3.1.7 Visual and Aesthetic Resources

Regulatory Setting

The National Environmental Policy Act of 1969 as amended (NEPA) establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing surroundings (42 U.S.C. 4331[b][2]). To further emphasize this point, the Federal Highway administration in its implementation of NEPA (23 U.S.C. 109[h]) directs that final decisions regarding projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

Likewise, the California Environmental Quality Act (CEQA) establishes that it is the policy of the state to take all action necessary to provide the people of the state "with…enjoyment of *aesthetic*, natural, scenic and historic environmental qualities." (CA Public Resources Code Section 21001[b])

Local Regulations

Local publication and planning documents can be indicators of viewer sensitivity to visual change. The applicable locally and regionally designated scenic roadways are listed below to provide insight into viewer sensitivity.

Solano County General Plan Resources Element

The Solano County General Plan's Resources Element identifies the County's scenic roadways and adopts policies for their preservation. The following roadways within or near the project area are identified on Figure RS-5 of the General Plan as being scenic roadways in the Solano County General Plan Resources Element (Solano Transportation Authority 2008).

- I-80 from Carquinez Strait at Vallejo to Solano-Yolo County line at Davis.
- I-680 from Carquinez Strait at Benicia to I-80 at Cordelia.
- SR 12 from the Solano-Napa County line to I-80 and from Union Pacific Railroad at Fairfield to Solano-Sacramento County line at Rio Vista.
- Green Valley Road from I-80 at Cordelia to Rockville Road.
- Oliver Road from I-80 at Fairfield to Mankas Corner Road and Waterman Boulevard.

City of Fairfield Scenic Vistas and Roadways Plan

The project includes changes to I-680 within the Fairfield Urban Limit Line. This area of I-680 is considered a scenic roadway by the City of Fairfield Scenic Vistas and Roadways Plan (Solano Transportation Authority 2008).

Methods

Landscape Units are described using the Federal Highway Administration (FHWA) Method of Visual Resource Analysis as described below.

Visual Character

Visual character is descriptive and non-evaluative, which means it is based on defined attributes that are neither good nor bad in themselves. Visual character is described in terms of its pattern elements such as form, line, color, and texture, and in terms of pattern character such as dominance, scale, diversity, and continuity.

A change in visual character cannot be described as having good or bad attributes until it is compared with the viewer response to that change. If there is public preference for the established visual character of a regional landscape, and resistance to a project that would contrast that character, then changes in the visual character can be evaluated.

Visual Quality

Visual quality is evaluated by identifying the vividness, intactness, and unity present in the viewshed. The FHWA states that this method should correlate with public judgments of visual quality well enough to predict those judgments. This approach is particularly useful in highway planning because it does not presume that a highway project is necessarily an eyesore. This approach to evaluating visual quality can also help identify specific methods for mitigating each adverse impact that may occur as a result of a project. The three criteria for evaluating visual quality are defined here.

Vividness is the visual power or memorability of landscape components as they combine in distinctive visual patterns.

Intactness is the visual integrity of the natural and man-made landscape and its freedom from encroaching elements. It can be present in well-kept urban and rural landscapes, as well as in natural settings.

Unity is the visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of individual man made components in the landscape.

Vividness, intactness, and unity of a landscape unit were each rated on a scale from 1 to 7 using the scale provided in Table 3.1.7-1. These scores were averaged and rounded to the nearest whole number to determine an overall visual quality score for the landscape unit.

Table 3.1.7-1. Vividness, Intactness, and Unity Scoring System

Score	Definition
1	Very Low
2	Low
3	Moderately Low
4	Moderate
5	Moderately High
6	High
7	Very High

Affected Environment

This discussion is taken primarily from the *I-80/I-680/SR 12 Interchange Project Visual Impact Assessment* (VIA), prepared in 2009.

Regional Landscape

Solano County has retained much of its agricultural character; however, the cities of Fairfield and Suisun City have experienced rapid growth of new residential and commercial development over the past several decades, resulting in a regional landscape characterized by a patchwork of rural, suburban, and urban landforms and aesthetics. This regional landscape is visually striking at times when abrupt changes between aesthetics occur, such as broad expanses of agricultural land being interrupted by dense residential subdivisions or large industrial parks. With the regional backdrop of the coastal mountains (locally, the Twin Sisters peak) and with Suisun Marsh providing a distinctive and vivid natural backdrop, this patchwork of rural, suburban, and urban aesthetics is even more vivid.

This patchwork of aesthetics is quite evident in the immediate project area and viewshed. For example, the western portion of the project area is surrounded by rolling hills used for grazing cattle; but at the junction with SR 12W, the land uses change abruptly to a large industrial park to the south and a large commercial center to the north. Similarly, dense residential subdivisions line the west side of I-680 while the east side is mostly undeveloped open space associated with the Suisun Marsh. Through the central portion of the study area, this patchwork continues with commercial retail uses lining both sides of the I-80 corridor through Cordelia, and then abruptly changing to an agricultural aesthetic east of Suisun Creek. Along the SR 12E corridor, striking differences can also be seen. The south side of the roadway is lined by a large industrial park, which abruptly turns to undeveloped lands east of Ledgewood Creek, while the north side is lined by the dense residential neighborhoods of downtown Fairfield.

