopt specific plans that are in accordance with the regional plan.

Regional Plan for the Lake Tahoe Basin: Code of Ordinances (Tahoe Regional Planning Agency)

The Code of Ordinances (2004) is designed to implement the Goals and Policies in a manner that attains and maintains the environmental thresholds. Chapter 22 Height Standards, Chapter 26 Signs, Chapter 30 Design Standards, and Chapter 71 Tree Removal have specific provisions that apply to aesthetic resources.

Tahoe Regional Planning Agency 2006 Threshold Evaluation Plan Draft

The TRPA Regional Plan for the Lake Tahoe Basin establishes thresholds for scenic quality that represent the minimum standards for scenic quality. The thresholds were updated in 2007 with the 2006 Threshold Evaluation Report (TRPA 2007). The overall intent of the regional plan is to improve the quality of the units that do not meet the threshold. Additionally, a number of communities and jurisdictions within this area have prepared their own plans that build upon the overall TRPA goals. The project passes through areas addressed in the plan.

Tahoe Regional Planning Agency Community Plans and Plan Area Statements

Visual resource and urban design concerns applicable to the project are addressed in the following community plans:

- Kings Beach Community Plan, 1996
- Kings Beach Industrial Area Community Plan, 1994
- Tahoe City Community Plan, 1994

These Community Plan Area Statements supersede TRPA Plan Area Statements (PASs) and Placer County Zoning within the Community Plan boundaries.

For many areas outside of Community Plan Areas, PASs are used to help guide development. These are generally less specific in scope and policy. Areas where the project is located within PASs include the 64-Acre Tract, Burton Creek, Martis Peak, Woodvista, and Kingswood East. The project crosses and lies adjacent to scenic corridors identified in TRPA documents, including SR 28, SR 89, and SR 267. Figure 4.9-1: Community Plan Areas Map, delineates the jurisdictional boundaries of these plan areas. Attachment 4.9-A: Policies Consistency Analysis contains additional detail regarding provisions for scenic resources in these plans.

Local

Placer County Design Standards and Guidelines for the Lake Tahoe Region Including the Community Plan Areas

The Placer County Design Standards and Guidelines include guidelines for minimizing the visual impact of utility lines within scenic highway corridors. These corridors include SRs 28, 89, and 267.

Placer County General Plan

Portions of the project lie within Placer County, California. The Placer County General Plan (Placer County 1994b) contains a number of policies related to scenic resources. Scenic Routes are specified in Community Plans, including the Martis Valley Community Plan, Tahoe Vista Community Plan, and Kings Beach Industrial Community Plan.

Tahoe City General Plan

The Tahoe City General Plan (Placer County 1994c) governs areas not specifically discussed in the Tahoe City Community Plan; however, it overlaps some with TRPA plans. The project falls within the 64-Acre Tract discussed in the Plan. This plan does not contain policies specifically addressing scenic resources for the area.

North Tahoe Area General Plan

The North Tahoe Area General Plan contains portions of the Lake Tahoe Basin along the northern shore from approximately Tahoe City east to the California/Nevada state border. The project falls within the areas of Watson Creek, Martis Peak, Kingswood East, and Woodvista, which are discussed within the plan. This plan does not contain policies specifically addressing scenic resources for these areas.

Placer County Design Guidelines

The Placer County Design Guidelines (2003) focus on visual environments in the communities of western Placer County which are of high aesthetic quality. The project is located east of the area governed by these guidelines.

Nevada County General Plan

Portions of the project, including the 132/650 Line Double-Circuit, the Truckee Substation, and the North Truckee Switching Station, lie in Nevada County. However, the project lies wholly within the city limits of the Town of Truckee and not within unincorporated areas of the county. Therefore, scenic provisions of the county's general plan are not considered.

Town of Truckee 2025 General Plan

The Town of Truckee 2025 General Plan (2006) contains provisions regarding scenic resources and utility undergrounding in its Community Character Element. I-80 is listed as a scenic corridor on the Scenic Resources Map in the Community Character Element (Figure CC-1 Scenic Resources, p. 3-5). Scenic views include views to Mount Rose, Castle Peak, Donner Summit, Mount Judah, Tinker's Knob, Donner Lake, and views up and down the Truckee River.

Brockway Road from the Truckee River to SR 267 is considered a key corridor with a gateway to Truckee at SR 267, as listed on the Corridors and Gateways Map (Figure CC-3, p. 3-22).

The Community Character and Land Use Elements of the Town of Truckee 2025 General Plan (2006) contain policies regarding aesthetic resources.

Martis Valley Community Plan

Martis Valley is an approximately 70-square-mile area that lies within Placer and Nevada counties, as well as within the Town of Truckee's incorporated limits. This area is roughly located to the east of Truckee and north of Northstar. It is a relatively level area that has experienced population growth on previously undeveloped pasture and forest lands. The northern portion of the 650 Line passes through this area. A number of policies contained within the Martis Valley Community Plan (2003) are relevant to visual resources. In particular, Section IV, Community Design, provides directions for preserving high visual quality of the area. Section VI, Public Facilities and Services also contains provisions for undergrounding utilities.

Regional and Local Landscape Settings

The project is located in the Lake Tahoe region, which is centered on Lake Tahoe, and straddles the northern edge of the California-Nevada state border. Figure 4.1-4: Regional Landscape Context shows the project in its regional context. It is a rugged, mountainous area located between the Carson Range on the east and the Sierra Nevada on the west. Approximately three-quarters of the land in the region is publicly owned, and the majority of the land is managed by the USFS.

Lake Tahoe is world renowned for its crystal clear water and picturesque setting. The lake is approximately 12 miles wide and 22 miles long, with about 75 miles of shoreline. The elevation of Lake Tahoe’s surface elevation is approximately 6,000 feet above sea level, with surrounding peaks rising to almost 11,000 feet above sea level. Near the project area, Mount Watson rises to 8,424 feet and Mount Pluto rises to 8,617 feet.

Long, relatively mild winters and short, dry summers characterize the region’s climate. Precipitation generally falls as snow during the winter months. The dominant vegetation is softwood forest stands (conifers) which, at near distances, provide strong vertical lines, interspersed with open meadows. Although the dark coniferous forests contribute to a stable framework for the area’s visual character, seasonal changes introduce a dramatic variation to this landscape character. During winter, snow cover accentuates areas that are not forested, which can create a strong visual contrast in areas of timber harvesting, ski slopes, roadways, transmission rights-of-way (ROWs), and other places where the unforested ground is visible. Photographs that illustrate winter conditions with snow cover in the project area are included as Attachment 4.1-A: Photographs of the Project Area in Winter Conditions.

Development is clustered around the lake’s shoreline and in a few level or moderately sloping areas. The region experiences a peak population with summer vacationers; however, it is also popular as a winter tourist destination for skiing and snow-related sports.

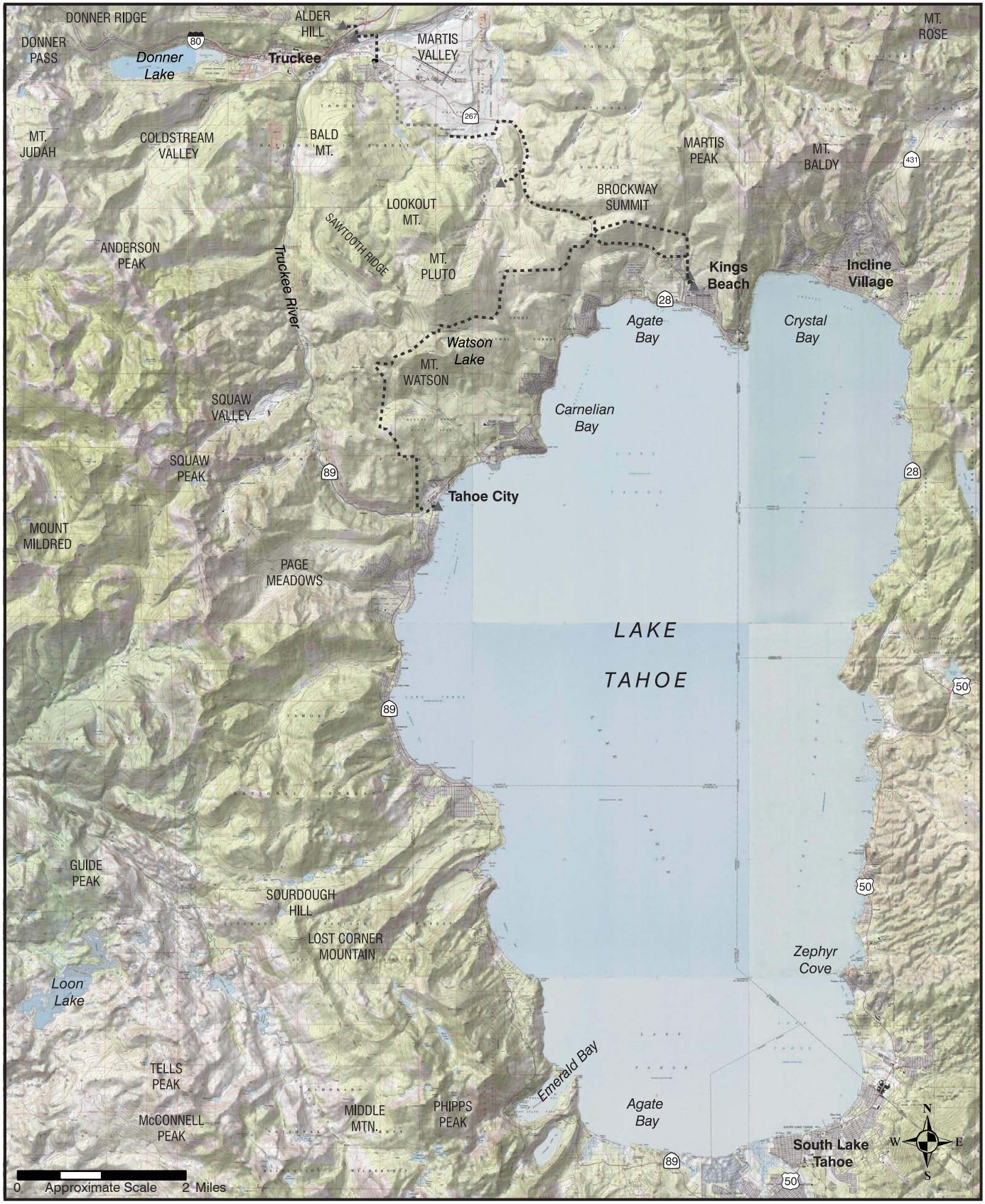

Figure 4.1-4: Regional Landscape Context **625 and 650 Line Upgrade Project**

- Project Route
- Previously Upgraded Line
- Substation

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Project Visibility and Viewshed

The project viewshed is defined as the general area from which the project will be visible. Along most of the project route, the project viewshed consists of the mountainous terrain of the Lake Tahoe Basin and surrounding region. As described below, the project will be visible from limited locations along public roads, as well as from public open space and limited residential areas. However, intervening landforms and vegetation will screen views of the project from many close range and more distant locations. Given the project length (approximately 28 miles), as well as natural landform and vegetation screening, the project will not be visible in its entirety from any single viewing location. Within the general area, several existing overhead transmission lines, including the 625 and 650 lines, are established landscape features.

Viewing distance is a key factor that affects the potential degree of project visibility. For reference, it may be noted that visual details generally become apparent to the viewer when they are seen in the foreground, at distances of 0.25 to 0.5 mile or less (Smardon et al. 1986 and USDA 1973). For the purposes of the project PEA visual analysis, the primary focus is considered this foreground viewshed area, where visual details are apparent, and up to approximately 1 mile from the project area, where change could be noticeable.

The following section describes existing conditions within this foreground viewshed. The project route is divided according to eight basic project components. Potentially affected viewer groups for each portion of the project are also identified. Photographs 1 through 48 present representative photographs of the project viewshed, including views that correspond to key views identified in the TRPA 1982 Scenic Resources Inventory, which are included in Attachment 4.1-B: Briefing Memo – Visual Simulation Viewpoints). Attachment 4.1-A: Photographs of the Project Area in Winter Conditions presents additional views of the project area in winter conditions. Table 4.1-3: Project Component Areas summarizes the project components and identifies corresponding photographs that portray the project route representative visual conditions. Figure 4.1-1: Photograph Viewpoints – Overview and Figure 4.1-2: Photograph Viewpoints – Details delineate the project components and their relationship to the photograph viewpoints.

Potentially Affected Viewer Groups

The project viewshed includes several primary types of potentially affected viewer groups—roadway motorists, recreation users, and residents. These groups may, at times, overlap; but, for the purposes of this discussion, they are described separately.

Motorists represent the largest of the affected viewer groups. Included in this group are motorists traveling on regional roadways, such as SRs 28, 89, and 267, and I-80. Motorists include a variety of roadway travelers—both local and regional travelers who are familiar with the visual setting, and travelers using the roadway on a less regular basis. These less frequent travelers might, for example, utilize these roadways to reach vacation destinations such as Lake Tahoe or ski resorts. These motorists include commuters, drivers of commercial trucks, and drivers of emergency vehicles. Depending upon the project component, views could range from a few seconds to 20 minutes or more. Viewer sensitivity is considered low to moderate.

Table 4.1-3: Project Component Areas

Project Component	Photographs (See Figures 4.1-1 and 4.1-2 for the location of photograph viewpoints)
625 Line – Existing and New	1 through 16
650 Line	17 through 36
132/650 Line Double-Circuit including Truckee Substation and North Truckee Switching Station	37 through 44 and 47 through 48
Northstar Tap/Fold and Northstar Substation	45
Brockway Substation	17 and 18
Squaw Valley Substation	46
Tahoe City Substation	1 through 4
Kings Beach Switching Station	No photographs

The second viewer group includes recreational users of the Lake Tahoe area. These include hikers, equestrians, and skiers/snowboarders. These users are important to the region's economy. Although the total duration of views for this group tends to be short, their expectation of a naturalistic landscape setting raises the sensitivity to moderate to high.

The third viewer group includes a limited number of neighborhood residents who border the project corridor. Residential views tend to be long in duration, and the sensitivity of this viewer group is considered moderate to high.

Transmission Lines

625 Line – Existing and New

The existing 625 Line runs for approximately 15.3 miles, from the Tahoe City Substation in Tahoe City, to the Brockway Substation in Kings Beach. The project proposes removing the existing line and constructing a new line from the Tahoe City Substation to the Kings Beach Switching Station, north of the Brockway Substation in Kings Beach. The origin and terminus of the route are within towns along the north shore of Lake Tahoe. However, most of the route passes through sparsely-settled, mountainous, forested, and recreation lands around northern Lake Tahoe. Most of the route lies within the TRPA boundary. It also crosses the TNF and skirts the southern boundary of the Burton Creek State Park. Travelers on local and regional roadways, recreational users, and a limited number of residents are the primary affected viewer groups.

The Tahoe City Substation is located in Tahoe City on the west side of SR 89 (West Lake Boulevard) near the Truckee River. Photographs 1 through 4 depict views of the substation and are described further within the Tahoe City Substation discussion. From these views, the existing 625 Line leaving the substation is not visible.

1. Lakeside Trail at the Truckee River outlet looking south

2. State Route 89 at William B. Layton Park looking south *

3. State Route 89 (West Lake Boulevard) looking north

4. State Route 89 (West Lake Boulevard) looking west

* Simulation Photo

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Photographs 1 - 4
Photographs of the Project and Surrounding Area
625 and 650 Line Upgrade Project

The 625 Line travels from the Tahoe City Substation and, as shown in Photograph 5, runs west, paralleling the Truckee River and a bike path along the river. Photographs 5 through 8 depict views along the river. As shown in Photograph 7, at approximate MP 15.2 along the existing line, is a view that is similar to a key TRPA view (Attachment 4.1-B: Briefing Memo – Visual Simulation Viewpoints, page 5) near the pedestrian/bike trail bridge over the Truckee River. Wood barrier railings on both sides of the trail dominate the foreground, and two existing 625 Line poles are barely visible against the forested backdrop in the distance. As shown in Photograph 6, recreational use along the river also includes rafting. At approximate MP 15.1 along the existing line, the route crosses the river and SR 89 west of Fairway Drive then travels north. Photograph 8 depicts the location of this highway crossing.

The transmission line passes along the southwestern corner of Burton Creek State Park before continuing north. At this point, at approximate MP 13.1 along the existing line, the new line diverges from the existing 625 Line and generally runs parallel to Mount Watson Road, a lightly used paved and unpaved road that provides access to recreation trails and logging roads. As shown in Photographs 9 through 16, this part of the transmission line travels through steep terrain with dense conifer cover in relatively remote forested areas that are not typically seen by the public. The Tahoe Rim Trail crosses the existing and new 625 lines in several locations. Photograph 9 shows a view from the trail looking down the 625 Line toward Lake Tahoe in the distance. Photograph 10 is another view from the trail. At this location, the new line is set back from the roadway and will cross the trail at a right angle. Views in this area are typically enclosed by dense conifers; however, occasional distant landscape views are available. Photograph 13 shows a relatively open view toward mountains in the west. The transmission line is not visible from this location because it is located behind the viewpoint. Much of the 625 Line will run parallel to and set back from Mount Watson Road. Photograph 15 is a typical view along Mount Watson Road. Currently, the existing 625 Line crosses the road at four locations, while the new line will cross the road at 19 locations. Photographs 12 and 16 show existing crossings and Photographs 11, 14, and 16 show where the new line will cross the roadway.

During non-winter months, the landscape colors in this area appear somewhat monochromatic ranging from dark green to dark brown with a dark green understory. However, in winter, with snow cover, the contrast between the groundplane and vegetation changes dramatically. Attachment 4.1-A: Photographs of the Project Area in Winter Conditions includes several examples of winter seasonal conditions.

At approximate MP 3.7, the existing 625 Line crosses SR 267 near Brockway Summit. At this highway crossing, the conductors are visible above the roadway, but the supporting poles are set back in the trees, as shown in Photograph 26. The existing 625 Line then heads east for approximately 2.5 miles, then turns south and ends at the Brockway Substation, which is located in Kings Beach near the corner of Speckled Avenue and Deer Street in a residential area. Immediately adjacent to the site are single-family homes, with industrial and commercial activities to the east. As shown in Photograph 17, substation access is from Cut Throat Avenue at Deer Street. The substation is partially screened by mature existing trees and other vegetation. As shown in Photograph 18, from Deer Street, wood distribution and transmission poles are typical elements within this landscape.

The 625 Line parallels the 650 Line and runs adjacent to residences for the last 0.6 mile before reaching the substation. The two existing lines appear in Photographs 19 and 20, within a forest landscape that includes the recreation trail in the transmission line ROW, north of the Kings Beach Switching Station.

Most of the 625 Line is located in the LTBMU. The majority of the 625 Line is within areas with a VQO of Partial Retention, although it is also within areas with Retention and Modification VQOs. The 625 Line includes landscapes that appear nearly unmodified by human activity, as well as developed areas around the communities of Tahoe City and Kings Beach, where built structures are evident within the landscape. A limited portion of the line also runs through the TNF. The VQO for this part of the TNF is Partial Retention.

650 Line

The existing 650 Line runs from the Kings Beach Diesel Generation Station to the Truckee Substation in Truckee. From Bob Haslem Court in Truckee to the Truckee Substation, the line has already been improved. The project includes the remaining approximately 10 miles of this transmission line route. The primary affected viewer groups are travelers on local and regional roadways, recreational users, and a limited number of residents in the Kings Beach and Martis Valley areas.

