

# VISUAL IMPACT ASSESSMENT

## State Route Highway 1 Auxiliary Lanes and Bus-on-Shoulder Improvements – Freedom Boulevard to State Park Drive and Coastal Rail Trail Segment 12

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June 2022

### California Department of Transportation

District 5, Santa Cruz County, State Route 1  
PM 8.1 to PM 10.7  
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*Statement of Compliance:* Produced in compliance with National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) requirements, as appropriate, to meet the level of analysis and documentation that has been determined necessary for this project.

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# VISUAL IMPACT ASSESSMENT

## State Route Highway 1 Auxiliary Lanes and Bus-on-Shoulder Improvements – Freedom Boulevard to State Park Drive and Coastal Rail Trail Segment 12

### I. PURPOSE OF STUDY

The purpose of this visual impact assessment (VIA) is to document potential visual impacts caused by the proposed project and propose measures to lessen any detrimental impacts that are identified. Visual impacts are demonstrated by identifying visual resources in the project area, measuring the amount of change that would occur as a result of the project, and predicting how the affected public would respond to or perceive those changes.

### II. PROJECT DESCRIPTION

The California Department of Transportation (Caltrans), in cooperation with the Santa Cruz County Regional Transportation Commission (SCCRTC) and the County of Santa Cruz, proposes to widen State Route (SR) 1 to include auxiliary lanes, accommodate bus-on-shoulder (BOS) operations between the Freedom Boulevard and State Park Drive interchanges, and construct Coastal Rail Trail Segment 12. The purpose of the project is to reduce congestion along SR 1 through the project limits, enhance bicycle and pedestrian connectivity along Segment 12 of the Coastal Rail Trail, promote the use of alternative transportation modes to increase transportation system capacity and reliability, and provide Coastal Rail Trail access across SR 1 at the two railroad bridges.

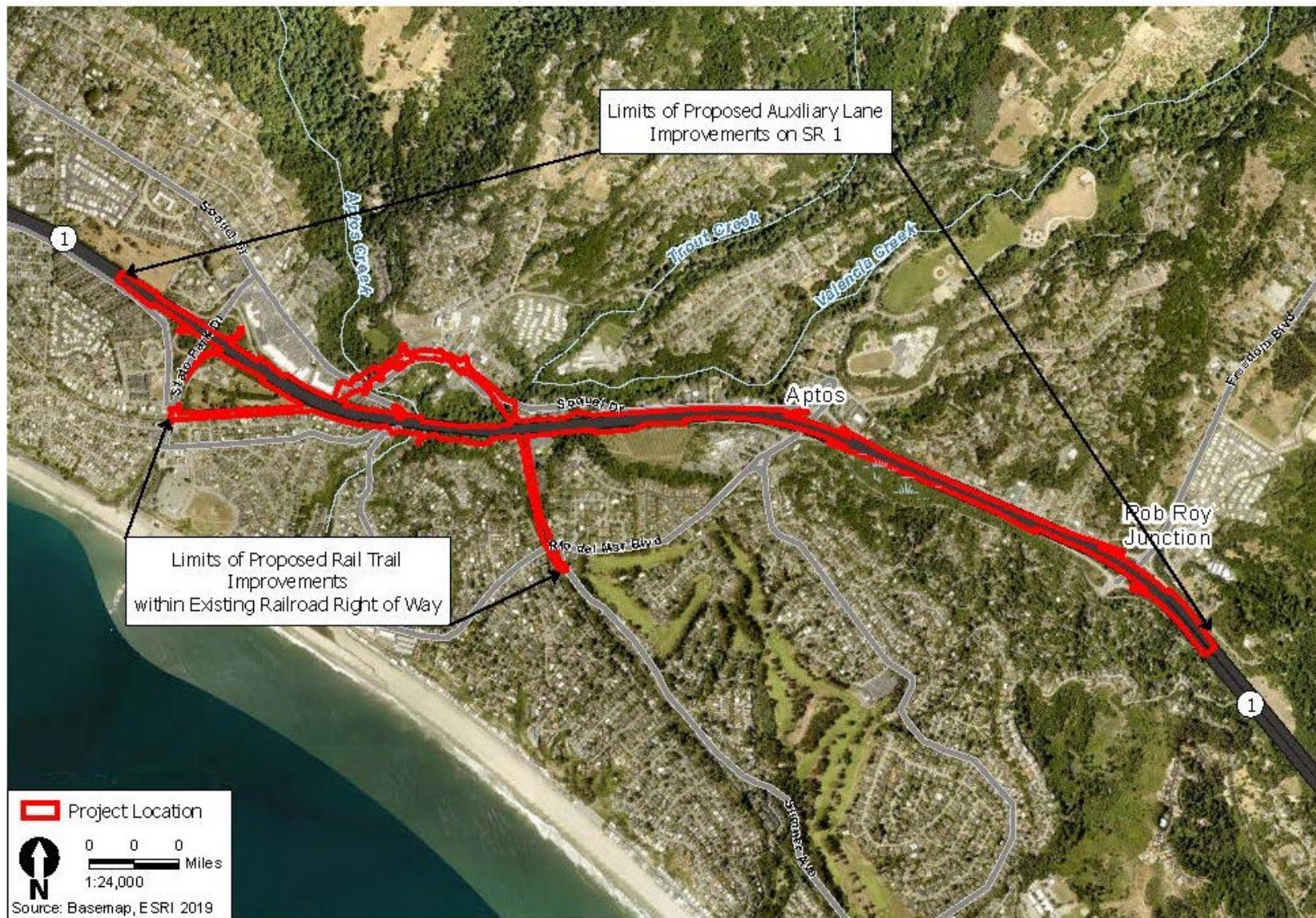
One build alternative and the no-build alternative are proposed for further consideration. The project is located in Santa Cruz County on SR 1 from post mile (PM) 8.1, south of Freedom Boulevard, to PM 10.7, north of State Park Drive, with 1.14 miles of trail along the SCCRTC-owned Santa Cruz Branch Rail Line (SCBRL) between State Park Drive and Rio Del Mar Boulevard. The total length of the project on SR 1 is 2.6 miles, and on the SCBRL is 1.14 miles. Within the limits of the proposed project, SR 1 is a controlled access highway with two 12-foot lanes; shoulder width varies within project limits. The average width of the inside shoulders is approximately 5 feet, and the average width of the outside shoulders is approximately 10 feet. Within the project area, the existing railroad right-of-way is generally in the range of 40 to 55 feet wide, with the existing railroad tracks generally in the center of the right-of-way. The existing railroad has at-grade crossings at State Park Drive, Aptos Creek Road, and Trout Gulch Road, with bridges over SR 1 at two locations, Soquel Drive, Aptos Creek and Valencia Creek, and crosses under Rio Del Mar Boulevard. The SCBRL is currently an active freight railroad. The project vicinity and location are shown in Figures 1 and 2, respectively. Figure 3 shows the project components.

This VIA examines two alternatives, including the build and no-build alternatives.



**Figure 1. Project Vicinity**





**Figure 2. Project Location**





Figure 3. Project Components (page 1 of 3)





**Figure 3. Project Components (page 2 of 3)**





Figure 3. Project Components (page 3 of 3)

## Build Alternative

### Auxiliary Lanes

Auxiliary lanes are designed to improve merging operations and reduce conflicts between traffic entering and exiting SR 1 by connecting the on-ramp of one interchange to the off-ramp of the next; they are not designed to serve through traffic. A southbound auxiliary lane and a northbound auxiliary lane would be added to the following segments of SR 1.

- Between the Freedom Boulevard and Rio Del Mar Boulevard interchanges.
- Between Rio Del Mar Boulevard and State Park Drive interchanges.

The total roadway widening would be approximately 2.6 miles in length. Southbound, the auxiliary lanes would begin at the existing State Park Drive loop on-ramp and end at the existing off-ramp to Freedom Boulevard. Northbound, the auxiliary lanes would begin at the existing Freedom Boulevard on-ramp and end at the existing diagonal off-ramp to State Park Drive.

The new auxiliary lanes would be 12 feet wide. From Freedom Boulevard to Rio Del Mar Boulevard, the width needed for the new lane would be added in the median. The existing median barrier would be reconstructed in its current location. From Rio Del Mar Boulevard to State Park Drive, the width needed for the new lane would be added outside the existing shoulders; the outside shoulders would be standard 10-foot-wide.

Moosehead Drive to the south of SR 1, south of Aptos Creek, would be realigned where it runs parallel to SR 1 due to the outside widening of SR 1. A new retaining wall would be placed along the outside highway shoulder to support the realignment that would include horizontal and vertical adjustments.

### Structures – State Route 1

The Build Alternative would include the replacement of the two Santa Cruz Branch Line railroad bridges over SR 1 and widening of the SR 1 bridge over Aptos Creek and Spreckels Drive to accommodate the proposed auxiliary lanes. The existing two-span Santa Cruz Branch Line railroad bridges (underpass structures) are proposed to be replaced with longer spans to accommodate the planned SR 1 ultimate improvements that are a six-through-lane concept plus an auxiliary lane in each direction between interchanges. The ultimate SR 1 configuration was approved in the *Final Environmental Impact Report/Environmental Assessment with a Finding of No Significant Impact for the Tier I High Occupancy Vehicle (HOV) Lanes and Tier II 41st Avenue to Soquel Avenue/Drive Auxiliary Lanes Project* (Tier I/Tier II Final EA/EIR/FONSI). In addition to the railroad bridges, new trail overcrossings would be constructed adjacent to the new railroad bridges for the ultimate trail configuration of the Coastal Rail Trail Segment 12 for the SR 1 improvements.

The widening of the SR 1 bridge over Aptos Creek and Spreckels Drive would occur on the south side of SR 1 only and require abutment walls along the existing embankments along the south side of Aptos Creek and the embankment on the north side of Spreckels Drive. The widened bridge would accommodate six lanes, each 12-foot wide (four through-lanes plus an auxiliary lane in each direction), 10-foot-wide outside shoulders, and a 9-foot-wide median with a 2-foot-wide inside shoulder in the northbound direction and 5-foot-wide inside shoulder in the southbound direction. To accommodate the SR 1 ultimate improvements of six through-lanes plus an auxiliary lane in each direction, the SR 1 bridge over Aptos Creek and Spreckels Drive would be widened to the north (inland) side as part of a future project.



### ***Retaining Walls – State Route 1***

The build alternative would include retaining walls at the following locations along SR 1 (Figure 3).

#### **Northbound**

- “SR1” Station 258+90 - 261+26; max height = 15 feet
- “SR1” Station 288+07 - 296+00; max height = 15 feet

#### **Southbound**

- “SR1” Station 258+55 - 263+01; max height = 20 feet
- “SR1” Station 265+55 - 268+56; max height = 12 feet
- “SR1” Station 269+71 - 270+70; max height = 12 feet
- “SR1” Station 273+20 - 277+02; max height = 20 feet
- “SR1” Station 277+02 - 278+98; max height = 30 feet
- “SR1” Station 281+56 - 284+41; max height = 35 feet
- “SR1” Station 284+41 - 296+45; max height = 15 feet

The build alternative would evaluate sound walls at the following locations along SR 1 (Figure 3).

#### **Northbound**

- “SR1” Station 258+57 – 267+49

#### **Southbound**

- “SR1” Station 263+18 – 266+78
- “SR1” Station 267+31 – 272+50
- “SR1” Station 284+79 – 291+52

### **Bus-on-Shoulder Features**

BOS features are proposed, which would allow future bus operations on the outside shoulders of SR 1 through the interchanges during peak congestion periods. At the Freedom Boulevard, Rio Del Mar Boulevard, and State Park Drive interchanges, the project would widen and improve SR 1 shoulders, which currently lack the width and pavement structural section to support bus operations.

#### ***Cross Section – State Route 1 Bus-on-Shoulder***

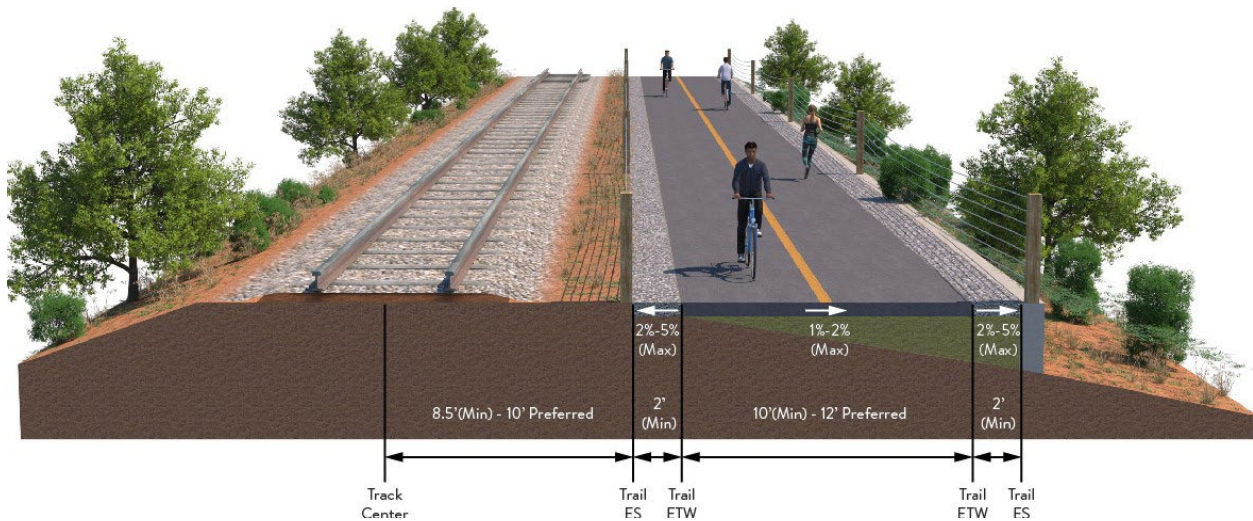
The added auxiliary lanes coupled with the BOS improvements allow the transit operator to use the auxiliary lane in between interchanges and use the shoulder between the off-ramp and on-ramps through the interchanges. Within the Freedom Boulevard, Rio Del Mar Boulevard, and State Park Drive interchange areas, the highway shoulders would be 12 feet wide.

#### ***Other Features – State Route 1 Bus-on-Shoulder***

New signs would be installed to advise motorists that only buses are allowed to use the highway shoulders through interchanges during peak traffic hours. Along northbound SR 1, a sign would be provided south of each of the three interchanges in the project area. Along southbound SR 1, a sign would be installed north of each interchange. Shoulders would be painted red to indicate bus-only use.

## Coastal Rail Trail Segment 12

The limits of Coastal Rail Trail Segment 12 extend from the southern terminus of the trail segment at Sumner Avenue, just south of the Rio Del Mar Boulevard underpass, to the northern terminus at State Park Drive. The proposed Coastal Rail Trail Segment 12 includes the construction of a paved bicycle and pedestrian shared use trail within the SCBRL right-of-way on the inland side of the tracks, consistent with the approved *Monterey Bay Sanctuary Scenic Trail (MBSST) Network Master Plan* (MBSST Network Master Plan) (Figure 4), with an optional first phase. The trail segment would include a new at-grade trail connection to Sumner Avenue just south of the Rio Del Mar Boulevard underpass where the existing railroad tracks pass under Rio Del Mar Boulevard and a new sidewalk on the north side of Sumner Avenue between the terminus of the trail and the existing sidewalk on Rio Del Mar Boulevard.