Landform

The majority of the landform is flat, consisting of the valley. A large portion of the project area is located in Green and Suisun Valleys. Suisun Valley is a highly scenic agricultural area, extending north and south from Twin Sisters peak to south of I-80.

A portion of the project area along Jameson Canyon Road and I-80 at the west end consists of rolling hills. Rolling hills are generally visible to the west and north. Twin Sisters peak, a double-peaked 2,200-foot mountain, is north of the existing I-80/I-680/SR 12 interchange.

Land Cover

Land cover in the project area consists of man-made components (e.g., roadways, buildings, signs, and utility lines), vegetation, and water. Land cover elements include the existing roads, single-family homes, commercial development, farmland, trees, shrubs, marshland, grazing land, industrial development, a school, utility lines, creeks, and railroad tracks.

Because the region is largely agricultural, vegetation (crops and grazing land) make up a large part of the region's visual character. Regional vegetative land cover also includes scattered trees and shrubs in farmland, grazing land, land adjacent to the roadways, the median of I-80 and I-680, and residential developments. Crops and grassland along the existing highways are coarse,

dense, low to the ground and, in some areas, adjacent to the existing roadway. Suisun Marsh, grazing land, trees, and farmland provide a brown/green element to the regional landscape that changes color depending on the time of year.

Suisun Marsh is a vegetated water feature that contributes to the regional character. Marshland adjacent to I-680, I-80, and SR 12E appears covered by coarse, low-lying marsh plants. Water is not immediately visible most of the year. In addition to the marshland, creeks are a visible water feature in the project area. Six creeks (American Canyon, Jameson, Green Valley, Dan Wilson, Suisun Creek, and Ledgewood Creeks) run through the project area.

Man made land cover in the region is diverse in age and scale. To the west of I-680, in Fairfield, manmade development includes new single-family residential neighborhoods, several dominant large white warehouses, and commercial buildings of various sizes and colors. Residential neighborhoods are visually separated from the highways by walls. These dense neighborhoods mostly consist of new two-story single-family homes. Man made development in Old Town Cordelia, a distinct community in Solano County, is comprised of less-dense neighborhoods of older one- or two-story single-family homes.

Man made land cover also includes train tracks that run perpendicular to SR 12E on the western border of Suisun City. Train cars and containers are visible on or adjacent to the tracks south of SR 12E. Industrial and commercial buildings, several of which appear older, are one or two stories high, of various browns and grays, and are located in Suisun City, east of the railroad tracks and south of SR 12E. Apartment buildings and single-family homes lie to the north. Tall walls in earth-toned colors block views of the majority of homes from SR 12E. Apartment buildings visible from the roadway include a light-pink three-story apartment building and a gray two-story building near the intersection with Pennsylvania Avenue. A black iron fence is located between the apartment buildings and SR 12E.

Utility poles line many of the local roadways and are visible from the freeway. In addition, several large electrical transmission lines and towers are visible in the area, including one large transmission line that crosses I-80 in the vicinity of the I-80/SR 12E interchange. Rural agricultural areas located at the far west end of the project area, along the east side of I-680, and in the central section between Suisun Creek and SR 12E include farm buildings, occasional residences, fencing, farm equipment, cattle, and other agricultural uses and facilities.

Project Viewshed

A viewshed is comprised of broad-range views from a specific viewing location. Viewsheds are generally quite large. The limits of a viewshed are defined as the visual limits of the views from the proposed project. The viewshed also includes the locations of viewers likely to be affected by visual changes brought about by project features.

For the purpose of this analysis, the viewshed is determined by the height of the landforms and the presence or absence of buildings along the roadway. These factors vary over the length of the project area and, as shown in Figure 3.1.7-1, create a viewshed that varies in width.

Landscape Units

To provide a framework for understanding the visual effects of a proposed highway project, the regional landscape can be divided into distinct landscape units. A landscape unit is a portion of the regional landscape and can be thought of as an outdoor room that exhibits a distinct visual character. A landscape unit often corresponds to a place or district that is commonly known among local viewers. The landscape units for the proposed project are shown in Figure 3.1.7-2.

Landscape Unit 1

Landscape Unit 1 is the westernmost portion of the project area. It runs from west of Red Top Road along Jameson Canyon Road/SR 12W until it joins with I-80 to the east. This landscape unit also includes the hills south of SR 12W in the project area and I-80 west of the I-80/SR 12 interchange. This landscape unit is dominated by agricultural uses—primarily grazing land, much of it on rolling hills. Jameson Creek is south of SR 12W in this landscape unit. Wire cattle fencing supported on metal stakes and wooden poles, follows SR 12W. The vegetation in this landscape unit is mostly grassland with trees along Jameson Creek, shrubs, and an olive orchard. A rural building is adjacent to the olive orchard. Overhead utility lines cross the landscape unit. A gas station and a fast food restaurant building are located along I-80 in Landscape Unit 1.

Existing Visual Character

Landscape Unit 1 exhibits a rural character defined by the dominant rolling hills covered in grassland. Although Jameson Canyon Road cuts through this landscape unit, its path is curved and follows the rolling hills, maintaining the continuity of the landscape. The rural character of this landscape unit gets its texture from the grass, shrubs, and trees; the dominant brown/green color varies with the season.