The route originates near a residential neighborhood in Kings Beach. As depicted in Photographs 19 through 21, the existing line is visible from some places along public streets in this neighborhood, including an informal trail, located adjacent to the ROW. Beginning at approximate MP 7.8, the line runs parallel to SR 267 for approximately 6.4 miles. Photographs 22, 23, and 25 through 31 illustrate views along SR 267 of existing wood poles along the route. As shown in Photograph 24, the route is also briefly visible from the Tahoe Rim Trail. SR 267 is a winding, mountain road. The roadway views are generally enclosed by tall conifers situated along the roadside; however, occasional long-range vistas, such as the view shown in Photograph 25 taken near the Brockway Summit, are available.

This view is similar to a key TRPA view, (Attachment 4.1-B: Briefing Memo – Visual Simulation Viewpoints) in which Lake Tahoe and the mountain ranges beyond are visible.

As SR 267 enters the Martis Valley to the north, landscape views open up with expansive views across the valley meadow to mountain ranges to the north, as shown in Photograph 30. Densely wooded mountains form a backdrop to the roadway and wood transmission line poles in east-facing highway views, as shown in Photograph 31. At approximate MP 1.4, the route crosses SR 267, skirts the edge of the Northstar Golf Course, and passes along the southern edge of the Martis Creek Lake National Recreation Area. Photograph 32, a view from SR 267 looking across the golf course toward the 650 Line, and Photograph 33, a view from the golf course, both show the landscape foreground with forested backdrop. The route also travels through a compact residential area in the valley. Photograph 34 is a view from Basque Drive, a residential street near the golf course that shows the existing wood poles visible in the open meadow.

5. Truckee River Bike Trail looking west

6. Pedestrian bridge over Truckee River looking southwest *

7. Recreation trail at pedestrian bridge looking southwest

8. State Route 89 west of Fairway Drive looking southwest *

* Simulation Photo

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Photographs 5 - 8
Photographs of the Project and Surrounding Area
625 and 650 Line Upgrade Project

9. View from Tahoe Rim Trail looking south *

10. View from Tahoe Rim Trail looking southwest

11. Mount Watson Road west of Mount Watson looking west *

12. Mount Watson Road looking south

* Simulation Photo

Photographs 9 - 12
Photographs of the Project and Surrounding Area
625 and 650 Line Upgrade Project

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13. Mount Watson Road looking west

14. Mount Watson Road north of Mount Watson looking west *

15. Mount Watson Road looking south

16. Mount Watson Road west of SR 267 looking west *

* Simulation Photo

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Photographs 13 - 16
Photographs of the Project and Surrounding Area
625 and 650 Line Upgrade Project

17. Brockway Substation entry on Cut Throat Avenue looking northeast

18. Deer Street near Cut Throat Avenue looking north

19. Cambridge Drive looking east *

20. Trail behind Cambridge Drive looking south

* Simulation Photo

Photographs 17 - 20
Photographs of the Project and Surrounding Area
625 and 650 Line Upgrade Project

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21. Bristol Circle at Commonwealth Drive looking southwest

22. State Route 267 near Kings Beach looking northwest

23. State Route 267 near Tahoe Rim Trail looking east *

24. Tahoe Rim Trailhead near State Route 267 looking east *

Photographs 21 - 24
Photographs of the Project and Surrounding Area
625 and 650 Line Upgrade Project

25. State Route 267 near Brockway Summit looking southeast *

26. State Route 267 looking south towards 625 Line crossing

27. State Route 267 looking northwest

28. State Route 267 south of Northstar Drive looking north

* simulation viewpoint

Photographs 25 - 28

Photographs of the Project and Surrounding Area

625 and 650 Line Upgrade Project

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29. State Route 267 near Northstar Drive looking north


30. State Route 267 in Martis Valley looking northwest *


31. State Route 267 looking east


32. State Route 267 looking south

Photographs 29 - 32
Photographs of the Project and Surrounding Area
625 and 650 Line Upgrade Project

33. Northstar-at-Tahoe Golf Course looking north

34. Basque Drive looking north

35. Martis Creek Trailhead looking south

36. Martis Creek Trail looking south *

Photographs 33 - 36
Photographs of the Project and Surrounding Area
625 and 650 Line Upgrade Project

The line crosses and passes near the Tomkins Memorial Trail, a 14.6-mile network of recreation trails located in the Martis Creek area. Photograph 32, taken from SR 267, includes the bridge over Martis Creek along the Tomkins Memorial Trail. Photograph 35 depicts the Martis Creek Trailhead near SR 267 looking south toward the project route. Photograph 36 shows the view from Martis Creek Trail, part of the Tomkins Memorial Trail network near the end of the line upgrade. The existing 650 Line is seen in the distance at the far side of the meadow in this view from the trail.

The upgraded portion of the 650 Line continues from just east of Bob Haslem Court, west through Martis Valley. The route then enters residential areas in the Town of Truckee and continues to the Truckee Substation.

In limited areas, the 650 Line crosses both the LTBMU and the TNF. VQOs for the route include Retention and Partial Retention. In this portion of the 650 Line, the visual character ranges from landscapes that appear nearly unmodified by human activity to developed areas around the communities of Kings Beach and Truckee where built structures are apparent.

132 Line

The existing 132 Line, which will be reconfigured to include the 650 Line, originates just south of Brockway Road near the northwest corner of Village Green Mobile Home Park, and runs approximately 1.6 miles north through the Town of Truckee to the North Truckee Switching Station. The primary viewer groups are travelers on local and regional roadways, recreational users, and residents in Truckee.

As Photograph 37 from Star Pine Road shows, the route originates in a residential neighborhood composed primarily of single-family homes. Photographs 38 and 39 show the existing wood poles crossing a forested section of Brockway Road, just north of the Village Green Mobile Home Park. The line continues north, crossing Estates Drive and the Truckee River Regional Park, where existing structures are seen against the skyline as they parallel Riverside Drive, as shown in Photograph 40.

As shown in Photograph 41, continuing north, the route crosses the Truckee River and the adjacent Truckee River Legacy Trail. At this point, the existing poles are seen on the right side of the view and conductors are visible crossing overhead. Along eastbound Glenshire Drive, the existing wood poles of the 132 Line and an adjacent line are seen against a distant mountain backdrop, as shown in Photograph 42. Photograph 43 depicts the crossing at I-80 just west of Donner Pass Road; here, tree cover on either side of the roadway backdrops and partially screens most of the existing line. The existing conductors appear crossing the roadway. The line continues north to Pioneer Trail, then parallels Pioneer Trail Road, along with at least two other adjacent lines—as shown in Photograph 44—heading toward the North Truckee Switching Station. As shown in Photograph 48, from Pioneer Trail Road, wood utility poles are a common feature near this end of the transmission line.

The photographs indicate that the existing 132 Line visual setting includes existing transmission structures and overhead lines, including those of the project.

A small section of the 132 Line, between approximate MP 0.6 and MP 1.0, is adjacent to the Tahoe Basin National Forest, with a VQO of Partial Retention.

Northstar Tap/Fold

The Northstar Tap originates at the Northstar Substation, located at the end of Stable Road, and heads in a northeasterly direction for 0.5 mile, crossing SR 267 and terminating approximately 0.2 mile south of the intersection of SR 267 and Northstar Drive. Photograph 28 shows the existing crossing of SR 267 near Northstar Drive. As seen in this photograph, transmission structures are a part of the existing visual setting.

Substations and Switching Stations

Brockway Substation

Located in a wooded, mixed-use residential and industrial neighborhood in Kings Beach, the Brockway Substation will be decommissioned as part of the project. Photograph 17 shows a close range view of the facility at the access road, and Photograph 18 presents a view from the residential street adjacent to the site. Dense, mature trees and understory plants provide screening from most locations on adjacent streets.

Northstar Substation

The Northstar Substation is located near the intersection of Stables Road and Northstar Drive in Placer County. As shown in Photograph 45, the facility is accessed via an approximately 800-foot-long driveway and is surrounded by mature trees. It is located within 450 feet of residences; however, due to screening provided by mature vegetation, the substation is generally not visible from the residences or adjacent roadways, including Northstar Drive and SR 89.

Squaw Valley Substation

The Squaw Valley Substation is located near the intersection of SR 89 and Squaw Valley Road, adjacent to a small commercial center. Photograph 46, taken from the intersection of Squaw Valley Road and SR 89, includes dense conifers with the substation visible on the right beyond the bus shelter. The photograph demonstrates that this substation is largely screened from the roadway by tall, mature trees, and is seen only briefly by SR 89 travelers. Because the Squaw Valley Substation is located more than 1.8 miles west of the 625 Line, it is not included on Figure 4.1-1: Photograph Viewpoints – Overview.

Tahoe City Substation

The Tahoe City Substation is located in Tahoe City on the west side of SR 89 (West Lake Boulevard) near the Truckee River. A description of the substation visual setting can be found in the previous discussion of the 625 Line. The view from SR 89 looking north toward the substation is shown in Photograph 3, and Photograph 4 depicts a view directly across the street from the facility. These close-range views show that tall conifers partially screen views of the substation from the roadway, and a wood slat fence screens lower portions of the facility.

37. Star Pine Road looking west

38. Brockway Road looking northwest

39. Brockway Road looking east

40. Estates Drive at Riverview Drive looking north

Photographs 37 - 40
Photographs of the Project and Surrounding Area
625 and 650 Line Upgrade Project

41. Truckee River Legacy Trail looking northeast

42. Glenshire Drive looking east

43. Interstate 80 westbound near Donner Pass Road looking west

44. Pioneer Trail Road looking northwest towards North Truckee Substation

Photographs 41 - 44
Photographs of the Project and Surrounding Area
625 and 650 Line Upgrade Project

45. Northstar Substation looking north

46. Squaw Valley Substation from Squaw Valley Road at State Route 89
(not shown on Viewpoint Maps)

47. Donner Pass Road looking southwest towards Truckee Substation

48. North Truckee Switchyard from Pioneer Trail Road looking west

Photographs 45 - 48
Photographs of the Project and Surrounding Area
625 and 650 Line Upgrade Project

Viewing from the north, an existing commercial building screens lower parts of the substation. Photographs 1 and 2 indicate that elements of the substation are visible from the north across the Truckee River from both William Layton Park at Fanny Bridge and from the Lakeside Trail across the Truckee River.

Truckee Substation and North Truckee Switching Station

The Truckee Substation serves as the current point of origin for the 650 Line. The existing Truckee Substation is located in an industrial area to the east of downtown Truckee, near the intersection of Donner Pass Road and E Street. As shown in Photograph 47, some open views are available from north and west of the site from Donner Pass Road. From locations further away, views of the substation are partially screened by existing buildings and from the northeast by vegetation along Trout Creek.

As shown in Photograph 48, the North Truckee Switching Station is located on Pioneer Trail Road just south of Comstock Drive. The North Truckee Switching Station is located in an industrial-commercial area north of I-80. As shown in Photograph 44, which presents a view of the facility from Pioneer Trail Road, open views are available from limited locations along the adjacent public roadway; however, existing buildings and trees partially screen the facility from other areas.

Kings Beach Switching Station

The Kings Beach Switching Station is located inside the Kings Beach Diesel Generation Facility, which is located approximately 750 feet north of the intersection of Speckled Avenue and Deer Street in Kings Beach. Because of surrounding mature trees, this facility is not visible from public viewing locations. Within the USFS LTBMU, the VQO for the general area surrounding the substation is Partial Retention.

4.1.3 Impacts

Significance Criteria

To determine the significance of the anticipated visual changes, the project's effects were evaluated in light of the direction provided in Appendix G of the CEQA Guidelines, which indicates that a project will have a significant effect on the environment if it will:

- Have a substantial, adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare, which will adversely affect day or nighttime views in the area.

Additionally, USFS and TRPA criterion were used to evaluate the project impacts.

In applying this criterion to determine significance, the extent of the project's visibility from sensitive viewing locations, the degree to which the various project elements would contrast with

or be integrated into the existing landscape, the extent of change in the landscape's composition and character, and the number and sensitivity of viewers were taken into account. Project conformance with public policies regarding visual quality was also considered.

Visual Change

The following discussion contains an evaluation of the project's potential visual effects on key public views, as represented by the set of 14 visual simulations. Table 4.1-4: Summary of Visual Effects at Key Viewpoints presents an evaluation summary for each viewpoint including the project elements shown in the simulation, applicable USFS visual management objectives, viewer type and relative volume, as well as a summary of change and potential visual contrast and applicable APMs.

The visual simulation views include public roadways and trail vantage points where the project may be visible. Four views were chosen to approximate views from the TRPA Lake Tahoe Basin Scenic Resources inventory (TRPA 1982) and, where applicable, the corresponding TRPA views are noted in the text. Attachment 4.1-B: Briefing Memo – Visual Simulation Viewpoints includes additional detail on the TRPA views.

This section includes an evaluation of visual change associated with all of the project components, including those that will not result in a particularly noticeable effect. For these discussions, references to existing conditions photographs are provided instead of visual simulations.

Tahoe City Substation

Figure 4.1-5: Visual Simulation – State Route 89 at William B. Layton Park (VP 2) presents a before and an after view from SR 89 at the entrance to William B. Layton Park in Tahoe City. This view is in the same location as one of the TRPA views (Attachment 4.1-B: Briefing Memo – Visual Simulation Viewpoints, page 5); however, it is facing further south than the TRPA view in order to capture the existing Tahoe City Substation. The existing view includes SR 89, a traffic signal, a commercial building, and a parking lot in the foreground. The building and signs are wood and wood-colored elements designed in a rustic style. Portions of the existing Tahoe City Substation are visible above the building's roofline. The majority of the substation structures appear against a backdrop of dense conifer trees.

The simulation shows the modified substation on the right side of the view behind the existing building. Much of the new equipment will appear against a landscape backdrop; however, some new equipment will silhouette against the sky. The simulation also shows the removal of several existing trees seen near the left side of the existing view. The additional substation components are similar in scale and form to the existing substation and are not particularly prominent; however, the tree removal represents a noticeable visual change to the landscape setting. In addition, the tree removal may result in portions of the substation equipment becoming more noticeable from the SR 89 corridor just south of the substation site. Although the project will not substantially alter the existing visual character or composition of the landscape setting, it could result in the substation appearing slightly more noticeable.

Table 4.1-4: Summary of Visual Effects at Key Viewpoints

VP Number	Location	Figure Number	Jurisdiction	Applicable VQO (SIO Equivalent)	Project Elements Shown in Simulation	Viewer type and relative volume	Summary of Visual Change and Potential Visual Contrast	Findings- in context of applicable VQO/SIO
2	SR 89 at William B. Layton Park	Figure 4.1-5	TRPA	Not Applicable (NA)	*Tahoe City Substation:* Substation expansion with some taller elements visible. Approximately five trees removed.	Motorists – high volume Recreational users – moderate volume	The change includes a minor increase in the amount of visible substation structures. New substation elements are similar in color and form to existing substation elements. The project represents a minor incremental visual change.	APM-AES-05 calls for new landscape screening to reduce the project's visibility from the roadway and recreation trail. VQO/SIO is not applicable. The project does not substantially alter the existing roadway view at the state park near the TRPA view location.
6	Pedestrian Bridge over Truckee River	Figure 4.1-6	USFS TRPA	Partial Retention (Moderate)	*625 Line:* 75-foot-tall weathered steel replacement pole. Two existing wood poles removed.	Recreational users – moderate volume	The project will replace two poles with a single, taller pole similar in color and form to the existing transmission structures. Both the existing and new structures' color and form will mimic conifer trees seen in the surrounding landscape; the upper portion of the replacement pole will contrast against sky. The reduction in the number of poles reduces the visual clutter.	APM-AES-08 calls for careful siting to reduce visibility in cases where 625 Line replacement poles are adjacent to the Truckee River and seen in unobstructed foreground public views along the river or adjacent trails (provided that substantial tree removal will not be required to relocate them). The project's change appears subordinate within the overall visual setting and represents a minor incremental alteration of the existing landscape character.
8	SR 89 west of Fairway Drive	Figure 4.1-7	USFS TRPA	Partial Retention (Moderate)	*625 Line:* Small portion of new 66-foot-tall weathered steel pole visible behind trees. Existing wood pole removed.	Motorists – high volume Recreational users – moderate volume	The project will replace an existing pole that currently appears in the foreground and is partially silhouetted against the sky; the new pole will be of similar scale and color. The project will generally reduce the deviation in landscape character because the new pole will be largely screened by coniferous trees and its form and color will blend in with conifer tree trunks seen in the landscape setting.	The project change appears subordinate within the overall visual setting and represents an incremental improvement to the landscape character. The project also slightly improves aesthetic conditions at the TRPA viewing location.
9	Tahoe Rim Trail	Figure 4.1-8	USFS TRPA	Partial Retention (Moderate)	*625 Line:* New 53-foot-tall weathered steel poles. Removal of existing poles. Removal of trees in ROW.	Recreational users – low volume (remote trail)	The project replaces existing built elements with similar elements. Both the existing and new structures' color and form mimic conifer trees seen in the surrounding landscape. Minor vegetation clearance does not substantially alter the texture of the forest background. The project represents a minor incremental visual change.	The project represents a minor change that does not substantially alter the existing landscape character. Project does not significantly affect visual conditions for this TRPA view location.

VP Number	Location	Figure Number	Jurisdiction	Applicable VQO (SIO Equivalent)	Project Elements Shown in Simulation	Viewer type and relative volume	Summary of Visual Change and Potential Visual Contrast	Findings- in context of applicable VQO/SIO
11	Mount Watson Road west of Mount Watson	Figure 4.1-9	USFS TRPA	Partial Retention (Moderate)	*625 Line:* New 57-foot-tall weathered steel pole. Original existing pole not seen from this viewpoint.	Motorists – low volume Recreational users – low volume (remote trail)	The project introduces a new pole in an open clearing; the upper portion could be noticeable in view from a limited portion of roadway due to contrast in form and color against the sky. Conductors and insulators could also be noticeable. The project could result in minor deviation in landscape character.	APM-AES-06 calls for the relocation of pole 625-085 to the eastern edge of the clearing to reduce its visibility from the roadway. Due to the dense tree-cover in the area, the new pole will be seen from a limited portion of Mount Watson Road and will generally not appear prominent within the landscape setting. When relocated, the new pole will blend in with the forest backdrop and will, therefore, appear subordinate within the overall landscape context.
14	Mount Watson Road north of Mount Watson	Figure 4.1-10	USFS TRPA	Partial Retention (Moderate)	*625 Line:* New 66-foot-tall weathered steel pole. Approximately three trees removed. Original existing pole not seen from this viewpoint.	Motorists – low volume Recreational users – low volume (remote trail)	The project introduces a new pole; existing trees screen the lower portion from view. However, the upper part will appear silhouetted against the sky and will contrast in line, color, and form. The project represents a noticeable visual change.	APM-AES-09 calls for new conifer tree planting to reduce the project's visibility from the roadway. Due to the dense tree-cover in the area, the new pole will be seen from a limited portion of Mount Watson Road and will generally not appear prominent within the landscape setting. Intervening young trees will mature, providing additional screening and reducing contrast. Thus, the project will not substantially alter existing landscape character.
16	Mount Watson Road	Figure 4.1-11 and Figure 4.1-12	USFS TRPA	Partial Retention (Moderate)	*625 Line:* New 55-foot-tall weathered steel poles with new cleared ROW. Removal of existing wood pole.	Motorists – low volume Recreational users – low volume (remote trail)	The project adds new poles, which mimic the line and color of existing conifer tree trunks seen in the surrounding landscape. Vegetation clearing within the ROW will contrast with the texture of adjoining forested areas; however, ROWs share similar visual characteristics of the existing open roadway corridor. Removal of existing transmission structures and cleared ROW that is currently visible from the roadway will reduce the visible landscape alteration.	APM-AES-09 calls for new conifer tree planting to reduce the project's visibility from the roadway. The project introduces elements that alter the overall landscape character; however, similar transmission facilities will be removed. Because the permanent project ROW will be narrowed after construction and vegetation will be allowed to re-establish, visual contrast in form and texture will decrease and the project will become less evident within landscape setting.

