Chapter 6
Visual Resources

Introduction

This chapter describes the impacts on visual resources that would result from the project. The key sources of data and information used in the preparation of this chapter are listed and briefly described below.

Identification of existing conditions with regard to visual resources entails three steps.

1. Objective identification of the visual features (visual resources) of the landscape.
2. Assessment of the character and quality of those resources relative to overall regional visual character.
3. Identification of the importance to people, or *sensitivity*, of views of visual resources in the landscape.

With an establishment of the baseline (existing) conditions, a proposed project or other change to the landscape can be systematically evaluated for its degree of impact. The degree of impact depends both on the magnitude of change in the visual resource (i.e., visual character and quality) and on viewers' responses to and concern for those changes. This general process is similar for all established federal procedures of visual assessment (Smardon et al. 1986) and represents a suitable methodology of visual assessment for other projects and areas.

The approach for this visual assessment is adapted from the Federal Highway Administrations' (FHWA's) visual impact assessment system (Federal Highway Administration 1988) in combination with other established visual assessment systems. The visual impact assessment process involves identification of:

- relevant policies and concerns for protection of visual resources;
- visual resources (i.e., visual character and quality) of the region, the immediate project area, and the project site;
- important viewing locations (e.g., roads) and the general visibility of the project area and site using descriptions and photographs;
- viewer groups and their sensitivity; and

- potential impacts.

Criteria for Visual Assessment

Descriptions of visual character and quality in this assessment rely on the following standard terms (Federal Highway Administration 1988).

- **Vividness—**The visual power or memorability of landscape components as they combine in striking or distinctive visual patterns.
- **Intactness—**The visual integrity of the natural and artificial landscape and its freedom from encroaching elements. Intactness can be present in well-kept urban and rural landscapes, as well as in natural settings.
- **Unity—**The visual coherence and compositional harmony of the landscape considered as a whole; it frequently attests to the careful design of individual components in the artificial landscape.

Vividness, intactness, and unity are the basic components used to describe visual character and quality for most visual assessments (U.S. Forest Service 1995, Federal Highway Administration 1988).

In addition to their use as descriptors, vividness, unity, and intactness are used more objectively as part of a rating system to assess a landscape's visual quality. Visual quality is evaluated using the equation:

$$\text{Visual Quality} = \frac{\text{Vividness} + \text{Intactness} + \text{Unity}}{3}$$

Vividness, intactness, and unity are evaluated independently; each quality is assigned a rating from 1–7. On this scale, 1 = very low, 4 = average/moderate, and 7 = very high. The overall rating for visual quality follows the same 1–7 range. Ratings have been included in parentheses (e.g., VQ = 2) in the visual quality description of the landscape units.

Viewer sensitivity or concern is based on the visibility of resources in the landscape, the proximity of viewers to the visual resource, the relative elevation of viewers to the visual resource, the frequency and duration of views, the number of viewers, and the types and expectations of individuals and viewer groups.

The criteria for identifying importance of views are related in part to the position of the viewer relative to the resource. An area of the landscape that is visible from a particular location (e.g., an overlook) or series of points (e.g., a road or trail) is defined as a viewshed. To identify the importance of views of a resource, a viewshed may be broken into distance zones of foreground, middleground, and background. Generally, the closer a resource is to the viewer, the more dominant it is and the greater is its importance to the viewer. Although distance zones in viewsheds may vary between different geographic regions or types of terrain, a commonly used set of criteria identifies the foreground zone as 0.25–0.5 mile

from the viewer, the middleground zone as extending from the foreground zone to 3–5 miles from the viewer, and the background zone as extending from the middleground zone to infinity (U.S. Forest Service 1995).

Visual sensitivity also depends on the number and type of viewers and the frequency and duration of views. Generally, visual sensitivity increases with an increase in total numbers of viewers, the frequency of viewing (e.g., daily or seasonally), and the duration of views (i.e., how long a scene is viewed). Also, visual sensitivity is higher for views seen by people who are driving for pleasure; people engaging in recreational activities such as hiking, biking, or camping; and homeowners; sensitivity tends to be lower for views seen by people driving to and from work or as part of their work (U.S. Forest Service 1995; Federal Highway Administration 1988; U.S. Soil Conservation Service 1978). Views from recreation trails and areas, scenic highways, and scenic overlooks are generally assessed as having high visual sensitivity.

Environmental Setting

This section discusses federal, state, and local regulations related to visual resources that would apply to the proposed project. Land use changes and development within the City are subject to City policies, including visual resource and aesthetic policies, design guidelines, and ordinances such as tree preservation/removal ordinances.

SR 32 is not designated in federal, State, or local plans as a scenic roadway or as a corridor worthy of protection for maintaining and enhancing scenic viewsheds. Additional applicable policies and guidelines are discussed below.

Regulatory Setting

Local

City of Chico Tree Preservation Ordinance

The City Tree Preservation Ordinance (Chico Municipal Code, Chapter 16.66) defines a “tree” or “trees” as the following.

- Any live woody plant having a single perennial stem of 24 inches or more in diameter, or multi-stemmed perennial plant greater than 15 feet in height having an aggregate circumference of 40 inches or more, measured at four feet six inches above adjacent ground.
- Tree or trees required to be preserved as part of an approved building permit, grading permit, demolition permit, encroachment permit, use permit, tentative or final subdivision map.

- Tree or trees required to be planted as a replacement for unlawfully removed tree or trees.
- "Tree" or "trees" does not mean Ailanthus, Chinese tallow, or box elder.

City of Chico Standard Mitigation Measure for Sites Containing Oak Trees

All native oak trees over six inches diameter at breast height (dbh) on the project site shall be preserved to the maximum extent practical.

General Plan

The City of Chico General Plan (City of Chico Planning Division 1999) includes the following policies pertaining to aesthetic and visual resources that may be applicable to the project. The City has identified SR 32 as a major corridor, under policy CD-G-6, that should be "improved with streetscape improvements, planting and other treatments within limits of existing development or rights-of-way."

Community Design

CD-G-4: Emphasize key city entrances.

CD-G-5: Minimize the intrusion of Highway 99 and its interchanges on the visual character and form of the city.

CD-G- 6: Make improvements to the major corridors traversing the city to heighten their visibility and accessibility.

CD-G-7: Design street and creekside improvements in consideration of their hierarchical role and function within the larger system.

CD-G-8: Extend new street patterns that heighten the sense of the creeks and are connected to existing patterns of development.

CD-G-9: Place restrictions on the overall scale and size of major arterials, so as to avoid creating barriers within the city fabric.