Existing Visual Quality

The rural character, rolling hills, and vegetation create a moderately high level of vividness. A gas station and small fast food restaurant along I-80, SR 12 with its steady flow of traffic, and a power line traversing the hills interrupt the visual experience. As a result, the intactness and unity of the landscape unit are considered moderate (Table 3.1.7-2).

Table 3.1.7-2. Visual Quality in Landscape Unit 1

Visual Quality Criteria	Vividness		Intactness		Unity		Visual Quality (Average Scores for Vividness, Intactness, and Unity)	
	Score	Description	Score	Description	Score	Description	Score	Description
Existing Conditions	4	Moderate	4	Moderate	4	Moderate	4	Moderate

Landscape Unit 2

This landscape unit is the developed valley floor where Green Valley and Suisun Valley come together along I-80. The landscape unit stretches along I-80 from the I-80/SR 12W interchange in the west to Dan Wilson Creek in the east. Commercial buildings are located north of I-80 and warehouses are located south of I-80/west of I-680. Old Town Cordelia and commercial buildings are located south of I-80/east of I-680.

Existing Visual Character

This landscape unit is characterized by suburban development. In Landscape Unit 2, north of I-80, the visual character is defined by relatively new commercial buildings of various sizes and colors along the flat valley floor. A similar character informs the area west of I-680 and south of I-80. There are a variety of forms and colors in these areas, created by the different sizes and colors of the commercial buildings and warehouses.

In Landscape Unit 2, Old Town Cordelia has a distinct visual character. Old Town Cordelia consists of one- or two-story single-family homes that are generally older and less densely spaced than other homes in the project area. Grass and scattered trees are visible between these homes, adding height and texture to the landscape. Commercial development of various ages, mostly earth-toned in color, is located near the intersection of I-680 and I-80. Flat open space (pavement or grass) lies between the commercial buildings in this area. Old Town Cordelia contains a diverse array of pattern elements, although a distinct boundary between the single-family homes and commercial development detracts from the diversity of this area. The visually distinct area of Old Town Cordelia is visually separated by I-80 and I-680 from the other portions of this landscape unit.

Existing Visual Quality

Old Town Cordelia and views of the hills contribute to a moderate level of vividness in this landscape unit. The random pattern of commercial and residential development along the highway in this landscape unit creates a low level of intactness and unity (Table 3.1.7-3).

Table 3.1.7-3. Visual Quality in Landscape Unit 2

Visual Quality Criteria	Vividness		Intactness		Unity		Visual Quality (Average Scores for Vividness, Intactness, and Unity)	
	Score	Description	Score	Description	Score	Description	Score	Description
Existing Conditions	4	Moderately	2	Low	2	Low	3	Moderately Low

Landscape Unit 3

Landscape Unit 3 is a flat area of the valley floor that is bisected by I-680. This landscape unit is characterized by commercial uses and single-family development to the west and marshland to the east of I-680. The marshland to the east is Suisun Marsh.

Existing Visual Character

This landscape unit exhibits a natural visual character east of I-680 characterized by flat brown marshland, and man-made suburban visual character to the west that includes a variety of building types and sizes.

The area to the west of I-680 includes man made elements such as two-story single-family developments, Rodriguez High School and its playing fields, large rectangular white warehouses, and other commercial development of varying sizes. The warehouses are dominant elements in the landscape due to their scale and their white color. Development in this landscape unit is varied in scale and function. Despite this, it does not appear continuous or diverse because it is

clustered by type and size, rather than intermixed. Farther north along I-680, the buildings become larger and more commercial.

The flat marshland east of I-680 contains little diversity but has a distinct texture and brown/green color created by the marsh plants.

Existing Visual Quality

Suisun Marsh, to the east of I-680, is fairly visually intact and unified since there are few man made elements visible in the marshland. However, the landscape west of I-680 is not visually unified and detracts from the visual quality of this landscape unit. Views of Suisun Marsh in the foreground and distant views to the hills to the north contribute to a moderate vividness and intactness in this landscape unit (Table 3.1.7-4).

Table 3.1.7-4. Visual Quality in Landscape Unit 3

Visual Quality Criteria	Vividness		Intactness		Unity		Visual Quality (Average Scores for Vividness, Intactness, and Unity)	
	Score	Description	Score	Description	Score	Description	Score	Description
Existing Conditions	4	Moderate	4	Moderate	2	Low	3	Moderately Low

Landscape Unit 4

Landscape Unit 4 consists of flat agricultural fields in Suisun Valley on either side of I-80 between developed areas of Fairfield. This landscape unit includes the existing I-80/SR 12E interchange.

Farmhouses, outbuildings, and commercial farm businesses are scattered throughout the area. Solano Community College and the new Fairfield Corporate Commons business park are also in this landscape unit. Agricultural lands consist of row crops, orchards, and vineyards. Dan Wilson Creek and Suisun Creek flow from north to south.

Existing Visual Character

East of Dan Wilson Creek (the western boundary of Landscape Unit 4), the project area becomes rural in character. I-80 constitutes a line of man-made development through flat farmland on the valley floor. Several rural homes and farm buildings are scattered throughout the landscape unit on the agricultural land. The presence of agriculture creates a texture and a brown/green color. Due to its scale relative to other elements in this landscape unit, one building, a Budweiser brewery, dominates the southeastern portion of the landscape. The rural character of this landscape unit is continuous with the exception of the Budweiser brewery.