VP Number	Location	Figure Number	Jurisdiction	Applicable VQO (SIO Equivalent)	Project Elements Shown in Simulation	Viewer type and relative volume	Summary of Visual Change and Potential Visual Contrast	Findings- in context of applicable VQO/SIO
19	Cambridge Drive	Figure 4.1-13	TRPA	Although the project is not on USFS land, the VQO of adjacent area is Partial Retention (Moderate)	*625 and 650 lines:* New 75-foot-tall replacement weathered steel pole. Two existing wood poles removed.	Residents – low volume (cul-de-sac with approx six residences)	The project will replace two poles with a single, taller pole that is similar in color and form to the existing transmission structures. Both the existing and new structures' color and form will mimic confer tree trunks seen in the surrounding landscape; only the upper portion of the replacement pole will contrast against the sky. Reduction in the number of poles will reduce the visual clutter.	Because the project will remove noticeable built elements that deviate from the landscape character, it represents a minor aesthetic improvement to the overall visual quality, including views experienced from adjacent USFS land.
23	SR 267 near Tahoe Rim Trail	Figure 4.1-14	USFS TRPA	Retention (High)	*650 Line:* Replacement poles located out of view of road. Removal of existing wood poles.	Motorists – high volume	The project will remove various existing wood poles that, although consistent with the form and color of adjacent coniferous tree trunks, are noticeable built elements. The project will decrease visual clutter and reduce the presence of transmission structures in the view.	The project will decrease the noticeable deviation in landscape character and improve the intact appearance of the visual setting. The project will improve viewing conditions for this TRPA view.
24	Tahoe Rim Trailhead	Figure 4.1-15	USFS TRPA	Retention (High)	*650 Line:* New 61-foot-tall weathered steel pole. Removal of three existing wood poles.	Recreational users – moderate volume (trailhead and lookout)	The project will replace two existing poles that appear silhouetted against the sky and distant ridgelines with a new single pole of similar form and color. The project will decrease visual clutter and reduce the presence of transmission structures in the view.	The project will decrease the noticeable deviation in landscape character and improve the intact appearance of visual setting. The project will improve viewing conditions for this view, which is similar to a TRPA view.
25	SR 267 near Brockway Summit	Figure 4.1-16	TRPA USFS	Retention (High) and Partial Retention (Moderate)	*650 Line:* New 61- and 52-foot-tall weathered steel poles. Removal of existing wood poles and guy wires.	Motorists – high volume	The project will replace existing poles that mimic the line and color of surrounding conifer tree trunks with similar elements. The project represents a minor visual change, which will not be particularly noticeable.	APM-AES-07 calls for the replacement poles for the 650 Line that are adjacent to SR 267 to be carefully sited to minimize their visibility (provided that substantial tree removal will not be required). The project represents a minor change, which does not affect apparent landscape character.
30	SR 267 in Martis Valley	Figure 4.1-17	Placer County	NA	*650 Line:* 66- and 52-foot-tall weathered steel replacement poles. Existing wood poles removed.	Motorists – high volume	The project will replace existing poles that contrast in color, line and form with the light-colored, fine-textured background of open fields. New poles are somewhat taller structures of similar form and color. The project represents a minor visual change, which will not be particularly noticeable.	VQO/SIO is not applicable. The project will not substantially alter the character of existing view.

VP Number	Location	Figure Number	Jurisdiction	Applicable VQO (SIO Equivalent)	Project Elements Shown in Simulation	Viewer type and relative volume	Summary of Visual Change and Potential Visual Contrast	Findings- in context of applicable VQO/SIO
36	Martis Creek Trail	Figure 4.1-18	Placer County	NA	*650 Line* 52- and 61-foot-tall weathered steel replacement poles. Existing wood poles removed.	Recreational users – moderate volume (easy trail) Residents – low volume	The project will replace existing poles that currently contrast somewhat in form and color against the backdrop vegetation. New poles will be somewhat taller, but their color will blend in with landscape backdrop. Given a reduction in visual contrast level, the project represents a minor visual improvement.	VQO/SIO is not applicable. The project will not substantially alter the character of existing view.

Existing view from State Route 89 at William B. Layton Park looking south (VP 2)

Visual simulation of the project (Tahoe City Substation)

Note: For viewpoint location refer to Figure 4.1-2

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Figure 4.1-5
Visual Simulation - State Route 89 at William B. Layton Park (VP 2)
625 and 650 Line Upgrade Project

625 Line

Figure 4.1-6: Visual Simulation – Pedestrian Bridge over Truckee River (VP 6) shows the 625 Line from the pedestrian bridge over the Truckee River in Tahoe City. The Truckee River appears in the foreground, while double wood poles from the existing 625 Line can be seen on the left river bank. This existing utility structure appears against the skyline slightly, but is mostly backdropped by forested hills. Conductors can be seen to the left, backdropped by trees and crossing the river against the skyline. A small wooden building on the right side of the river along SR 89 and a pipeline crossing over the river in the distance also appear in the view. Further upstream to the east, other buildings and built elements are visible from the river. As shown in this image, river rafting is a popular recreational activity in this area.

The simulation shows the new single, self-supporting steel pole, as well as the removal of two existing poles. The number of conductors remains the same as in the existing condition. The replacement pole, located in roughly the same place as the existing poles, is 75 feet tall—approximately 15 feet taller than the existing poles—and its diameter is somewhat wider than the existing poles. From this vantage point, most of the replacement pole will be seen against the landscape backdrop; however, the upper portion will appear silhouetted against the sky. When seen along the skyline, this pole will appear somewhat more prominent than the existing poles due to its height and wider profile. However because the new pole replaces two existing poles, there will be a decreased amount of visual clutter in the view.

A comparison of the existing view and simulation indicates that while the visual change will be noticeable, it will represent an incremental change that does not substantially alter the overall existing visual character of this landscape setting.

Figure 4.1-7: Visual Simulation – State Route 89 west of Fairway Drive (VP 8) portrays a before and an after view of the 625 Line as seen from SR 89 west of the intersection with SR 28. The simulation view is from the recreation trail that runs parallels to SR 89 near the pedestrian bridge. This viewpoint is near a TRPA View (Attachment 4.1-B: Briefing Memo – Visual Simulation Viewpoints, page 5). Photograph 7 more closely recreates this view; however, it was not used for simulation purposes because the project is not particularly noticeable in the view. The existing view includes a wood pole of the existing 625 Line that appears prominently in the planting strip between the trail and the highway, near the center of the image. Conductors cross the highway to a pair of wood poles located behind the trees at the right side of the view. Other built elements seen in the view include roadway signs and a building on the right side of the road.

The simulation shows the removal of the existing wood pole. The new pole will be located behind tall conifers to the north on the right side of the view. Conductors will still be visible crossing above the roadway, and a small portion of the new steel pole can be seen through some upper conifer branches on the right side of the view. As seen from this location along SR 89, the project represents an incremental change that will improve the area's visual quality by reducing the number of visibly prominent utility structures.

Figure 4.1-8: Visual Simulation – Tahoe Rim Trail (VP 9) provides a before and an after view of the 625 Line from the Tahoe Rim Trail, north of Tahoe City. From this location, one of several

project trail crossings offers a long-range landscape vista through the project ROW tree clearing. Mountains located south of the Tahoe Basin appear in the backdrop of the view, and, in the middleground, a lighter-colored clearing is visible. An existing wood utility pole appears prominently in the foreground in the center of the view. Additional poles of this line are visible further away, down the hillside. Mature conifer trees are seen along both sides of the cleared ROW.

The simulation shows a replacement pole located down the hillside and further from the viewpoint with other replacement poles beyond it. In addition, some tree removal in the ROW clearing is shown. The simulation indicates that the distant mountains will become more visible as a result of the tree removal. The replacement poles appear similar in scale to the existing poles. Although the replacement poles will be somewhat taller than the existing poles, their greater distance from the viewpoint and smaller proportion of skyline structures will reduce their visual prominence. From this vantage point on the Tahoe Rim Trail, the project represents a minor incremental change and an improvement in the landscape's visual quality.

Figure 4.1-9: Visual Simulation – Mount Watson Road west of Mount Watson (VP 11) presents a before and an after view from Mount Watson Road, approximately 1.25 miles west of Mount Watson. In general, views from Mount Watson Road are enclosed by dense conifers on both sides of the roadway. This viewpoint shows one of the few locations where the line crosses the roadway. The new angle pole will be situated in the middle of a clearing adjacent to the road. Because the existing 625 Line is located behind the viewer, this view does not show the existing transmission facility.

The simulation shows a new steel angle pole on the right side of the clearing. The pole is anchored in part by guy wires and has a thinner profile than self-supporting angle poles. Although it is partially backdropped by conifers, the upper portion of the new pole will appear against the skyline. New conductors will also be seen crossing the road against the skyline. When seen from the west, the new pole will appear against a forest backdrop and will, therefore, appear less noticeable. Due to the dense tree-cover in the area, this particular pole will be visible from a limited portion of Mount Watson Road. The simulation portrays a location where the pole will be most visible and where the project will result in a noticeable visual change.

Figure 4.1-10: Visual Simulation – Mount Watson Road north of Mount Watson (VP 14) shows the project at a location approximately 0.75 miles northwest of Mount Watson and approximately 0.4 mile north of Watson Lake. The roadway appears in the center foreground, surrounded by tall coniferous trees. Because the existing 625 Line corridor is located almost 1,000 feet to the west of this viewpoint, the existing transmission facility cannot be seen from this location. Similar to Figure 4.1-9: Visual Simulation – Mount Watson Road west of Mount Watson (VP 11), this perspective is among the few vantage points where the line crosses Mount Watson Road.

The simulation shows a new steel angle pole and conductors. The conductors appear against the skyline, crossing the road and running parallel to the right side of the road. The simulation also shows some tree removal. Existing young tress screen the lower portion of the new pole, while the top appears silhouetted against the sky. Guy wires are seen against the skyline; however, they are smaller in diameter than the conductors and are barely visible.

Existing view from the pedestrian bridge over the Truckee River looking southwest (VP 6)

Visual simulation of the project (625 Line)

Note: For viewpoint location refer to Figure 4.1-2

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Figure 4.1-6
Visual Simulation - Pedestrian Bridge over Truckee River (VP 6)
625 and 650 Line Upgrade Project

Existing view of State Route 89 west of Fairway Drive looking southwest (VP 8)

Visual simulation of the project (625 Line)

Note: For viewpoint location refer to Figure 4.1-2

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Figure 4.1-7
Visual Simulation - State Route 89 west of Fairway Drive (VP 8)
625 and 650 Line Upgrade Project

Existing view from the Tahoe Rim Trail looking south (VP 9)

Visual simulation of the project (625 Line)

Note: For viewpoint location refer to Figure 4.1-2

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Figure 4.1-8
Visual Simulation - Tahoe Rim Trail (VP 9)
625 and 650 Line Upgrade Project

Existing view from Mount Watson Road west of Mount Watson looking west (VP 11)

Visual simulation of the project (625 Line)

Note: For viewpoint location refer to Figure 4.1-1

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Figure 4.1-9
Visual Simulation - Mount Watson Road west of Mount Watson (VP 11)
625 and 650 Line Upgrade Project

Existing view from Mount Watson Road north of Mount Watson looking west (VP 14)

Visual simulation of the project (625 Line)

Note: For viewpoint location refer to Figure 4.1-1

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Figure 4.1-10
Visual Simulation - Mount Watson Road north Watson (VP 14)
625 and 650 Line Upgrade Project

As seen from this Mount Watson Road viewpoint, the project will result in a somewhat noticeable visual change. Attachment 4.1-C: Visual Simulation in Winter Conditions – Mount Watson Road (VP 14) shows the same view during winter conditions with snow cover. In winter conditions, because the new pole will not appear against a snowy hillside, it is expected that the degree of visual change will be similar to what is portrayed in Figure 4.1-10: Visual Simulation – Mount Watson Road north of Mount Watson (VP 14). The existing young trees that are seen in the foreground near the center of this view will eventually mature to a size similar to some of the taller surrounding trees and will provide, over time, additional screening.

Figure 4.1-11: Visual Simulation – Mount Watson Road West of State Route 267 (VP 16) presents an existing view and simulation from Mount Watson Road, approximately 1.25 miles southwest of SR 267 and approximately 3 miles northeast of Watson Lake. Both the existing and new 625 Line routes cross the road at this location. The roadway appears in the center foreground, surrounded by tall coniferous trees. Between the trees, the ridgeline of Mount Pluto appears in the distance, down the roadway to the west. The photograph also includes some areas of ground with snow cover. In the foreground on the left, the lower portion of an existing 625 Line wood pole appears near the edge of the road. The existing 625 Line ROW corridor extends (left) southwest out of this view, after crossing Mount Watson Road.

The simulation shows the project as it would appear shortly after construction. The existing 625 Line wood pole has been removed and the new 625 Line ROW appears on the right. The project includes a line of self-weathered steel poles and overhead conductor, as well as clearing of trees and other vegetation within a 65-foot-wide ROW. The vegetation clearing results in a tree-lined, open view toward the Mount Pluto ridgeline in the distance to the west. As seen from this Mount Watson Road vantage point, the project will result in a noticeable visual change, including increased contrast in texture between the ROW and surrounding landscape setting. During periods with snow cover, it is expected that the contrast in color and texture between the cleared ROW ground surface and surrounding vegetation cover could appear somewhat more evident. Currently, the existing 625 Line poles and ROW are visible to the southwest and northeast from this roadway location (comparable to Photograph 12). Removal of these existing 625 Line facilities will result in an additional landscape change brought about by the project. The affected roadway views will be brief in duration, generally lasting less than 1 minute.

Figure 4.1-12: Visual Simulation 8 to 10 Years after Construction – Mount Watson Road West of State Route 267 (VP 16), presents a second simulation from this vantage point. This simulation shows the project's appearance 8 to 10 years after construction, when the permanent ROW is 40 feet in width, as opposed to 65 feet. The simulation portrays re-establishment of understory vegetation and small coniferous trees within the ROW area. The simulation demonstrates that re-established vegetation and the narrowed ROW will reduce the level of visual contrast between the project and its landscape setting. In addition, at the ROW edges, the young trees shown in the simulation will eventually be comparable in size to the mature trees seen in the surrounding landscape. In this respect, the contrast and overall visibility of the permanent ROW will be further reduced, thus decreasing the project's visual effect on the landscape setting.

Existing view from Mount Watson Road looking west (VP 16)

Visual simulation of the project after construction (625 Line)

Note: For viewpoint location refer to Figure 4.1-1

Figure 4.1-11
Visual Simulation - Mount Watson Road west of State Route 267 (VP 16)
625 and 650 Line Upgrade Project

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Existing view from Mount Watson Road looking west (VP 16)

Visual simulation of the project approximately 8 to 10 years after construction (625 Line)

Note: For viewpoint location refer to Figure 4.1-1

Figure 4.1-12
Visual Simulation 8 to 10 years after construction -
Mount Watson Road west of State Route 267 (VP 16)
625 and 650 Line Upgrade Project

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As seen in the Figure 4.1-11: Visual Simulation – Mount Watson Road West of State Route 267 (VP 16) and Figure 4.1-12: Visual Simulation 8 to 10 Years after Construction – Mount Watson Road West of State Route 267 (VP 16) simulations, the project represents a noticeable change to this Mount Watson Road view. However, given the removal of the existing transmission line structures and ROW, vegetation re-establishment, and the reduced width of the permanent ROW, the long-term visual effect will not be substantial.

625 Line and 650 Line

Figure 4.1-13: Visual Simulation – Cambridge Drive (VP 19) portrays a before and an after view taken near the end of Cambridge Drive, in a residential area of northern Kings Beach (VP 19). A rustic recreation trail that parallels the transmission line ROW runs along the end of the cul-de-sac, perpendicular to the road. At the end of this street, two existing wood poles associated with the 625 and 650 lines appear. A wood distribution pole is located slightly closer to the viewpoint at the edge of the pavement. Tall coniferous trees provide a backdrop to the existing transmission poles and partially screen the conductors. Scattered shrubs, boulders, and bare soil comprise the ground cover. Other vertical elements seen at this location include roadway markers for snow removal.

The simulation shows a single steel replacement pole located near the center of the view. It is taller than the existing poles, but similar in profile and color. Conductors for both the 625 and 650 lines are carried on this double-circuit pole and appear against both the sky and tree backdrop. In this view, the replacement of two poles with a single, taller pole will somewhat reduce the visual clutter and, therefore, represents a positive incremental visual change.

650 Line

Figure 4.1-14: Visual Simulation – State Route 267 near Tahoe Rim Trail (VP 23) depicts a before and an after view from SR 267 taken near the Tahoe Rim Trail. Dense conifer trees on either side of the roadway frame a view of mountains beyond. In this view, wood poles of the 650 Line appear along the left side of the roadway. On the right are poles supporting guy wires for the transmission poles. Other built elements that appear in the view include roadway markers and snow removal markers.

The simulation shows the removal of existing poles on both sides of the roadway. The 650 Line has been relocated to the north. The relocated line is behind the tall conifers bordering the roadway and is no longer visible from this location. From this particular viewpoint, the project represents an incremental and noticeably positive visual change.

Figure 4.1-15: Visual Simulation – Tahoe Rim Trailhead (VP 24) presents a before and an after view looking south from the Tahoe Rim Trail area near SR 267, northwest of Kings Beach. The view is in a similar location to a TRPA View (Attachment 4.1-B: Briefing Memo – Visual Simulation Viewpoints, page 5). In this location, dramatic distant views of the forested mountains of the Lake Tahoe Basin are available. The view includes conifers and interpretive trail signage, as well as three existing wooden poles of the 650 Line. Conductors for both the 650 Line and a distribution line are carried on the wood poles.

The simulation depicts a single steel replacement pole located near the center of the view. The other replacement poles will be located out of the view. Although the single replacement pole is taller than the existing poles, it will be located further away and downslope from the viewpoint and will, therefore, be less prominent. In addition, with the pole relocation, two of the replacement structures will no longer be visible in this view. From this particular scenic vista, the project represents an incremental visual change that will improve the landscape setting.

Figure 4.1-16: Visual Simulation – State Route 267 near Brockway Summit (VP 25) shows a before and an after view from southbound SR 267 near the Brockway Summit, north of Kings Beach. This is the first location traveling south on SR 267 where Lake Tahoe becomes visible from the roadway. This view encompasses roadway and forests in the foreground with the lake and distant shoreline in the distance. In this respect, the view represents an important visual gateway experience. This view also approximately replicates a TRPA View (Attachment 4.1-B: Briefing Memo – Visual Simulation Viewpoints, page 5). Wood poles of the existing 650 Line also appear along the left (west) side of the roadway and two support poles for guy wires are visible on the right side. Two sets of guy wires cross over the road in this view.