**Figure 4. Coastal Rail Trail Segment – Ultimate Trail Configuration**

The SCCRTC wishes to preserve the SCBRL corridor for transportation uses to include recreational passenger rail, freight rail, a multiuse trail, and future commuter rail transit. The ultimate configuration to accommodate all proposed transportation uses along the SCBRL is a bicycle and pedestrian shared use trail adjacent to railroad tracks. The SCBRL is currently an active freight railroad with SCCRTC owning the right of way. SCCRTC contracts to serve freight and recreational passenger rail along the freight easement. The SCCRTC's contracted freight operator has indicated that they may file for abandonment of freight along the SCBRL.

As a method of preserving the right of way of a corridor that otherwise could be abandoned, the SCCRTC could consider railbanking the corridor. The Department of Interior defines railbanking as the preservation of a railroad corridor for future rail use. Railbanking is accomplished under the National Trails System Act through provisions that allow a railbanked corridor to be used for interim trail use purposes through a voluntary agreement reached between a railroad and a trail manager. The right of way is preserved for future freight reactivation and could allow the removal of the railroad tracks and construction of a trail in the interim condition.

For this reason, an optional first phase is being considered for Segment 12 of the Coastal Rail Trail, where all or a portion of the trail could be located along the alignment of the existing railroad tracks.

## ***Ultimate Trail Configuration***

### ***Trail Alignment***

The ultimate trail configuration includes construction of a paved bicycle and pedestrian shared use trail alongside the existing railroad track alignment. New trail bridge crossings of SR 1 at two locations and adjacent to the existing railroad bridges at Soquel Drive, Aptos Creek, and Valencia Creek would be constructed. New at-grade trail crossings would be constructed at Aptos Creek Drive, Parade Street, and Trout Gulch Road. An at-grade trail connection from the new trail to the Aptos Village County Park between Aptos Creek and Aptos Creek Road would be constructed.

### ***Structures***

- At the two locations where the existing railroad bridges cross over SR 1, the Rail Trail would be placed adjacent to the reconstructed rail underpasses.
- Where the Rail Trail crosses over Aptos Creek, Valencia Creek and Soquel Drive, the existing structures have been evaluated for their load bearing capacities, and it has been determined there is not enough data to cantilever the Rail Trail. Therefore, the project would include construction of new Rail Trail bridges adjacent to the existing railroad structures.
- For areas where the Rail Trail is on an independent structure from the railroad bridges or grade, the separation between the two structures would be a minimum of 5 feet.

### ***Retaining Walls***

Retaining walls would be constructed in the following locations for the Coastal Rail Trail Segment 12 alignment.

- North of SR 1 (towards State Park Drive) – An approximate 6-foot high, 300-foot long retaining wall on the inland side of the trail.
- SR 1 to Soquel Drive—Retaining wall varying in height between approximately 5-feet and 20-feet, approximately 300-feet long on the inland side of the trail.
- Aptos Creek to Aptos Creek Road—Retaining wall varying in height between approximately 2-feet and 18-feet, approximately 400-feet long on the inland side of the trail.
- Trout Gulch Road to Valencia Creek—Retaining wall varying in height between approximately 2-feet and 18-feet, approximately 450-feet long on the inland side of the trail.
- South of SR 1 (towards Rio Del Mar Boulevard)—An approximate 12-foot-high, 400-foot long retaining wall on the inland side of the trail.
- Under Rio Del Mar Boulevard - Retaining wall varying in height between approximately 4-feet and 16-feet, approximately 1,000-feet long on the inland side of the trail.

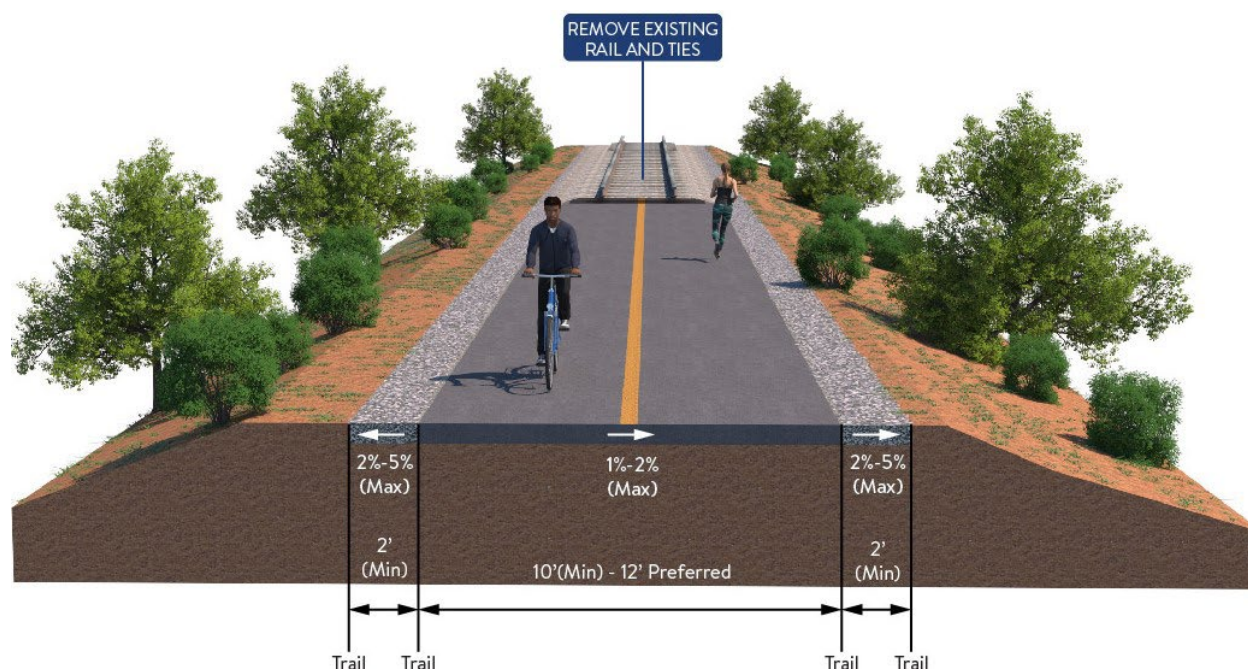
### ***Fencing***

Fencing to separate trail users and the railroad for the ultimate trail improvements is proposed as shown in Figure 4. In accordance with the Federal Railroad Administration guidelines, there would be a 10-foot offset from the centerline of the railroad to the edge of the trail, although an 8-foot-6-inch offset from the centerline of the railroad may be allowed in some circumstances. The fencing would be constructed using concrete posts (4 feet 6 inches in height) etched to resemble wood, and multiple smooth wire strands. Fence post construction is anticipated to require 3-foot-deep excavation. The new trail bridges over Aptos Creek, Valencia Creek, and Soquel Drive would include a railing.

### ***Construction of Optional First Phase for Coastal Rail Trail Segment 12***

It is possible that the common carrier could file for abandonment of freight operations with the STB along the SCBRL at any time, in which case all or a portion of the SCBRL would likely be railbanked to preserve the corridor for future freight re-activation but could then be used for a multiuse trail as an interim condition.

All or a portion of the trail would be constructed in approximately the same location of the existing railroad tracks by removal of the rails and ties from just south of Rio Del Mar Boulevard at the southern terminus with Sumner Avenue to the northern terminus at State Park Drive, as shown in Figure 5. The two existing railroad bridges over SR 1 would be removed and two new trail overcrossings over SR 1 would be constructed in their place. The existing railroad bridges at Aptos Creek and Valencia Creek/Soquel Drive (south) would be repurposed for the new trail by removing the railroad decking and replacing with a new trail deck and railing system. The existing single span railroad bridge superstructure over Soquel Drive (north) would be removed and replaced with a new trail deck and railing system.



**Figure 5. Coastal Rail Trail Segment – Optional First Phase**

Stair access between the new trail and existing Soquel Drive (north) is proposed. A stair connection from the trail to Soquel Drive would begin on the south side of the trail west of the existing railroad bridge over Soquel Drive with a terminus at the Soquel Drive/Spreckels Drive signalized intersection. A new crosswalk would be provided at the Soquel Drive/Spreckels Drive signalized intersection. All trail users can access Soquel Drive via the at-grade trail crossing with Aptos Creek Road as an alternative to using the stairs. The alternative route would be identified with new signage. An at-grade trail connection from the new trail to the Aptos Village County Park between Aptos Creek and Aptos Creek Road would be constructed.

New at-grade trail crossings would be constructed at Aptos Creek Drive, Parade Street, and Trout Gulch Road in the approximate location of the existing railroad tracks.



### Structures

- At the two locations where the existing railroad bridges cross over SR 1, the existing railroad bridges would be removed, and new single-span trail overcrossings would be constructed over SR 1 in the same general location as the existing railroad bridges. The bridge abutments constructed on either side of Highway 1 would be constructed to freight railroad standards and be positioned and sized to account for the ultimate trail configuration.
- Where the trail crosses over Aptos Creek, Valencia Creek, and Soquel Drive (south), the existing bridge structures would remain, the railroad tracks removed, and new trail constructed along the existing rail centerline.
- The existing single span railroad bridge superstructure over Soquel Drive (north) would be removed and replaced with a new trail deck and railing system.
- Slight modifications of the existing railroad bridge abutments are proposed to meet current seismic requirements.

### Retaining walls

Retaining walls would be constructed in the following locations:

- Just west of Soquel Drive — An approximate 5-foot high, 60-foot long retaining wall on the south side of the trail.
- Just east of Aptos Creek — An approximate 18-foot high, 140-foot long retaining wall on the south side of the trail and an approximate 6-foot high, 140-foot long retaining wall on the inland side of the trail.

### Fencing

The new trail overcrossings over SR 1 would include railings with fencing and the repurposed bridges over Aptos Creek, Valencia Creek, and Soquel Drive would have fencing added. No additional fencing is anticipated due to the railroad tracks being removed.

### ***Removal of Optional First Phase for Coastal Rail Trail Segment 12***

If all or a portion of the optional first phase of the trail is implemented, the trail along the existing railroad track alignment would need to be removed, a trail would be constructed adjacent to the tracks as described by the proposed ultimate trail project, and the railroad tracks re-installed in their approximate existing location. At-grade railroad crossings of Aptos Creek Drive, Parade Street, and Trout Gulch Road would need to be reconstructed.

### Structures

- At the two locations where new trail overcrossings are constructed over SR 1 as part of the optional first phase improvements, the trail overcrossings would be relocated to be adjacent to the existing railroad alignment, and new railroad bridges would be constructed over SR 1 adjacent to the trail overcrossings, as described by the ultimate trail configuration. Construction of the new two-span railroad bridges over SR 1 would require the construction of support columns in the median of SR 1 to support the new railroad bridges.
- Repurpose bridges over Soquel Drive (south), Aptos Creek, and Valencia Creek from trail use to rail use by removing the trail deck and railing system and reconstructing railroad infrastructure.
- The trail deck and railing system over Soquel Drive (north) would be removed and replaced with a single span railroad bridge with reconstructed railroad infrastructure.

## ***Design Standards***

Coastal Rail Trail Segment 12 would be designed as a multi-use paved path per the guidelines identified in Chapter 5 of the *Monterey Bay Sanctuary Scenic Trail (MBSST) Master Plan*. The design standards used for this segment of the Coastal Rail Trail follow the MBSST guidelines and are listed under *Cross Section Standards*. The MBSST Network Master Plan incorporates and refers to design elements from the Class I Bikeways identified in Chapter 1000 of the Highway Design Manual (HDM).

In areas where existing constraints limit the available width for the trail to be adjacent to the railroad tracks, other alternative design standards than those listed in the MBSST Master Plan may be utilized for design.

### **Cross Section Standards**

- The paved traveled way of the Coastal Rail Trail would be a minimum of 12 feet wide but may be reduced to 10 feet in areas with existing constrained conditions.
- Shoulders would be provided on each side of the traveled way and would be 2 feet in width where possible.
- For accessibility and drainage, the cross slope of the traveled way would be between 1% and 2%.
- The shoulder cross slope would be between 2% and 5% and would angle away from the surface of the traveled way.

### **Horizontal Design**

- The design speed for the trail would be established at 20 miles per hour and correlates to a minimum stopping sight distance of 125 feet.
- To meet a minimum stopping sight distance of 125 feet, a radius of no less than 500 feet would be used for the Coastal Rail Trail alignment where possible.
- The minimum horizontal clearance between the railroad centerline and the edge of the Coastal Rail Trail, inclusive of shoulders, is 8 feet, 6 inches.
- Where roadways are adjacent to the trail, such as Soquel Drive through Aptos Village, a minimum horizontal separation of 12 feet on tangents and 10 feet on curves is recommended between edge of pavement of the roadway and edge of the trail. This standard would be modified at constrained locations along the corridor where necessary to maintain the absolute minimum horizontal separation. Such separation variances may include vertical separation, fence, or other barriers.

### **Vertical Design**

- The vertical grade slope for the Coastal Rail Trail would be limited to no more than 5%.
- Vertical obstructions and signs would be 10 feet above the entire Coastal Rail Trail, except in limited situations where the vertical clearance may be reduced to 8 feet over the travel way and 7 feet over the shoulders.
- The Coastal Rail Trail would either be constructed following closely the existing grade or on widened segments and new bridges requiring new cuts/fills and retaining walls. Minor grading of the existing ground surface in segments on existing grade is anticipated and may involve excavation of approximately one-foot depth.

## **Vegetation Removal and Planting**

Construction work for the Build Alternative would require removal of existing mature landscape plantings along SR 1 and along the Coastal Rail Trail Segment 12 route. Where proper setback requirements allow, plantings would be replaced as per Caltrans' policies, and include an automated

irrigation system and a 3-year plant establishment period. The replacement planting effort would include vegetation impacted by the contractor's staging, storage, and construction activities. Vegetation needed for the optional first phase trail improvements is significantly less than for the ultimate trail improvements.

### **Construction Activities**

Construction work for the Build Alternative would be done primarily during daylight hours from 7:00 a.m. to 6:00 p.m. However, night-time work and temporary closures of lanes and roadways may be necessary to avoid major disruption for tasks that could interfere with traffic or create safety hazards such as demolition of the existing railroad bridges. Construction activities would include excavation, drilling, dewatering, pavement demolition, bridge demolition, mass grading, concrete form work, pavement installation, storm system installation, landscaping and irrigation, sign installation, striping operations, and traffic control. Such activities would require the use of the following types of equipment: drilling rig, forklift, scissor lift, backhoe, track excavator, compactor, concrete pump, crane, bulldozer, grader, front-end loader, dump trucks, jackhammer, and vibratory roller. These activities may require temporary highway, ramp, and local street partial lane closures or full closures with possible detours.

A Transportation Management Plan (TMP) would be developed as part of the project construction planning phase. The TMP would address potential impacts to circulation of all modes of travel (i.e., transit, bicycles, pedestrians, and vehicles). Roadway and/or pedestrian access to all occupied businesses and respective parking lots would be maintained during project construction. The TMP would include an evaluation of potential detour impacts and would also include measures to minimize, avoid, and/or mitigate impacts to alternate routes. The TMP would address coordination with local agencies for traffic through or near the construction zone. Staging areas would be located within the existing Caltrans right-of-way and within the SCBRL right-of-way along Coastal Rail Trail Segment 12.

### **Construction Schedule**

Construction of the SR 1 and Coastal Rail Trail improvements including the auxiliary lanes and BOS features is anticipated to begin in 2025 subject to availability of funds for construction and is estimated to take approximately 3 years to complete.