Existing Visual Quality

The rural character of this landscape unit creates a moderate level of vividness (Table 3.1.7-5). Although the majority of the landscape unit appears intact and unified in its agricultural character, encroachment of industrial uses (e.g., the brewery) in the eastern portion of the unit detracts from the overall intactness and unity.

Table 3.1.7-5. Visual Quality in Landscape Unit 4

Visual Quality Criteria	Vividness		Intactness		Unity		Visual Quality (Average Scores for Vividness, Intactness, and Unity)	
	Score	Description	Score	Description	Score	Description	Score	Description
Existing Conditions	4	Moderate	4	Moderate	4	Moderate	4	Moderate

Landscape Unit 5

This landscape unit is generally flat. It encompasses SR 12E and the man-made development on either side of the highway. Single-family residential development is north of SR 12E, while commercial and industrial structures with grass and parking lots between them are south of SR 12E. This landscape unit also includes train tracks and a portion of downtown Suisun City at its eastern end. Commercial/industrial buildings, including an Amtrak station, are present in this portion of downtown Suisun City.

Existing Visual Character

Landscape Unit 5 is characterized by buildings along SR 12E. Large retail and industrial buildings generally characterize the area south of SR 12E. Although an undeveloped area of Suisun Marsh lies between the existing commercial development south of SR 12E and downtown Suisun City, a mixed-use development project planned for this area by Suisun City will extend the existing commercial/industrial character on the south side of SR 12E in this landscape unit. Structures north of SR 12E are mostly single-family homes separated from SR 12E by a wall. The buildings north of SR 12E are smaller than those to the south. SR 12E divides the visual character in this landscape unit.

In addition to SR 12E, the train tracks form a line through this landscape unit west of downtown Suisun City. The area of downtown Suisun City in this landscape unit consists of commercial/industrial buildings, mostly gray and earth toned in color, that are smaller and older than those west of the train tracks.

Existing Visual Quality

The mix of commercial and residential development in this landscape unit is not vivid (Table 3.1.7-6). Because the pattern of development switches from clusters of large commercial/industrial buildings to single-family residential to smaller, older commercial/industrial buildings, this landscape unit is not intact or unified. The walls around the majority of residential development also detract from the unity of this landscape unit.

Table 3.1.7-6. Visual Quality in Landscape Unit 5

Visual Quality Criteria	Vividness		Intactness		Unity		Visual Quality (Average Scores for Vividness, Intactness, and Unity)	
	Score	Description	Score	Description	Score	Description	Score	Description
Existing Conditions	2	Low	2	Low	2	Low	2	Low

Viewer Sensitivity and Response

Viewer sensitivity is defined both as the viewers' concern for scenic quality and the viewers' response to change in the visual resources that make up the view. Local values and goals may confer visual significance on landscape components and areas that would otherwise appear unexceptional in a visual analysis. Community aspirations for visual quality can be expressed in local publications and planning documents.

Viewer response is typically assessed by measuring the number of viewers exposed to the resource change, type of viewer activity, duration of views, speed at which the viewer moves, and position of the viewer.

Three different sets of viewer groups were identified for this analysis as discussed below. These groups represent people with views from the project and people with views of the project.

Motorists

Motorists comprise both drivers and passengers traveling on I-80 in the project area. Motorists in approximately 160,000 vehicles drive through the project area during each weekday. These viewers experience a constantly changing sequence of views as they travel along I-80 in the project area.

Motorist sensitivity to visual change would vary depending on the individual's role as passenger or driver and the level of traffic congestion experienced. Drivers traveling at normal speeds usually need to focus their attention on long-range, non-peripheral views (Federal Highway Administration 1981). However, passengers likely have a more heightened awareness of a wide range of views because they are not concentrating on the task of driving and can look out the side window toward their side of the highway. Motorists traveling at normal highway speeds would have a much shorter duration of view than motorists driving slowly due to congested traffic (which is common in the project area during peak periods). For safety reasons, motorists experiencing congested traffic conditions are likely to focus on views of the existing highway and the traffic in front of them.

Residents

Thousands of residents live near the project area. The greatest number of homes are west of I-680 in the Gold Hill area of Fairfield and on the north side of SR 12E in Fairfield. Other residential areas are Cordelia, Green Valley, and scattered rural residences. Some residents have distant views of the I-80/I-680/SR 12 interchange from their homes in the hills northeast of the I-80/SR 12W interchange. Others have middle ground views of the existing highways from their homes. Community residents are likely to experience views of long duration. Most residential views of the existing highways are screened by walls, landscaping, or both.

Residents are likely to have a higher concern about the project than motorists. It is expected that residents would be concerned with effects on views from their homes and neighborhoods.

Commercial Area Employees and Customers

A variety of commercial uses, ranging from shopping centers to hotels, line portions of the roadways that constitute the project area. Commercial uses are concentrated along I-80, east of its intersection with SR 12W and west of Dan Wilson Creek; east of the I-80/SR 12E

interchange; and on the west side of I-680, north of Red Top Road. Consequently, hundreds of viewers per day would have short duration, middle ground-to-distant views of the project. Viewer awareness would be low and sensitivity medium-to-low, because these viewers would generally be concentrating on specific indoor tasks, not looking at the highway.