The simulation shows replacement poles situated in approximately the same locations as the existing poles on the west side of the roadway. The existing guy wires crossing the road and support poles will be removed. The replacement steel poles will be somewhat taller than existing poles and could appear somewhat more noticeable against the skyline. However, the replacement poles will appear similar in scale and color to the existing structures. The removal of existing poles and guy wires will reduce the level of visual clutter and, therefore, will be a positive visual change. A comparison of the existing view and visual simulation demonstrates that the project represents a minor, incremental change, and will not be particularly noticeable to travelers on this roadway.

Figure 4.1-17: Visual Simulation – State Route 267 in Martis Valley (VP 30) shows a before and an after view from southbound SR 267 in Martis Valley in northern Truckee (VP 30). After passing through the mountains around Lake Tahoe where roadway views are generally enclosed by dense conifer forests, this is one of the first open vistas across the broad plain of the Martis Valley. This view currently includes open meadow and forests in the foreground and middle ground with unobstructed, panoramic views across the valley to the distant mountains to the north of Truckee. In addition, the wood poles of the existing 650 Line cross the open meadow. In this area, due to the sparse tree cover of the landscape, views toward the existing transmission line are open and generally unobstructed.

The simulation shows the steel replacement poles in locations generally similar to the existing poles. A comparison of the existing view and simulation demonstrates that the new poles are somewhat taller than existing poles; however, the new poles will generally be similar in appearance to the existing poles. It may be noted that the replacement pole will be located closer to the viewpoint than the existing structure. As seen from this SR 267 viewpoint, visual changes to the landscape setting will be incremental and will not substantially alter the existing visual character or quality of the landscape setting.

Existing view from Cambridge Drive looking east (VP 19)

Visual simulation of the project (625 and 650 Line)

Note: For viewpoint location refer to Figure 4.1-1

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Figure 4.1-13
Visual Simulation - Cambridge Drive (VP 19)
625 and 650 Line Upgrade Project

Existing view from State Route 267 near the Tahoe Rim Trail looking east (VP 23)

Visual simulation of the project (650 Line)

Note: For viewpoint location refer to Figure 4.1-1

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Figure 4.1-14
Visual Simulation - State Route 267 near Tahoe Rim Trail (VP 23)
625 and 650 Line Upgrade Project

Existing view from the Tahoe Rim Trailhead near State Route 267 looking east (VP 24)

Visual simulation of the project (650 Line)

Note: For viewpoint location refer to Figure 4.1-1

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Figure 4.1-15
Visual Simulation - Tahoe Rim Trailhead near State Route 267 (VP 24)
625 and 650 Line Upgrade Project

Existing view from State Route 267 near Brockway Summit looking southeast (VP 25)

Visual simulation of the project (650 Line)

Note: For viewpoint location refer to Figure 4.1-1

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Figure 4.1-16
Visual Simulation - State Route 267 near Brockway Summit (VP 25)
625 and 650 Line Upgrade Project

Existing view from State Route 267 in Martis Valley looking northwest (VP 30)

Visual Simulation of the project (650 Line)

Note: For viewpoint location refer to Figure 4.1-1

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Figure 4.1-17
Visual Simulation - State Route 267 in Martis Valley (VP 30)
625 and 650 Line Upgrade Project

Figure 4.1-18: Visual Simulation – Martis Creek Trail (VP 36) shows a before and an after view from the Martis Creek Trail near the existing 650 Line and the end of the proposed rebuild (VP 36). The trail is part of the Tompkins Memorial Trail, a 14.6-mile-long recreation trail network that connects to the Northstar Ski Resort area. The view encompasses an open meadow backdropped by forested mountains, including Lookout Mountain, part of the Northstar Ski Resort. The existing transmission line located along the far side of the meadow is approximately 600 feet from this vantage point. Against the backdrop of the dark, coniferous forest, the existing poles and conductors are not prominent elements in the landscape.

The simulation shows new, taller poles, in approximately the same locations as existing poles. Although the poles are taller, they are of a similar scale, design, and color, to the existing poles. Their dark color results in low visual contrast against the forested background. The simulation indicates that visual change associated with the project will not be particularly noticeable. Therefore, the project represents an incremental change that does not substantially alter the overall existing visual character seen in this location.

132/650 Line Double-Circuit

Approximately 32 poles along 1.6 miles of transmission line will be replaced and reconfigured as part of the 132/650 Line Double-Circuit. The line originates just south of Brockway Road near the northwest corner of the Village Green Mobile Home Park and runs north through the Town of Truckee to the North Truckee Switching Station. As shown in Photographs 37 through 44, the 132/650 Line Double-Circuit lies within a developed landscape that includes existing transmission and distribution structures. Because replacement poles will be similar in scale and appearance to the existing structures, the visual effect will be minor and incremental. Therefore, the 132/650 Line Double-Circuit will not substantially alter the appearance of the landscape setting.

Northstar Tap/Fold

Modifications to the existing Northstar Tap/Fold involve replacing approximately 14 wood poles with 11 slightly taller, self-weathering structures, on an approximately 0.5-mile-long transmission line. This transmission line extends from the 650 Line on SR 267 to the Northstar Substation located at the end of Stable Road. Public views of this project component are limited. A view of the existing SR 267 crossing, near Northstar Drive, includes wood pole transmission structures, as shown in Photograph 28. Proposed modifications to the existing facility are relatively minor and will not alter its scale or general appearance. Because public views of this project component are limited, and given the minor degree of modification, the effects will not be particularly noticeable.

Brockway Substation

The Brockway Substation is situated in a forested, mixed-use residential and industrial neighborhood in Kings Beach. This facility will be decommissioned as part of the project, and the site will be reclaimed. Although it is largely screened by mature conifers, the substation's removal will result in a positive visual impact.

Northstar Substation

The Northstar Substation is located near the intersection of Stables Road and Northstar Drive, as shown in Photograph 45. This facility is set back from public roads and surrounded by existing mature trees. Views from public locations, including those from Northstar Drive and SR 89, are largely screened by these trees. The proposed substation improvements will occur within the existing substation fence line and will be relatively minor. The changes will not substantially alter the substation's scale or existing visual character. Because of the restricted visibility of the facility and minor degree of modification, the visual change will not be noticeable to the public.

Squaw Valley Substation

The Squaw Valley Substation is located near the intersection of SR 89 and Squaw Valley Road, more than 1.8 miles west of the 625 Line. Minor improvements, located entirely within the existing fence line, will occur at this substation. This facility is briefly visible from a limited segment along SR 89. A view toward the substation, taken from the intersection of the two roadways, demonstrates that tall, mature trees substantially screen views of the substation, as shown in Photograph 46. Given its limited visibility and substantial screening, the minor degree of visual change will not be particularly noticeable.

Truckee Substation and North Truckee Switching Station

The project proposes modifications to the existing Truckee Substation, which is located in an industrial area to the east of downtown Truckee. Unobstructed views of this facility are available from Donner Pass Road. Substation improvements will occur within the existing substation fence line. Because the proposed improvements are minor, and because this site lies within a developed industrial area, the changes will not be particularly noticeable to the public and will not substantially affect the landscape setting.

The North Truckee Switching Station is located on Pioneer Trail Road just south of Comstock Drive in a wooded, industrial-commercial neighborhood. The site is visible from places along Pioneer Trail Road. Improvements proposed at this facility are relatively minor and will occur entirely within the existing fence line. Due to the minor degree of modification and given the existing industrial-commercial setting, the visual change to this project element is not expected to be particularly noticeable to the public.

Kings Beach Switching Station

The Kings Beach Switching Station is located approximately 750 feet north of the intersection of Speckled Avenue and Deer Street in Kings Beach. The project will involve incorporation of the existing switching station with new substation equipment to become the new Kings Beach Substation. This rebuilt facility will become a terminus for the rebuilt 625 and 650 lines.

All improvements will occur within the larger SPPCo-owned parcel that houses the Kings Beach Diesel Generation Station. This site is set back from public roadways and screened by mature trees; therefore, project changes at this site will generally not be visible from public viewing locations.

Existing view from the Martis Creek Trail looking southeast (VP 36)

Visual simulation of the project (650 Line)

Note: For viewpoint location refer to Figure 4.1-1

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Figure 4.1-18
Visual Simulation - Martis Creek Trail (VP 36)
625 and 650 Line Upgrade Project

Impact Evaluation

The project was evaluated primarily using CEQA impact significance criteria. In addition, USFS management goals and TRPA scenic thresholds were considered. Overall, the project will not substantially alter the visual character of the surrounding area as experienced by the public. The project's modifications to the existing landscape setting will not result in a substantial, demonstrable negative effect.

Question 4.1a - Scenic Vista Effects - *Less-than-Significant Impact*

For the purposes of this evaluation, a scenic vista is defined as a distant public view along or through an opening or corridor that is recognized and valued for its scenic quality. Potential effects on four scenic vistas have been evaluated based on this definition and in light of the scenic vistas delineated in TRPA's Lake Tahoe Basin Scenic Resource Inventory (TRPA 1982). Detail on the Landscape Units and Views identified by the TRPA is included as Attachment 4.1-B: Briefing Memo – Visual Simulation Viewpoints. Table 4.1-5: Summary of Scenic Vista Effects at Key Viewpoints summarizes the vistas evaluated. Figure 4.1-1: Photograph Viewpoints – Overview and Figure 4.1-2: Photograph Viewpoints – Details show the locations of these viewpoints.

Table 4.1-5: Summary of Scenic Vista Effects at Key Viewpoints

Location	VP Number	Figure Number	TRPA View
SR 89 at William B. Layton Park in Tahoe City	VP 2	4.1-5	View #6 Roadway Unit 15
SR 89 near the pedestrian bridge over Truckee River in Tahoe City	VP 8	4.1-7	View #6 Roadway Unit 42
SR 267 near Brockway Summit	VP 24	4.1-15	View #1 Roadway Unit 41
Tahoe Rim Trail near SR 267	VP 25	4.1-16	View #2 Roadway Unit 41

As described in the following paragraphs, the project will generally result in minor incremental changes to scenic vistas in the area. In some cases, project-related changes will improve existing visual conditions.

The Figure 4.1-5: Visual Simulation – State Route 89 at William B. Layton Park (VP 2) view, taken from SR 89 at William B. Layton Park, is not actually a scenic vista in the sense of being a "distant public view along or through an opening or corridor that is recognized for its scenic value." This view was included in the evaluation because a wider view from this location is identified in the TRPA inventory. The wider panoramic view shown in Figure 5a of Attachment 4.1-B: Briefing Memo – Visual Simulation Viewpoints includes the Tahoe City Substation and encompasses views of the Truckee River and Fanny Bridge. As demonstrated in Figure 4.1-5: Visual Simulation – State Route 89 at William B. Layton Park (VP 2), the project will result in an incremental change to the foreground view looking south. The effects include some vegetation removal and relatively minor modifications to the existing substation structures. These effects will not substantially alter the existing character and composition of the landscape

setting. APM-AES-05 includes landscaping with trees and shrubs that will provide screening, thereby reducing the project's visibility and impact to the less-than-significant level. Therefore, the project will not affect the scenic vista that is identified in the TRPA scenic resources inventory.

Figure 4.1-7: Visual Simulation – State Route 89 west of Fairway Drive (VP 8), a view from SR 89 west of Fairway Drive, looks south along the recreation trail, encompassing tall conifers with the trail and roadway in the foreground and a backdrop of forested hillside. This view is similar to another TRPA scenic vista, which can be found in Attachment 4.1-B: Briefing Memo – Visual Simulation Viewpoints, Figure 5a). Currently, a wood utility pole appears prominently near the center of this view. A comparison of the before and after images, as depicted in Figure 4.1-7: Visual Simulation – State Route 89 west of Fairway Drive (VP 8), shows that by removing the existing pole and relocating the replacement structure, the project will reduce the visual prominence of utility structures and the scenic quality of the view.

The view from the Tahoe Rim Trailhead encompasses dramatic distant views of forested ridges and mountains. Figure 4.1-15: Visual Simulation – Tahoe Rim Trailhead (VP 24) presents a before and an after view of the project from this location. As shown in the simulation, the project will improve visual conditions by relocating a replacement utility structure that will appear less prominent than the existing pole. In addition, with the relocation, two of the replacement poles are no longer visible in this view.

A similar positive incremental visual effect will also occur at a location along SR 267. Figure 4.1-16: Visual Simulation – State Route 267 near Brockway Summit (VP 25) portrays the project's effect on the southbound SR 267 view at Brockway Summit, a scenic vista that includes Lake Tahoe and its distant shoreline, seen against a mountain backdrop. In this view, project-related change will include removing existing guy wires and support structures. A comparison of the existing view and simulation image demonstrates that the project will not obstruct nor have a substantial effect on distant views of landscape scenery.

Question 4.1b - Scenic Resource Damage within a State Scenic Highway – *Less-than-Significant Impact*

There are no designated state scenic highways within the project viewshed; therefore, project modifications will not affect views from a state scenic highway.

SR 28 and SR 89 in Placer County and I-80 in both Placer and Nevada counties are eligible state scenic highways. Additionally, SR 89, SR 267, and Northstar Drive are identified as Placer County scenic roadways. The Truckee General Plan identifies I-80 as a scenic corridor and Brockway Road as a key gateway corridor. Portions of the project will be visible from these roadway corridors. As described below, the project will result in incremental changes that would generally result in positive visual effects to these scenic corridors. Additional analysis of effects on these public views can be found in Section 4.1.3 Impacts.

State Route 28

The Tahoe City Substation may be visible from SR 28 near the crossing with SR 89. Potential effects on views from this roadway are included in the following discussion of SR 89.

State Route 89

The Tahoe City Substation will be visible from limited locations along SR 89 near the intersection with SR 28. Figure 4.1-5: Visual Simulation – State Route 89 at William B. Layton Park (VP 2) shows a view of the project from a location near this intersection. A comparison of the existing view and the visual simulation demonstrates that the new substation components will be similar in scale and general appearance to the existing substation and will not be particularly prominent. However, tree removal that will occur at the substation site could be a noticeable visual change, and limited portions of the substation could potentially become more noticeable from a limited area along SR 89 (see Photograph 3). With incorporation of APM-AES-05, which includes landscape mitigation, the project will provide additional screening, and the effect will be less than significant.

The existing and new 625 lines parallel and cross SR 89 in the Tahoe City area. Figure 4.1-7: Visual Simulation – State Route 89 west of Fairway Drive (VP 8) depicts the 625 Line as seen from SR 89 west of the intersection with SR 28. The simulation shows the removal of the existing wood pole and its replacement with a pole that is largely hidden behind tree cover. In this location along the SR 89 corridor, the project represents an incremental change that will improve the quality of the visual environment by reducing the number of prominent built elements.

State Route 267

Views from SR 267 within the Lake Tahoe Basin area will generally be improved with project implementation. The Figure 4.1-14: Visual Simulation – State Route 267 near Tahoe Rim Trail (VP 23) simulation—a view from SR 267 taken near the Tahoe Rim Trail—shows the removal of existing poles on both sides of the roadway with the 650 Line relocated behind tall conifers and out of view. From this viewpoint, the project represents an incremental and noticeably positive visual change. Figure 4.1-16: Visual Simulation – State Route 267 near Brockway Summit (VP 25) shows a key roadway view from southbound SR 267 near the Brockway Summit. At this location, the project represents a minor, incremental change. Change at this location will include the removal of some transmission elements, including guy wires, which will decrease the level of visual clutter that will be seen along the roadway.

In the Martis Valley area, the project's effect on SR 267 views will be incremental and will not substantially alter the existing landscape setting. Figure 4.1-5: Visual Simulation – State Route 89 at William B. Layton Park (VP 2), a view from northbound SR 267, shows that replacement poles will generally appear similar to existing poles. The poles will be placed in locations close to the existing poles, and, although they will be somewhat taller, they are generally similar in overall form and appearance to the existing poles.

Interstate 80

As shown in Photograph 43, the existing crossing of the 132 Line from I-80 is located just west of Donner Pass Road. New poles and conductors at this location will be similar in scale and appearance to existing structures and due to the brief viewing duration, project visual effects will be minor and barely noticeable from the roadway.

Brockway Road

The 132 Line crosses Brockway Road near Justin Creek Road south of downtown Truckee. As shown in Photographs 38 and 39, the existing transmission line crosses this location. Replacement poles along this line will be similar in scale and appearance to the existing structures. Therefore, the project's visual effect will be minor and incremental and will not substantially alter the existing character or quality of views from this roadway corridor.

Northstar Drive

The Northstar Tap/Fold, Northstar Substation, and a small portion of the 650 Line are located as close as 500 feet to Northstar Drive. The Northstar Tap/Fold and the substation will be screened by dense, mature conifers and not visible from the road. Photograph 29 shows the existing 650 Line near Northstar Drive at SR 267. Replacement poles for the 650 Line are located along SR 267 to the north and south of the Northstar Drive intersection. Like the effects described previously under the SR 267 discussion, the project's impact on views from Northstar Drive will be minor and incremental.

Question 4.1c - Visual Character Degradation

Construction – Less-than-Significant Impact

Construction-related visual impacts will result from the presence of equipment, materials, and work crews along the route. Overall project construction is expected to take approximately 14 months within a 3-year construction period. However, construction at any one pole location will take considerably less time. These construction-related visual effects are relatively short-term, lasting only a few days at any one pole location. It is expected that they will not be particularly noticeable to the general public. Construction activity may be most noticeable to the limited number of residents who live in close proximity (within 200 to 300 feet) to portions of the project route. Construction-related visual effects could also be noticed by motorists traveling along the route on public roadways.

Construction-related visual impacts associated with grading and ground disturbance required for the installation of new structures and access roads could also occur. There are a limited number of existing residential viewers within close proximity to the route and motorists' views of construction activity will be brief in duration. With the incorporation of APM-AES-01, which includes keeping construction activities inconspicuous and screened where possible, it is expected that these short-term, construction-related visual impacts will be less than significant.

As outlined in Chapter 3 - Project Description, areas that are temporarily disturbed near each replacement pole, as well as areas to be used for conductor stringing, will be restored to pre-construction conditions, as appropriate and agreed upon by landowners, following construction.

Vegetation Clearing Along Right-of-Way

The project will involve tree removal within the majority of the temporary 65-foot-wide ROW areas. The ROW will be required for construction of the proposed transmission line improvements. This will involve grading and vegetation removal within the ROW area. In conjunction with project construction, approximately 155.8 acres of vegetation will be removed within the ROW. The number of trees to be removed for project construction will be determined

based on the project's final alignment. Most mature trees to be removed are between 60 feet and 100 feet tall, though smaller saplings and young trees are scattered throughout. There are very few old-growth trees in the project area; much of the project area has been previously used for timber harvest. The tree clearing will occur primarily along the new 625 Line route, and along new access roads and existing ROWs that will be widened. Tree removal will take place largely in areas that are not generally seen by the public from heavily traveled roadway corridors or from heavily-used recreation areas. Following construction, all disturbed areas, including the cleared ROW, will be recontoured and reseeded.

The widths of SPPCo's existing permanent easements vary, but average approximately 30 feet. SPPCo will negotiate with landowners along the new 625 Line alignment to obtain a new permanent easement of 40 feet and to improve the existing easement to 40 feet along the 650 Line. All tree limbs within 10 feet of the outside conductor of each line will be trimmed in accordance with General Order 95, Rule 35 and California Public Resources Code Section 4293. This will result in a maintained area measuring approximately 36 feet in width, centered on each ROW. However, smaller vegetation will be allowed to grow in this area. Additional clearing may be required outside of this area to remove hazard trees, which are defined as dead, dying, diseased, decaying, or bug-infested trees that have the potential to fall into the line due to their proximity. This will occur on a case-by-case basis, as it does for the existing lines.