### **Demolition**

Demolition work would generally comprise removal of existing bridge structures, abutments, columns, overhead sign foundations, rails and ties, clearing and grubbing, tree removal, pavement removal, and drainage system removal.

### **Stormwater Drainage and Treatment Facilities**

The Build Alternative would include drainage system improvements and permanent stormwater treatment facilities for the SR 1 and Coastal Rail Trail Segment 12 improvements. Hydromodification measures would be included, if needed. During construction, the contractor would be required to develop and implement a Storm Water Pollution Prevention Plan (SWPPP) in compliance with the statewide Construction General Permit and consistent with the guidelines and procedures in Caltrans' Statewide Storm Water Management Plan. The SWPPP will provide detailed, site-specific information regarding best management practices to avoid and minimize water quality impacts. The project would be constructed to minimize erosion by disturbing slopes only when necessary, minimizing cut and fill areas to reduce slope lengths, providing cut and fill slopes flat enough to allow revegetation to limit

erosion rates, and providing concentrated flow conveyance systems such as storm drains, ditches, and gutters.

## Utilities

Existing utilities located in areas subject to construction that conflict with the proposed improvements would be relocated as needed. This is anticipated to include sanitary sewer and electric utility poles adjacent to Moosehead Drive and a gas line along the Coastal Rail Trail Segment 12 route for the ultimate trail improvements, and other utility appurtenances.

## Property Acquisitions

The Build Alternative would require full or partial acquisitions for the construction of the SR 1 and Coastal Rail Trail Segment 12 ultimate trail improvements, as well as temporary easements for construction activities such as the construction of sound walls and retaining walls along SR 1 and the SCBRL.

Table 1 lists the full and partial property acquisitions that would occur under the Build Alternative. Along the SCBRL corridor, the acquisitions shown below would be needed for the construction of the proposed ultimate trail configuration of Coastal Rail Trail Segment 12. No new property acquisitions would be needed to construct the optional first phase of the Coastal Rail Trail Segment 12, however the Surface Transportation Board (STB) would have to approve railbanking the corridor.

**Table 1. Property Acquisitions**

Assessor's Parcel No.	Street Address	Partial Acquisition (square feet)	Full Acquisition (square feet)
<b>Coastal Rail Trail Segment 12 – Ultimate Trail Improvements</b>			
039-232-03	7992 Soquel Drive	2,700	7,510 <sup>a</sup>
039-232-02	7994 Soquel Drive	1,100	3,350 <sup>a</sup>
039-232-01	7996 Soquel Drive	5,370	12,110 <sup>a</sup>
041-561-11	8035 Soquel Drive 23	2,100	
041-011-42	10 Parade St A	400	
041-011-41	15 Parade St B	400	
044-282-47	379 Sandalwood Drive	320	
044-282-48	369 Sandalwood Drive	3,300	
041-052-16	9006 Soquel Drive	520	
041-052-17	Soquel Drive - Vacant	1,560	
<b>State Route 1</b>			
042-071-01, 042-071-02, 042-071-03, 042-067-18	345 Moosehead Drive	1,129	
042-067-16	Moosehead Drive - Vacant	343	
042-067-17	Moosehead Drive - Vacant	735	

<sup>a</sup> During final design, partial acquisition of parcel numbers 039-232-01, 039-232-02, and 039-232-03 may be determined to be feasible, in which case, the respective amounts shown in the "Partial Acquisition" column of Table 1 would be acquired. In the event that it is determined during final design that partial acquisition is infeasible, the respective amounts shown in the "Full Acquisition" column of Table 1 would be acquired.



## **No-Build Alternative**

Under the No-Build Alternative, there would be no construction of auxiliary lanes or BOS features on SR 1 within the project area, and Coastal Rail Trail Segment 12 would not be constructed. The existing transportation facilities within the project area would remain unchanged. The No-Build Alternative assumes the construction of other planned and programmed projects in the region, including other auxiliary lanes projects on SR 1 and other segments of the Coastal Rail Trail.

### III. PROJECT LOCATION AND SETTING

The project location and setting provides the context for determining the type and severity of changes to the existing visual environment. The terms *visual character* and *visual quality* are defined below and are used to further describe the visual environment. The project setting is also referred to as the corridor or project corridor that is defined as the area of land that is visible from, adjacent to, and outside the highway right-of-way, and is determined by topography, vegetation, and viewing distance.

The proposed project is located on SR 1 between the Freedom Boulevard interchange (the southern project termini) and the State Park Drive interchange (the northern termini) and is within an urbanized area. SR 1 runs generally east/west in this segment through the community of Aptos, which is an unincorporated portion of Santa Cruz County. The project is located in the Central California Coast Bioregion, which stretches from Point Conception to the south to the Santa Cruz Mountains on the north (USGS 2020). The proposed project site is on a relatively flat shelf between the Pacific Ocean and the Santa Cruz Mountains. Elevations within this segment of SR 1 gently descend in both directions toward Aptos Creek. The areas directly adjacent to the creek contain the densest vegetation in the segment. Areas outside of Aptos Creek are characterized by a mix of suburban residential and light commercial development interspersed with natural open spaces and large mature trees. The visual character is very consistent throughout the segment.

Although the project is located in the Coastal Zone, as defined by Santa Cruz County and the State of California, there are no views of the ocean or coastal areas from either SR 1 or the Coastal Rail Trail Segment 12. In addition, there are no scenic vistas associated with either the SR 1 or Coast Rail Trail Segment 12 corridors. SR 1 is an Eligible State Scenic Highway but is not officially designated (Caltrans 2019). However, SR 1 is a County-designated scenic corridor (Santa Cruz County 1994).

The project falls within Classified Landscape Freeway segments along SR 1 that are located between post-miles (PMs) 7.83-9.68 and 10.22-11.18 (Caltrans 2020a). As identified in Cal. Code Regs., Title 4 Sections 2507 and 2508, a Classified Landscape Freeway must have planting areas that are at least 1,000 feet in length and may have gaps no greater than 200 feet. The proposed project would not introduce billboards or signs along the Classified Landscaped Freeway segment. Therefore, the proposed project would need to directly affect vegetation along the Classified Landscaped Freeway segment to affect its designation. Removing vegetation in a manner that are less than 1,000 feet or that create gaps that are greater than 200 feet would compromise the Classified Landscape Freeway status. Impacts to vegetation along the Classified Landscaped Freeway segment are discussed under Section VII, *Visual Impact*.

### IV. ASSESSMENT METHOD

This visual impact assessment generally follows the guidance outlined in the publication *Visual Impact Assessment for Highway Projects* published by the Federal Highway Administration (FHWA) in March 1981. The following steps were followed to assess the potential visual impacts of the proposed project:

- A. Define the project location and setting.
- B. Identify visual assessment units and key views.
- C. Analyze existing visual resources, resource change and viewer response.
- D. Depict (*or describe*) the visual appearance of project alternatives.
- E. Assess the visual impacts of project alternatives.
- F. Propose measures to offset visual impacts.

The assessment and analysis of the existing visual character and land use was based on field visits conducted on February 18 and 19, 2021. Aerial photography provided base information for the existing roadway, including satellite imagery from Google Earth Pro and Google Maps. *Google Earth Pro Street View* and *Google Maps Street View* were also used to supplement site visits. This VIA also incorporates findings and recommendations from the *July 2013 Visual Impact Assessment: Tier I – Corridor Analysis of High Occupancy Vehicle (HOV) Lanes and Transportation System Management Alternatives and Tier II – Build Project Analysis of 41st Avenue to Soquel Avenue/Drive Auxiliary Lanes and Chanticleer Avenue Pedestrian Overcrossing*, which addressed a series of projects along SR 1 between Morrissey Boulevard and San Andreas-Larkin Valley Roads within Santa Cruz County (Caltrans 2013). Additionally, the Visual Impact Assessment for the segment to the west, *Visual Impact Assessment – Highway 1 Auxiliary Lanes – State Park Drive to Bay Avenue/Porter Street*, from July 8, 2020, was consulted and recommendations incorporated as appropriate (Caltrans 2020b).

## **V. VISUAL ASSESSMENT UNITS AND KEY VIEWS**

The project corridor was divided into a series of “outdoor rooms” or *visual assessment units* (VAUs), which were previously referred to as landscape units. Each VAU has its own visual character and visual quality. It is typically defined by the limits of a particular viewshed. The previously mentioned Tier I Visual Impact Assessment from July 2013, which analyzed the entire corridor from Morrissey Boulevard and San Andreas-Larkin Valley Roads interchanges, identified two distinct and separate landscape units along SR 1 between Freedom Boulevard and State Park Drive, the Aptos and Upland Landscape Units shown in Figure 6. However, in-depth site investigation and field visits conducted in 2021 revealed that a discernable difference in visual character and quality is not visible along SR 1 between Freedom Boulevard and State Park Drive. It is not until a viewer approaches the San Andreas Road interchange, to the south and outside of the project corridor, that a change in visual character and quality is readily visible. In this area, the transition from mature dense trees and riparian corridors changes to a more open native scrub plant and grass mix with more scattered trees and noticeable difference in topography. Therefore, it was determined that two separate VAUs along SR 1 are not warranted, and the visual character and quality described in the 2013 Visual Impact Assessment for the Aptos Landscape Unit is most relevant for the project corridor being analyzed under this proposed project. This revised assessment unit will be referred to as the SR 1 VAU and is shown in Figure 7. Figure 7 also shows the locations of typical views that are representative of the project corridor and key views that have been simulated. In addition, this project analyzes Coastal Rail Trail Segment 12, which is consistent in visual character and quality throughout its length and is referred to as the Rail Trail VAU. This VAU and the locations of its associated typical views that are representative of the project corridor and key views that have been simulated are shown in Figure 8.



**Figure 6. Aerial View of Landscape Units from Tier I VIA (July 2013)**

## **SR 1 Visual Assessment Unit**

Figure 8 includes the typical views associated with the SR 1 VAU that are mapped on Figure 7. As noted in the Tier I VIA, the *“predominant visual element of this unit is the tree vegetation associated with the creeks that cross the corridor, including Aptos-Valencia Creeks, Ord Gulch, Borregas Creek, Pot Belly Creek, and Nobel Creek.”* In addition to the riparian vegetation lining the creeks, large trees such as pine, cedar, redwood, and eucalyptus dominate views throughout the segment, while smaller understory trees and vegetation screen the majority of views to adjacent developments. The height and density of the existing vegetation creates a feeling of enclosure for highway users that creates a tunnel-like feeling. Adjacent developments within the segment are predominately a mix of residential and light commercial, all suburban in nature. In some areas, views to adjacent uses are non-existent due to the dense vegetation, while in others, brief glimpses through vegetation are visible. Development is noticeable to the highway user along the north side of SR 1 between Rio Del Mar Boulevard and Freedom Boulevard. These developments are primarily commercial in nature and visible as patches of existing vegetation, which open up and frame views.

The elevation change between Freedom Boulevard to the south and State Park Drive to the north is minimal, encompassing less than 30 feet of vertical change, resulting in gentle undulations along the corridor. Hillsides and ridgelines are non-existent with the exception of a hillside bordering Aptos Creek. This hillside adjacent to the south side of SR 1, and along the creek, contains Moosehead Drive and sparse residential properties to and from which views would likely be impacted by the proposed build alternative, specifically the widening of the bridge at Aptos Creek.

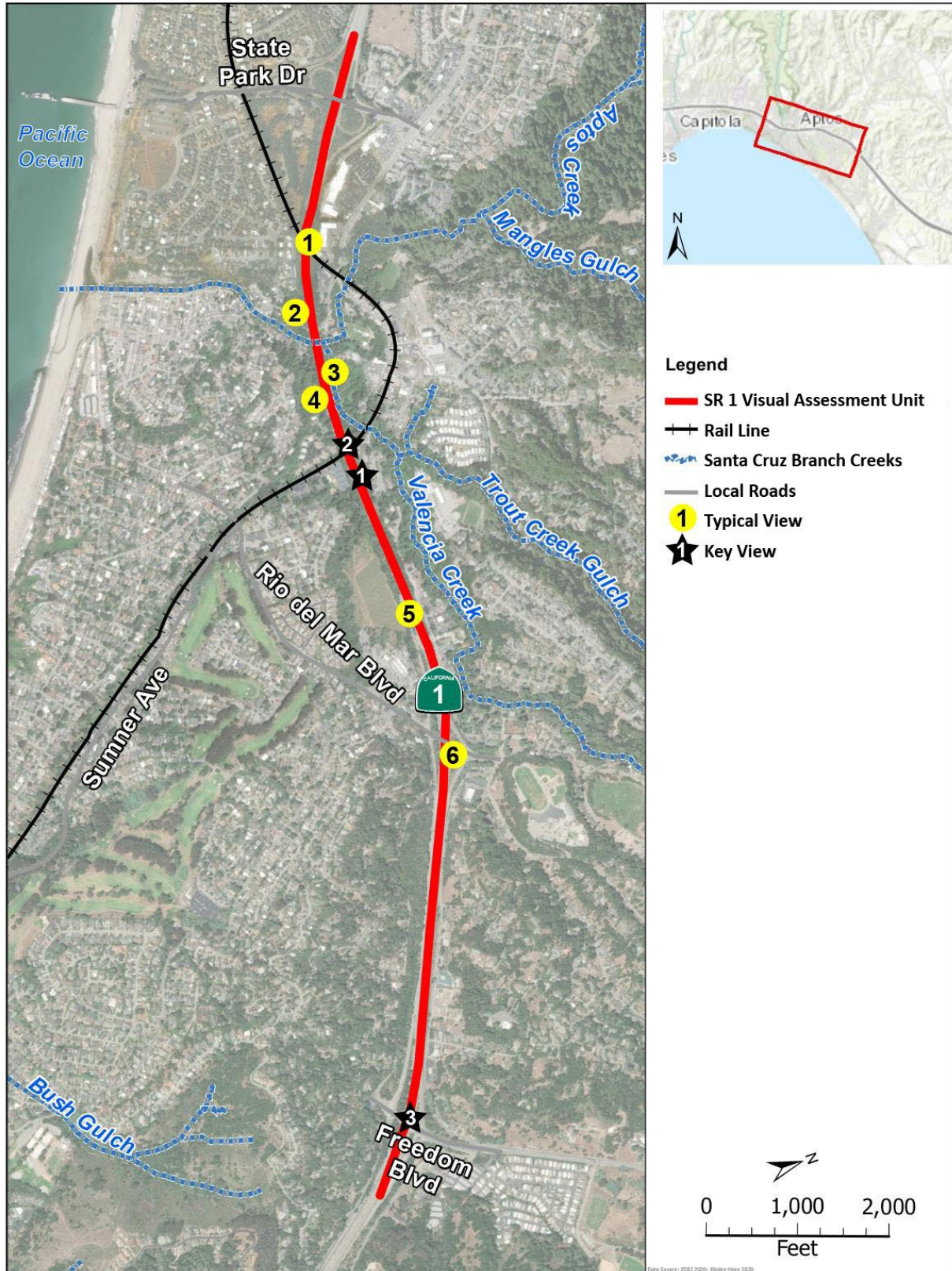
The Santa Cruz Mountain foothills are located to the north. However, these distant ridgelines and mountains are largely unnoticeable because of the height and proximity of the mature trees to the highway user and, therefore, have little effect on the visual character associated with this VAU.

Visible highway elements include the highway itself; on- and off-ramps and overcrossings at State Park Drive, Rio Del Mar Boulevard, and Freedom Boulevard; two non-active railroad over- crossings between State Park Drive and Rio Del Mar Boulevard; and miscellaneous highway and regulatory signage.