Environmental Consequences

Because it is not feasible to analyze all the views in which the project alternatives would be seen, it is necessary to select a number of viewpoints that most clearly reflect the visual effects of the project. Viewpoints also represent the primary viewer groups that would potentially be affected by the project. The locations of the viewpoints selected for this analysis are shown in Figure 3.1.7-3. The viewpoints and visual simulations are presented in Figures 3.1.7-4 through 3.1.7-27.

The most substantial visual effects would be associated with Alternatives B and C. The visual effects of the fundable first phases of the project alternatives (Phase 1s) would be similar but reduced. Accordingly, there is no separate discussion for the fundable first phases in this analysis.

The 14 viewpoints used in this analysis were selected in consultation with the Department's Office of Landscape Architecture to represent views of Alternatives B and C. Viewpoint 1 was adjusted to a slightly different position for Alternative C to better represent the alternative's features. Viewpoint 14 was selected as a point of interest for Alternative B to depict the central interchange configuration. Alternative C does not include this interchange; accordingly, a simulation of Alternative C at Viewpoint 14 is not included in this analysis.

At several viewpoint locations, the future view of project components is the same or nearly the same for both alternatives. The simulations for the two alternatives are essentially the same at viewpoints 5, 12, and 13. The simulations at viewpoints 2, 3, 9, and 11 reflect minor variations between the two alternatives, such as a slight difference in a sign or a sidewalk; both simulations are shown even though the resulting visual impact is the same.

The visual impacts of project alternatives are determined by assessing the visual resource change caused by the project and predicting viewer response to that change.

Visual resource change is the sum of the change in visual character and the change in visual quality. The first step in determining visual resource change is to assess the compatibility of the proposed project with the visual character of the existing landscape. The FHWA's Method of Visual Resource Analysis, discussed above in the section titled "Affected Environment," is used to determine visual character and visual quality. As part of this process, vividness, intactness, and unity of the viewpoint were each rated on a scale from 1 to 7 (Table 3.1.7-1). These scores were averaged and rounded to the nearest whole number to determine an overall visual quality score for each viewpoint. The scores for all viewpoints within each landscape unit were added together to determine and average score for each landscape unit.

The second step is to compare the visual quality of the existing resources with the projected visual quality after the project is constructed. For this analysis, simulations of the build alternatives were prepared for each viewpoint (Figures 3.1.7-4 through 3.1.7-27) and the "future" condition visual quality was calculated (Table 3.1.7-1). Visual impact was determined by

subtracting the "future" visual quality score from the existing visual quality score. An effect is considered adverse if the visual quality score would decrease by two points or more. Beneficial effects to visual quality would occur if there would be an increase in the visual quality score.

The viewer response to project changes is the sum of viewer exposure and viewer sensitivity to the project as determined in the preceding section. The resulting level of visual impact is determined by combining the severity of resource change with the degree to which people are likely to oppose the change.

Temporary Visual Impacts Caused by Construction Activities

During construction, small trees and shrubs adjacent to the freeway would be removed. Crops in areas immediately adjacent to construction areas may also be removed during grading, exposing the soils underneath. Construction equipment would be visible along the highway. Disturbed earth and construction equipment would introduce an encroaching element into an otherwise agricultural setting. However, ongoing and recently completed major construction activities are widespread throughout most of the project area. Projects currently under construction include the Fairfield Corporate Commons, along the north side of I-80 in the central section, and the North Connector Project, which will be a local frontage road along the north side of I-80 in the central section. Because of the considerable extent of recent development activity in the I-80/I-680/SR 12 interchange area, construction sites would not be out of character with the existing visual environment. The construction process would decrease visual quality by interrupting and decreasing the vividness of views, and create encroaching elements, reducing the intactness and unity of views. In addition, construction sites may include lighting, introducing new sources of light and glare. Although adverse visual impacts would occur during construction, these impacts would be temporary and would not contrast with the existing visual character of the area.

There would be no effect under the No-Build Alternative because no construction would take place.

Long-Term Changes in Visual Quality and Character

The project area is already developed with the major highway interchange of I-80, I-680, and SR 12. The surrounding visual environment includes a diverse array of industrial, commercial, and residential development as well as farmland and grazing land. The buildings around the existing interchange vary in height, color, size, and age. In general, the built elements around the existing interchange appear randomly placed and do not appear unified. Farmland and grazing land is dispersed between these man-made elements. The existing visual quality in the project area is generally low to moderate.

All build alternatives would result in several adverse and beneficial localized changes to visual character. The extent of paved surface would increase and in the area of new overpasses, on- and off-ramps, utility towers, and interchange components, could obstruct specific long-distance views. The visual changes in Landscape Unit 3 would be the most dramatic and result in an adverse visual impact. However, because the project involves improvement of existing freeways and interchanges, as a whole it would not be out of character. Other landscape units would experience a less dramatic change and would not be considered adverse.

Avoidance, Minimization, and/or Mitigation Measures, will be incorporated into interchange improvements to minimize adverse visual effects of the alternatives.

Alternative B

The changes in visual quality scores for each landscape unit are shown in Table 3.1.7-7 and discussed in the subsequent paragraphs.