CD-G-11: Heighten the visual prominence of the creek corridors which help to establish a sense of orientation and identity within the city.

CD-G-12: Open up creeks to public view and access.

CD-G-13: Extend the amenity value of the creeks.

CD-G-47: Mark major entries to neighborhoods, but discourage the use of high walls and gated entries which isolate areas from one another and create an unfriendly appearance.

CD-G-55: Encourage tree planting and consider adopting a heritage tree preservation and maintenance program.

Open Space

OS-G-14: Maintain existing views of the foothills from roadways and public uses and other rights-of-way on the valley floor whenever feasible.

OS-G-15: Preserve and enhance Chico's creeks and the riparian corridors adjacent to them as open space corridors for the visual amenity, drainage, fisheries, wildlife habitats, flood control and water quality value.

Existing Conditions

This section discusses the existing conditions related to visual resources in the study area.

Study Area

Regional Character

The project location is in Chico, which is in the central portion of the Sacramento Valley, approximately 90 miles north of Sacramento. The project region, as discussed in this section, is considered to be the area within a 30-mile radius of the project location.

The project region lies in a transitional zone that contains both the flat valley floor and the rolling foothills of the western slope of the Cascade Range. The project region is primarily urban, except at its western and southern boundaries. West and south of the urban center, agriculture is a primary land use, characterized by livestock grazing, field crops, and orchards. Rock outcrops and buttes are found south of the project location. Land use transitions from agriculture (in the region's outskirts), to strip malls and light commercial, then to primarily residential uses (at the region's center). The dominant types of natural vegetation are valley oak savannah and riparian woodlands, which occur in concentrated areas and varying densities because of the urban and agricultural nature of the project region. Water features in the project region include Big Chico, Little Chico, Mud, Butte, Comanche, and Sycamore Creeks and Lindo Channel.

A mix of agricultural, developed, and natural landscapes characterize the project region. The landscape pattern is influenced by development sprawling from the existing city core and the major roadways in the region. The visual quality of the project region and the area immediately surrounding the project area is moderate in vividness, intactness, and unity. (The study area is shown in Figures 5-1a through 5-1h and is defined as the area proposed for any ground-disturbing

activities, such as construction activities, construction staging area, and construction access.)

Project Vicinity Character

The project vicinity is defined as the area within 0.5 mile of the project location. SR 32 is located in southern Chico and south of Bidwell Park, off of SR 99. SR 32 is an at-grade roadway and transects both the project vicinity and southern Chico in a northeast –southwest direction. The vicinity is characterized by primarily residential and commercial development, which abuts and is directly adjacent to the right-of-way. While most of the land adjacent to SR 32 is developed, there are large undeveloped portions located north and south of the roadway east of El Monte Avenue and several vacant lots on either side of the roadway west of El Monte Avenue. Commercial and business development does not front SR 32, but it backs along Humboldt Road and occurs on El Monte and Forest Avenues, in close proximity to their intersections with SR 32. Development in the western project vicinity is limited because the area consists of well-established neighborhoods, whereas newer development is occurring in the eastern portions where there is available land.

Big Chico and Little Chico Creeks and Horse Slough run through the project vicinity. Big Chico Creek, which is located within Bidwell Park and just north of the SR 99/SR 32 interchange, runs northeast–southwest through the project vicinity. Little Chico Creek is located south to SR 32, bordering Humboldt Road. Horse Slough crosses under SR 32 between Forest and El Monte Avenues. The creek corridors are characterized by a dense mix of natural riparian vegetation that does not offer views of the streambed. The natural vegetation along the creeks is a small component of a fairly robust urban forest. Much of Chico includes a mature, relatively dense canopy of trees (typically deciduous broadleaves). The project vicinity is similarly densely vegetated, with ornamental trees in private yards and planted and naturally colonized trees along the highway corridor. The urban forest in the project vicinity includes remnant native oaks that have been preserved.

The visual quality of the project vicinity is moderate in vividness, intactness, and unity because of the visual obstructions caused by vegetation, typical of SR 32 with other roadways in the vicinity and region, and common with the visual character of development in the region. SR 32 travels in the direction of the foothills and acts as a background view corridor, which tunnels one's view along the roadway corridor to this view. Visibility of the foothills, however, is dependent on atmospheric conditions. Beyond this, there are very few views present beyond the immediate roadway corridor because it is blocked by existing vegetation.

Landscape Units and Key Viewpoints

SR 32 is at-grade, which causes a distinct separation between viewer groups affected by the proposed project. Therefore, for this analysis, the area surrounding the project area has been subdivided into two landscape units (Landscape Units 1 and 2) that are based on specific vantage points and differing sensitivities of those affected by the proposed project. Landscape Units 1 and 2 are designated SR 32 between SR 99 and El Monte Avenue and SR 32 between El Monte Avenue and Yosemite Drive, respectively, and are shown in Figure 6-1. The landscape units will provide the framework for analysis. The landscape units have been defined on the basis of similar visual features and homogeneous character. Key viewpoints, shown in Figure 6-1, have been chosen for their representation of the landscape unit within which they are located and those viewers affected.

Landscape Unit 1—SR 32 between SR 99 and El Monte Avenue

Landscape Unit 1 is the approximately 1.0-mile corridor of SR 32 between the SR 99 and SR 32 interchange to El Monte Avenue. Viewers in this unit are mainly travelers on SR 32. There are few views presented beyond the immediate roadway corridor because it is blocked by existing dense, mature vegetation located both to the north and south of the roadway. This existing vegetation is part of the existing right-of-way and residential and business/commercial landscaping. The roadway and adjacent vegetation acts as a view corridor when traveling east from the interchange toward the foothills, tunneling one's view along the roadway corridor to the middleground view of the foothills (Figure 6-2, Photos 1 and 2). Visibility of the foothills, however, is dependent on atmospheric conditions. Background views are not present as the terrain precludes them. Traveling in the opposite direction (from El Monte Avenue towards SR 99), the same is true; only views are limited to the foreground by landscaping within and around the park-and-ride (located in between the east- and west-bound lanes near the interchange) and the SR 99 overpass. Views vary seasonally when deciduous trees drop their leaves, allowing for a much clearer view from the roadway toward the uses adjacent to it. Vegetation also blocks middleground and background views to the surrounding area and region. There is an existing roadway median, starting from the park-and-ride and extending approximately 0.2 mile to the east, which is unplanted and does not act to physically or visually separate eastbound and westbound traffic.