The areas surrounding and approaching Aptos Creek, from both east and west, have the highest visual quality due to the mature trees that have grown within the area directly surrounding the creek and its slopes.

This VAU is moderately well-lit. Much of the SR 1 mainline is not lit except for vehicles traveling at night. However, the interchanges and ramps are well-lit. In addition, the corridor receives minimal lighting from local roadways, parking areas, and development adjacent to the VAU. Daytime and nighttime glare are also moderate because trees along the highway provide shading to minimize glare coming from the highway pavement and structures, and it screens glare from adjacent development.





**Figure 7. SR 1 Visual Assessment Unit and Associated View Locations**





**Figure 8. SR 1 Visual Assessment Unit Typical Views**



## Coastal Rail Trail Visual Assessment Unit

Figure 10 includes the typical views associated with the SR 1 VAU that are mapped on Figure 9. The topography and vegetation that border the Coastal Rail Trail VAU closely mimics that described above for SR 1. The grade of the Rail Trail alignment is flat to gently sloping. Trees along the trail corridor are comprised of similar species, mature, and provide substantial screening given the density of understory vegetation in most areas.

The major visual difference between the character of the SR 1 VAU and the Coastal Rail Trail VAU is the proximity of adjacent development to the project corridor. Where adjacent development is set back from the highway and, in most cases, screened quite well from SR 1, development along the Coastal Rail Trail VAU is often very close and, in some cases, very visible from the Rail Trail alignment. The existing Rail Trail alignment is highly visible as it traverses across Aptos Creek and passes through the Village of Aptos, because it is located directly adjacent to commercial development and the village's major thoroughfare, Soquel Drive. North of Aptos Village, the Rail Trail alignment is roughly situated at the same grade as the surrounding development. South of Aptos Village, the Rail Trail alignment is at a slightly higher grade than adjacent development near SR 1. However, as it approaches its terminus near Rio Del Mar Boulevard, the Rail Trail alignment is located at an elevation that is 15 to 20 feet below the grade of adjacent development and steep embankments separate the existing rail line from adjacent residential development so that it is largely obscured from view, even to viewers directly adjacent to the Rail Trail alignment.

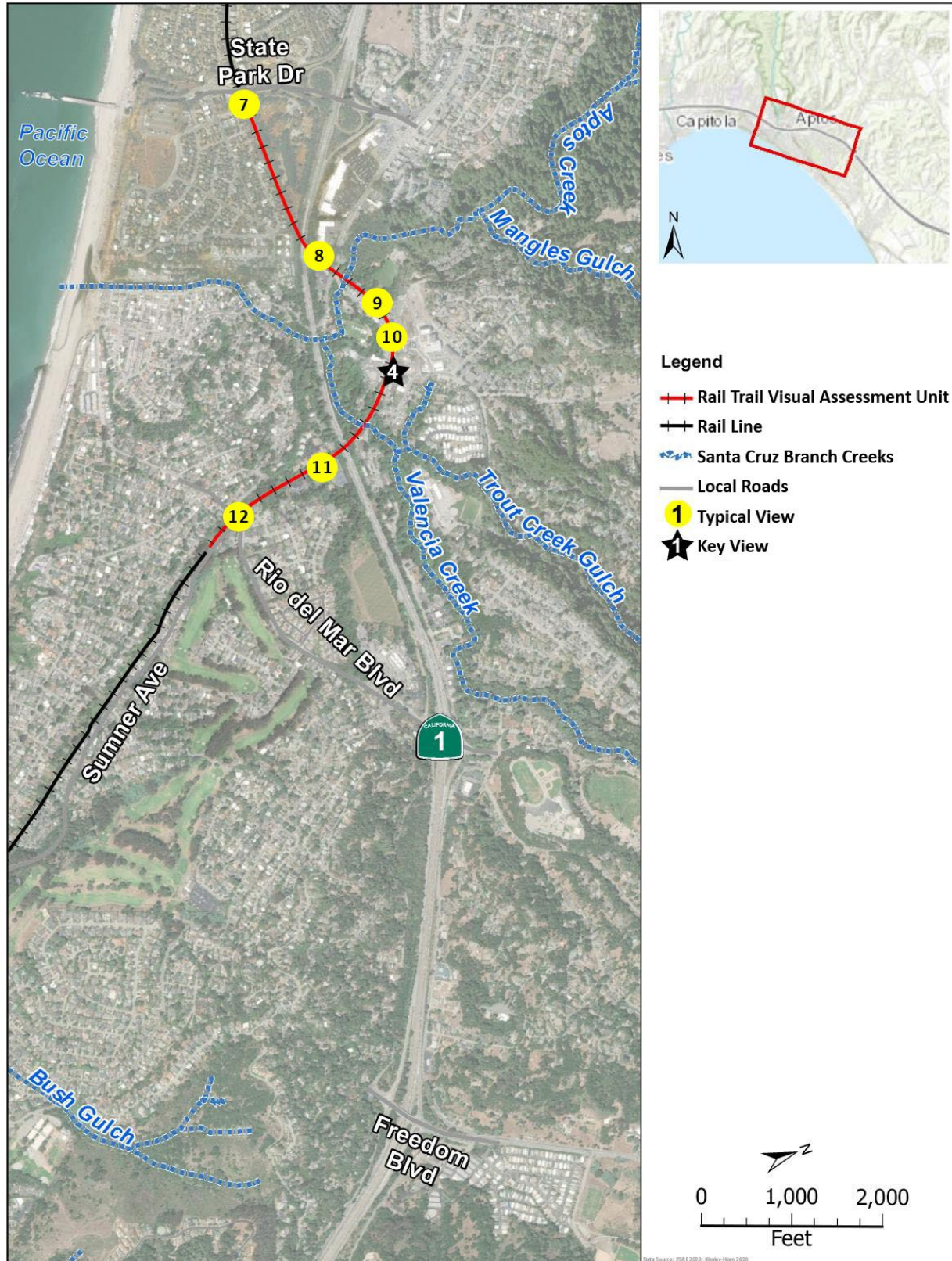
The Santa Cruz Mountain foothills are located to the north. However, these distant ridgelines and mountains are largely unnoticeable because of the height and proximity of the mature trees to the highway user and, therefore, have little effect on the visual character associated with this VAU.

Visible elements associated with the Coastal Rail Trail VAU consist of existing, non-active tracks; two existing bridge structures for the rail alignment to cross over SR 1 between the State Park Drive and Rio Del Mar Boulevard interchanges; two existing bridge structures for the rail alignment to cross over Soquel Drive, near its intersection with Spreckles Drive and east of Bernal Street; and a bridge undercrossing for the rail line to travel under Rio Del Mar Boulevard near Sumner Avenue.

With the exception of the commercial development associated with the Village of Aptos, the areas adjacent to this VAU are primarily residential and/or park-like in appearance and nature. These same residential developments are also the areas of the alignment with the highest visual character because the height and density of the existing mature trees that separate the developments from the Rail Trail alignment creates a tunnel-like enclosure that feels quiet, separated, and somewhat distant from the adjacent developments, similar to the visual character associated with SR 1.

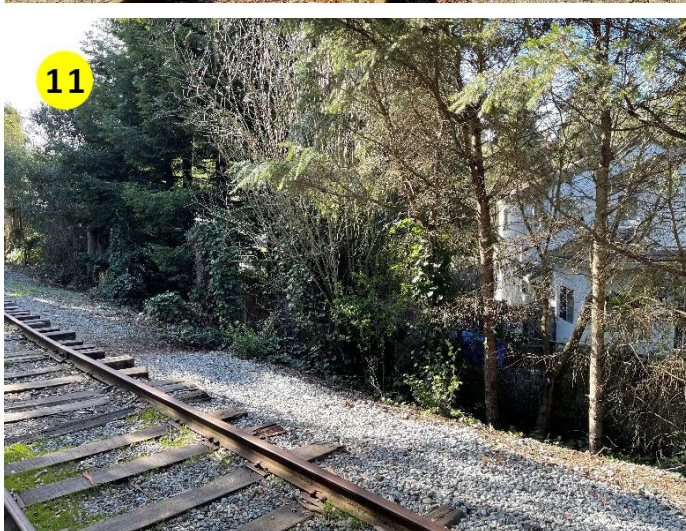
This VAU is not well-lit. The existing rail corridor is not lit, and the only light it receives is minimal lighting from local roadways, parking areas, and development adjacent to the VAU. Daytime and nighttime glare are also fairly low because trees along the rail corridor provide shading to minimize glare coming from adjacent development, except within Aptos Village where daytime and nighttime glare is moderate because there are few trees or structures immediately next to the rail corridor to provide shading.





**Figure 9. Rail Trail Visual Assessment Unit and Associated View Locations**





**Figure 10. Rail Trail Visual Assessment Unit Typical Views**



## VI. VISUAL RESOURCES AND RESOURCE CHANGE

*Resource change* is assessed by evaluating the visual character and the visual quality of the visual resources that comprise the project corridor before and after the construction of the proposed project. Resource change is one of the two major variables in the equation that determine visual impacts (the other is *viewer response*, discussed below in *Section VII Viewers and Viewer Response*).

Visual quality, as used in FHWA's publication entitled *Visual Impact Assessment for Highway Projects* (FHWA 1981) methodology, is based on the concepts of the science of aesthetics and is analogous to the Bureau of Land Management's scenery quality rating and the U.S. Forest Service's variety classes. The methods outlined in the FHWA report describe many factors that can contribute to a landscape's visual quality, but these factors can ultimately be grouped under three headings: vividness, intactness, and unity.

Key viewpoints, used for creating simulated images of anticipated changes (Section VIII of this report) are identified with a black star in Figures 7 and 9. For the discussion of visual quality associated with each VUA, it is important to remember that these are general evaluations for the corridors as a whole. Specific locations within the unit may have higher or lower visual quality than the average. In the discussion of key viewpoints in Section VIII of this report, visual quality is assessed for specific views, and these may differ from the average, or general, visual quality rating assigned below because that rating only considers a specific location within the corridor.

### Visual Resources

Visual resources of the project setting are defined and identified below by assessing visual character and visual quality in the project corridor.

#### Visual Character

Visual character includes attributes such as form, line, color, texture, and is used to describe, not evaluate; that is these attributes are neither considered good nor bad. However, a change in visual character can be evaluated when it is compared with the viewer response to that change. Changes in visual character can be identified by how visually compatible a proposed project would be with the existing condition by using visual character attributes as an indicator. For this project the following attributes were considered:

- Form - visual mass or shape
- Line - edges or linear definition
- Color - reflective brightness (light, dark) and hue (red, green)
- Texture - surface coarseness
- Dominance - position, size, or contrast
- Scale - apparent size as it relates to the surroundings
- Diversity –a variety of visual patterns
- Continuity - uninterrupted flow of form, line, color, or textural pattern

The visual character of the proposed project associated with both SR 1 and the Coastal Rail Trail VAUs will be mostly compatible with the existing visual character of the corridors. The attributes of form and line would be similar between existing and proposed conditions within both VAUs. The form of the SR 1

VAU is very linear, with large trees enclosing and overhanging the edges. In a few locations, where retaining or soundwalls would be added, existing vegetation would be impacted but would not disrupt the overall visual character. However, the visual character would be impacted slightly more along the portion of SR 1 that is directly adjacent to Aptos Creek, where the proposed widening of the existing bridge structure over Aptos Creek and Spreckels Drive would require the removal of existing vegetation, resulting in a more open roadway corridor. There would be an increase in gray and black coloring along the SR 1 corridor because the project would require a larger area of pavement to accommodate the expanded auxiliary lanes in each direction. In addition, red pavement markings, a pavement marking coloring that does not currently exist along this segment of SR 1, would be painted in some locations to indicate bus-only use. The existing textures along the corridor (vegetation, pavement, walls, and fences) would remain relatively unchanged. Regarding scale, the most noticeable changes would be a wider highway corridor that would feel larger in scale to some users and the new Rail Trail overcrossing structures that would appear slightly wider and larger in scale than the existing structures. Given that the types of elements proposed are so similar in nature to existing structures associated with the SR 1 project corridor, the diversity of visual patterns in the corridor would remain relatively unchanged. Lastly, the visual continuity of the corridor would be affected with the removal of existing vegetation, which currently acts to tie the linear aspects together. However, the proposed project would aim to replace plantings where space allows. The other proposed elements and changes along the corridor should not affect the visual character.

The form of the Coast Rail Trail VAU is also very linear, with large trees enclosing and overhanging the edges. The addition of a paved trail with soft-surface natural shoulders, adjacent to the rail tracks, would blend in with the existing colors and textures of the rail segment. Vegetation removal within the Coast Rail Trail VAU would be minimal. However, in some areas, the loss of some existing vegetation would lessen the dominant green color that is magnified by the dense mature evergreen trees and understory plants that hold their color year-round. However, the proposed project would aim to replace plantings where space allows. The existing textures along the corridor (vegetation, pavement, walls, and fences) would remain relatively unchanged. Regarding scale, the most noticeable changes would be the two new trail bridges that would run parallel to the rail bridges over SR 1 and Aptos Creek, which would feel only slightly larger in scale to existing rail users. Given that the types of elements proposed are so similar in nature to existing features associated with the Rail Trail project corridor, the diversity of visual patterns in the corridor would remain relatively unchanged. Lastly, the visual continuity of the corridor would only be slightly altered with the removal of existing vegetation, which currently acts to tie the linear aspects together. The other proposed elements and changes along the Rail Trail corridor should not affect the visual character.

### Visual Quality

Visual quality is evaluated by identifying the vividness, intactness, and unity present in the project corridor. Public attitudes validate the assessed level of quality and predict how changes to the project corridor can affect these attitudes. This process helps identify specific methods for addressing each visual impact that may occur as a result of the project. The three criteria for evaluating visual quality are defined below:

- **Vividness** is the extent to which the landscape is memorable and is associated with distinctive, contrasting, and diverse visual elements.
- **Intactness** is the integrity of visual features in the landscape and the extent to which the existing landscape is free from non-typical visual intrusions.

- **Unity** is the extent to which all visual elements combine to form a coherent, harmonious visual pattern.

The visual quality of the existing corridor would be altered by the proposed project. The dense, mature vegetation that dominates the corridor creates a vivid and unifying experience for both highway and Rail Trail users. The areas adjacent to Aptos Creek are of a particularly high visual quality and would be impacted. In areas along the north side of SR 1, near Freedom Boulevard and along Soquel Drive where vegetation is sparser, the large trees still contribute to the unity of the corridor and dominate the visual quality. While proposed overcrossing replacements would create new forms, they would ultimately improve the visual character and intactness over the existing crossings, which are in disrepair and contribute to a negative visual character. As noted in the *State Park Drive to Bay Avenue/ Porter Visual Impact Assessment* from July 2020, even though the unity would be slightly degraded, the visual quality remains high “because of the dominance of the vegetation throughout” the SR 1 VAU. In addition, replacement plantings along SR 1 would reduce changes to the existing visual character of the project corridor for passing motorists and help maintain the designation of the Classified Landscaped Freeway segment and also aid in retaining the existing visual quality.

## Resource Change

As a result of the proposed project, the resource change would be moderate-low. The project would modify the existing SR 1 corridor by widening to accommodate the auxiliary lanes. The replaced rail bridges, widened bridge over Aptos Creek, and addition of trail bridges over SR 1 and Aptos creek would slightly expand the appearance of these structures but would be in keeping with existing structures. Similarly, new retaining walls and soundwalls would be in keeping with existing elements along SR 1 and the rail corridor. These proposed modifications would be comparable in form and scale to the existing facilities.