Table 3.1.7-7. Summary of Change to Visual Quality Scores, Alternative B

Landscape Unit	Existing Conditions	Future Conditions	Change in Score
1	4	3	-1
2	2	3	+1
3	5	3	-2
4	4	3	-1
5	3	3	0
Average for Alternative B	**4**	**3**	**-1**

Landscape Unit 1

Under Alternative B, the changes reflected in visual simulations for viewpoints 7 and 8 (Figures 3.1.7-10 and 3.1.7-11) would be the most substantial in this unit, converting a rural character into a more developed one. The visual change occurring at viewpoint 8 would be substantial and result in an adverse visual impact. At viewpoints 5 and 6 the landscape would become slightly more developed, but the overall visual quality would not substantially change (Figures 3.1.7-8 and 3.1.7-9). While the visual change at several viewpoints (viewpoints 7 and 8) would be substantial and the visual change specifically at viewpoint 8 would be adverse, as a whole, the visual quality within this landscape unit would slightly decrease.

Landscape Unit 2

At viewpoint 1 (Figure 3.1.7-4), visual clutter would be reduced, increasing visual quality and resulting in a beneficial visual change. At viewpoint 4 (Figure 3.1.7-7), vegetation would be removed and pavement would be widened, altering the visual character. As a whole the visual quality within this landscape unit would slightly improve.

Landscape Unit 3

At viewpoint 2 (Figure 3.1.7-5), the new I-680/Red Top Road interchange would obstruct views of the Suisun Marsh, substantially decreasing visual quality and resulting is an adverse visual impact. At viewpoint 3 (Figure 3.1.7-6), removal of roadside and median vegetation, road widening, a new overpass, and addition of an off-ramp and signage would change the views from a rural to a developed character. As a whole the visual effect within this landscape unit would be substantial and considered adverse.

Landscape Unit 4

At viewpoint 9 (Figure 3.1.7-12), the removal of roadside vegetation, the addition of the new westbound truck scales, and the increased extent of paved surface would decrease visual quality. However at viewpoint 1, the removal of man-made elements and utility lines would result in a beneficial change in the visual quality. At viewpoint 4 there would be very little perceptible

change in the view. As a whole the visual quality within the landscape unit would slightly decrease.

Landscape Unit 5

In this unit (Figures 3.1.7-13 through 3.1.7-17), most of the changes would increase the developed character of views through vegetation removal and roadway improvements. However, existing visual quality is moderate throughout the landscape unit, and overall the project would not result in a change to the visual quality score of this landscape unit.

Alternative C

The changes in visual quality scores for each landscape unit are shown in Table 3.1.7-8 and discussed in the subsequent paragraphs.

Table 3.1.7-8. Summary of Change to Visual Quality Scores, Alternative C

Landscape Unit	Existing Conditions	Future Conditions	Change in Score
1	4	3	-1
2	3	3	0
3	5	3	-2
4	4	3	-1
5	3	3	0
Average for Alternative C	**4**	**3**	**-1**

Landscape Unit 1

The changes to views in this landscape unit would be substantial, owing to the construction of a large and complex highway interchange as depicted in viewpoints 6, 7, and 8 (Figures 3.1.7-22 through 3.1.7-24). The visual change occurring at viewpoints 6 and 8 would be substantial and considered adverse. Visual change at viewpoints 5 and 7 would be less substantial to negligible. The visual character of a large portion of this landscape unit would be transformed from a rural/suburban highway character to a highly developed highway character.

Landscape Unit 2

The changes to views in this landscape unit would be substantial, owing to the construction of a large and complex highway interchange as depicted in viewpoints 1 and 4 (Figures 3.1.7-18 and 3.1.7-21). However, because this landscape unit is already dominated by I-80 and the existing I-680/80 interchange, the overall visual change would negligible.

Landscape Unit 3

The changes to views in this landscape unit would be similar to those under Alternative B resulting in an adverse visual impact.

Landscape Unit 4

The changes to views in this landscape unit would be similar to those under Alternative B.

Landscape Unit 5

The most substantial change would be the addition of the Pennsylvania Avenue overcrossing of SR 12E as shown in viewpoint 10 (Figure 3.1.7-26). However this addition would result in

improved visual quality by removing existing visual clutter (power lines, stop lights, signs) from the view. At other viewpoints, the visual changes would be minimal. Overall the visual quality of this landscape unit would not change.

Effect on Officially Designated Scenic Highways

There are no officially designated state scenic highways or highways eligible for such designation within the project limits.

The following roadways within or in close proximity to the project area are identified as being scenic roadways in the Solano County General Plan Scenic Roadway Element (1977):

- I-80 from Carquinez Strait at Vallejo to Solano-Yolo County line at Davis.
- I-680 from Carquinez Strait at Benicia to I-80 at Cordelia.
- SR12 from the Solano-Napa County line to I-80 and from Union Pacific Railroad at Fairfield to Solano-Sacramento County line at Rio Vista.
- Green Valley Road from I-80 at Cordelia to Rockville Road.
- Oliver Road from I-80 at Fairfield to Mankas Corner Road and Waterman Boulevard.

The project includes changes to I-680 within the Fairfield Urban Limit Line. This area of I-680 is considered a scenic roadway by the City of Fairfield Scenic Vistas and Roadways Plan (1999).