Most residents and businesses adjacent to the streets located off of and parallel to SR 32, with vegetation on either side, and because of this, views from the highway to residences and vice versa are often screened. The north side of this landscape unit includes primarily single family residences that directly abut the SR 32 right-of-way with their backyards. The south side of the landscape unit includes a mix of single family and multi-family residential and commercial and business operations. Like the north side, most of these viewers are oriented away from SR 32 and inwards toward parking lots around buildings or toward Humboldt Road. Views from both the northern and southern sides of the landscape unit towards SR 32 are screened by vegetation but views of passing vehicles are available where vegetation is thin (Figure 6-2, Photo 3). Views also vary seasonally when deciduous trees drop their leaves, allowing for a much clearer view of the roadway and passing traffic. In

general, adjacent residences and commercial and business operations serve as a visual barrier for other potential viewers that are located further north or south of those immediately adjacent to the roadway.

Recreationists on SR 32 include cyclists, walkers, and joggers. Crosswalks are provided for pedestrians at both Forest and El Monte Avenues, and cyclists use bike lanes provided on these adjacent streets to cross SR 32. While there are no bike lanes on SR 32 and no cyclists were observed on the roadway, this does not preclude cyclists from using this roadway.

Cobra head street lights are located at the SR 32 on- and off-ramps and at roadway intersections, in conjunction with traffic signals (Figure 6-2, Photo 4). The lights are the same height as tree canopies in the right-of-way and are located in close proximity to them; therefore, they do not stand out against their surroundings. Existing fence lines are mostly vegetated and there is minimal roadway signage, so these features do not stand out amongst the surroundings.

This landscape unit is dominated by the aforementioned vegetation and paved surface of the highway. Vegetation alongside the highway includes evergreen and deciduous tree and shrub species. Shoulder vegetation is dense and obstructs most views to adjacent residences and businesses except during the winter, when there are glimpses of adjacent residential, commercial, and business properties. This vegetation, together with views toward the foothills, provide a pleasing roadway experience.

The lack of visually dominating aboveground utilities (e.g., roadway lights, traffic lights, and utility lines and poles) and infrastructure (e.g., overpasses, large buildings), combined with the prominence of the vegetated roadway corridor in this landscape unit, create a visual quality that is moderate (VQ = 4). Vividness (V = 4), intactness (I = 4), and unity (U = 4) are all moderate.

Landscape Unit 2—SR 32 between El Monte Avenue and Yosemite Drive

Landscape Unit 2 is the approximately 1.1-mile corridor of SR 32 between the El Monte Avenue to Yosemite Drive. Viewers in this unit include roadway travelers, residences, and businesses along SR 32. Viewers in this unit are mainly travelers on SR 32 and residences. Unlike Landscape Unit 1, this landscape unit lacks the densely vegetated roadway corridor to both the north and south. This unit is comprised of oak savannah, of which large portions have been cleared to accommodate new and fairly new development. Development is primarily located to the north of SR 32, except for a small area of development located on the southeast corner of El Monte Avenue (Figure 6-2, Photo 5). Between Bruce Road and Yosemite Drive, development abuts SR 32; however, the remainder of the land to the immediate north and south of the roadway is in open space. The SR 32/El Monte Avenue intersection marks the point where SR 32 begins to transition to the rising foothills to the east.

The lack of vegetation in the immediate corridor of the roadway and gently rising terrain offers views over the foreground and middleground (Figure 6-2, Photo 6). Traveling east, these views include the roadway corridor, existing development