Figure 4.1-11: Visual Simulation – Mount Watson Road West of State Route 267 (VP 16) and Figure 4.1-12: Visual Simulation 8 to 10 Years after Construction – Mount Watson Road West of State Route 267 (VP 16), respectively, show the temporary and permanent ROW appearance. This view shows the project from Mount Watson Road at a location where a close-range, unobstructed view down the ROW can be seen from the road. Because this type of unobstructed view is available from limited locations, the simulation shows the ROW vegetation clearing where it would be most evident. Narrowing the permanent operations-phase ROW from 65 to 40 feet will reduce the visual contrast between the cleared ROW area and the surrounding landscape setting. In addition, APM-AES-09 calls for new conifer tree planting in selected areas that will provide screening, thereby reducing the project's visibility and visual contrast.

Because most of the tree removal will occur along areas that are not highly visible to the public and because the width of the ROW will, over time, be reduced to only 36 feet, it is expected that the visual change associated with tree removal will not substantially alter the overall aesthetic character of the project's landscape setting, and the visual effect will be less than significant.

Tahoe City Substation Tree Removal

A limited number of trees will be removed within the perimeter fence line area of the Tahoe City Substation site. APM-AES-05 calls for installing trees and shrubs at key locations around the Tahoe City Substation, which will reduce this effect to the less–than-significant level.

Access Road Grading and Vegetation Clearing

Access to the transmission line ROW will primarily be through the use of existing paved and dirt access roads, which vary in width from approximately 8 to 10 feet. Approximately six new spur roads, ranging between 40 feet to 1,790 feet in length will also be established to facilitate access from existing roads to the transmission lines' ROWs. Construction of these roads will require

grading and vegetation removal in an area 12 feet wide for straight sections, and up to 25 feet wide at roadway curves. Where the terrain allows, the individual pole work areas and stringing sites will be accessed using a centerline travel route that will be located within the 65-foot-wide temporary transmission line ROW. Because the new 625 Line route follows Mount Watson Road more closely than the exiting alignment, fewer access roads will be needed. The areas will be allowed to return to pre-construction conditions in places where access roads are no longer needed. The Project Description provides detailed descriptions of new access roads. New spur roads are primarily located along the relocated 625 Line in areas that are not particularly visible to the public. Therefore, it is anticipated that the visual effects will be less than significant.

Staging Areas

The project will require seven temporary construction staging areas along the project route. Activities and equipment storage at each staging area will be limited in duration to the construction needs of adjacent portions of the project, as outlined in the Project Description. Once construction has been completed, SPPCo will restore the temporary staging areas to near pre-construction conditions. With the exception of the Northstar Golf Course staging area, the staging areas are all located away from public viewing areas or are generally screened from view by mature vegetation. Chapter 3 – Project Description provides a more detailed discussion of each staging area's activities and dimensions. A description of the potential visibility of construction activities at each of the staging areas follows.

Joerger Road Staging Area

This approximately 2.8-acre site lies adjacent to the Martis Creek Lake Recreation Area and the Truckee Tahoe Airport. The site has scattered tree cover. Denser tree cover lies to the south and east along an area that drains into Martis Creek. Open views of the site between scattered conifers are available from Joerger Drive, a two-lane roadway that ends 0.5 mile to the east. Dense trees to the south generally screen views of the site from Martis Creek Road, the airport, and Alpine Meadows Campground, and a developed portion of the recreation area. Because of the limited local use of the adjacent roadways and dense vegetation to the south and west, activities at this staging area will not be particularly noticeable.

Northstar Golf Course Staging Area

This site is approximately 2.1 acres in size and is located adjacent to the well-traveled SR 267, north of the Northstar Golf Course. Photograph 30, a view looking west toward the site from SR 267, indicates that there is limited tree cover in this area. Views of construction activities at this staging area will be noticeable from the Northstar Golf Course and to travelers along SR 267. The nearest residential area is located approximately 0.5 mile to the south. Views from these residences will be partially screened by mature trees. Given the viewing conditions, it is expected that of the seven staging areas, the Northstar Golf Course area will be most evident to the greatest number of viewers. Use of the Northstar Golf Course Staging Area will be limited in duration, and with the incorporation of screening as described in APM-AES-01, the anticipated visual effects will be less than significant.

Kings Beach Staging Area

This 2.1-acre site is located amidst dense, coniferous forest with access from a dirt road off of Canterbury Drive—a residential street. The nearest residence is located on Cambridge Drive, approximately 350 feet away. Dense tree cover generally screens views of the site from the nearby residences and streets. Although construction vehicles and equipment traveling to and from the site along local streets could be noticeable to residents, use of the staging area will generally not be evident.

Sawmill Flats Staging Area

This approximately 3-acre staging area is located on a disturbed site near Mount Watson Road, uphill from a dam on West Martis Creek. Mount Watson Road is lightly traveled, and views from this roadway are screened by dense, tall tree cover. The site is approximately 0.35 mile from Northstar-at-Tahoe ski runs and 1 mile from residences; however, dense tree cover generally restricts the site's visibility.

Former Batch Plant Staging Area

This site is approximately 0.2 acres in size and located adjacent to Mount Watson Road. This roadway is lightly traveled. Dense tree cover and rugged topography limit all but close-range views of the site. The nearest residences are over 2 miles away from the site. Therefore, construction activities at this staging area will be limited in visibility.

Fiberboard Highway Staging Area

This 0.5-acre area lies adjacent to the lightly-traveled Mount Watson Road. The site is over 1.5 miles from the nearest residence. Scattered tree cover in the immediate area, dense tree cover to the north and west, and rugged topography limit views of the site to locations on Mount Watson Road immediately adjacent, and to the south of the site. Thus, construction activities at this site will generally be screened and not particularly noticeable to the public.

Tahoe City Staging Area

The Tahoe City Staging Area is located on approximately 3.4 acres of a previously disturbed site with little tree cover. Site access is via a dirt road off of two residential streets—Jackpine and Red Cedar streets. The staging area lies approximately 0.25 miles from existing residences; however, intervening dense, tall tree cover screens views from the residential area. Construction vehicles and equipment traveling to and from the site could be noticeable to a limited number of residents along the two streets. Use of the Tahoe City Staging Area will be limited in duration and with the incorporation of screening as described in APM-AES-01, the anticipated visual impacts will be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Transmission Lines

As outlined in the following discussion, the proposed removal of 15 miles of transmission line, replacement of approximately 12 miles of existing transmission line, and introduction of approximately 16 miles of new transmission line will result in incremental changes to the project's visual setting. A set of visual simulations illustrates the change associated with

transmission line improvements that will be seen from eleven key public viewpoints in the project area (Figures 4.1-5 through 4.1-18). With the incorporation of APM-AES-02 through APM-AES-09, which include using dulled finishes and relocating select poles, the visual effects will not substantially alter or degrade the existing visual character or quality of the project's landscape setting. In some instances, including along scenic roadways and in residential areas, project implementation will improve existing visual conditions, as discussed in Section 4.1.3 Impacts.

As part of the project, the existing approximately 15-mile-long 625 Line, including 341 wood poles and overhead conductor, will be removed. Following its removal, the existing 625 Line ROW area will be restored. The approximately 16-mile-long rebuilt 625 Line will include 300 new self-weathering (brownish/rust color) steel poles situated within a new 40-foot-wide ROW. Portions of the new 625 Line alignment will be set back further from public roadways and will, therefore, appear less visible to the public, as demonstrated in Figure 4.1-7: Visual Simulation – State Route 89 west of Fairway Drive (VP 8). The new 625 Line will also result in improved visual conditions at the Tahoe Rim Trail, as shown in Figure 4.1-8: Visual Simulation – Tahoe Rim Trail (VP 9). The new transmission line will be visible from the pedestrian bridge over the Truckee River in Tahoe City. From this location, the taller replacement pole could appear somewhat more prominent than the existing pole. APM-AES-08 calls for carefully siting replacement poles to minimize their visibility in cases where they would appear prominently in unobstructed foreground views. In some locations in the Tahoe City area, the project will result in visual improvements along the 625 Line, as shown in Figure 4.1-7: Visual Simulation – State Route 89 west of Fairway Drive (VP 8). In locations on USFS lands along Mount Watson Road, the new 625 Line will be closer to the roadway which, at some locations, will result in the transmission line being more visible from this roadway. APM-AES-06 will relocate a particularly noticeable pole to a less visible location, thus reducing the project's effect on views from Mount Watson Road, as shown in Figure 4.1-9: Visual Simulation – Mount Watson Road west of Mount Watson (VP 11). APM-AES-09 calls for new conifer tree planting in selected areas along Mount Watson Road that will provide screening, thereby reducing the project's visibility and effect on views from the roadway. Because this roadway is remote and not heavily used, the number of affected viewers in this area of the project will be low.

Along the existing 10-mile-long 650 Line, new self-weathering steel poles and conductor will replace 225 wood existing poles and overhead conductor. Although slightly taller, the replacement poles installed along this existing line will be similar in scale and general appearance to the existing wood poles. Portions of the rebuilt 650 Line will be visible from SR 267. Because the new poles will be set back further from the highway in some locations, the project will result in improved views along parts of the roadway, as shown in Figure 4.1-14: Visual Simulation – State Route 267 near Tahoe Rim Trail (VP 23). As demonstrated in Figure 4.1-15: Visual Simulation – Tahoe Rim Trailhead (VP 24), the rebuilt 650 Line will also result in improved visual conditions at the Tahoe Rim Trailhead near SR 267.

Along the 1.6-mile-long 132 Line portion of the project, approximately 32 self-weathering steel poles will replace 30 existing wood poles. In addition, the Northstar Tap modifications will include replacing approximately 14 wood poles with 11 self-weathering steel poles. Although slightly taller, the new poles installed along these two lines will be similar in scale and general appearance to the existing poles, and the resulting visual change will not be particularly

noticeable to the public. Therefore, the visual character of the landscape around the Northstar Tap and the 132 Line areas will not be affected by the project.

Substations and Switching Stations

As described in the following section, the visual effects associated with project modifications to the existing substations and switching stations will generally occur at sites where existing transmission facilities are established features in the landscape setting. In general, the incremental visual changes associated with these improvements will not be noticeable to the public and the effects will not substantially alter the visual character or quality of the project's landscape setting. The proposed changes at the Tahoe City Substation, including a limited amount of tree removal, could be noticeable; however, with the landscape screening proposed as part of the project, the effects will not substantially alter existing views currently experienced by the public.

Decommissioning the Brockway Substation and restoration of the site will result in a net positive impact to the visual character of the surrounding residential neighborhood.

The proposed Northstar Substation improvements will involve minor modifications similar in visual character to the existing substation equipment. The modifications represent a minor incremental change to the existing appearance of the substation. Public views are limited due to screening provided by intervening vegetation; therefore, the minor incremental visual effects will be less than significant.

Similar to project improvements proposed at the Northstar Substation site, the Squaw Valley Substation modifications will be minor and only seen from limited public viewing locations. Therefore, project changes at this existing facility will not result in degradation of existing visual character.

Proposed improvements to the Tahoe City Substation will include some tree removal and modification to an existing substation. The modifications will occur within the existing substation fence line. The additional substation components will be similar in scale and represent a minor incremental change to the existing appearance of the substation. Although the project will not substantially alter the existing visual character or composition of the landscape setting, it could result in the substation appearing slightly more noticeable. APM-AES-05 includes the installation of trees and shrubs at key locations outside the substation perimeter fence line in order to provide additional screening and to integrate the substation's appearance into the surrounding landscape setting. With the incorporation of this APM, as well as the other APMs outlined in Section 4.1.4 Applicant-Proposed Measures, the potential effect on the area's visual character associated with Tahoe City Substation improvements will be less than significant.

Additional modifications to existing facilities include modifications located within the existing fence lines of the Truckee Substation and North Truckee Switching Station, as well as the Kings Beach Switching Station. Modifications at these facilities will be minor and only seen from limited public viewing locations. Therefore, project changes at these component sites will not result in degradation of existing visual character.

United States Forest Service Management Goals

Portions of the project are located on USFS lands in the LTBMU or the TNF. The following discussion evaluates portions of the project in light of USFS visual management goals. VQOs in the project area include Retention, Partial Retention, and Modification, with the SIO equivalents of High, Moderate, and Low. Table 4.1-5: Summary of Scenic Vista Effects at Key Viewpoints presents an evaluation summary for each viewpoint, including applicable USFS visual management objectives, viewer type and relative volume, as well as a summary of change and potential visual contrast and, where applicable, APMs.

The majority of USFS lands through which the project passes have a VQO of Partial Retention or the equivalent of a Moderate SIO, which allows for the presence of some deviations from the natural landscape. This objective calls for modifications that are visually subordinate to the natural landscape. As described in Section 4.1.2 Existing Conditions and documented in Photographs 1 through 48, the existing conditions meet this SIO objective.

A limited portion of the both the existing and new 650 and 625 lines pass through areas in the LTBMU and TNF designated with a VQO of Retention or an equivalent of a High SIO. Areas with High Scenic Integrity should have an intact landscape character with no evident deviations. However, given the presence of existing transmission facilities, these areas do not currently meet the objective designated by the USFS.

SPPCo has incorporated design features intended to reduce the project's overall visibility as well as its prominence in the natural landscape. The design of the project incorporates aesthetic treatment measures that are sensitive to the visual qualities of the natural landscape. Specifically, the dark brown color of the replacement poles described in APM-AES-02 repeats an element of color from the coniferous forest backdrop. Similarly, the vertical line and streamlined form of the poles are more compatible with characteristics of the conifer trunks than the existing poles with horizontal crossarms. In some locations, such as along SR 267 near Brockway Summit, the replacement 650 Line poles are relocated out of public views.

By reducing visual clutter and the number of transmission structures that are currently visible, the project will result in a positive visual change that will allow elements of the natural landscape to appear more visible at some locations on USFS lands. Figure 4.1-8: Visual Simulation – Tahoe Rim Trail (VP 9), Figure 4.1-14: Visual Simulation – State Route 267 near Tahoe Rim Trail (VP 23), Figure 4.1-15: Visual Simulation – Tahoe Rim Trailhead (VP 24), and Figure 4.1-16: Visual Simulation – State Route 267 near Brockway Summit (VP 25) demonstrate these positive visual changes. In the Figure 4.1-8: Visual Simulation – Tahoe Rim Trail (VP 9) simulation, which depicts a view from the Tahoe Rim Trail down the utility ROW northeast of Tahoe City, the greater distance of replacement poles from the viewpoint reduces the visual prominence of the project. From this vantage point, the project represents a minor incremental change that reduces visual clutter. In the Figure 4.1-14: Visual Simulation – State Route 267 near Tahoe Rim Trail (VP 23) simulation, a view from SR 267 near the Tahoe Rim Trail, the overall effect of the project will be a decrease in built structure visibility resulting in a positive visual change. In the Figure 4.1-15: Visual Simulation – Tahoe Rim Trailhead (VP 24) simulation, from the scenic view at a trailhead on the Tahoe Rim Trail, the project also will reduce the visibility of transmission structures. The Figure 4.1-16: Visual Simulation – State Route 267 near

Brockway Summit (VP 25) simulation from southbound SR 267, with Lake Tahoe seen in the distance, demonstrates that in this view, the project will remove some structures and guy wires and that project implementation will result in a positive visual change, due to reduced visual clutter (Section 4.1.3 Impacts includes additional evaluation of the simulation views).

The visual simulation shown in Figure 4.1-9: Visual Simulation – Mount Watson Road west of Mount Watson (VP 11), depicts one location where a new 625 Line angle pole located in an open clearing along Mount Watson Road has the potential to appear prominent from the roadway. APM-AES-06 will relocate the pole to reduce project visibility, which will result in the project elements becoming visually subordinate to the natural landscape character.

In other areas where the new line crosses Mount Watson Road, as shown in visual simulation Figure 4.1-10: Visual Simulation – Mount Watson Road north of Mount Watson (VP 14) and Figure 4.1-11: Visual Simulation – Mount Watson Road West of State Route 267 (VP 16), the vegetation clearing and new poles are visible from the roadway, introducing visual contrast and noticeable visual change. APM-AES-09 calls for selective conifer tree planting to reduce the project's visibility and preserve the landscape character as seen from Mount Watson Road. With this APM, impacts will be less than significant.

As shown in the simulations, the project is generally a minor incremental change to the landscape setting and, in some cases, a positive change. Given this and existing visual conditions, the project meets USFS objectives in areas designated with a Moderate or Low SIO. Although project implementation would not result in completely eliminating existing built elements from the areas designated with a High SIO, it would bring the area closer to meeting the objective.

Tahoe Regional Planning Agency Thresholds

As outlined in Section 4.1.2 Existing Conditions, the TRPA provides guidance with respect to managing visual quality in part of the project area. The 625 Line, Tahoe City Substation, and Brockway Substation all lie within the TRPA boundary. TRPA policies address a range of aesthetic issues, such as construction impacts, vegetation removal, scenic view effects, design of signage, and lighting. The evaluation included in Attachment 4.9-A: Policies Consistency Analysis outlines why the project generally conforms with TRPA policies regarding aesthetic resources. The following specific aspects of project construction and operation reflect some of the ways in which it is designed to minimize potential visual and aesthetic effects.

The project includes measures to minimize aesthetic impacts of temporary construction activities. Grading, excavation, and other ground-disturbing activities will be limited to what is necessary for installing or removing the poles and reclaiming worksites. Areas disturbed by construction will be recontoured to blend with adjacent topography and revegetated with native seed mixes. SPPCo will restrict areas of tree removal to only locations necessary for construction. The Figure 4.1-8: Visual Simulation – Tahoe Rim Trail (VP 9) simulation shows that in some places, tree removal required for project operation will actually open up long-range views from public locations. Existing roads will be used to access the project work areas and all new roads will be temporary.

In addition, as part of the project, the existing Brockway Substation will be removed from the predominately residential district that lies within the Kings Beach Industrial Plan Area. Its removal from residential and public view will visually upgrade the area. The project does not interfere with scenic views of Lake Tahoe or other prominent scenic features. The Figure 4.1-16: Visual Simulation – State Route 267 near Brockway Summit (VP 25) simulation indicates that the project could improve a key TRPA-identified scenic view of Lake Tahoe by reducing the level of visual clutter seen along the roadway. The only signs proposed to be installed as part of this project will be for safety information. Lighting will only be installed at substations, will conform to TRPA guidelines, and will be used on an as-needed basis only, and not for continuous nighttime use. The project involves modifications to an existing aboveground utility line, for which, because of steep topography, rocky soils, and the high costs associated with the technique, undergrounding is not feasible.

Attachment 4.1-B: Briefing Memo – Visual Simulation Viewpoints explains the project's relationship to TRPA scenic roadway units and vistas that could be in the project area. Four scenic views identified in the 1982 plan are evaluated in the response to Question 4.1c, which determined that the project's effect will be minor and incremental. As previously discussed, in some cases, project implementation will result in improvements to TRPA views by reducing the visual prominence of built features and by decreasing the level of visual clutter currently seen in these views. At the Tahoe City Substation, where changes proposed by the project will be noticeable, APM-AES-03 provides for landscape screening to reduce the projects potential visibility and improve its appearance. In addition, in cases where the new 625 Line will appear prominently within unobstructed foreground views, APM-AES-08 calls for carefully siting replacement poles to reduce their visibility.

Question 4.1d – Light and Glare

Construction – No Impact

Project construction will not involve the use of night lighting; therefore, no impact will occur.