Construction of the proposed project would require grading and removal of vegetation to accommodate the proposed widening, bridge replacements, and construction of new bridges. The grading, retaining wall structures, soundwalls, and loss of vegetation would be visible to viewers traveling through the area. In addition, small portions of commercial properties would be acquired, and parking lots converted, to accommodate the Rail Trail. However, the changes that would result from construction of the proposed project can be accomplished without substantial visual impact on the resources in the Rail Trail VAU. In addition, creating a connection to Aptos Village Park would not impact visual resources associated with the park, and views from these recreational areas would be in keeping with existing conditions. Overall, the visual resource changes proposed by the project would be moderate-low because, although new visual features would be introduced and some vegetation would be removed, the proposed project would aim to replace plantings where space allows. In addition, aesthetic treatments would be applied to sound walls, retaining walls, and bridge structures. Therefore, changes would generally be in keeping with the existing visual character and would often result in slight improvements in visual quality.

## VII. VIEWERS AND VIEWER RESPONSE

The population affected by the project is composed of *viewers*. Viewers are people whose views of the landscape may be altered by the proposed project—either because the landscape itself has changed or their perception of the landscape has changed.

Viewers, or more specifically the response viewers have to changes in their visual environment, are one of two variables that determine the extent of visual impacts that would be caused by the construction and operation of the proposed project. The other variable is the change to visual resources discussed earlier in *Section VII Visual Resources and Resource Change*.

## Types of Viewers

There are two major types of viewer groups for highway projects: highway neighbors and highway users. Each viewer group has their own particular level of *viewer exposure* and *viewer sensitivity*, resulting in distinct and predictable visual concerns for each group that help to predict their responses to visual changes.

### HIGHWAY NEIGHBORS (Views to the Road)

Highway neighbors are people who have views to the road. They can be subdivided into different viewer groups by land use. For example, residential, commercial, industrial, retail, institutional, civic, educational, recreational, and agricultural land uses may generate highway neighbors or viewer groups with distinct reasons for being in the corridor and therefore having distinct responses to changes in visual resources. For this project the following highway neighbors were considered:

- **Residential Viewers:** There are many residents who live directly adjacent to SR 1. However, most of these viewers have completely obstructed views of the highway due to the dense vegetation. In one case along the Soquel Drive frontage, near the Freedom Boulevard northbound on-ramp, multi-family residential users have only partially obscured views to SR 1.
- **Recreational Viewers:** The Tennis Club of Rio Del Mar is located along the south side of SR 1 adjacent to the club's five tennis courts. These viewers have heavily screened views of SR 1, similar to the residential viewers. A small neighborhood park, Seacliff Village Neighborhood County Park, at the intersection of McGregor Drive and Canterbury Drive has unobstructed views of the southbound offramp and mostly screened views of the State Park Drive interchange.
- **Religious Viewers:** There is a large church, The Coastlands, on the southeast corner of the State Park Drive interchange. SR 1's southbound off-ramp to State Park Drive and another, the Episcopal Church of St John, on McGregor Drive, which both have visibility from parking lots, drive- ways, and entrances to the highway, though mostly screened by vegetation.
- **Commercial Viewers (employees and customers):** At a few locations along the corridor, commercial viewers have views of SR 1. These are primarily small office and commercial developments and restaurants along the Soquel Drive frontage road north of Rio Del Mar Boulevard and adjacent to the Freedom Boulevard northbound on-ramp.
- **Local Street Viewers:** These viewers are those that drive, bike, or walk on the roadways that cross above SR 1 or are adjacent to SR 1. Three overhead crossings of SR 1 are within the corridor— Freedom Boulevard, Rio Del Mar Boulevard and State Park Drive. Spreckels Drive crosses under SR 1, Soquel Drive runs adjacent to SR 1 and serves as a frontage road, and Moosehead Drive and Bonita Drive wind alongside SR 1, coming in close proximity to the highway at some locations. The Freedom Boulevard, Rio Del Mar Boulevard and State Park Drive overcrossings all include vehicular traffic and bicycle travel lanes with protected sidewalks for separated pedestrian traffic on one side. The viewers from above have a panoramic view of SR 1, while those below can view the on- and off-ramps along with the overcrossing structures. The undercrossing at Spreckels Drive only provides views of SR 1 from below.

## HIGHWAY USERS (Views *from* the Road)

Highway users are people who have views *from* the road. They can be subdivided into different viewer groups in two different ways—by mode of travel or by reason for travel. For example, subdividing highway users by mode of travel may yield pedestrians, bicyclists, transit riders, car drivers and passengers, and truck drivers. Dividing highway users or viewer groups by reason for travel creates categories like tourists, commuters, and haulers. It is also possible to use both mode and reason for travel simultaneously, creating a category like *bicycling tourists*, for example. For this project the following highway users were considered:

- **Daily Commuter Viewers:** Daily commuters include those in private vehicles, along with regular travelers such as delivery drivers and truck drivers. These viewers have greater awareness of the visual environment because of their familiarity with the corridor due to repeated trips. Congestion on the roadway can give them even more time to observe their surroundings. At posted speeds, however, drivers tend to focus on long- to mid-range views straight ahead, while passengers have more time and a wider range of views.
- **Tourist Viewers:** SR 1 carries a high amount of tourist traffic, driving between the Central Coast cities and visiting parks and beaches. These viewers tend to have a high interest in the visual environment, especially because SR 1 is nationally recognized as a highway with scenic views, but less awareness than the regular travelers described above. Similar to the daily commuters, when there is congestion they can focus even more on their surroundings, but at higher speeds passengers have a better chance for wider views.
- **Transit Viewers:** Currently, SR 1 in the corridor is used for regional bus travel by Santa Cruz Metro bus lines 55, 69A, 69W, and 91X. Generally, transit viewers are similar to both daily commuter and tourist passengers, because they have time and a wide range of views (though usually only on one side of the road). For regular travelers of this route, they may also have familiarity with the corridor.

## RAIL TRAIL NEIGHBORS (Views *to* the Trail)

Rail Trail neighbors are people who have views *to* the trail. They can be subdivided into different viewer groups by land use. For example, residential, commercial, industrial, retail, institutional, civic, educational, recreational, and agricultural land uses may generate trail neighbors or viewer groups with distinct reasons for being in the corridor and therefore having distinct responses to changes in visual resources. For this project the following Rail Trail neighbors were considered:

- **Residential Viewers:** There are many residents who live directly adjacent to Rail Trail. However, most of these viewers have completely obstructed views of the trail due to the dense vegetation and/or noticeable difference in grade. In one area along Carrera Circle, just south of SR 1, the trail is situated at a higher elevation than adjacent residences. In all other cases, the trail is at or below the grade of adjacent residential viewers.
- **Recreational Viewers:** The trail passes by Aptos Village Park. The Rail Trail is at a higher elevation than the park so that terrain and vegetation prevent views from the park interior. However, views of the trail are available from near the park entrance and along a portion of the entry drive. The Tennis Club of Rio Del Mar is located along Sandalwood Drive and directly adjacent to the trail. Although the Rail Trail sits at an elevation above the club, the view of the trail from the club is mostly obscured by vegetation. As the trail traverses south from the club it begins its transition to being noticeably below the grade of adjacent recreational viewers on local streets. The southern terminus of the Rail Trail is adjacent to the Seascapes Golf Course. Views to the trail from the course are completely obstructed by residential properties, vegetation, and difference in grade.

- **Religious Viewers:** Although the trail sits at the same grade or just slightly higher, the view from The Coastlands church is heavily screened by vegetation and a fence/wall along the southern edge of the church property.
- **Commercial Viewers (employees and customers):** At multiple locations, commercial viewers have substantial views of the Rail Trail. These viewers are located primarily within the Village of Aptos where the trail runs directly between Soquel Drive and the parking lots of the Aptos Station commercial development. Additional commercial viewers are located at the gas station near the corner of Sea Ridge Road and State Park Drive. In all cases, the commercial viewers have relatively unobstructed views of the Rail Trail.
- **Local Street Viewers:** These viewers are those that drive, bike, or walk on the roadways that cross the Rail Trail or are adjacent to it. The Rail Trail is most readily seen from at-grade intersections such as at State Park Drive, Aptos Road, and Trout Gulch Road that provide direct views down the rail corridor. Rail Trail Segment 12 crosses over SR 1 twice, and it also crosses over Soquel Drive twice, near the intersections of Spreckels Drive and Aptos Street. Viewers on SR 1 and Soquel Drive are only able to see views of the bridge structures that pass above and small segments of trail that are visible on either side of the bridges. The Rail Trail crosses under Rio Del Mar Boulevard, near its intersection with Sumner Avenue. The viewers from above have uninterrupted views to the trail, below, from protected pedestrian walkways on both sides of the bridge.

#### **RAIL TRAIL USERS (Views from the Trail)**

Rail Trail users are people who have views from the trail. They can be subdivided into different viewer groups in two different ways—by mode of travel or by reason for travel. For example, subdividing trail users by mode of travel may yield pedestrians or bicyclists. Dividing trail users or viewer groups by reason for travel creates categories like tourists, commuters, and haulers. It is also possible to use both mode and reason for travel simultaneously, creating a category like *bicycling tourists*, for example. For this project the following trail users were considered:

- **Commuter Viewers:** Commuters are those who live locally and utilize the trail to commute to their place of employment. Currently, there is no existing paved trail, the existing Rail Trail corridor has a rough gravel finish, and the rough nature of the trail corridor is difficult for bicyclists or other users to navigate. Therefore, it is unlikely that it is used by anyone other than pedestrians. These viewers have a great awareness of the visual environment because of their familiarity with the trail due to repeated trips.
- **Recreational Viewers:** Recreational viewers along the trail would also be pedestrians, for the reasons described above for commuters. These viewers are, likely, locally based and have a great awareness of the visual environment because of their familiarity with the trail due to repeated trips. Additionally, recreational viewers tend to have a higher interest in the visual environment than commuters as they are there to enjoy their surroundings.

### **Viewer Response**

Viewer response is a measure or prediction of the viewer's reaction to changes in the visual environment and has two dimensions as previously mentioned, viewer exposure and viewer sensitivity.

#### **Viewer Exposure**

Viewer exposure is a measure of the viewer's ability to see a particular object. Viewer exposure has three attributes: location, quantity, and duration. *Location* relates to the position of the viewer in



relationship to the object being viewed. The closer the viewer is to the object, the more exposure. *Quantity* refers to how many people see the object. The more people who can see an object or the greater frequency an object is seen, the more exposure the object has to viewers. *Duration* refers to how long a viewer is able to keep an object in view. The longer an object can be kept in view, the more exposure. High viewer exposure helps predict that viewers will have a response to a visual change.

### ***Residential Viewers***

#### **State Route 1**

Residential viewer exposure to SR 1 is generally within the foreground and middleground. These viewers, primarily along the south side of the highway, have substantial vegetation in the immediate foreground, with the SR 1 in the distant foreground and middleground. No residences appear to have clear, unobstructed views of SR 1 due to the density and maturity of existing vegetation. The view duration of most residences is only moments. There are approximately nine residences along Moosehead Drive that are in the closest proximity to SR 1, whose views could be considered nearly indefinite, if not for heavy vegetation, depending on how long the viewer spends in their yards or at their windows. In addition, there are several residences along Soquel Drive, north of SR 1 and between Jaunell Road and Monroe Avenue, and along Carrera Circle, south of SR 1, that are also in close proximity to SR 1. These views could also be considered nearly indefinite, depending on how long the viewer spends in their yards or at their windows.

#### **Rail Trail**

Residential viewer exposure to the Rail Trail is primarily within the foreground. Views are mostly screened by vegetation, walls and/or topography. Similar to the residences along SR 1, viewers in the five townhomes along Carrera Circle have view durations from backyards that could be considered indefinite.

### ***Recreational Viewers***

#### **State Route 1**

Recreational viewer exposure to SR 1 from the Rio Del Mar Tennis Club is predominately within the foreground due to the proximity of the highway to the adjacent tennis courts. Viewers from the club and any of its five courts, have dense, hedge-like vegetation in the immediate foreground that blocks all views to SR 1 and eliminates any view duration. The number of viewers from the tennis club could vary, given event size, but likely fluctuates between 10 and 30 viewers at any given time. The Seacliff Village Neighborhood County Park at the corner of McGregor Drive and Canterbury Drive has unobstructed middleground views to the southbound off-ramp at State Park Drive. It is used by the local residential community and may have up to 20 viewers at a time. Depending on the length of their stay, view durations from the park would be considered short-term and lasting no longer than a day. However, viewers at the tennis club and park are likely to have return visitors from local residents that frequent these recreational areas.

#### **Rail Trail**

The recreational viewer exposure to the Rail Trail is primarily within the foreground. Viewers at the Rio Del Mar Tennis Club, and its five courts, have large, mature trees with sparse understory vegetation in the immediate foreground of views to the trail. Given the distance between the club and the trail, up to 10 viewers can have view durations of a few moments. The Seacliff Village Neighborhood County Park at the corner of McGregor Drive and Canterbury Drive has distant background views to the trail segment

terminus at State Park Drive to the southeast. The views from the park are distant and minimal to non-existent given the dense, heavily screened vegetation.

### ***Religious Viewers***

#### ***State Route 1***

As noted in the State Park Drive to Bay Avenue/ Porter Visual Impact Assessment from July 2020, the “Religious viewer exposure to SR 1 is in the middleground to background, primarily of the southbound offramp in the middleground, across McGregor Drive, and other ramps and SR 1 itself in the background. There are many large trees screening these views, except for the southbound off-ramp. During church events there may be 100 viewers or more in the church entrance, parking lots, and driveways. However, their views are relatively short, only the time it takes to walk to and from their cars and drive to or from the church property”.

#### ***Rail Trail***

Similar to the views of SR 1, religious viewer exposure to the trail is within the middleground to background. The Coastlands Church sits directly adjacent to the trail alignment and its outdoor event space may accommodate guests of up to 100. These viewers have little to no view of the trail given the existing fence and dense vegetation along the southern edge.

### ***Commercial Viewers***

#### ***State Route 1***

Commercial viewer exposure to SR 1 is generally from the north side and within the foreground to middleground. The majority of commercial view are across Soquel Drive, which acts as a frontage road for most of the corridor. In most cases there are tall mature trees, with sparse understory vegetation that creates ‘windows’ or views to SR 1. The view duration of customers is substantially shorter, as they enter and exit businesses, than that of employees that are at work for several hours. The number of viewers for commercial properties is difficult to estimate, but most are light commercial office use with likely less than 12 customers at a time.

#### ***Rail Trail***

Commercial viewer exposure to the trail is primarily from either side of Soquel Drive in Aptos Village. These views are generally within the foreground. Given the lack of vegetation in these areas, view durations are longer for employees and last only for a few minutes for customers entering and exiting businesses. The number of viewers for these commercial properties is difficult to estimate but is likely less than 25 at any one given time.

### ***Local Street Viewers***

#### ***State Route 1***

As noted in the State Park Drive to Bay Avenue/ Porter Visual Impact Assessment from July 2020, “local street viewer exposure to SR 1 varies. For viewers on overcrossings and undercrossings, the views are in the foreground or middleground. For parallel streets (frontage roads), the views are in the foreground. For frontage roads, there is usually some vegetation screening part of their views. The number of viewers varies with each roadway”. Along Soquel Drive, State Park Drive, Rio Del Mar Boulevard, and Freedom Boulevard, traffic can be heavy, with multiple viewers at any given time. McGregor Drive carries low volumes of traffic and a smaller number of viewers. Moosehead Drive, Bonita Drive, and Spreckels Drive have even less traffic and therefore substantially less viewers. At overcrossings and

undercrossings, views are brief except for viewers on Soquel Drive that have views that are moderately long.