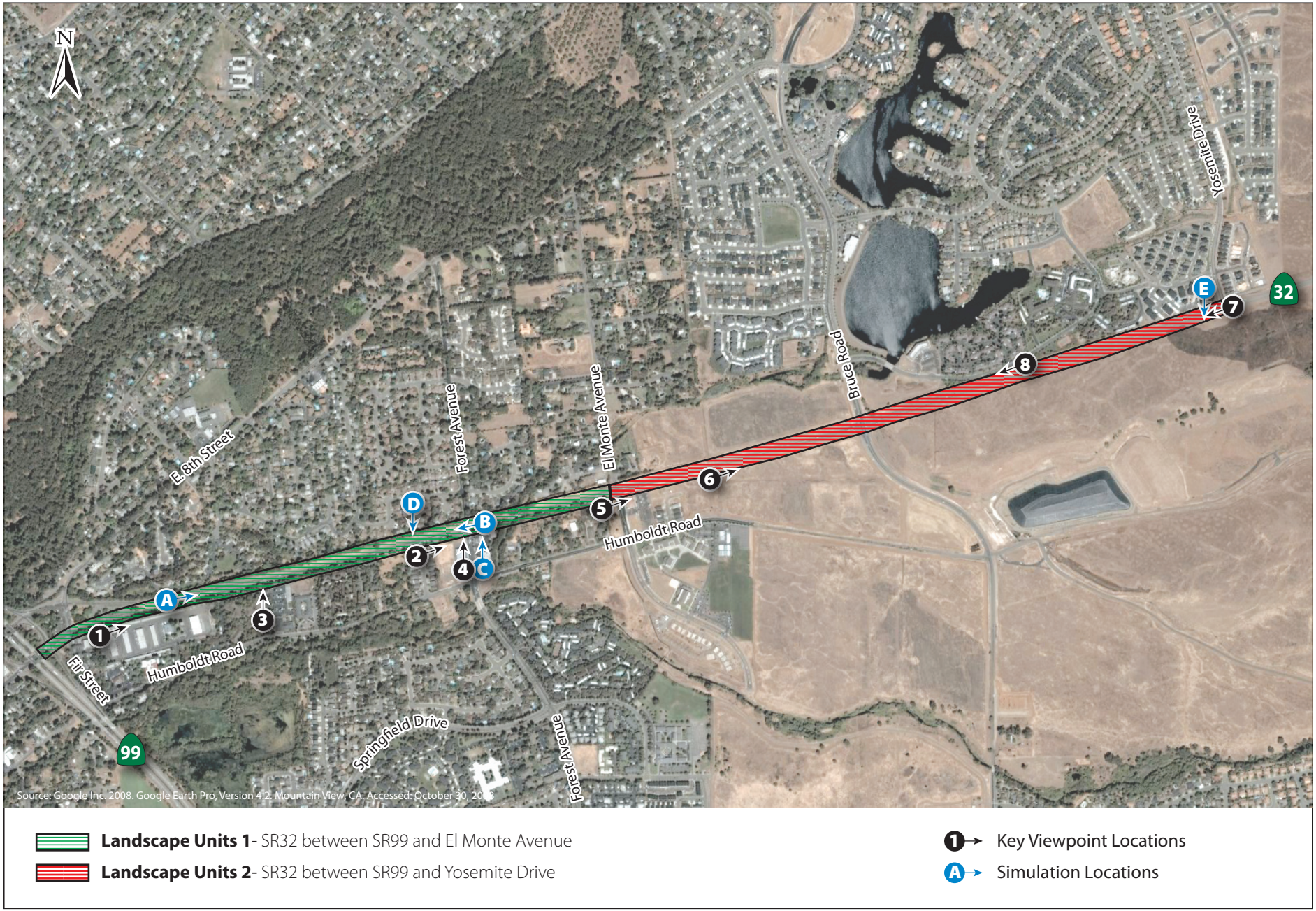

Figure 6-1
Landscape Units, Key Viewpoints, and Photosimulation Locations

and related infrastructure, and the oak savannah. Traveling west, these views include the roadway corridor, existing development and related infrastructure, the surrounding oak savannah, and the urban forest of Chico, especially its edge (Figure 6-2, Photo 7). Visibility of the foothills and urban forest are, however, dependent on atmospheric conditions. Background views are present to varying degrees, dependent upon a viewer's location in the landscape, as the terrain, built features, and existing vegetation may preclude them in certain locations. Views vary seasonally when deciduous trees drop their leaves, allowing for a clearer view from the roadway toward the uses adjacent to it. This portion of the roadway lacks a median.

This landscape unit includes a mix of single family and multi-family residences and commercial and business operations. Most residences and businesses located off of and parallel to SR 32 front the developments' interior streets. Newer development located off of Yosemite Drive and Sierra Sunrise Terrace lacks mature vegetation along the right-of-way (Figure 6-2, Photo 8), while development located off of Bruce Road that is adjacent to SR 32, which has been ±10 years does include semi-mature to mature landscaping. This development has more screening from SR 32 than those located off of Yosemite Drive. While most of viewers adjacent to the roadway are oriented away from SR 32 and inwards toward parking lots around buildings or interior streets, the roadway is a prominent visual feature. Views also vary seasonally when deciduous trees drop their leaves, allowing for a much clearer view of the roadway and passing traffic. In general, adjacent residences and commercial and business operations serve as a visual barrier for other potential viewers that are located further north or south of those immediately adjacent to the roadway.

Recreationists include cyclists, walkers, and joggers. Because there is not contiguous development on both sides of SR 32, crosswalks are not provided for pedestrians at intersections, including Bruce Road and Yosemite Drive. While there are no bike lanes on SR 32 or adjacent streets in this landscape unit and no cyclists were observed on the roadway, this does not preclude cyclists from using these roadways.

Cobra head street lights are located at the Bruce Road intersection, in conjunction with the traffic signals. At Yosemite Avenue, cobra head street lights are used on either side of SR 32 to signify the entrance. Utility lines with wooden poles run north-south, across SR 32, at the Bruce Road intersection. Sparse vegetation makes these elements more prominent features in the visual setting. Existing fence lines and roadway signage also stand out more amongst the natural surroundings, in locations where the vegetation is sparse.

This oak savannah open space and rolling terrain provides a more unique and pleasing visual experience. However, aboveground utilities (e.g., roadway lights, traffic lights, and utility lines and poles) and infrastructure (e.g., roadways, buildings) detract from the overall visual quality. The visual quality of this landscape unit is moderate (VQ = 4.2). Vividness (V = 5), intactness (I = 4), and unity (U = 3.5) are moderately high to moderate.

Viewer Groups and Responses

Roadway Travelers

One of the largest viewer groups of the proposed project are travelers along SR 32. Because SR 32 is a commercial and commuter route, frequent viewers include truck drivers and commuters. Speeds on SR 32 average 45–65 mph (posted speed is 55 mph) during peak and off-peak hours, depending on location on the roadway.

During commute hours, single views could have long duration; however, viewers who frequently travel the freeway generally possess low visual sensitivity to their surroundings. The passing landscape becomes familiar to these viewers, and their attention is typically not focused on the passing. At standard roadway speeds during off-peak hours, views are of short duration and roadway travelers are fleetingly aware of surrounding traffic, road signs, their immediate surroundings within the automobile, and other visual features.

This viewer group also includes drivers using the SR 99 interchange with SR 32 and local streets that connect to SR 32. These viewers have low sensitivity to their surroundings because of their concentrated effort on merging onto SR 32 or slowing down and exiting/merging from SR 32 onto local streets.

Residents

Residents in both landscape units are the most likely to be affected by the proposed project because of their proximity to SR 32. Residences abut the Caltrans right-of-way and are separated from it by fences and vegetation/landscaping. Residents in this unit are likely accustomed to the sight of traffic and the vegetated right-of-way of SR 32, which vary seasonally. Residences face away from SR 32, toward tree-lined streets, creating a neighborhood atmosphere; extreme focus is not placed on SR 32. SR 32 is more of a visual presence to the newer residences on the southeast corner of SR 32/El Monte Avenue and off of Yosemite Drive and Sierra Ladera Lane, where there is a lack of mature vegetation screening the roadway. The majority of residents have expressed support for construction of a concrete sound wall, an option to the proposed wooden fence. Residences have high sensitivity to their surroundings because of their extended viewing of SR 32 and sense of ownership of views from their homes.

Businesses

Businesses and commercial operations are located off of SR 32, along Humboldt Road and local streets that intersect SR 32. These businesses are separated from SR 32 most often by fencing that is lined by vegetation, in Landscape Unit 1, and a sound wall, in Landscape Unit 2. These viewers are very accustomed to traffic and roadway conditions, but are more focused on their daily operations

Photo 1: Looking northeast near the park-and-go lot. This photo depicts the vegetated roadway corridor and foothills in the middleground.