Operation and Maintenance – Less-than-Significant Impact

Project lighting will only be installed at the Tahoe City and Kings Beach substations. Lighting will be directed downward, in accordance with TRPA's outdoor lighting codes, and will be used on an as-needed basis only. Generally, this will consist of one downward-directed lamp, utilizing a 500-watt halogen bulb, located at the control building. Existing structures and landscaping will largely screen substation lighting, and new landscaping proposed at the Tahoe City Substation—described further in APM-AES-05—will further screen views of lighting from outside the facility. In addition, new substation structures will be treated with a non-reflective finish.

No lighting is associated with operation of the transmission lines. Non-specular conductors will be used on the transmission lines, as described in APM-AES-03, and transmission poles will have a dark, non-reflective finish, as described in APM-AES-02.

Because the aesthetic design measures described previously are incorporated into the substation and transmission line components, the project will not create a new source of substantial light

that could adversely affect nighttime views in the area, nor will it create a new source of substantial glare.

4.1.4 Applicant-Proposed Measures

The following measures are proposed to ensure that impacts to aesthetics are reduced to the less-than-significant level:

- APM-AES-01: Construction activities will be kept as clean and inconspicuous as practical. Where practical, construction storage and staging will be screened with opaque fencing from close-range residential views and public viewing areas.

- APM-AES-02: Self-weathering dark brown steel poles (CorTen) will be used for the transmission lines in order to reduce potential visual contrast.

- APM-AES-03: Non-specular conductors will be used for the transmission lines to reduce the potential for new sources of glare.

- APM-AES-04: A non-reflective finish will be used for substation equipment at all substations and switching stations to reduce the potential for new sources of glare.

- APM-AES-05: Landscaping will be installed at the Tahoe City Substation to provide screening and to reduce the project's visibility from SR 89 and the recreation trail. Plant material will be appropriate to the local landscape setting and will be consistent with SPPCo's technical requirements for landscaping in proximity to substation and transmission facilities. More specifically, the following will be implemented:

  – With the property owner's permission, conifer trees will be planted outside of the perimeter fence along the southwest and southeast sides of the substation site. Tree planting will replace existing trees that will be removed and will provide additional screening and landscape backdrop with respect to views from SR 89.

  – With the property owner's permission, on the southeast side of the substation, a mixture of trees and tall shrubs will be planted along the recreational trail adjacent to SR 89 to provide additional screening.

  – With the property owner's permission, at the western corner of the substation site, a mixture of shrubs will be planted outside of the perimeter fence in order to screen views from the recreation trail.

- APM-AES-06: Proposed pole 625-085, located in a highly visible clearing adjacent to Mount Watson Road, will be relocated to the eastern edge of the clearing to reduce its visibility from the roadway.

- APM-AES-07: In cases where replacement poles for the 650 Line are adjacent to SR 267 and will be visible in unobstructed foreground public views from the roadway, poles will be carefully sited to minimize their visibility when substantial tree removal will not be required to relocate them.

be carefully sited to minimize their visibility when substantial tree removal will not be required to relocate them.

- APM-AES-08: In cases where replacement poles for the 625 Line are adjacent to the Truckee River will be visible in unobstructed foreground public views along the river or adjacent trails, poles will be carefully sited to minimize their visibility when substantial tree removal will not be required to relocate them.

- APM-AES-09: In consultation with the USFS and in order to reduce potential project visibility, selective, site-specific conifer tree planting will be considered in limited areas along the new 625 Line route where relatively unobstructed foreground views of new structures are seen from Mount Watson Road. Placement of new trees will not conflict with project operations or safety requirements.

4.1.5 References

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ATTACHMENT 4.1-A: PHOTOGRAPHS OF THE PROJECT AREA IN WINTER CONDITIONS

1. Mount Watson Road looking west (VP 14)*

2. Tahoe Rim Trail at Mount Watson Road looking southwest (VP 24)

3. State Route 267 in Martis Valley looking northwest (VP 30)

4. Martis Creek Trail looking south (VP 36)

*Simulation Photo

ENVIRONMENTAL VISION

010510

Attachment 4.1-A

Photographs of the Project Area in Winter Conditions

625 and 650 Line Upgrade Project

ATTACHMENT 4.1-B: BRIEFING MEMO – VISUAL SIMULATION VIEWPOINTS

ATTACHMENT 4.1-B

Briefing Memo- Visual Simulation Viewpoints
625 and 650 Line Upgrade Project

The following attachment was prepared in April 2009 as part of a consultation process with public agencies including USFS and TRPA. As noted in the attachment, agency input is reflected in the PEA Aesthetics analysis.

Briefing Memo - Visual Simulation Viewpoints

625 and 650 Line Upgrade Project

Proponent's Environmental Assessment

Sierra Pacific Power Company

Prepared for:

Insignia Environmental

Prepared by:

Environmental Vision

April 2009

Briefing Memo- Visual Simulation Viewpoints

625 and 650 Line Upgrade Project

Contents

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I. Introduction

The proposed 625 and 650 Line Upgrade Project (project) is located in northeastern Placer County and southeastern Nevada County, California. A general project location map and project route map are included as Figure 1. All figures may be found following Section IV, References.

A Proponent's Environmental Assessment (PEA) is currently being prepared for the 625 and 650 Line Upgrade Project. The PEA document will include an evaluation of potential impacts to existing visual resources. This memo presents information describing the selected viewpoints for purposes of preparing a set of visual simulations that will document the visual change associated with the project. Figure 1 shows the general location of these eight selected viewpoints and Figure 3 presents the corresponding set of photographs. Field observations as well as review of photography, technical data, public plans and policies pertaining to visual resources management and the criteria outlined in Section II provided the basis for viewpoint selection.

Overall the project involves upgrades to approximately 25 miles of transmission line. The 625 and 650 lines comprise the majority of the project route. The existing 625 Line and the new 625 Line alignment generally run in a southwest-northeast direction. The 650 Line runs in a predominantly northwest-southeast direction, paralleling State Highway 267 (Highway 267) for much of its length. In addition to transmission line upgrades, the project proposes modifications to several substations located along the route including the Tahoe City Substation. Proposed work will generally occur within existing SPPCo transmission corridor rights-of-way (ROW). The PEA document will provide detailed description of the project including each of its components.

The project components are predominantly located within lands managed by the U.S. Forest Service, Lake Tahoe Basin Management Unit and the Tahoe National Forest. The project also spans the communities of Kings Beach, Truckee, and Tahoe City. A major portion of the project also lies within an area managed by the Tahoe Regional Planning Agency (TRPA). The TRPA's *Lake Tahoe Basin Scenic Resources Inventory* and the *TRPA Regional Plan for the Lake Tahoe Basin*, prepared respectively in 1982 and 1986 provide a foundation for managing visual quality in the Lake Tahoe Basin. The TRPA inventory identified a set of roadway and shoreline units including key views. Figure 2 depicts an overview of the Tahoe Basin and the location of TRPA's Roadway and Shoreline Units. The TRPA policy framework guides development in the area with the goal of improving the overall visual quality around the lake. The selection of simulation viewpoints for the 625 and 650 Line Upgrade Project PEA visual analysis is based, in part, on the TRPA scenic view inventory.

Note: Additional simulation viewpoints are included in the PEA based on Agency consultation.

II. Visual Simulations

As part of the PEA aesthetics resources analysis, visual simulations will be produced to illustrate representative views showing the locations, scale and appearance of project features. The general purpose of the simulations will be to document the project-related change that will be seen from key sensitive viewpoints or viewing locations. The PEA document will present the visual simulations as a set of before and after images. These images will document before and after visual conditions by showing each selected existing view paired with a corresponding view showing the project. The visual simulations will provide an analytical tool for developing a technically sound assessment of visual impacts. The simulations will also facilitate clear and objective communication of visual impacts.

The following criteria were employed for purposes of identifying and selecting the location of simulation viewpoints:

• Sensitive or protected views including public open space and recreation trails, residential areas, and designated scenic roadways or vista points are considered important.

• Views that represent the visual experience of a relatively large number of affected viewers are considered important.

• Selected vantage points should include views that portray a representative range of viewing conditions along the project corridor (i.e., varied viewing distance and landscape character).

In addition, it is important to select accessible ground level viewing locations that represent what the public actually sees. Therefore, oblique aerial or "birdseye" views are generally not appropriate for visual impact assessment purposes.

III. Selected Simulation Viewpoints

Table 1 is a summary of the eight simulation viewpoint locations. The table identifies the particular project component(s) that would be visible from each viewpoint and also highlights relevant visual resources management plans and policies for each selected view.

Figure 1 is an overview map of the project route with the simulation viewpoint locations and Figure 3 presents the set of eight photos. Additional figures present detailed maps showing viewpoint locations in relationship to the project route as well as larger reproductions of each simulation photograph (Figures 4-10). In cases where there are related views identified in the 1982 TRPA Scenic Resources Inventory, the TRPA images are presented alongside the simulation views. Detailed maps also show the relationship between TRPA roadway and shoreline units, the project route, and the simulation viewpoints. Figures 9 and 10 show simulation viewpoint locations and photographs for the two simulation views located outside the boundary of the Lake Tahoe Basin (TRPA area). Where it lies in proximity to the project, the Tahoe Rim Trail, a 165-mile trail that circles the ridgelines around the Tahoe Basin, is also delineated on the detailed maps.

Table 1: Summary of Visual Simulation Viewpoints

Number and Viewpoint Location (Map Detail and Photo Figure #)	Visible Project Component	Visual Resources Public Plan/Policy Framework	Related TRPA View
1. Highway 89 at William Layton State Park (Figure 5 and 5a)	Tahoe City Substation, 625 Line	- Highway 89, Eligible State Scenic Highway - TRPA, Tahoe City Community Plan	View #6 Roadway Unit 15
2. Highway 89 (Figure 7 and 7a)	625 Line	- Highway 89, Eligible State Scenic Highway - TRPA, Tahoe City Community Plan	View #6 Roadway Unit 42
3. Tahoe Rim Trail (Figure 7 and 7b)	625 Line	- USFS, Tahoe National Forest - TRPA	
4. Fiberboard Highway/Mt. Watson Rd (Figure 9)	625 Line	- USFS, Tahoe National Forest - TRPA	
5. Cambridge Drive (Figure 8 and 8b)	625 and 650 Lines	- USFS, Tahoe National Forest - TRPA, Kings Beach Community Plan	
6. Tahoe Rim Trail near Highway 267 (Figure 8 and 8b)	650 Line	- USFS, Tahoe National Forest - TRPA	Near View #2 Roadway Unit 41
7. Highway 267 near Brockway Summit (Figure 8 and 8a)	650 Line	- Highway 267, Eligible State Scenic Highway - USFS Tahoe National Forest - TRPA	View #1 Roadway Unit 41
8. Highway 267 (Figure 10)	650 Line	- Highway 267, Eligible State Scenic Highway & Placer County Scenic Route, Martis Valley Community Plan	

Note: all viewpoints are located within Placer County (refer to Figure 1).
Additional simulation viewpoints are included in the PEA based on Agency consultation.

Figure 4 is a map detail showing TRPA Roadway Unit 14 – Tahoe Tavern. The Tahoe City Substation and a portion of the 625 line are located at the edge of this roadway unit. The nearest TRPA view is View 1, located on Highway 89, just south of the project. This TRPA view is oriented southward and therefore, looks away from the project. This original view from the scenic inventory is included on Figure 4 for informational purposes. Figure 4 also indicates that TRPA View 2, located further to the south, will not be affected by the project.

Figure 5 presents a map detail of TRPA Roadway Unit 15 – Tahoe City. As shown on the map, TRPA viewpoint #6 closely corresponds to selected Simulation Viewpoint 1. Figure 5a includes both the original TRPA image and the simulation photo. *Based on Agency consultation, a wide-angle photo panorama of the existing conditions in this location has been added to Figure 5a.* The TRPA viewpoint, located at the Highway 89 bridge over the Tahoe River, represents a panoramic view that spans from southeast to northeast. The original TRPA view does not capture the area of project change. Also located on Highway 89, an Eligible State Scenic Highway, the Simulation Viewpoint 1 is situated near the TRPA viewpoint but looks south in order to show the Tahoe City Substation.

Figure 6, a map detail of TRPA Shoreline Unit 15 – Tahoe City includes TRPA viewpoint #3. The accompanying TRPA photo image is a view taken from the lake itself, looking northwest toward the project route. In this area, the project follows an existing transmission ROW located on the hillside, more than one-half mile from the shoreline. The existing project corridor is not visible from this viewpoint location due to intervening topography and trees, combined with the viewing distance. Because the project is located within an existing ROW, no significant vegetation removal is planned. Therefore, it is anticipated that the project would also be screened from this view.

Figure 7 is a map detail of TRPA Roadway Units 42 and 43 – Outlet to Lower Truckee. These two roadway units encompass a portion of Highway 89 from its intersection with Highway 28 to just east of Fir Crags Road. As shown on this figure, Simulation Viewpoint 2 corresponds closely to TRPA view #6. Both views are presented on Figure 7a. The Simulation Viewpoint 2 position is oriented to capture the project change seen from the recreation trail located along Highway 89. When the original TRPA view #6 was photographed, this trail had not yet been developed. *Note that an additional photo in this location is included in the PEA based on Agency consultation (PEA figure 4.1-4b, photo 7).*

Figure 7b presents the selected Simulation Viewpoint 3 photo, taken from the Tahoe Rim Trail looking south down the existing transmission line ROW. This viewpoint is located in the Tahoe National Forest; its location is also shown on Figure 7.

Figure 8 depicts a map detail of TRPA Roadway Units 40 and 41– Brockway Cutoff to Brockway Summit. These roadway units cover Highway 267 from its intersection with Highway 28/North Lake Boulevard north to Brockway Summit. Views considered by the scenic inventory generally encompass roadway views toward Lake Tahoe. As shown on the Figure 8 map, Simulation Viewpoint 7 closely approximates TRPA view #1 looking southeast, down Highway 267 towards Lake Tahoe. These two photographic views are presented on Figure 8a. Figure 8b shows Simulation Viewpoint 5 and 6 photos. The original TRPA view #2 is located near selected Simulation Viewpoint 6; however, the simulation viewpoint is positioned to represent the view seen from the Tahoe Rim Trail trailhead. Simulation View 5 was selected because it represents a view of the project that would be seen from the northern Kings Beach residential areas.

Figures 9 and 10 respectively show Simulation Viewpoint 4 and 8 locations with the corresponding simulation photographs. Both viewpoint locations are situated in Placer County, outside TRPA management units. Viewpoint 4 is located in the Tahoe National Forest along the Fiberboard Highway/Mount Watson Road. This view was chosen to portray the new 625 line where it crosses the roadway. *Note that visual simulations with both summer and winter conditions are included in the PEA based on Agency consulation.* Viewpoint 8 depicts a view from Highway 267 at the southern edge of Martis Valley, an area situated just south of the Town of Truckee. Highway 267 is designated as a scenic route in the Martis Valley Community Plan (Placer County 2003) as well as an Eligible State Scenic Highway.

IV. References

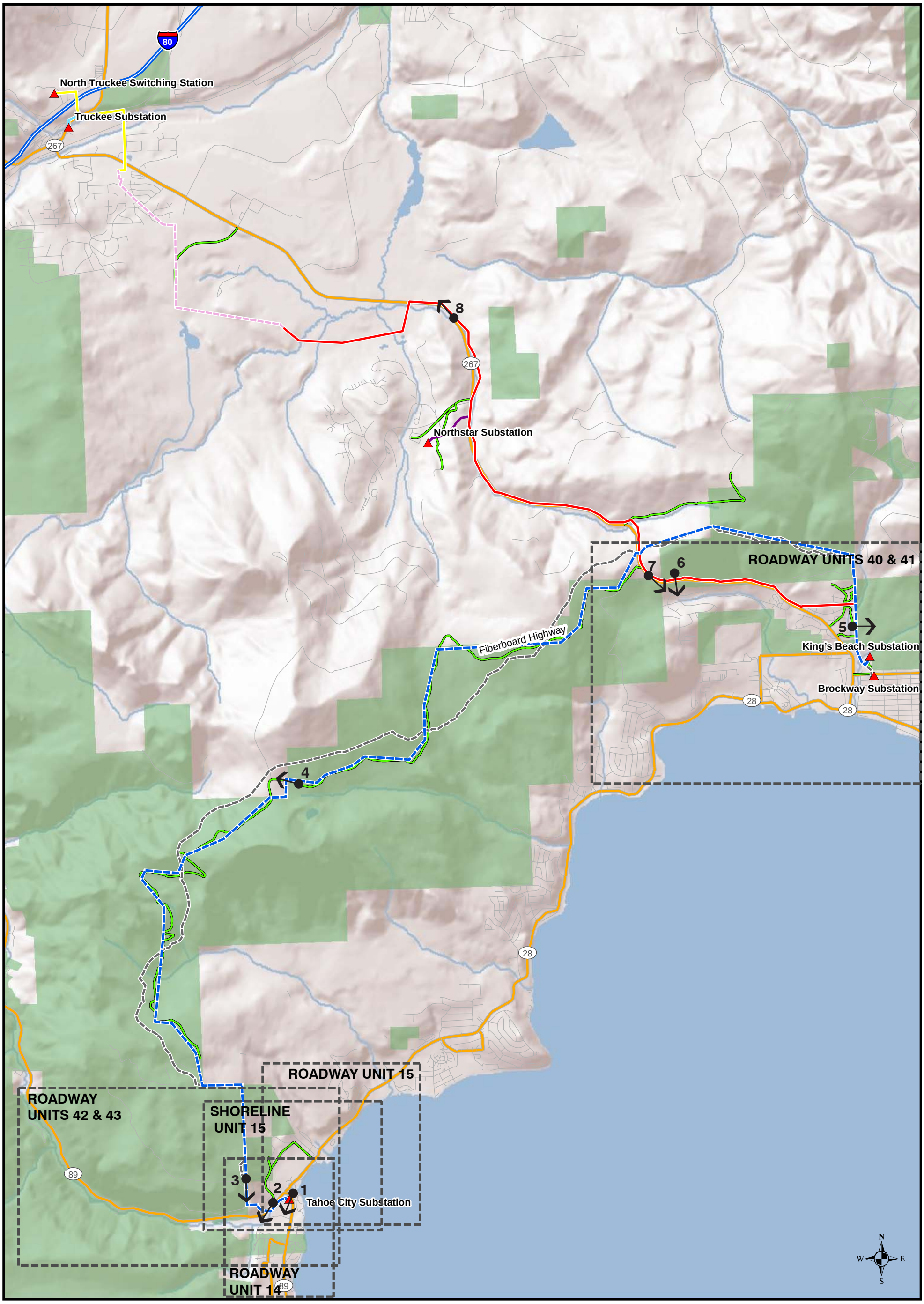
California Department of Transportation, California Scenic Highway Program, accessed online at http://www.dot.ca.gov, on January 10, 2009.

Placer County. 2003. *Martis Valley Community Plan*. December 16, 2003.

Tahoe Regional Planning Agency. 1982. *Lake Tahoe Basin Scenic Resource Inventory*. Prepared by Wagstaff and Brady.

Tahoe Rim Trail Association. 2008. Tahoe Rim Trail Website. http://www.tahoerimtrail.org/ Site accessed February 23, 2009.

U.S. Forest Service and Jeff Schaffer. 2003. *Tahoe Rim Trail: Tahoe City to Brockway Summit* (Map).