#### Rail Trail

Local street viewer exposure to the trail is similar to that of SR 1 but primarily within the foreground. For viewers on overcrossings and undercrossings, the views are within the foreground or middleground. For parallel streets, the views are within the foreground. For most roads, there is usually substantial vegetation or topography that partly or fully screens their views and view durations are minimal. The exception being along Soquel Drive in the Village of Aptos. Given the developed urban nature of the area, little to no vegetation exists between the roadway and the trail. Therefore, views are unobstructed, and durations last for a few minutes as travelers pass by the trail on the road.

### **All Highway Viewers**

#### State Route 1

As noted in the State Park Drive to Bay Avenue/ Porter Visual Impact Assessment from July 2020, “highway viewers have similar exposure to views of SR 1 and the surrounding environment. Generally, their exposure from SR 1 to the surrounding land is limited to foreground and middleground views, due to the density of the vegetation.” On the eastern edge of the corridor, on the north side of SR 1 and near the Freedom Boulevard interchange, the views open up for limited middleground views toward light commercial and office development. Given the speed of the highway, view durations of the adjacent developments are only momentarily visible. As further noted in the State Park Drive to Bay Avenue/ Porter Visual Impact Assessment from July 2020, “SR 1 carries heavy traffic each day, with some vehicles carrying multiple viewers. Views at any one location are brief, though longer during congested traffic.”

#### Rail Trail

Highway viewer exposure to the trail is limited to the two overcrossings between Rio Del Mar Boulevard and State Park Drive. Views at these overcrossings are within the foreground or middleground with brief durations, except in times of heavy traffic.

### **Viewer Sensitivity**

Viewer sensitivity is a measure of the viewer’s recognition of a particular object. It has three attributes: activity, awareness, and local values. *Activity* relates to the preoccupation of viewers—are they preoccupied, thinking of something else, or are they truly engaged in observing their surroundings. The more they are actually observing their surroundings, the more sensitivity viewers will have of changes to visual resources. *Awareness* relates to the focus of view—the focus is wide and the view general or the focus is narrow and the view specific. The more specific the awareness, the more sensitive a viewer is to change. *Local values* and attitudes also affect viewer sensitivity. If the viewer group values aesthetics in general or if a specific visual resource has been protected by local, state, or national designation, it is likely that viewers will be more sensitive to visible changes. High viewer sensitivity helps predict that viewers will have a high concern for any visual change.

Given its proximity and relevancy, the viewer sensitivities discussed in the *State Park Drive to Bay Avenue/ Porter Visual Impact Assessment* (Caltrans 2020b) and *Visual Impact Assessment: Tier I – Corridor Analysis of High Occupancy Vehicle (HOV) Lanes and Transportation System Management Alternatives and Tier II – Build Project Analysis of 41st Avenue to Soquel Avenue/Drive Auxiliary Lanes and Chanticleer Avenue Pedestrian Overcrossing* (Caltrans 2013) have been reviewed and adapted as necessary below:

### ***Residential Viewers (State Route 1 and Rail Trail)***

Residential viewers tend to have a high sensitivity to the visual environment around their residences. Although they are sometimes preoccupied with indoor or outdoor activities, they also may spend time observing their surroundings. The focus of their view is general, rather than directed toward anything specific, and their awareness is strong. SR 1 is a state eligible scenic highway (Caltrans 2019) and is a Santa Cruz County-designated scenic road (Santa Cruz County 1994). Santa Cruz County also has a tree removal policy, restricting the removal of healthy trees unless they pose a traffic hazard or for the purpose of road widening, and replacement of trees nearby is required. Residential viewer sensitivity and awareness towards the Rail Trail is currently minimal given its inactive status. If reactivated as a rail line, viewer awareness would become strong. These designations and policies suggest high local values.

### ***Recreational Viewers (State Route 1 and Rail Trail)***

Recreational viewers tend to have a high sensitivity to the visual environment when they are participating in outdoor recreation. Although tennis players have a very specific focus, viewers at the county park and bicyclists on the local streets have a wider focus. The designations and policies discussed above suggest high local values, especially because most of the recreational viewers are locals.

### ***Religious Viewers (State Route 1 and Rail Trail)***

Religious viewers at the churches with views of SR 1 and the Rail Trail have moderate sensitivity to the surrounding visual environment. Their activity, arriving and leaving the church, generally preoccupies them. Their focus is on the church, rather than the highway or trail. However, the designations and policies discussed above suggest moderately high local values, as most of the people using the church are likely locals.

### ***Commercial Viewers (State Route 1 and Rail Trail)***

Commercial viewers in the corridor tend to have low to moderate sensitivity to the surrounding visual environment. Their activity, arriving and leaving the place of commerce, generally preoccupies them. Their focus is on the business, rather than the highway. However, these are primarily local businesses, so the designations and policies discussed above suggest moderately high local values in Santa Cruz County.

### ***Local Street Viewers (State Route 1 and Rail Trail)***

The local street viewers on the streets with views of SR 1 and the Rail Trail generally have moderate sensitivity. Drivers and passengers on these roadways are usually focused on the road itself. Some bicyclists and pedestrians may be less focused on the roadways, but most of these streets have, moderate traffic and/or narrow bikeways and sidewalks, requiring viewers to concentrate on the local street for safety. The County designations and policies suggest high local values.

### ***Highway Users—Daily Commuter Viewers (State Route 1 and Rail Trail)***

Daily commuter viewers have moderate to high viewer sensitivity, depending on their activity. Drivers are usually preoccupied with their driving, though congestion can result in more time to observe the surrounding visual environment. Passengers have time to observe. Drivers tend to focus more specifically on the road, while passengers tend to have a more expansive focus. These commuters are from the local or regional area. State and County designations and policies suggest moderate local values.



### ***Highway Users—Tourist Viewers (State Route 1 and Rail Trail)***

Tourist viewers have high viewer sensitivity. Although they have low familiarity with the views from SR 1, the purpose of their drive is, in part, to observe their surrounding visual environment. Drivers are more preoccupied with their driving, though congestion can result in more time to observe their surroundings. Similar to daily commuters, passengers have time to observe, and drivers tend to focus more on the road, while passengers tend to have a more expansive focus. These tourist viewers are often from outside the region and do not have the same expectations as local users, but they would likely have high expectations due to the highway's reputation for scenic quality.

### ***Highway Users—Transit Viewers (State Route 1 and Rail Trail)***

Transit viewers have moderate to high viewer sensitivity. For viewers using transit for regular trips, their sensitivity is similar to that of the daily commuter passengers. If the transit viewers are only taking the trip occasionally or as tourists, their sensitivity would be similar to the tourist viewer passengers.

## **Regulations**

The regulatory setting provided in the *July 2013 Visual Impact Assessment: Tier I – Corridor Analysis of High Occupancy Vehicle (HOV) Lanes and Transportation System Management Alternatives and Tier II – Build Project Analysis of 41st Avenue to Soquel Avenue/Drive Auxiliary Lanes and Chanticleer Avenue Pedestrian Overcrossing*, which addressed a series of projects along SR 1 between Morrissey Boulevard and San Andreas-Larkin Valley Roads within Santa Cruz County, remains current for this proposed project (Caltrans 2013). To summarize, even though SR 1 is an Eligible State Scenic Highway, there are no Officially designated State Scenic Highways within the study area (Caltrans 2019). However, SR 1 is designated by Santa Cruz County as a scenic roadway, valued for its vistas (Santa Cruz County 1994).

In addition to Eligible State Scenic Highways in the study area, and not identified in previous VIAs, the project corridor overlaps with two segments of Classified Landscaped Freeways that are located between PM 7.83-9.68 and 10.22-11.18 (Caltrans 2020a). Caltrans defines a classified landscaped freeway as “a section of freeway with ornamental vegetation planting that meets the criteria established by the California Code of Regulations (Cal. Code Regs.), Outdoor Advertising Regulations, Title 4, Division 6. This designation is used in the control and regulation of outdoor advertising displays.” As identified in Cal. Code Regs., Title 4 Sections 2507 and 2508, a classified landscaped freeway must have planting areas that are at least 1,000 feet in length, with healthy plantings that improve the aesthetic appearance of the highway. Functional plantings (i.e., plantings for erosion control, traffic safety, reducing fire hazards, traffic noise abatement, other non-ornamental purposes) do not qualify. The placement of advertising is prohibited within 660 feet of the edge of the right-of-way of a landscaped freeway (Caltrans 2020c).

Lastly, as identified in the *Draft Community Impact Assessment* for the proposed project, “SR 1 between Freedom Boulevard and State Park Drive lies within the Coastal Zone (Santa Cruz County Coastal Program). The portion of Coastal Rail Trail Segment 12 located south of the northern (inland) right of way limits of SR 1 is also within the Coastal Zone. In addition, a small portion of SR 1, adjacent to Valencia Lagoon, is within the Coastal Zone Appeal Jurisdiction that allows members of the public to appeal County approvals to the CCC” (Caltrans 2022).

## **Group Viewer Response**

The narrative descriptions of viewer exposure and viewer sensitivity for each viewer group were merged to establish the overall viewer response of each group.

### ***Neighbors (Views to SR 1 and Rail Trail)***

- **Residential Viewers (SR 1)—Moderate-High Viewer Response.** There are few residential viewers who can see SR 1 in the middleground views from their properties. The duration of their views varies from briefly to several hours. They may be preoccupied with other activities or observant of their surroundings. Residential viewers typically have strong awareness of the visual environment and high local aesthetic values.
- **Residential Viewers (Rail Trail)—High Viewer Response.** There are many residential viewers who can see the Rail Trail from their properties. These views are primarily in the middle- and foreground. The duration of their views varies depending on proximity, vegetation and topography, but can last for several hours, depending on type of outdoor activity. Residential viewers typically have strong awareness of the visual environment and high local aesthetic values.
- **Recreational Viewers (SR 1 and Rail Trail)—High Viewer Response.** SR 1 and the Rail Trail vary between the foreground, middleground and background of the recreational viewer's view throughout the highway and Rail Trail segments. The number of viewers ranges from a few to approximately 30 at a time. The duration of their views varies with their activity—from brief (tot-lot) to multiple hours (tennis court). They can be preoccupied or observant, depending on their activity. Recreational viewers typically have strong visual awareness and high local aesthetic values.
- **Religious Viewers (SR 1 and Rail Trail)—Moderate Viewer Response.** There are two churches with views of SR 1 and the Rail Trail. Views from each are in the middleground to background. It is possible for each church to have 100 or more viewers at a time during times of worship. The duration of their views is typically brief as they walk from the parking lot to the church entry. The Coastlands Church, however, has an outdoor event space where views would be substantially longer if not for a wall that screens views to the SR 1 and Rail Trail. Religious viewers are generally preoccupied with their activity and have moderate awareness of their surroundings. They typically have moderate local aesthetic values.
- **Commercial Viewers (SR 1 and Rail Trail)—Moderate Viewer Response.** SR 1 is in the middleground of the views from commercial and office viewers, who typically number less than 12 at a time, per property. Their views of SR 1 are usually brief to a few minutes. They are typically preoccupied with their activities, with their focus on the business rather than the highway. The views of the Rail Trail are in the foreground for commercial retailers along Soquel Drive in Aptos Village. These viewers have extended views of the Rail Trail that could last several hours. Commercial viewers typically have moderate local aesthetic values.
- **Local Street Viewers (SR 1 and Rail Trail)—Moderate Viewer Response.** SR 1 and the Rail Trail are in both the foreground and middleground views for multiple local street viewers in any one day. Their view of the highway and Rail Trail is typically very brief, up to a few minutes. Local Street viewers are typically preoccupied with their activity and focused on navigating the local street, though passengers, bicyclists, and pedestrians pay greater attention to their surroundings. Local street viewers typically have a moderately-high local aesthetic value.

### ***Users (Views from SR 1 and Rail Trail)***

- **Daily Commuter Viewers (SR 1 and Rail Trail)—Moderate Viewer Response.** For daily commuters the view from SR 1 and the Rail Trail are primarily in the foreground and middleground. The density of vegetation screens most background views out. SR 1 has thousands of daily commuters a day. The Rail Trail is likely used by no more than 50 people a day as a way to commute to their place of work. Duration of views from SR 1 are brief at any one location but encompass several minutes over the entirety of the segment. Drivers are usually preoccupied with driving and specific in their focus on

the road, while passengers are generally observant of the surroundings with a more general focus. Given the difference in commuter speed, the duration of views from the Rail Trail are substantially longer, but typically no longer than 10-15 minutes. Most daily commuters are local, so they typically have moderate to high local aesthetic values.

- **Tourist Viewers (SR 1)—High Viewer Response.** For tourist viewers, the view of SR 1 is the same as for daily commuters. Given its reputation as a scenic drive and large volumes of traffic (thousands per day). The duration of views from SR 1 is brief at any one location but may be several minutes over the entirety of the segment. Like the commuter viewers, drivers are usually preoccupied with driving and specific in their focus on the road, while passengers are generally observant of the surroundings with a more general focus. Most of these viewers are not local, but they have high expectations for their view.
- **Tourist Viewers (Rail Trail)—High Viewer Response.** For tourist viewers, the view of the Rail Trail is more similar to that of a recreational-type user. Hikers and cyclists tend to have a high sensitivity to their environment when participating in outdoor recreation. The area surrounding SR 1 is a destination due to its reputation for ocean views and unique natural environment. Depending on mode of transport (walking versus biking) the duration of views from the Rail Trail may be up to 5 to 10 minutes at any given time. While tourist viewers are not typically locals, they have a similarly high expectation for views.
- **Transit Viewers (SR 1 and Rail Trail)—Moderate Viewer Response.** For transit viewers, the view of SR 1 is similar to that of daily commuters. SR 1 currently has only a few regional bus routes using the highway and the rail service has been suspended. The expansion proposed by this project would open up alternatives for more transit viewers in the future but, as of 2019, transit viewers were approximately 85 or less per day on average (Hurrell pers comm.). The duration of views from both SR 1 and the Rail Trail are brief at any one location but may encompass several minutes over the entirety of the segment. Similar to passengers in the daily commuter and tourist viewer groups, users are generally observant of the surroundings with a more general focus and a moderate expectation for views.