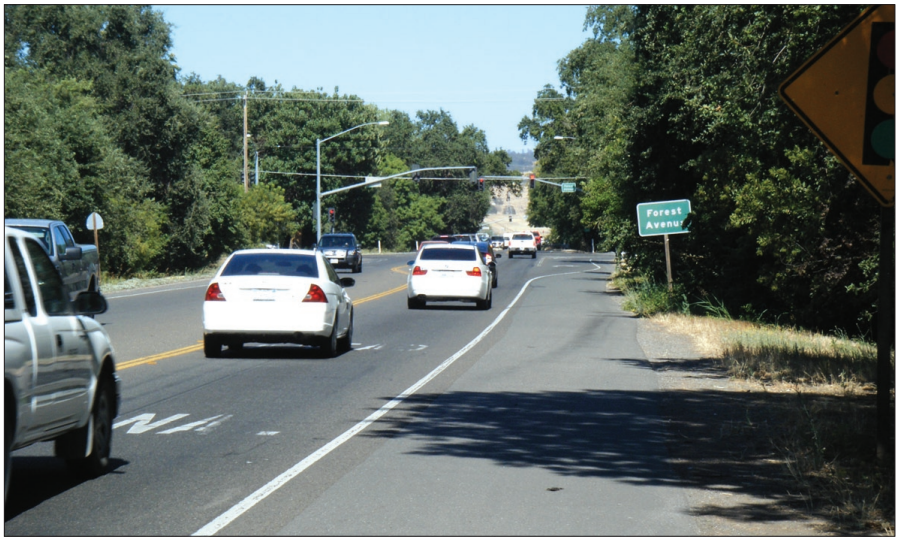

Photo 2: Looking northeast, southwest of Forest Avenue. This photo depicts the vegetated roadway corridor and foothills in the middleground.

Photo 3: Looking north from Chico Creek Professional Park. This photo depicts how vegetation along the right-of-way screens views of SR 32.

Photo 4: Looking north toward SR 32 from Forest Avenue. This photo depicts existing utilities common to the project vicinity.

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Figure 6-2a
Key Viewpoints

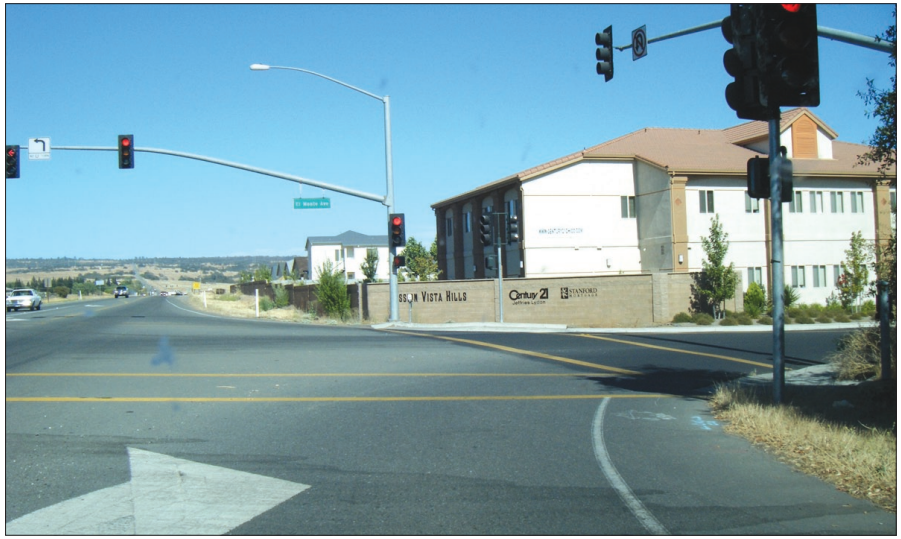

Photo 5: Looking east from SR 32 toward the El Monte Avenue intersection. This photo depicts the newer development that is located south of SR 32.

Photo 6: Looking northeast from SR 32 toward Bruce Road. This photo depicts the openness of the roadway corridor in this area and the foothills in the middleground.

Photo 7: Looking southwest from SR 32 toward Yosemite Drive and Bruce Road. This photo depicts the openness of the roadway corridor in this area and the foothills in the middleground.

Photo 8: Looking southwest from SR 32 toward Sierra Sunrise Terrace. This photo depicts the openness of the right-of-way in this area and the semi-mature trees along the edge of the right-of-way.

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Figure 6-2b
Key Viewpoints

associated with business. Because of this, business and commercial viewers would have moderately low sensitivity to changes resulting from the proposed project.

Recreationists

Recreationists include cyclists, walkers, and joggers who are more likely to regard the natural and built surroundings as a holistic visual experience; however, these viewers are accustomed to the busy roadway conditions of SR 32 and connecting local streets. Recreationists would be moderately sensitive to visual changes in the environment because the baseline condition includes existing roadways and associated development.

Impact Analysis

This section describes impacts and recommended mitigation measures for the proposed project. It describes the methods used to determine the project's impacts and lists the thresholds used to conclude whether an impact would be significant. Because evaluating visual impacts is inherently subjective, federal and professional standards of visual assessment methodology have been used to determine potential impacts on aesthetic values of the project area. Measures to mitigate (avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion.

Approach and Methodology

Using the concepts and terminology, described at the beginning of this section, and criteria for determining significance, described above, analysis of the visual effects of the project are based on:

- direct field observation from vantage points, including neighboring buildings, property, and roadways (conducted by an ICF Jones & Stokes landscape architect on August 1, 2008);
- photographic documentation of key views of and from the project site, as well as regional visual context;
- review of project construction drawings; and
- review of the project in regard to compliance with state and local ordinances and regulations and professional standards pertaining to visual quality.

Professional Standards

According to professional standards, a project may be considered to have significant impact if it would significantly:

- conflict with local guidelines or goals related to visual quality;
- alter the existing natural viewsheds, including changes in natural terrain;
- alter the existing visual quality of the region or eliminate visual resources;
- increase light and glare in the project vicinity;
- result in backscatter light into the nighttime sky;
- result in a reduction of sunlight or introduction of shadows in community areas;
- obstruct or permanently reduce visually important features; or
- result in long-term (that is, persisting for 2 years or more) adverse visual changes or contrasts to the existing landscape as viewed from areas with high visual sensitivity.

Impacts and Mitigation Measures of Proposed Project and Timber Barrier Alternative

This section has been divided into "General Impacts" (impacts occurring throughout the project area) and "Specific Landscape Unit Impacts" (impacts directly affecting a particular landscape unit). Generally, because the project involves making improvements to an existing state highway, the visual quality and character of the area would not be substantially altered relative to baseline conditions. Within the project limits, there are no roadways within or near the project area that are designated in California or local plans as a scenic highway or route worthy of protection for maintaining and enhancing scenic viewsheds. As such, the project would not damage scenic resources along a scenic highway.

General Impacts

Impacts that would occur as a result of the proposed project include temporary changes in views as a result of construction; potential glare and light impacts; and visual impacts resulting from topography and grade changes, removal of vegetation, and reduction of right-of-way planting areas for the creation of new lanes. Representative photos for vantages within the project area have been chosen to the best degree possible to depict (a) existing conditions, (b) roadway widening and wooden sound barrier conditions, (c) roadway widening and concrete sound barrier design option conditions, (d) roadway widening and wooden sound barrier with timber barrier alternative conditions, and (e) roadway widening and concrete sound barrier design option with timber barrier alternative conditions. These impacts would potentially affect both landscape units.