All build alternatives would result in several adverse and beneficial localized changes to visual character. The visual changes in Landscape Unit 3 which includes changes along State Route 12 West and I-80 would be the most dramatic and result in an adverse visual impact. However, because the alternatives involve improvement of existing freeways and interchanges, as a whole the alternatives would not be out of character and would not be expected to result in changes to local scenic roadway designations and therefore would not result in an adverse visual impact.

No-Build Alternative

There would be no changes to the visual quality and character of the project area under the No-Build Alternative.

Light and Glare

Under all build alternatives, new lighting would be incorporated into portions of the proposed project which would affect the surrounding neighborhoods. Under Alternative C, tall utility towers would cross over the proposed I-80/I-680 freeway-to-freeway ramps. These towers would have blinking red lights at their tops that would create a new source of light during the night. However, because such lighting would be consistent with existing freeway lighting and because adjoining land uses in areas where new lighting would be installed currently include lighting fixtures such as street lights, this effect would not be severe. Moreover, as discussed below in the section titled “Avoidance, Minimization, and/or Mitigation Measures,” incorporation of appropriate light and glare screening measures would ensure this effect is not adverse.

Under the No-Build Alternative there would be no changes to lighting and therefore no effects from light and glare.

Avoidance, Minimization, and/or Mitigation Measures

The Department mandates that a qualitative/aesthetic approach should be taken to minimize visual quality loss in the project area. This approach addresses the actual cumulative loss of visual quality that will occur in the project viewshed when the project is implemented. It also constitutes minimization measures that can more readily generate public acceptance of the project.

Visual minimization measures will consist of adhering to the following design requirements in cooperation with the Department's District Landscape Architect. While these measures will not fully reduce or avoid effects such as view blockage that will occur at several viewpoints, the measures will help to reduce the overall visual effects of the project and project elements.

All visual minimization measures will be designed and implemented with the concurrence of the Department's District Landscape Architect.

Replace Landscaping as Appropriate

Landscaping removed by the project will be replaced along I-680, I-80, and SR 12 within the project limits. Landscape plans will be developed during final design. .

Light and Glare Screening Measures

Light and glare screening measures shall be incorporated into project plans during final design, including the use of downward-cast lighting.

Building Materials and Forms for the Westbound Truck Scales

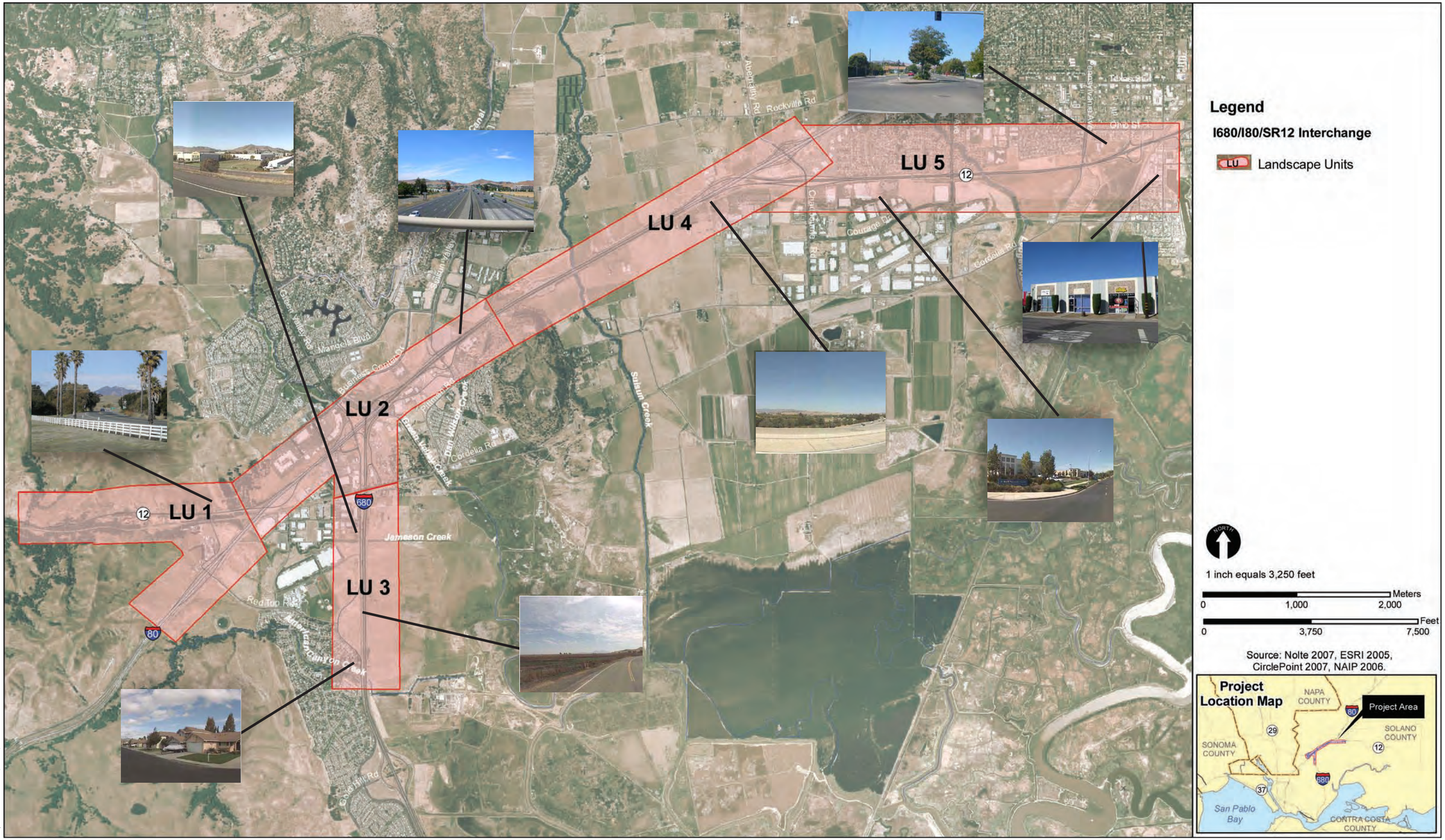
The I-80 westbound truck scales building materials and forms are to blend with local architectural features of the surrounding community, consistent with the architecture and landscaping of the I-80 Eastbound Truck Scales Relocation Project.