TRPA Management Units
Photo Viewpoint
Substation
New 625 Line
Existing 625 Line
650 Line
Northstar Fold
650 Line Previously Upgraded
650 Line to be Removed
132/650 Double-Circuit
USFS Lands
Paved Access Road
Limited Access
Highway
Major Road
Local Road

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Figure 1
Photo Viewpoint Locations Overview
625 and 650 Line Upgrade Project

1:60,000
0 0.5 1 1.5 2 2.5 3 Miles

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12/15/2008

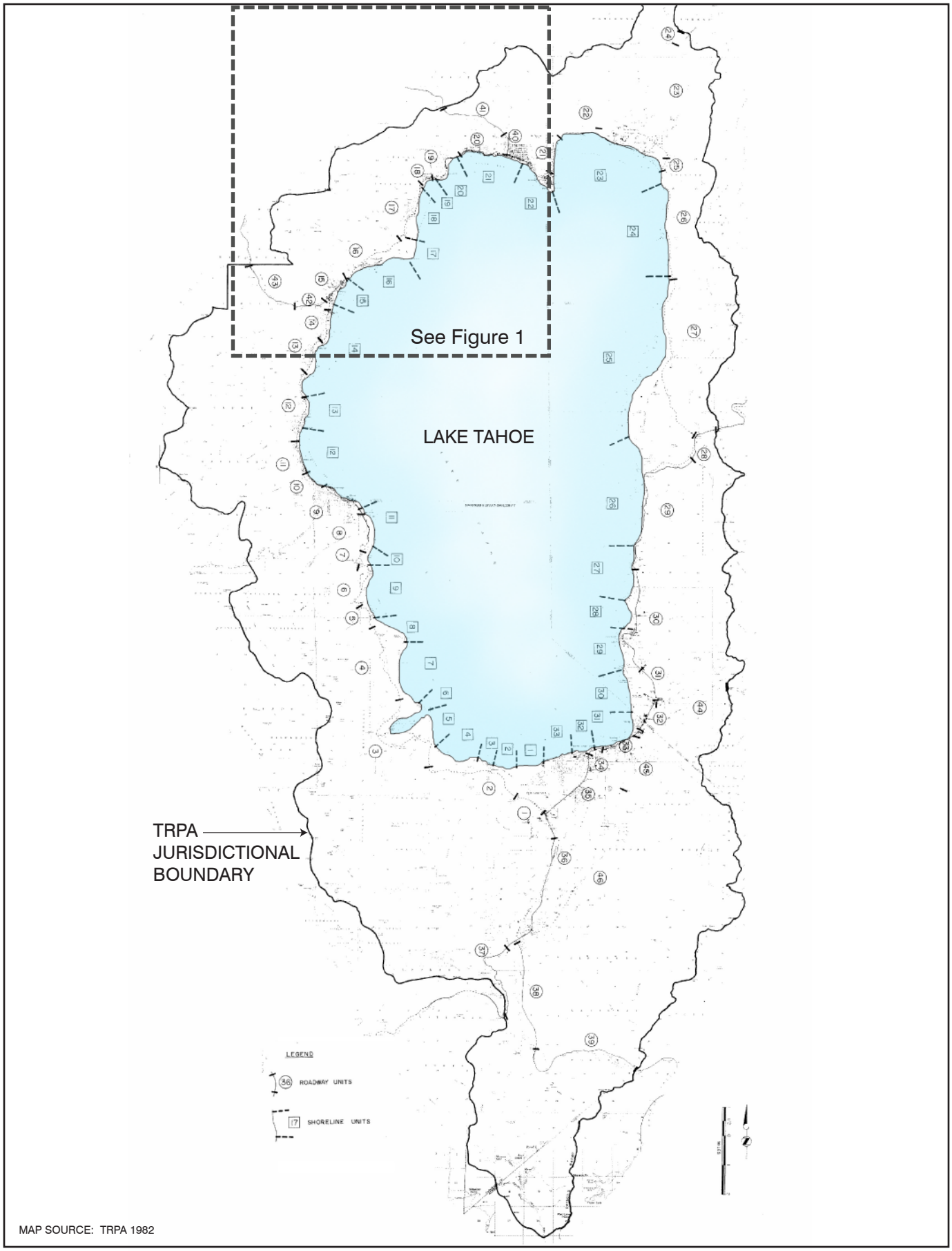

Figure 2
TRPA Roadway and Shoreline Unit Locations
625 and 650 Line Upgrade Project

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1. Hwy. 89 at William B. Layton State Park entrance looking south

2. Hwy. 89 looking southwest

3. View from Tahoe Rim Trail looking south

4. Fiberboard Hwy./Mt. Watson Road looking west

5. Cambridge Drive looking east

6. Tahoe Rim Trail near Hwy. 267 looking south

7. Hwy. 267 near Brockway Summit looking south

8. Hwy. 267 looking north

Note: Additional simulation photos are included in the PEA based on agency consultation.

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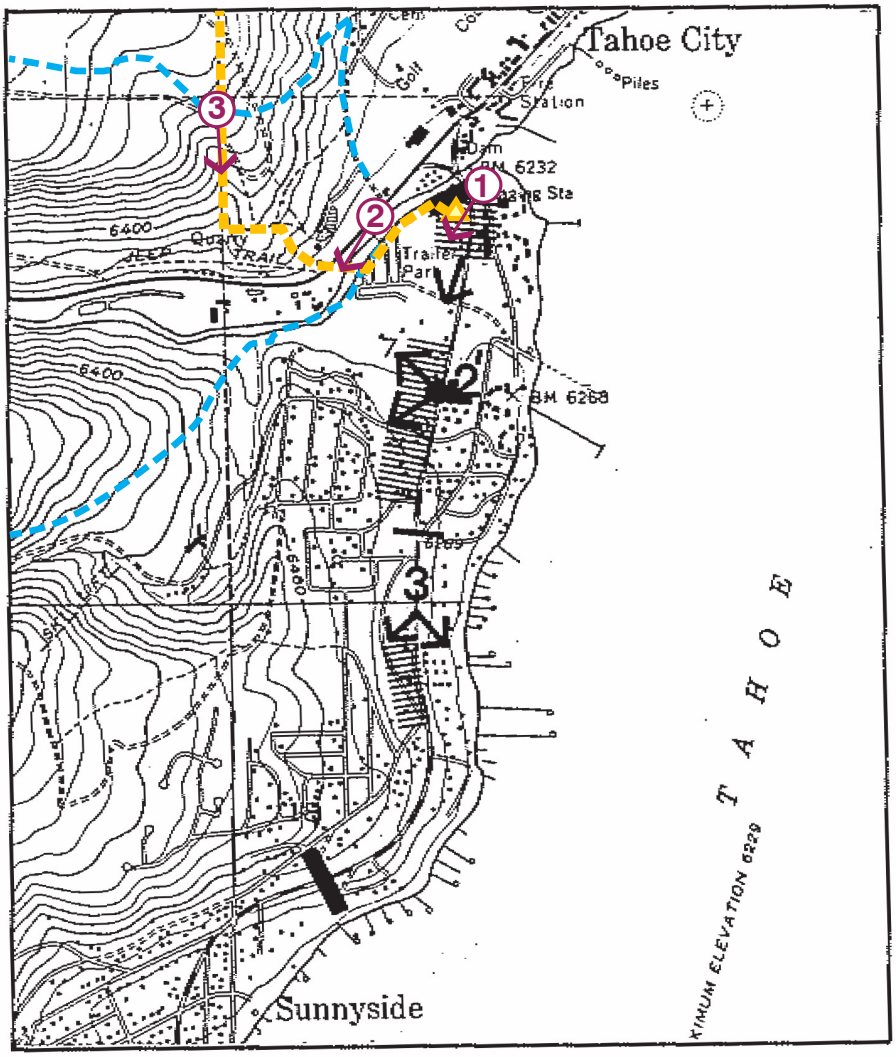
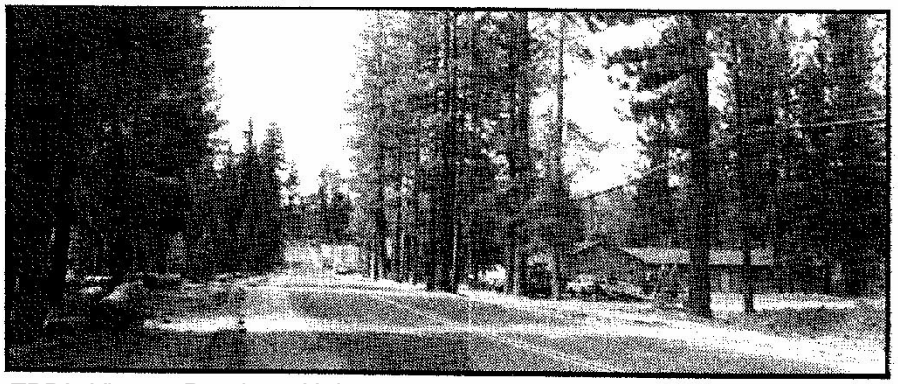
Figure 3
Photos for Visual Simulation
625 and 650 Line Upgrade Project



Note: Highway 89 is an Eligible State Scenic Highway

TRPA Roadway Maps Legend

- Roadway Unit Boundaries
- 3 Roadway Segment within Unit with Consistent Character
- ① Simulation Viewpoint
- Project Route
- Substation
- Tahoe Rim Trail
- Typical View within Segment
- Panoramic View
- 4 View of Specific Resource
- Areas of Concern



TRPA View 1, Roadway Unit 14

Note: The project site is not visible in this view

MAP SOURCE: TRPA 1982

Figure 4
Photo Viewpoints
TRPA Roadway Unit 14 - Tahoe Tavern
625 and 650 Line Upgrade Project

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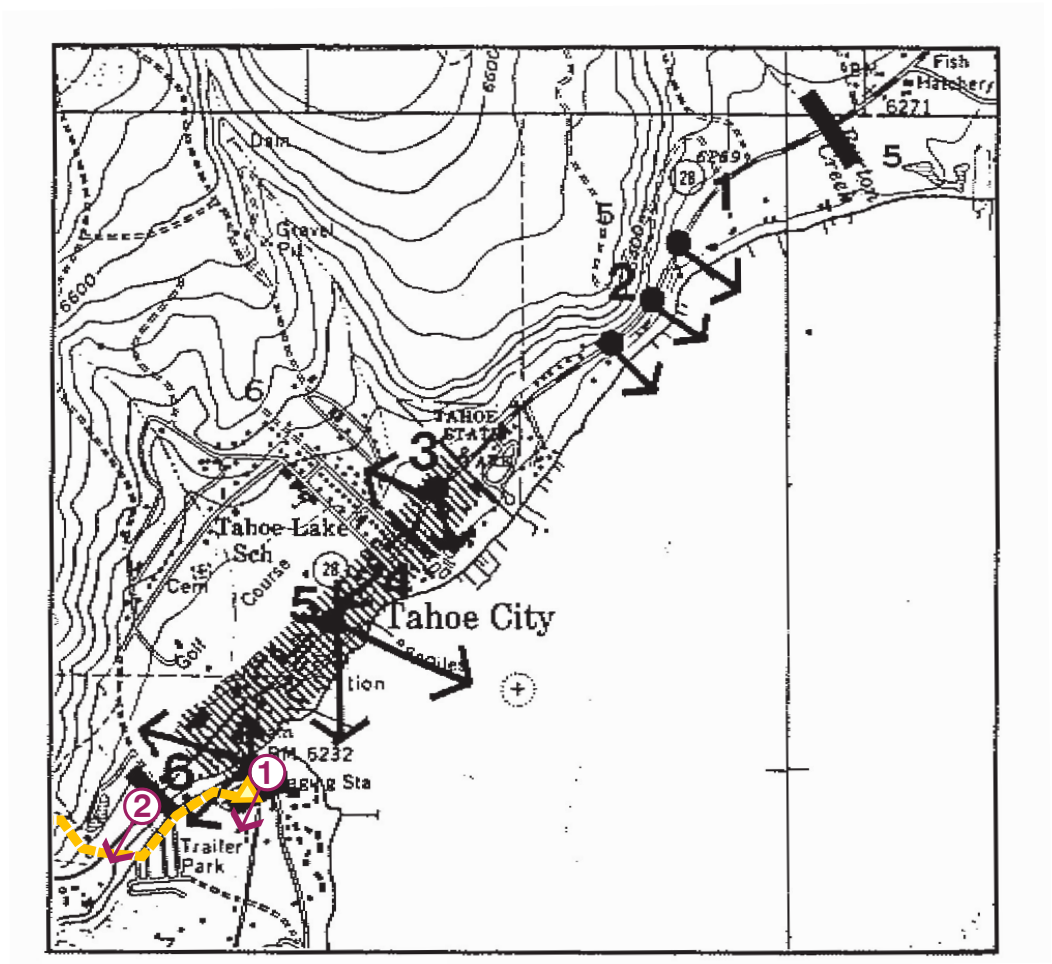

Note: Highway 89 is an Eligible State Scenic Highway

TRPA Roadway Maps Legend

- Roadway Unit Boundaries
- 3 Roadway Segment within Unit with Consistent Character
- Typical View within Segment
- Panoramic View
- 4 View of Specific Resource
- Areas of Concern
- ① Simulation Viewpoint
- Project Route
- Substation

MAP SOURCE: TRPA 1982

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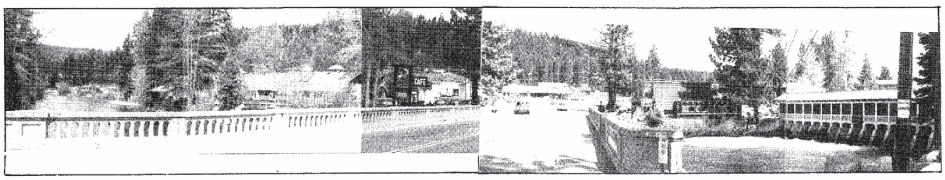
Figure 5
Photo Viewpoints
TRPA Roadway Unit 15 - Tahoe City
625 and 650 Line Upgrade Project



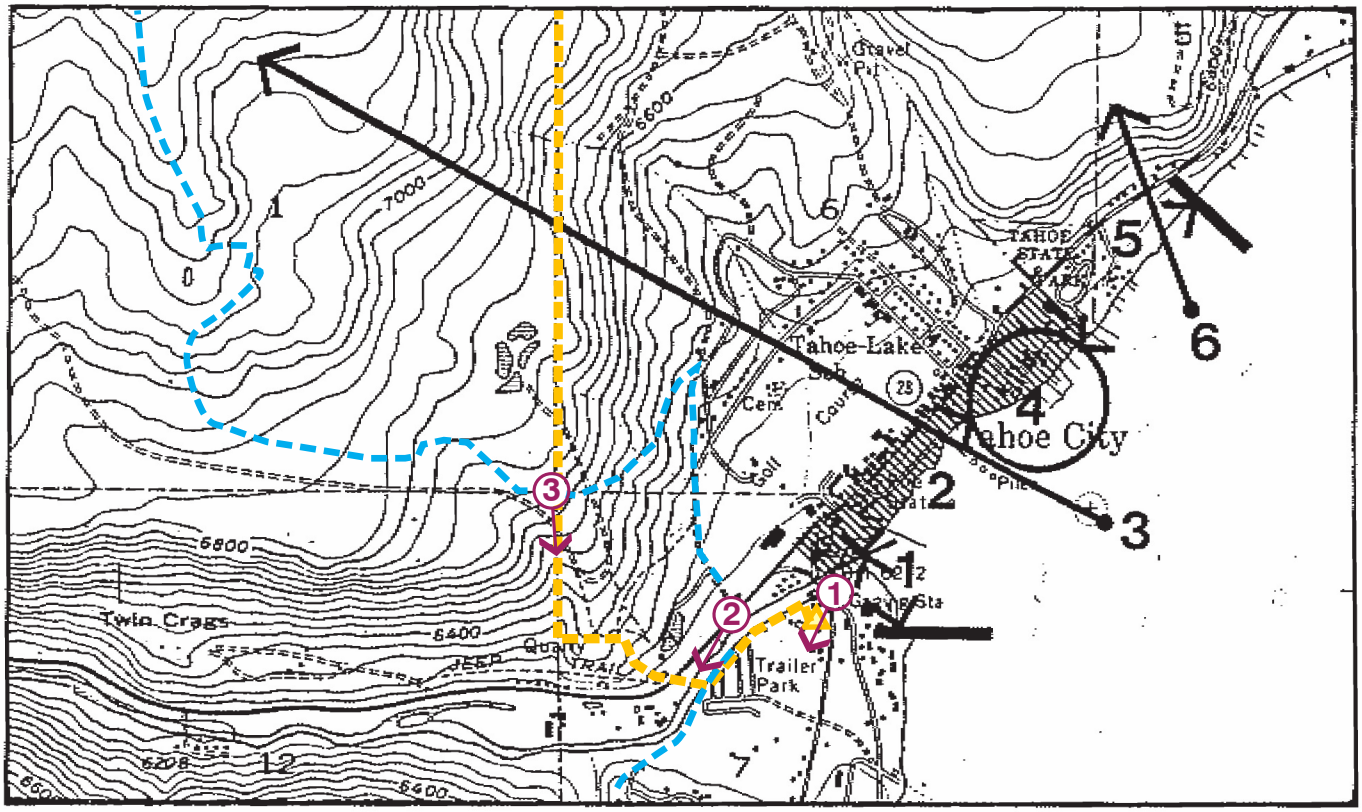
TRPA Viewpoint 6 - Roadway Unit 15

Photo 1 Existing Panoramic View

Note: The existing conditions panorama above was added based on agency consultation.