Impact VIS-1: Temporary Visual Impacts Caused by Construction Activities (Less than Significant with Mitigation Incorporated)

Construction of the proposed improvements would create temporary changes in views of and from the project area. Construction activities would introduce considerable heavy equipment and associated vehicles, including dozers, graders, scrapers, and trucks, into the viewshed of SR 32, public roadways, and residential and commercial properties. Safety and directional signage would also be a visible element. Assuming the project does not undergo phased construction, construction for the entire project is expected to require approximately one year.

In addition to construction of the proposed project, other construction projects are proposed within the vicinity of the project area, including SR 99 auxiliary lane project construction and Oak Valley and Meriam Park mixed-use developments (refer to "Related Projects" in Chapter 2). All viewer groups in the project area and vicinity would not be accustomed to seeing construction activities and equipment; their sensitivity to such impacts would be moderate.

If sound barrier Options A1 (6-foot-high pre-cast concrete wall) and A2 (6-foot-high concrete block wall) and their associated 8-foot high concrete wall options (Option A4) are constructed on the Caltrans side of the right-of-way, with the outside edge of the footing placed at the property line; entry to private properties would be necessary to construct these sound barrier design options. Implementation of Option A3 entails constructing a 6-foot-high wooden fence within the residential properties at the proposed locations shown in Figures 2-3a through 2-3f; affected residences would be subject to construction easements for a period of approximately two to three days per property (Brogan pers. comm.). The sensitivity of these residences to such impacts would be high; however, because construction is expected to last only two to three days per property, this is considered to be a short-term change in the visual character of the area behind their residences.

Nighttime construction may be required for low-intensity construction activities such as roadway paving.

Implementation of Mitigation Measure VIS-1 would reduce construction impacts to a less than significant level.

> **Mitigation Measure VIS-1a: Apply Minimum Lighting Standards if Nighttime Construction is Required**
>
> If night time construction is required, lights will be installed at the lowest allowable height and the lowest allowable wattage will be used per current Caltrans and City requirements. Lights will be screened and directed away from residential areas to the highest degree possible; and the amount of nighttime lights used will be minimized to the highest degree possible.

Long-term visual impacts are discussed under Impacts VIS-2 through VIS-5.

Impact VIS-2: Adversely Affect a Scenic Vista (No Impact)

The project area is not located within an area designated as a scenic vista and therefore would not obstruct public scenic vistas or views. Therefore, implementation of the proposed project would not adversely affect any scenic vistas. There would be no impact.

Impact VIS-3: Damage Scenic Resources Along a Scenic Highway (No Impact)

There are no roadways within or near the project area that are designated in California plans as a scenic highway or route worthy of protection for maintaining and enhancing scenic viewsheds. Therefore, implementation of the proposed project would not damage scenic resources, such as trees, rock outcroppings, and historic buildings along a scenic highway. There would be no impact.

Impact VIS-4: Degrade the Existing Visual Character or Quality of the Site and Its Surroundings (Significant and Unavoidable)

Along SR 32, the existing road cross section would be functionally and visually affected to accommodate the roadway widening and bridge widening over Dead Horse Slough. Widening of the roadway would change the character of the roadway from one that is more rural to one that is more suburban in nature. In addition, existing vegetation would be removed throughout the project area within the Caltrans right-of-way and on private properties in Landscape Unit 1 (SR 32 between SR 99 and El Monte Avenue) to accommodate the proposed sound barrier; tree removal would not occur in Landscape Unit 2 (SR 32 El Monte Avenue to Yosemite Drive).

The proposed sound barrier design options and location options would result in tree removal and pruning in Landscape Unit 1. Removing existing trees and vegetation along SR 32 and installing a sound barrier would further change the current visual character of this portion of SR 32 from one that is more rural to one that is more suburban.

Vegetation in the right-of-way creates an attractive visual barrier between residences and businesses and SR 32 and provides a vegetated view for SR 32 drivers. Activities associated with road construction, vegetation removal in the CRZ, tree pruning, and construction of one of the concrete sound barrier options would have a visual impact by creating a more substantial, built structure than presently exists.

Under all options, a total of 92 trees would be removed for construction of the road widening. An estimated 15 trees would require canopy pruning. A total of 23 trees would be removed for CRZ. Canopy pruning would be required for 27 trees.

Sound barrier Option A1, a pre-cast concrete wall, has the potential to be lighter in color than its surroundings and would stand out. Under this option, 71

additional trees would be removed for construction of the sound barrier. An estimated 35 trees would require canopy pruning (Figures 6-3a and 6-5a through 6-8a, Simulation 1).

Construction of sound barrier Design Option A2, a concrete block wall, would have the greatest visual impact of the sound barrier design options by creating a more substantial, continuous, built structure. In addition, a concrete barrier would be typically lighter in color than its surroundings. Under this option, 118 additional trees would be removed for construction of the sound wall. An estimated 31 trees would require canopy pruning (Figures 6-3a and 6-5a through 6-8a, Simulation 2). This option has the greatest affect on existing vegetation and would alter the existing visual character of the roadway corridor the greatest amount.

Construction of sound barrier Design Option A3, a wooden fence, would blend best with the existing surroundings. The use of a natural material would soften the appearance of the barrier. Its darker color would also enable it to recess back in to the view. Construction of a wooden fence would result in the removal of 59 trees. An estimated additional 66 trees would require canopy pruning. Under post-project conditions, SR 32 drivers would view the proposed sound barrier rather than the existing vegetation. (Figures 6-3a and 6-5a through 6-8a, Simulation 3).

The proposed project would include replanting the area outside of the 30-foot CRZ with appropriate species; Mitigation Measure BIO-15a provides specific performance standards that would be met in compensating for the loss of these trees.

Sound barrier Design Option A4, an 8-foot-high barrier, would result in the same amount of tree removal and canopy pruning by barrier type because trees would need to be removed and pruned to accommodate the same footings and the same construction equipment as the 6-foot-high barriers (Figures 6-3b and 6-5b through 6-8b, Simulations 1, 2, and 3).

Two additional location options are proposed on the north side of SR 32, at the request of residences in that location, to further screen views of SR 32 and to further alleviate perceived noise that could result from the proposed widening. Location Option B1, extending the barrier east of Forest Ave to El Monte Avenue, and Location Option B2, extending the barrier east of Fir Street, would require additional tree removal and pruning to accommodate the sound barriers. Refer to Table 6-1 for tree removal and canopy pruning for each barrier design by location option. Barriers in these locations would introduce a substantial built structure where only chain link fencing or vegetation presently exists. These location options would result in an increased amount of tree removal and pruning in the project area; the concrete block wall would have the greatest impact and the wooden fence the least.