## VIII. VISUAL IMPACT

Visual impacts are determined by assessing changes to the visual resources and predicting viewer response to those changes. These impacts can be beneficial or detrimental. The ratings used to evaluate visual quality, visual character, viewer exposure, and viewer response that are presented in Tables 3 through 6, below, use a numeric rating system from high (5) to low (1). The ratings were determined using the following ranges: high (5.00 to 4.50), moderate-high (4.49 to 3.50), moderate (3.49 to 2.50), moderate-low (2.49 to 1.50), and low (1.49 to 1.00). Cumulative impacts and temporary impacts due to the contractor's operations are also considered. A generalized visual impact assessment process is illustrated in the following diagram:

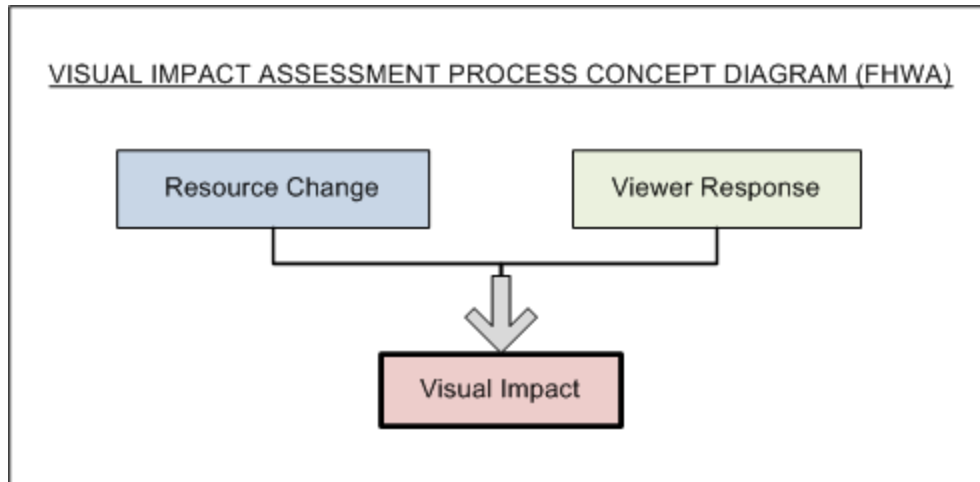


Table 2 provides a reference for determining levels of visual impact by combining resource change and viewer response.

Table 2. Visual Impact Ratings Using Viewer Response and Resource Change						
Resource Change (RC)	Viewer Response (VR)					
		Low (L)	Moderate-Low (ML)	Moderate (M)	Moderate-High (MH)	High (H)
	Low (L)	L	ML	ML	M	M
	Moderate-Low (ML)	ML	ML	M	M	MH
	Moderate (M)	ML	M	M	MH	MH
	Moderate-High (MH)	M	M	MH	MH	H
	High (H)	M	MH	MH	H	H

## Visual Impacts by Visual Assessment Unit

Because it is not feasible to analyze all the views in which the proposed project would be seen, it is necessary to select a number of key views associated with visual assessment units that would most clearly demonstrate the change in the project's visual resources. Key views also represent the viewer groups that have the highest potential to be affected by the project considering exposure and sensitivity. In addition, these key views will be analyzed for each proposed alternative.

The project would be located entirely within an urbanized area, and no rural areas would be affected. As described in Section III, *Project Location and Setting*, there are no scenic vistas or officially designated scenic routes associated with the proposed project. As such, scenic vistas and scenic routes would not be affected by the project, and these resources are not discussed further. Therefore, the analysis focuses on whether the project would conflict with applicable zoning and other regulations governing scenic quality or result in changes in light and glare.



It is important to note that the minimization measures depicted in the visual simulations include details such as wall textures and new landscaping of disturbed areas. The aesthetic treatments of structures and specific plant types depicted are representative only. The actual types of treatments, colors and landscape would be designed in collaboration with Caltrans' District Landscape Architect.

The following section describes and illustrates visual impacts by visual assessment unit, compares existing conditions to the proposed alternatives, and includes the predicted viewer response.

## **SR 1 VISUAL ASSESSMENT UNIT**

The SR 1 VAU extends from just west of the State Park Drive/SR 1 interchange to just east of the Freedom Boulevard/SR 1 interchange. Most of the vegetation along SR 1 is concentrated along the corridor between the Northern and Southern Aptos Rail Bridges that is comprised of a mixed canopy that is dominated by redwoods, oaks, and sycamores. The vegetation is especially dense where Aptos Creek crosses the corridor. At several locations, adjacent residential properties can be seen within this VAU, mostly along the Soquel Drive frontage road, near the Freedom Boulevard northbound on-ramp.

There are three key views for the SR 1 VAU that includes Key Views 1-3 that are shown in Figures 11-13, respectively. Viewers at Key View 1, looking toward the Southern Aptos Rail Bridge, are primarily users of the highway. Viewers at Key View 2, from the Southern Aptos Rail Bridge, include recreational and commuter bicycle and pedestrian users along the proposed Coastal Rail Trail Segment 12. Viewers at Aptos Creek KV3B include daily commuters, tourists, pedestrians, and transit viewers from the overcrossing at Rio Del Mar.

The proposed project falls within Classified Landscape Freeway segments along SR 1 that extend between PMs 7.83-9.68 and 10.22-11.18 (Caltrans 2020a). The proposed project would remove vegetation along the Classified Landscaped Freeway segments to accommodate widening, creating gaps in vegetation larger than 200 feet. However, the project would include replacement landscaping along the affected areas of SR 1, which would include the replacement of skyline trees. Therefore, it is anticipated that the designation of these Classified Landscaped Freeway segments would not be affected.

Changes to nighttime lighting within this VAU would be minimal. It is anticipated that any lights removed during construction would be reinstalled at a similar location, and no additional lighting is proposed. Therefore, there would be no notable changes in nighttime lighting. Changes in daytime and nighttime glare are discussed below.

### **Key View 1**

#### Description

Key View 1 (Figure 11) was taken from northbound SR 1 at the eastern overcrossing (existing rail bridge) near station 264+00 looking west (*as shown and described in the Tier I VIA from July 2013 and adapted as applicable for this report*). The view is from the perspective of the high-way traveler in the right lane.

#### Existing Visual Character/Quality

The existing view includes the existing concrete barrier along the highway corridor, with a clear view of SR 1 heading in the northbound direction, and clearly captures the existing condition of the Southern Aptos rail overcrossing and concrete abutments. This view also captures some of the southbound traffic. The visual character of this portion of the highway is very well vegetated in a manner that helps to isolate the highway within the landscape, and the corridor dominated by the relatively straight lines represented by the highway lanes and vegetative border. Mature groupings of redwoods, oak, and

eucalyptus flank both sides of the roadway and are the dominant characteristic of this view. Dense underbrush and non-native vines help to obstruct views into neighboring properties. Mature redwoods and oaks can also be seen in the background that help to unify this view. The view is contrasted by the overcrossing height warning sign and overhead powerlines that cross with the Southern Aptos Rail easement. The dominant colors are contrasting dark gray (pavement) and green (vegetation). The smooth texture of the roadway surface contrasts with the coarse texture of the vegetation. During sunny days, shadow patterns from the trees can create irregular shades of gray.

Vividness is moderate-high as this portion of the corridor provides high quality views of mature trees that contrast against the blue sky and the Southern Aptos Rail bridge screens views further down the highway; however, the bridge, which has fallen into disrepair, is a focal point that slightly degrades the quality of the view. Intactness is moderate because the vegetative border creates a coherent view, but the bridge and center guardrail dominate this viewpoint as a contrasting presence to the natural surrounding elements. Unity is moderate-high because the roadway fits well into the landscape, but the bridge creates a visual barrier to views beyond. Overall, the existing visual quality of Key View 1 is considered moderate-high due to the existing vegetation that overhangs the highway, frames the existing railroad bridge, and creates an intimate appearance to the highway corridor combined with the existing bridge that is aged, in disrepair, and detracts from the visual quality.

#### Proposed Project Features

As shown in the simulation in Figure 11, a prefabricated pedestrian and bicycle bridge would be constructed in place of the existing Southern Aptos Rail bridge shown in the existing view. A new rail bridge would be constructed immediately behind the pedestrian and bicycle bridge, and the abutments of both bridges would be setback to allow the future bus-on-shoulder lane configuration. The highway would be wider than existing, with two additional 12-foot-wide auxiliary lanes in each direction and shoulders to meet current standards. The wider roadway would equate to a longer bridge. The median barrier would be rebuilt to current safety standards and a retaining wall would be placed along the southbound travel way to minimize tree removals. Large trees would be planted to replace trees removed for construction on all sides of the bridges and native shrubs and seasonal flowering plantings would be planted to replace screen planting that previously obstructed views into neighboring properties.

#### Viewer Response

Viewer exposure is moderate-high because viewers have middleground views of project features, the number of vehicles is estimated at approximately 47,000 or more per day on mainline SR 1, and the duration of their views varying from a few seconds to a few minutes (CDM Smith 2021). Viewer sensitivity is also moderate-high with viewers focused on the corridor itself, the fact that the vast majority are locals, and high local values as indicated by the number of policies and regulations related to aesthetics and visual resources. The overall level of viewer response would be moderate-high.

#### Resource Change

In the foreground, visibility of vehicles travelling in the southbound lanes would be more obscured due to the height of the median barrier. In the middleground, the existing, enclosed feeling of this viewpoint would be replaced by a more open and lighter aesthetic quality due to tree removal for construction and open steel truss pedestrian bridge design. Due to the width of the rail trail corridor, some skyline trees would be removed and cannot be replaced due to safety or geometric requirements. In the background, the addition of retaining walls along the southbound lanes and safety barrier along the northbound lanes may increase reflected light through this zone. The dominant colors would be earth tones to

subtly contrast with the existing and proposed vegetation. The horizontal scale of the pedestrian and rail bridges would dominate the view. Daytime and nighttime glare would remain moderate because trees remaining along the highway and replacement plantings would provide shading to minimize glare coming from the highway pavement and structures, and it would screen glare from adjacent development. The resulting visual character would remain moderate-high.

The existing visual quality is moderate-high with moderate-high vividness and intactness and moderate unity. Although the proposed project would remove some of the predominant skyline canopy trees and screening plant material, the design and coloring of the proposed bridge enhances the aesthetic quality at this location and would be an improvement over the appearance of the existing bridge. As a result, the vividness would remain moderate-high, intactness would be improved to moderate-high, and unity would remain moderate-high. The resulting visual quality would remain moderate-high, and the overall resource change would be low.

Table 3, below, summarizes and compares the narrative ratings for visual resource change, viewer response and visual impacts.







*Source: Mark Thomas, April 2022.*

**Figure 11. Key View 1, Existing View and Simulated Conditions—from SR 1 looking north toward the Rail Trail VAU.**

<b>Table 3. Key Viewpoint 1</b> <b>Anticipated Changes in Visual Quality, Visual Character, Viewer Exposure and Viewer Sensitivity</b> <i>View from SR 1 Northbound at Station 264+00 Looking West</i>		
<b>Visual Quality</b>		
<i>Attributes</i>	<i>Existing Condition</i>	<i>Proposed Project Condition</i>
<b>Vividness/Memorability</b> High (5): Striking; Low (1): Plain	Moderate-High 3.75	Moderate-High 3.75
<b>Intactness</b> High (5): Free of Encroaching Elements Low (1): Cluttered/Lacking Integrity	Moderate-High 3.50	Moderate-High 3.75
<b>Unity</b> High (5): Coherent/Harmonious Low (1): Disjointed/Jarring	Moderate 3.25	Moderate-High 3.50
<b>Overall Visual Quality</b>	<b>Moderate-High (3.50)</b>	<b>Moderate-High (3.67) +5%</b>
<b>Visual Character</b>		
<b>Scale</b> High (5): Small; Low (1): Monumental	Moderate-High 3.75	Moderate 3.25
<b>Diversity</b> High (5): Complex; Low (1): Monolithic	Moderate 3.25	Moderate-High 3.50
<b>Continuity</b> High (5): Harmonious; Low (1): Dissonant	Moderate-High 3.50	Moderate-High 3.75
<b>Dominance</b> High (5): Balanced; Low (1): Prominent/Unbalanced	Moderate-High 3.75	Moderate-High 3.75
<b>Overall Character</b>	<b>Moderate-High (3.56)</b>	<b>Moderate-High (3.56) 0%</b>
<b>Resource Change</b>	<b>Moderate-High (3.53)</b>	<b>Moderate-High (3.62) +2%*</b>
<b>Viewer Exposure</b>		
<b>Location of Views</b> High (5): In Foreground; Low (1): In Background	Moderate 3.00	Moderate 3.00
<b>Number of Viewers</b> High (5): Over 100,000; Low (1): Less than 50	Moderate-High 4.25	High 4.50
<b>Duration of Views</b> High (5): More than 4 hours; Low (1): Less than 1 minute	Moderate 2.50	Moderate 2.50
<b>Overall Exposure</b>	<b>Moderate (3.25)</b>	<b>Moderate (3.33) +3%</b>
<b>Viewer Sensitivity</b>		
<b>Attention of Viewer</b> High (5): Observant; Low (1): Preoccupied	Moderate 3.00	Moderate 3.00
<b>Viewer Awareness</b> High (5): Focused on View; Low (1): Focused Away	Moderate 3.25	Moderate 3.25
<b>Local Values and Goals</b> High (5): Values Aesthetics Low (1): Does Not Value Aesthetics	High 4.50	High 4.50
<b>Overall Sensitivity</b>	<b>Moderate-High (3.58)</b>	<b>Moderate-High (3.58) 0%</b>
<b>Viewer Response</b>	<b>Moderate-High (3.42)</b>	<b>Moderate-High (3.46) +1%</b>

\*Percent resource change – High: >50%, Moderate-high: 30-50%, Moderate: 20-30%, Moderate-Low: 10-20%, Low: <10%

## ***Key View 2***

### ***Description***

Key View 2 (Figure 12) was taken from the existing South Aptos Rail Bridge looking towards the west (northbound). The view is from the perspective of a future trail user and generally that of highway travelers, as they approach the Aptos Creek Bridge from the east.

### ***Existing Visual Character/Quality***

The existing view includes the existing concrete barrier along the highway corridor, with a clear view of SR 1 heading in both directions. The visual character of this portion of the highway is very well vegetated in a manner that helps to isolate the highway within the landscape, and the corridor dominated by the relatively straight lines represented by the highway lanes and vegetative border. Mature groupings of redwoods, oak, and eucalyptus flank both sides of the roadway and are the dominant characteristic of this view. The denseness, maturity, and proximity of the existing vegetation to the highway creates an intimate experience to the highway and Rail Trail users, which acts to reduce the overall scale of the trail and highway corridors in the environment. Dense underbrush and non-native vines also help to obstruct views into neighboring properties. Mature trees can also be seen in the background that help to unify this view. The dominant colors are contrasting dark gray (pavement) and green (vegetation). The smooth texture of the roadway surface contrasts with the coarse texture of the vegetation. During sunny days, shadow patterns from the trees can create irregular shades of gray.

Vividness is moderate-high as this portion of the corridor provides high quality views of mature trees that contrast against the blue sky. Intactness and unity are moderate-high because the vegetative border creates a coherent view and, even though the wide roadway corridor is a contrasting presence to the natural surrounding elements, the roadway fits well into the landscape. Overall, the existing visual quality of Key View 2 is considered moderate-high due to the existing vegetation that frames the highway and creates an intimate appearance to the highway corridor.

### ***Proposed Project Features***

As shown in the simulation in Figure 12, the highway would be wider than the existing, due to the addition of one new 12-foot-wide auxiliary lane in each direction and expanded shoulders that would meet current standards. The median barrier would be rebuilt to current safety standards and a retaining wall would be placed along the southbound travel way to minimize tree removals and retain the Moosehead Drive configuration. A sound wall would also be placed along the southbound shoulder, adjacent to the South Aptos Rail Bridge, to minimize traffic noise for residents along Carrera Circle and the eastern end of Moosehead Drive. The retaining wall and sound wall would introduce new vertical surfaces along this segment of highway, but aesthetic treatments would ensure that they blend with the natural landscape and do not detract from views. In addition, large skyline trees would be planted to replace trees removed for construction near the new Moosehead Drive retaining wall and along the north side of the highway, and native shrubs and plantings would replace screen plantings that previously obstructed views into neighboring properties.