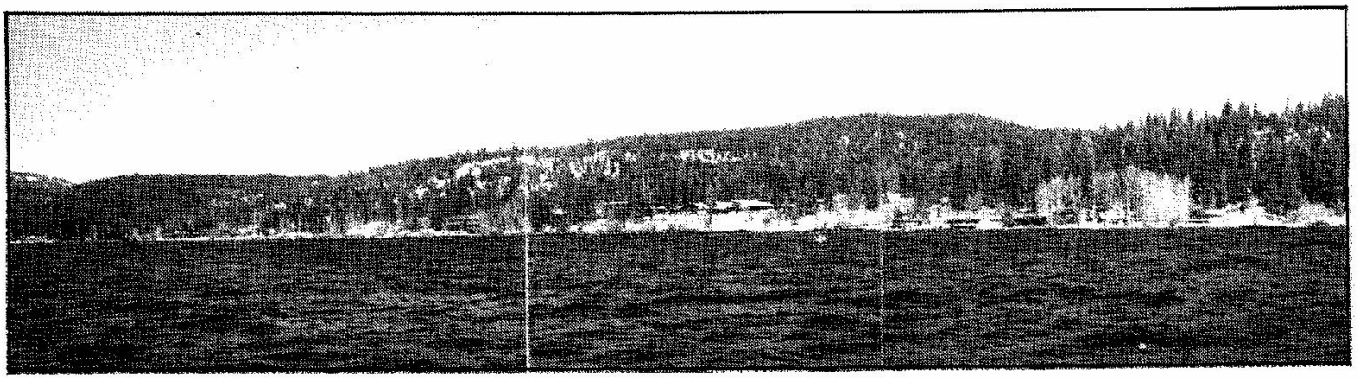
Photo 1 - Existing View: Highway 89 at William B. Layton State Park entrance looking south (Tahoe City Substation)

Figure 5a
Photo Viewpoints
TRPA Roadway Unit 15 - Tahoe City
625 and 650 Line Upgrade Project



TRPA Roadway Maps Legend

- Roadway Unit Boundaries
- 3 Roadway Segment within Unit with Consistent Character
- ① Simulation Viewpoint
- Typical View within Segment
- Panoramic View
- Project Route
- Substation
- 4 View of Specific Resource
- Areas of Concern
- Tahoe Rim Trail



View 3, Shoreline Unit 15

MAP SOURCE: TRPA 1982

Figure 6
Photo Viewpoints
TRPA Shoreline Unit 15 - Tahoe City
625 and 650 Line Upgrade Project

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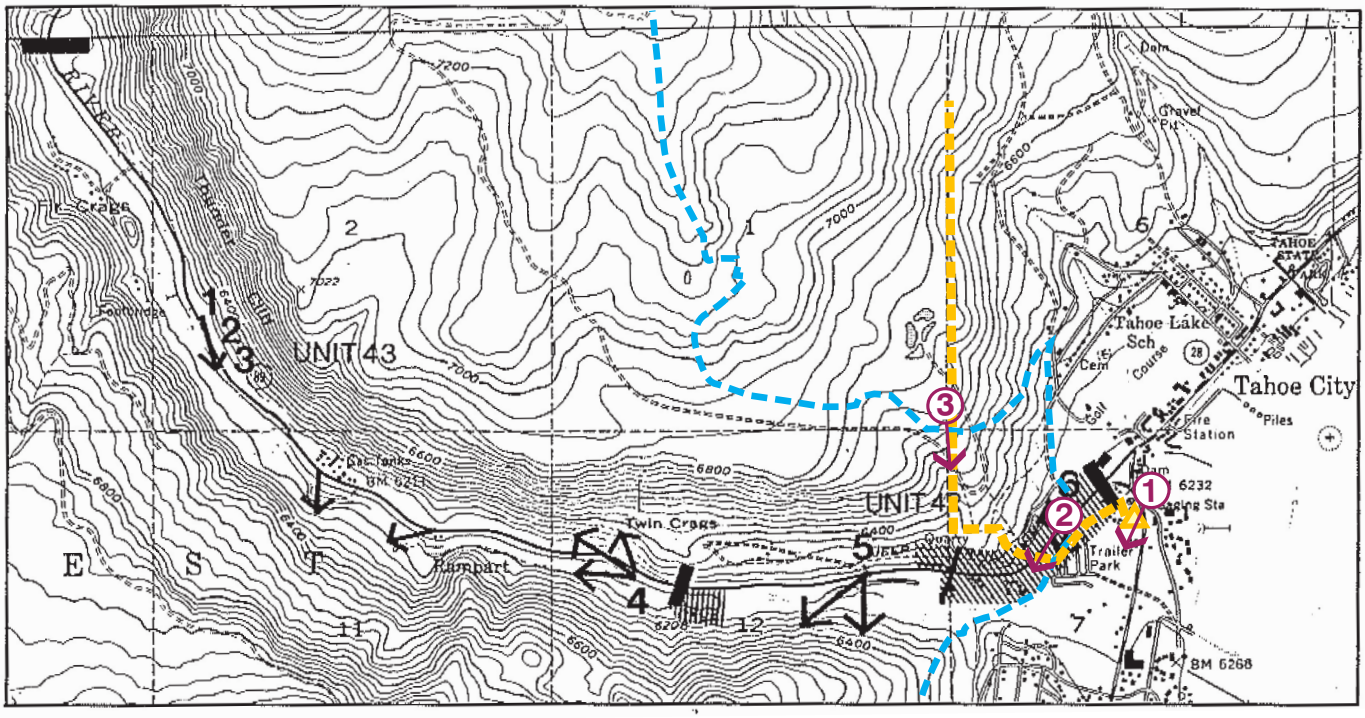

Note: Highway 89 is an Eligible State Scenic Highway

TRPA Roadway Maps Legend

- Roadway Unit Boundaries
- Roadway Segment within Unit with Consistent Character (3)
- Typical View within Segment
- Panoramic View
- View of Specific Resource (4)
- Areas of Concern
- Simulation Viewpoint (1)
- Project Route
- Substation
- Tahoe Rim Trail

MAP SOURCE: TRPA 1982

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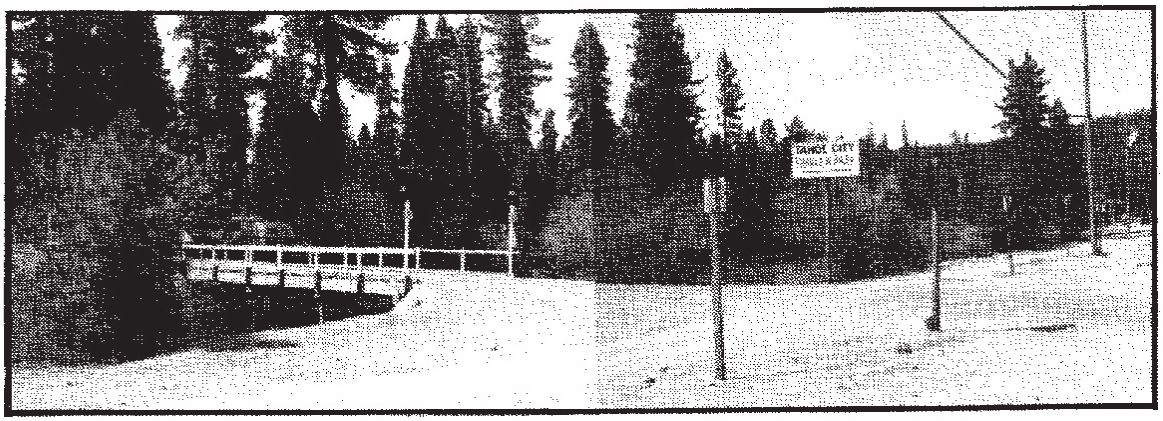
Figure 7
Photo Viewpoints
TRPA Roadway Units 42 & 43 - Outlet to Lower Truckee River
625 and 650 Line Upgrade Project



TRPA Viewpoint 6 - Roadway Unit 42

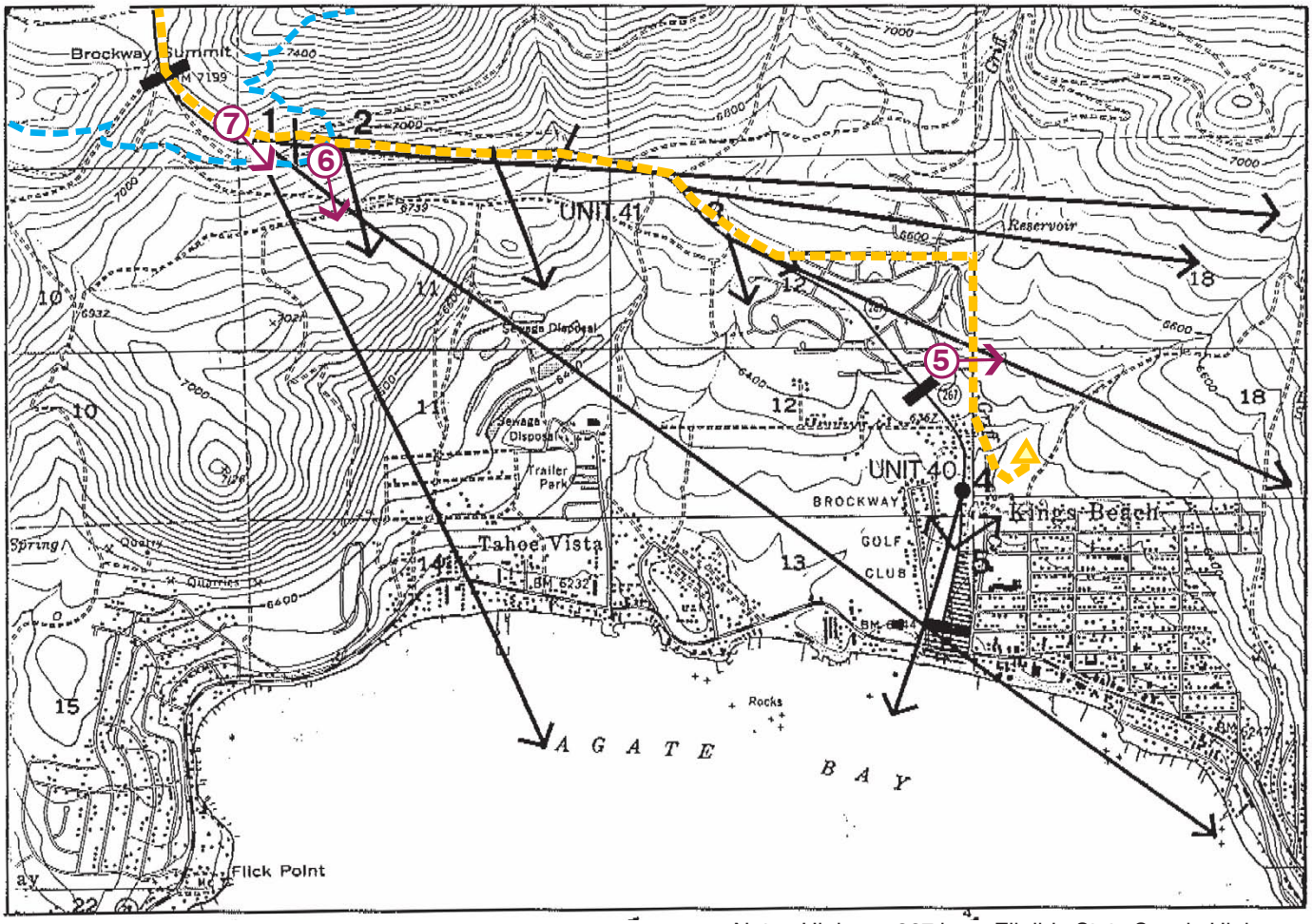
Photo 2 - Existing View: Highway 89 looking southwest (625 Line)

Note: An additional photo at this location is included in the PEA based on agency consultation.

Figure 7a
Photo Viewpoints
TRPA Roadway Units 42 & 43 - Outlet to Lower Truckee
625 and 650 Line Upgrade Project

Photo 3 - Existing View: Tahoe Rim Trail looking south (625 Line) *Tahoe National Forest*

Figure 7b
Photo Viewpoints
TRPA Roadway Units 42 & 43 - Outlet to Lower Truckee
625 and 650 Line Upgrade Project



Note: Highway 267 is an Eligible State Scenic Highway

TRPA Roadway Maps Legend

- Roadway Unit Boundaries
- Roadway Segment within Unit with Consistent Character (3)
- Typical View within Segment
- Panoramic View
- View of Specific Resource (4)
- Areas of Concern
- Simulation Viewpoint (5)
- Project Route
- Substation
- Tahoe Rim Trail

MAP SOURCE: TRPA 1982

Figure 8
Photo Viewpoints
TRPA Roadway Units 40 & 41 - Brockway Cutoff to Brockway Summit
625 and 650 Line Upgrade Project

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TRPA Viewpoint 1 - Roadway Unit 41

Photo 7 - Existing View: Highway 267 at Brockway Summit looking south (650 Line)

Note: A replacement photo with a clear view of Lake Tahoe is included in the PEA.

Figure 8a
Photo Viewpoints
TRPA Roadway Units 40 & 41 - Brockway Cutoff to Brockway Summit
625 and 650 Line Upgrade Project

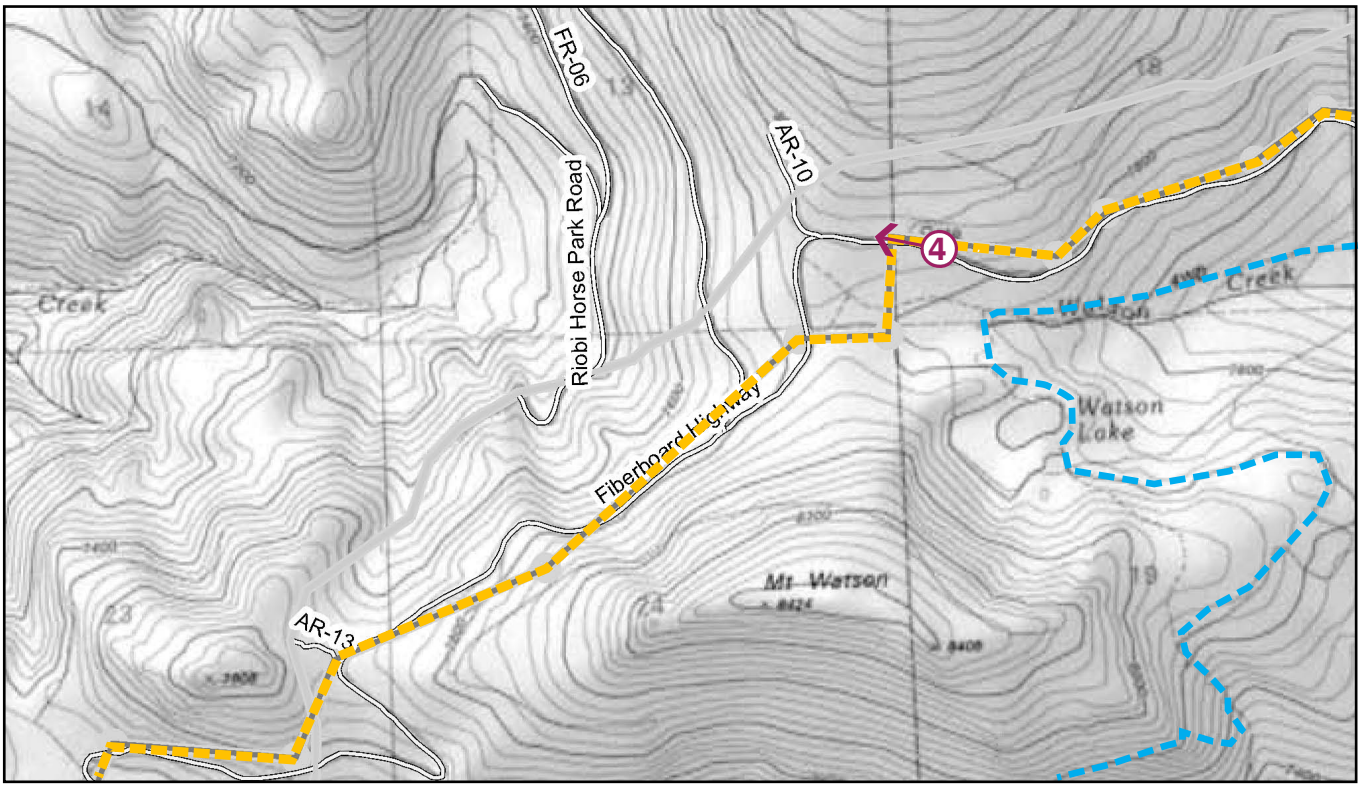
Photo 5 - Existing View: Cambridge Drive looking east (625 and 650 Line)

Photo 6 - Existing View: Tahoe Rim Trail near Highway 267 looking south (650 Line)

Figure 8b
Photo Viewpoints
TRPA Roadway Units 40 & 41 - Brockway Cutoff to Brockway Summit
625 and 650 Line Upgrade Project

Photo 4 - Existing View: Fiberboard Highway/Mt. Watson Road looking west (new 625 Line crossing)
Tahoe National Forest

Note: An additional photo, with summer conditions, and other typical views along Mt. Watson Rd. are included in the PEA based on agency consultation.



Legend

④→ Simulation Viewpoint

Project Route

Tahoe Rim Trail

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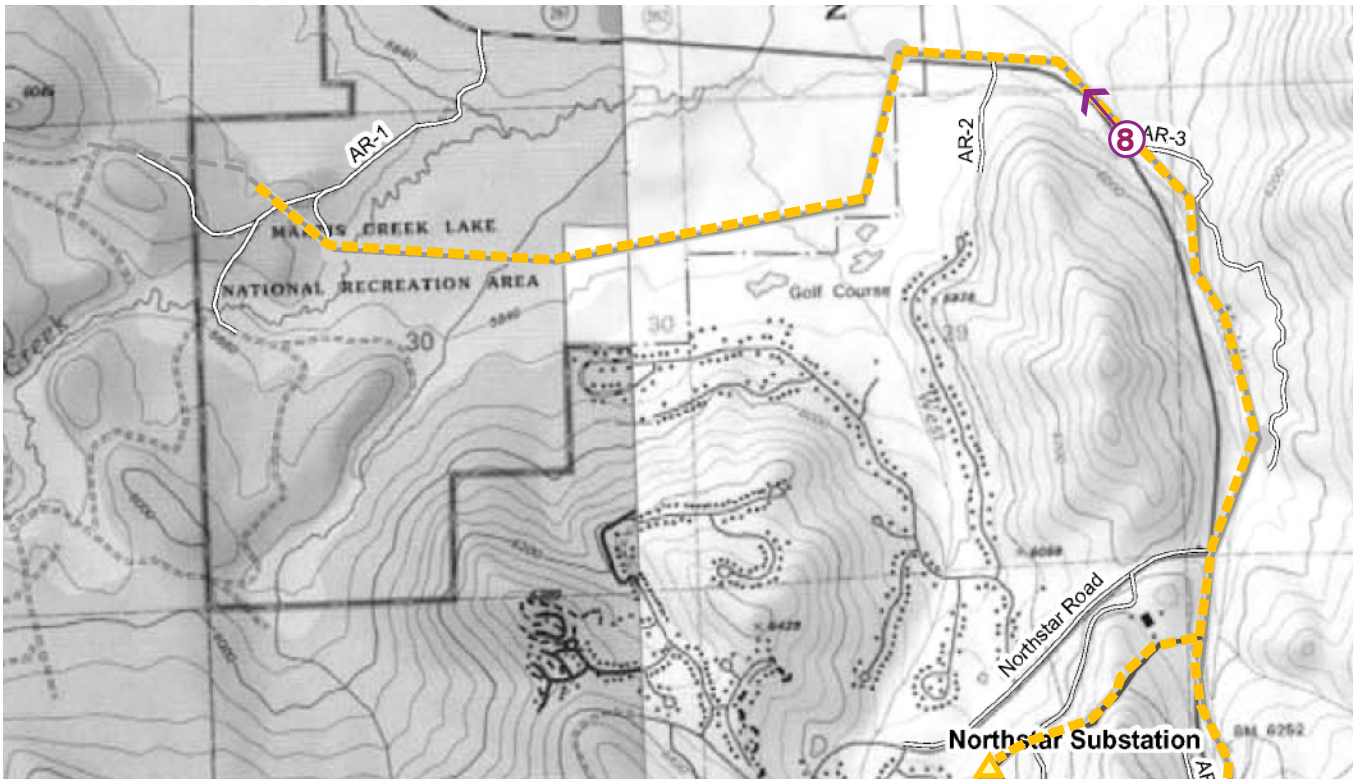
Figure 9
Photo Viewpoints
Placer County
625 and 650 Line Upgrade Project

Photo 8 - Existing View: Highway 267 looking north (650 Line)



Note: Highway 267 is an Eligible State Scenic Highway

Legend

8→ Simulation Viewpoint

Project Route

Substation

Figure 10
Photo Viewpoints
Placer County
625 and 650 Line Upgrade Project

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ATTACHMENT 4.1-C: VISUAL SIMULATION IN WINTER CONDITIONS – MOUNT WATSON ROAD (VP 14)

Existing view from Mount Watson Road looking west (VP 14)

Visual simulation of the project (625 Line)

Note: For viewpoint location refer to Figure 4.1-1

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Attachment 4.1-C
Visual Simulation in Winter Conditions - Mount Watson Road (VP 14)
625 and 650 Line Upgrade Project