Table 6-1. Tree Removal by Barrier Design for Each Location Option

Barrier Design	Location Option B1	Location Option B2
Pre-Cast Concrete Wall	3 trees removed 18 trees to be canopy pruned	2 trees removed 5 trees to be canopy pruned
Concrete Block Wall	18 trees removed 2 trees to be canopy pruned	19 trees removed 4 trees to be canopy pruned
Wooden Fence	1 trees removed 20 trees to be canopy pruned	0 trees removed 9 trees to be canopy pruned

Forest and El Monte Avenues would be widened to accommodate additional turn lanes. This would require reconstruction of curb returns, relocation of traffic signals and lighting facilities, relocation of utilities and drainage facilities, and conforming paving along the side streets as needed to match the existing configuration of the side streets. Accurate Auto, located on Forest Avenue, would be the most affected by these changes, losing unlandscaped frontage along the roadway. In general, the widening of Forest and El Monte Avenues would not greatly alter the existing character of these streets.

The overall impact of the proposed project is considered adverse because it would change the visual character of the affected areas. Implementation of Mitigation Measures VIS-4 and BIO-15a would reduce impacts but not to a less than significant level. Therefore, this impact is considered significant and unavoidable.

Timber Barrier Alternative

The change in visual character described above for the proposed project also would occur under the Timber Barrier Alternative. However, under the Timber Barrier Alternative, a timber barrier would be constructed in the median between the park-and-ride lot and Bruce Road, except at roadway intersections and Dead Horse Slough bridge where there would be no median. The irrigated median would be planted with trees. The Timber Barrier Alternative would be beneficial to the aesthetic appearance of the roadway. It would reduce and soften the appearance of the widened roadway surface and provide a visually pleasing travel corridor. In addition, the use of timber is a natural material that would be visually pleasing and complement tree plantings in the median, as opposed to a standard metal guardrail (Figure 6-4a and 6-4b, Simulations 1, 2, and 3).

Mitigation Measure VIS-4: Implement Sound Barrier Aesthetics

If sound barrier Design Option A2 (the concrete block wall) is selected, a roughened wall surface would soften the verticality of the wall face by providing visual texture and reducing the amount of smooth surface that can reflect light. Choosing earth-toned colors for the wall surface would be less distracting to viewers and help the noise barrier blend with the planted vegetation as it matures. Adding a design motif to the wall face that reflects natural materials would reduce visual monotony, soften verticality, and be more visually pleasing to viewers than a plain wall surface.

If sound barrier Design Option A1 (pre-cast concrete wall) is selected, the design of the pre-cast concrete wall would reflect a natural material such as wood or stone, rather than a smooth plank appearance, that would blend better with the visual environment and provide visual interest until plantings mature. Recent studies have shown that structures 1 to 2 degrees darker than the color of the general surrounding area creates less of a visual impact than matching or lighter hues (U.S. Bureau of Land Management 2008). Therefore, the pre-cast concrete wall and associated structures shall be a shade that is 1 to 2 degrees darker than the general surrounding area, and the use of light buff/tan, brown, or gray colors shall be avoided. Instead, darker colors such as deep browns, deep red-browns, and deep warm grays shall be selected for their ability to complement the surrounding vegetation and to recess back and not stand out amongst their surroundings.

Mitigation Measure BIO-15a: Compensate for Loss of Protected Trees

The City will compensate for the loss of protected trees through the preparation of a mitigation planting plan, including a species list and number of each species, planting locations, and maintenance requirements. Because the tree ordinance does not specify mitigation ratios for replacement plantings, compensation ratios will be developed in coordination with the City of Chico Urban Forester. Potential mitigation areas will be also be identified in coordination with the City of Chico Urban Forester.

Plantings would occur outside of the 30-foot CRZ, Planted species will be based on those removed from the project area and will include primarily valley oak and interior live oak. Plantings will consist of cuttings taken from local plants, or plants grown from local material. Plantings will be monitored annually for three years or as required in the project permits. A minimum of 75 percent of the plantings will have survived at the end of the monitoring period for mitigation to be considered successful. If the survival criterion is not met at the end of the monitoring period, planting and monitoring will be repeated until the survival criterion is met.

These plantings would soften the appearance of both the proposed project and concrete sound barrier design option. While new plantings would improve aesthetics of the proposed project and provide visual screening of the roadway from adjacent businesses, it would not rectify the change in roadway character, as it would take years before the plantings would mature and return the roadway character to a similar character as presently exists.

Impact VIS-5: Create a New Source of Light or Glare (Less than Significant with Mitigation Incorporated)

The proposed project would not create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area. This impact is considered less than significant with mitigation incorporated.

Daytime and Nighttime Glare. Once the facility has been built, the widened roadway would increase the amount of reflective surface present, but not to a level that would substantially alter the amount of glare perceived within the project area. A pre-cast concrete wall, Design Option A1, or concrete block wall, Design Option A2, would increase the amount of glare to a higher degree than a wooden sound fence, Design Option A3. The concrete structures would have a larger surface area that is much lighter in color and may result in increased reflective glare from sunlight during the day and from artificial light sources at night, especially until plantings mature. Design Option A3 would construct a wooden sound barrier that would be visible to roadway travelers and residences (Figures 6-3a through 6-8a and 6-3b through 6-8b, Simulation 3). While this would have a large surface area, the natural material has low reflectivity.

Project implementation would require that existing vegetation be removed along the entire Caltrans right-of-way within the project area, increasing the impact of glare (see Impact VIS-4 for further details on vegetation removal). The proposed project includes replanting the area outside of the 30-foot CRZ with appropriate species, such as trees whose canopy can overhang the wall, shrubs, and climbing vines that can spread along the wall surface, which would reduce reflective glare, especially at maturity (Figures 6-3a through 6-6a and 6-3b through 6-6b, Simulations 1, 2, and 3). Residences could also experience increased glare from the wall surface facing their homes (Figures 6-7a, 6-7b, 6-8a, and 6-8b, Simulations 1, 2, and 3). The installed and relocated light standards would be concrete or galvanized steel; no reflective surfaces are proposed. These galvanized surfaces would naturally oxidize within a short time following installation and would not cause reflective daytime glare.