Incorporate Aesthetic Recommendations in Design of Freeway-Related Structures

Sound walls, overpass structures, landscaping, and other freeway-related structures and features will be consistent with the corridor aesthetic recommendations for the I-80 corridor being prepared by the STA.

Source: CirclePoint 2009.

Figure 3.1.7-1
Project Viewshed



Source: CirclePoint 2009.

Figure 3.1.7-2
Landscape Units

Source: CirclePoint 2009.

Figure 3.1.7-3
Project Viewpoints

Existing view from Central Way south of Ritchie Road looking north

Visual simulation of Alternative B

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-4
Viewpoint 1, Alternative B

Existing view from Red Top Road at Lopes Road looking east

Visual simulation of Alternative B

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-5
Viewpoint 2, Alternative B

Existing view from Interstate 680 northbound near Red Top Road looking north (VP 3)

Visual simulation of Alternative B

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-6
Viewpoint 3, Alternative B

Existing view from I-80 westbound near Green Valley Road overhead looking southwest

Visual simulation of Alternative B

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-7
Viewpoint 4, Alternative B

Existing view from I-80 westbound near Red Top Road looking west

Visual simulation of Alternatives B & C

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-8
Viewpoint 5, Alternatives B and C

Existing view from I-80 eastbound near Red Top Road looking northeast

Visual simulation of Alternative B

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-9
Viewpoint 6, Alternative B

Existing view from State Route 12 eastbound near Red Top Road (VP 7)

Visual simulation of Alternative B

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-10
Viewpoint 7, Alternative B

Existing view from State Route 12 westbound near Red Top Road (VP 8)

Visual simulation of Alternative B

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-11
Viewpoint 8, Alternative B

Existing view from I-80 westbound near SR12E

Visual simulation of Alternative B

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-12
Viewpoint 9, Alternative B

Existing view from State Route 12 eastbound near Pennsylvania Avenue (VP 10)

Visual simulation of Alternative B

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-13
Viewpoint 10, Alternative B

Existing view from Pennsylvania Avenue near Illinois Street

Visual simulation of Alternative B

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-14
Viewpoint 11, Alternative B

Existing view from Beck Avenue at Diamond Way

Visual simulation of Alternatives B and C

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-15
Viewpoint 12, Alternatives B and C

Existing view from Main Street at Common Street

Visual simulation of Alternatives B & C

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-16
Viewpoint 13, Alternatives B and C

Existing view from State Route 12 eastbound near Ledgewood Creek (VP 14)

Visual simulation of Alternative B

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-17
Viewpoint 14, Alternative B

Existing view from Central Way between Ritchie Road and Cordelia Road looking north

Visual simulation of Alternative C

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-18
Viewpoint 1, Alternative C

Existing view from Red Top Road at Lopes Road looking east

Visual simulation of Alternative C

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-19
Viewpoint 2, Alternative C

Existing view from Interstate 680 Northbound looking north

Visual simulation of Alternative C

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-20
Viewpoint 3, Alternative C

Existing view from Interstate 80 westbound near Green Valley overcrossing looking southwest (VP 4)

Visual simulation of Alternative C

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-21
Viewpoint 4, Alternative C

Existing view from Interstate 80 eastbound near Red Top Road looking northeast (VP 6)

Visual simulation Alternative C

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-22
Viewpoint 6, Alternative C

Existing view from SR12W eastbound near Red Top Road

Visual simulation of Alternative C

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-23
Viewpoint 7, Alternative C

Existing view from SR12W westbound near Red Top Road

Visual simulation of Alternative C

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-24
Viewpoint 8, Alternative C

Existing view from I-80 westbound near SR12E

Visual simulation of Alternative C

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-25
Viewpoint 9, Alternative C

Existing view from State Route 12 eastbound near Pennsylvania Avenue (VP 10)

Visual simulation of Alternative C

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-26
Viewpoint 10, Alternative C

Existing view from Pennsylvania Avenue near Illinois Street

Visual simulation of Alternative C

Graphics ... 02166.02 EIS (9-24-09)

Figure 3.1.7-27
Viewpoint 11, Alternative C