Nighttime Light. New sources of light would be introduced from the signalization of Fir Street. The amount of light that would come from signalization of this location is negligible. Signals and lighting currently exist at the Forest Avenue, El Monte Avenue, and Bruce Road intersections with SR 32. These lights would be relocated; no new lights are proposed.

Implementation of Mitigation Measures VIS-3, VIS-4, and VIS-5 would reduce the impact to a less than significant level.

Timber Barrier Alternative

Trees planted as part of the Timber Barrier Alternative would be beneficial in reducing the amount of glare reflecting off of the widened roadway surface. At maturity, these trees would cast shade on the roadway surface to decrease the amount of sunlight reflecting off of the pavement and reflective surfaces of vehicles. This impact is considered beneficial because the proposed alternative

would the amount of glare resulting from the proposed project, as discussed above in Impact VIS-4.

Mitigation Measure VIS-5a: Apply Minimum Lighting Standards

Lights will be installed at the lowest allowable height and the lowest allowable wattage will be used per current Caltrans and City requirements; lights will be screened and directed away from residential areas to the highest degree possible; and the amount of nighttime lights used will be minimized to the highest degree possible.

Mitigation Measure VIS-5b: Construct Walls with Low-sheen and Non-reflective Surface Materials for Concrete Sound Barrier Design Option

Use of similar building materials and colors to those found in nearby, established communities would aid in helping the facility to blend with its local surroundings. The objective of these treatments would be to reduce the appearance of the wall surface by blending better with the surrounding community. Walls shall have low-sheen and non-reflective surface materials to reduce potential for glare. The use of smooth toweled surfaces and glossy paint shall be avoided.

Specific Landscape Unit Impacts

Impact VIS-6: Permanent Changes to Views in Landscape Unit 1—SR 32 between SR 99 and El Monte Avenue (Significant and Unavoidable)

Widening and construction of the sound barrier in Landscape Unit 1 would require that existing vegetation be removed throughout the unit within the Caltrans right-of-way and on private properties adjacent to the roadway; this would change the character of the roadway from one that is more rural to one that is more suburban in nature. As addressed in Impact VIS-4, SR 32 drivers would view the cleared right-of-way or proposed sound barrier rather than the existing vegetation. A wooden fence would blend better with the existing surroundings and soften the appearance of the barrier than a pre-cast concrete or concrete block wall that would have a greater visual impact by creating a more substantial, built structure that is lighter in color.

While new landscaping plantings, installed as part of the project, would help to revegetate the right-of-way and soften the appearance of the proposed sound barrier, it would take a number of years before the plantings would mature and return the roadway character to a similar appearance as presently exists. Therefore, this would not rectify the change in roadway character. This impact to this unit is considered adverse because the proposed project would change the visual character of the affected areas.

Vegetation removal, roadway widening, and sound barrier construction and alteration of the rural character of roadway corridor in this unit, to one that is more suburban, would reduce the visual quality in this unit. The vividness would be reduced from (V = 4) to (V = 3), intactness from (I = 4) to (I = 3), and unity from (U = 4) to (U = 3) for an overall visual quality reduction from (VQ = 4) to (VQ = 3). The change to a lower rating is considered to be an adverse impact.

Mitigation Measures VIS-4, VIS-5a, VIS-5b, and BIO-15a would reduce impacts but not to a less than significant level. Therefore, this impact is considered significant and unavoidable.

Impact VIS-7: Permanent Changes to Views in Landscape Unit 2—SR 32 between El Monte Avenue and Yosemite Drive (Significant and Unavoidable)

Landscape Unit 2 is comprised of oak savannah and lacks dense vegetation along the SR 32 corridor. Development is mostly located to the north of SR 32, except for a small area of development located on the southeast corner of El Monte Avenue. Development in this unit is fairly new. Between Bruce Road and Yosemite Drive, development abuts SR 32; however, the remainder of the land to the immediate north and south of the roadway is in open space.

There would be no vegetation removal in this unit because of the lack of vegetation in the immediate corridor of the roadway; however, there would be conversion of open space within the existing right-of-way to a paved roadway. Widening between El Monte Avenue and Bruce Road would nearly double the width of the roadway cross section in this portion of the unit by widening to the north of SR 32. Between Bruce Road and Yosemite Drive, the roadway would be widened roughly on either side of the centerline to two lanes in each direction. Turn lanes would also be added at Yosemite Drive. Widening in this unit and the conversion of open space would alter the existing visual character of the roadway from one that is more rural in nature to one that is more suburban. The addition of a sound barrier from the Sierra Sunrise Village development to Yosemite Drive, as proposed by this project, would wall off these residents and create a visual barrier between the roadway corridor and the adjacent developments, more typical of suburban developments, restricting views from residences to the open space south of the SR 32 (Figure 6-8a and 6-8b, Simulations 1, 2, and 3).

The Timber Barrier Alternative would be constructed in the median, in this unit, only between El Monte Avenue and Bruce Road, which would be beneficial to the aesthetic appearance of this roadway section. It would reduce and soften the appearance of the widened roadway surface. However, the barrier and landscape planting would not mediate the change in character. No other plantings are proposed in this unit.

Alteration of the rural character of this unit, to one that is more suburban, from roadway widening and sound barrier construction would reduce the visual quality in this unit. The vividness would be reduced from (V = 5) to (V = 4), intactness from (I = 4) to (I = 3), and unity from (U = 3.5) to (U = 3) for an overall visual

quality reduction from (VQ = 4.2) to (VQ = 3.3). The change to a lower rating is considered to be an adverse impact.

Mitigation Measures VIS-4, VIS-5a, VIS-5b, and BIO-15a would reduce impacts but not to a less than significant level. Therefore, this impact is considered significant and unavoidable.

No-Project Alternative

Under the No-Project Alternative, SR 32 would not be widened and intersection improvements would not be constructed. There would be no impacts on visual resources.

Cumulative Impacts

Clearing, excavation, and grading activities associated with construction of approved and planned development in the City could result in adverse short-term changes to views. Planned development could also alter the existing visual character of the area in the long-term and affect the area's visual amenities, including open and views of the foothills to the east, Bidwell Park, and smaller creekside greenways within the City. Future development and roadway improvements could also incrementally add to ambient atmospheric lighting. Implementation of Mitigation Measures VIS-4 (implement sound barrier aesthetics), BIO-15a (compensate for loss of protected trees), VIS-5a (apply minimum lighting standards), and VIS-5b (construct walls with low-sheen and non-reflective surface materials for concrete sound barrier design option) would reduce the project's incremental impact to visual resources to less than cumulatively considerable.