### ***Viewer Response***

Viewer exposure is moderate-high because viewers have middleground views of project features, the number of vehicles is estimated at approximately 47,000 or more per day on mainline SR 1, there would be new viewers accessing the Rail Trail, and the duration of their views varying from a few seconds to a few minutes (CDM Smith 2021). Viewer sensitivity is also moderate-high, given the importance of vegetation, large trees and the general character of the area and with viewers focused on the corridor



itself, the fact that the vast majority are locals, and high local values as indicated by the number of policies and regulations related to aesthetics and visual resources. The overall level of viewer response would be moderate-high.

#### Resource Change

In the foreground, visibility of vehicles travelling in both directions would be slightly expanded due to the removal of vegetation along the edge of the highway and the widened corridor. In the middleground, the existing, enclosed feeling of this viewpoint would be replaced by one that is slightly more open and brighter due to tree removal for construction. Daytime and nighttime glare would remain moderate because trees remaining along the highway and replacement plantings would provide shading to minimize glare coming from the highway pavement and structures, and it would screen glare from adjacent development. The addition of a retaining wall and sound wall along the southbound lanes may slightly increase reflected glare through this zone. However, the use of vines and other vegetation could, over time, help reduce the visual impact of and glare coming from the sound and retaining walls. The dominant colors would be earth tones to subtly contrast with the existing and proposed vegetation. The change in visual character would be reduced from moderate-high to moderate.

The existing visual quality is moderate-high with moderate-high vividness, intactness, and unity. Although the proposed project would remove some of the predominant skyline canopy trees and screening plant material to construct the widening, retaining wall, and sound wall, the design and coloring of the proposed retaining wall and sound wall would ensure these features recede in to view. In addition, vegetation planted along the highway would mature over time to replace some of the vegetative screening that would be removed. As a result, the vividness would be slightly reduced but would remain moderate-high and intactness and unity would be lowered to moderate. The resulting visual quality would be reduced to moderate, and the overall resource change would be moderate-low.

Table 4, below, summarizes and compares the narrative ratings for visual resource change, viewer response and visual impacts.



*Source: Mark Thomas, April 2022.*

**Figure 12. Key View 2, Existing View and Simulated Conditions—from the existing South Aptos Rail Bridge looking west toward the SR 1 VAU.**



<b>Table 4. Key Viewpoint 2</b> <b>Anticipated Changes in Visual Quality, Visual Character, Viewer Exposure and Viewer Sensitivity</b> <i>View from South Aptos Rail Bridge Looking West</i>		
<b>Visual Quality</b>		
<i>Attributes</i>	<i>Existing Condition</i>	<i>Proposed Project Condition</i>
<b>Vividness/Memorability</b> High (5): Striking; Low (1): Plain	Moderate-High 4.25	Moderate-High 3.75
<b>Intactness</b> High (5): Free of Encroaching Elements Low (1): Cluttered/Lacking Integrity	Moderate-High 4.00	Moderate 3.25
<b>Unity</b> High (5): Coherent/Harmonious Low (1): Disjointed/Jarring	Moderate-High 3.75	Moderate 3.25
<b>Overall Visual Quality</b>	<i>Moderate-High (4.00)</i>	<i>Moderate (3.42) -15%</i>
<b>Visual Character</b>		
<b>Scale</b> High (5): Small; Low (1): Monumental	Moderate-High 3.75	Moderate 3.00
<b>Diversity</b> High (5): Complex; Low (1): Monolithic	Moderate-High 4.00	Moderate-High 3.50
<b>Continuity</b> High (5): Harmonious; Low (1): Dissonant	Moderate-High 3.75	Moderate 3.00
<b>Dominance</b> High (5): Balanced; Low (1): Prominent/Unbalanced	Moderate-High 3.75	Moderate 3.00
<b>Overall Character</b>	<i>Moderate-High (3.81)</i>	<i>Moderate (3.13) -18%</i>
<b>Resource Change</b>	<b>Moderate-High (3.91)</b>	<b>Moderate (3.28) -16%*</b>
<b>Viewer Exposure</b>		
<b>Location of Views</b> High (5): In Foreground; Low (1): In Background	Moderate-High 3.75	Moderate-High 3.75
<b>Number of Viewers</b> High (5): Over 100,000; Low (1): Less than 50	Moderate-High 4.25	High 4.50
<b>Duration of Views</b> High (5): More than 4 hours; Low (1): Less than 1 minute	Moderate 2.50	Moderate 2.50
<b>Overall Exposure</b>	<i>Moderate-High (3.50)</i>	<i>Moderate-High (3.58) +2%</i>
<b>Viewer Sensitivity</b>		
<b>Attention of Viewer</b> High (5): Observant; Low (1): Preoccupied	Moderate 3.25	Moderate 3.25
<b>Viewer Awareness</b> High (5): Focused on View; Low (1): Focused Away	Moderate-High 3.50	Moderate-High 3.50
<b>Local Values and Goals</b> High (5): Values Aesthetics Low (1): Does Not Value Aesthetics	High 4.50	High 4.50
<b>Overall Sensitivity</b>	<i>Moderate-High (3.75)</i>	<i>Moderate-High (3.75) 0%</i>
<b>Viewer Response</b>	<b>Moderate-High (3.63)</b>	<b>Moderate-High (3.67) +1%</b>

\*Percent resource change – High: >50%, Moderate-high: 30-50%, Moderate: 20-30%, Moderate-Low: 10-20%, Low: <10%



### **Key View 3**

#### **Description**

Key View 3 (Figure 13) was taken from the Freedom Boulevard overcrossing looking towards the west (northbound). The view is from the perspective of a local street user and intended to represent the general view of highway travelers as well for purposes of this study.

#### **Existing Visual Character/Quality**

The existing view from the Freedom Boulevard overcrossing overlooking SR 1 includes southbound and northbound lanes in the foreground, middleground, and background, with a thick border of mature vegetation on the southbound side and relatively open views to the Soquel Drive frontage road along the northbound side. Mature pines flank the left side of the roadway in the foreground and middleground. Redwood trees and mixed deciduous trees are predominant in the foreground on the right side, with the view of businesses along Soquel Drive taking up the predominance of the middleground view. There is little underbrush and screening between businesses and the highway, which allows relatively clear views both into and out of the highway corridor. Brief glimpses (seconds) of structures and topography are visible beneath the mature canopies. Longer duration views (minutes) of the commercial uses are possible in times of reduced speed due to heavy traffic. The dominant colors are contrasting gray (pavement) and green (vegetation). The smooth texture of the highway contrasts with the coarse texture of the vegetation. During sunny days, shadow patterns from the trees can create irregular shades of gray.

The overall visual quality is moderate. Vividness is moderate as this portion of the corridor is not as distinct as other segments, there is no focal point, and a mix of visual elements comprises a somewhat typical suburban view. In addition, the center median is not planted and dirt, with the lack of grass or vegetation, slightly degrades the view. Intactness is moderate as the visual quality of the existing roadway and businesses dominates this viewpoint as a contrasting presence to the natural surrounding elements. Unity is moderate due to the fairly unified corridor that is disrupted by the dirt median and sparse vegetation along the commercial area, along a segment of highway that, otherwise, is bordered by mature trees.

#### **Proposed Project Features**

As shown in the simulation in Figure 13, the median would be narrowed, paved, and a concrete barrier added to accommodate an additional lane in each direction. The shoulders would be widened to meet current standards and painted red for buses directly adjacent to the interchange. The drainage ditch in the median would be relocated along the northbound travel lanes. The northbound on-ramp would be realigned slightly, and a constraining surface treatment added to the gore of the ramp. The median barrier would be rebuilt to current safety standards and shoulders on the left side of this view (southbound lanes) would remain relatively untouched. Replacement plantings would be installed along disturbed areas.

#### **Viewer Response**

Viewer exposure is moderate-high because, while the highway serves thousands of travelers per day, the photograph is from the perspective of a local street user on the overcrossing and the number of viewers from this location would range from approximately 5,000 to 7,000 per day (Hurrell pers. comm.). The widened highway and bus on shoulder lanes would be noticeable to those on the highway, as well as those on the overcrossing. Duration of views for those local street users on the overcrossing would likely be less than a minute. Highway users would have a substantially longer view duration given

that most of the improvements would stretch the length of the segment. Viewer sensitivity is also moderate-high, given the importance of vegetation, large trees and the general character of the area and with viewers focused on the corridor itself, the fact that the vast majority are locals, and high local values as indicated by the number of policies and regulations related to aesthetics and visual resources. The overall level of viewer response would be moderate-high.

#### Resource Change

The highway would appear wider to travelers on SR 1 and from the overcrossing at Freedom Boulevard. In the foreground, visibility of vehicles travelling in both directions would be slightly expanded due to the widened corridor. The width of paving would increase but would be in lieu of the existing bare ground in the median. This would create a more unified highway corridor. In the foreground and middleground of the right side of this view some existing, low-quality shrubs would be removed to accommodate new highway features. However, new highway plantings would provide greater visual interest and minimize visual changes. In addition, the existing vegetation along the southbound lane of the highway would remain in place, retaining the aesthetic qualities that those trees provide. In the middleground, the existing, enclosed feeling of this viewpoint would be replaced by one that is slightly more open and brighter due to tree removal for construction. The dominant colors would be greys to subtly contrast with the existing and proposed vegetation. This change in appearance would not be outside of the anticipated views associated with the highway. Daytime and nighttime glare would remain moderate because trees remaining along the highway and replacement plantings would provide shading to minimize glare coming from the highway pavement and structures, and it would screen glare from adjacent development. The resulting visual character would remain moderate.

The existing visual quality is moderate with moderate vividness, intactness, and unity. Although the proposed project would widen to the inside and remove some vegetation along the ramp, paving the median would create a more unified corridor and replacement plantings along the highway would mature over time to provide aesthetic relief of equal or greater quality compared to existing conditions. As a result, the vividness, intactness, and unity would be slightly improved but would remain moderate. The resulting visual quality would remain moderate, and the overall resource change would be low.

Table 5, below, summarizes and compares the narrative ratings for visual resource change, viewer response and visual impacts.





*Source: Mark Thomas, April 2022.*

**Figure 13. Key View 3, Existing View and Simulated Conditions—from Freedom Boulevard overcrossing looking west (northbound).**



<b>Table 5. Key Viewpoint 3</b> <b>Anticipated Changes in Visual Quality, Visual Character, Viewer Exposure and Viewer Sensitivity</b> <i>View from Freedom Boulevard Overcrossing Looking West</i>		
<b>Visual Quality</b>		
<i>Attributes</i>	<i>Existing Condition</i>	<i>Proposed Project Condition</i>
Vividness/Memorability High (5): Striking; Low (1): Plain	Moderate 3.00	Moderate 3.25
Intactness High (5): Free of Encroaching Elements Low (1): Cluttered/Lacking Integrity	Moderate 3.00	Moderate 3.25
Unity High (5): Coherent/Harmonious Low (1): Disjointed/Jarring	Moderate 3.00	Moderate 3.25
<b>Overall Visual Quality</b>	<b>Moderate (3.00)</b>	<b>Moderate (3.25) +8%</b>
<b>Visual Character</b>		
Scale High (5): Small; Low (1): Monumental	Moderate 3.00	Moderate 3.00
Diversity High (5): Complex; Low (1): Monolithic	Moderate-High 4.00	Moderate-High 4.00
Continuity High (5): Harmonious; Low (1): Dissonant	Moderate 2.50	Moderate 3.00
Dominance High (5): Balanced; Low (1): Prominent/Unbalanced	Moderate 3.00	Moderate 3.25
<b>Overall Character</b>	<b>Moderate (3.13)</b>	<b>Moderate (3.31) +6%</b>
<b>Resource Change</b>	<b>Moderate (3.07)</b>	<b>Moderate (3.28) +6%*</b>
<b>Viewer Exposure</b>		
Location of Views High (5): In Foreground; Low (1): In Background	Moderate 3.00	Moderate 3.00
Number of Viewers High (5): Over 100,000; Low (1): Less than 50	Moderate-High 3.50	High 4.50
Duration of Views High (5): More than 4 hours; Low (1): Less than 1 minute	Moderate 2.50	Moderate 2.50
<b>Overall Exposure</b>	<b>Moderate (3.25)</b>	<b>Moderate (3.33) +3%</b>
<b>Viewer Sensitivity</b>		
Attention of Viewer High (5): Observant; Low (1): Preoccupied	Moderate 3.25	Moderate 3.25
Viewer Awareness High (5): Focused on View; Low (1): Focused Away	Moderate-High 3.50	Moderate-High 3.50
Local Values and Goals High (5): Values Aesthetics Low (1): Does Not Value Aesthetics	High 4.50	High 4.50
<b>Overall Sensitivity</b>	<b>Moderate-High (3.75)</b>	<b>Moderate-High (3.75) 0%</b>
<b>Viewer Response</b>	<b>Moderate-High (3.50)</b>	<b>Moderate-High (3.54) +1%</b>

\*Percent resource change – High: >50%, Moderate-high: 30-50%, Moderate: 20-30%, Moderate-Low: 10-20%, Low: <10%

## COAST RAIL TRAIL VISUAL ASSESSMENT UNIT

The Coast Rail Trail VAU is located along an existing rail corridor and Segment 12 starts at State Park Drive and terminates along Sumner Avenue, just east of the intersection with Rio Del Mar Boulevard. The corridor between State Park Drive and the North Aptos Rail Bridge is characterized by some trees growing within the rail right of way and the fences of adjacent suburban residential properties that are located to the south. Between the North Aptos Rail Bridge and the intersection with Aptos Creek Road, the raised rail corridor travels through groupings of mature trees and the southern part of Aptos Village County Park. Between Aptos Creek Road and the South Aptos Rail Bridge, through Aptos Village, there is significantly less vegetation than the rest of the corridor, and it is characterized by the adjacent historic and main-street style commercial buildings intermixed with more modern looking commercial buildings. From the South Aptos Rail Bridge to Sumner Avenue, there is significant mature tree coverage and steep side slopes up to adjacent residential uses that are significantly screened from the corridor due to tree coverage. Creating a connection to Aptos Village Park would not impact visual resources associated with the park, and views from these recreational areas would be in keeping with existing conditions.

Changes to nighttime lighting within this VAU would be minimal. No additional lighting is proposed along the Rail Trail corridor. In addition, it is anticipated that any lights removed along SR 1, which may be lighting the rail corridor, would be reinstalled at a similar location. Similarly, the replacement safety lighting at at-grade rail crossings with local roadways is expected to be very similar to existing conditions. There is also expected to be minimal impacts to existing vegetation along the rail corridor, resulting in very little change in daytime and nighttime light and glare. Therefore, there would be no notable changes in daytime or nighttime light or glare.

There is one key view for the Coast Rail Trail VAU, which includes Key View 4 that is shown in Figure 14. Key View 4 is used in this document to illustrate changes in view within Aptos Village, adjacent to the ultimate configuration of rail line and trail.

### ***Key View 4***

#### ***Description***

Key View 4 (Figure 14) was taken in Aptos Village at the intersection of Trout Gulch Road and Soquel Drive looking west. The view is from the perspective of local street and trail users.

#### ***Existing Visual Character/Quality***

The existing view includes Trout Gulch Road and the rail crossing in the foreground with Soquel Drive and the railroad tracks in the middleground and background. Commercial and retail development dominates the middleground and background of the view. Vegetation is minimal and therefore views to adjacent commercial properties are exposed for durations of up to several minutes. The overall visual character is dominated by both horizontal (streets and rail tracks) and vertical lines (structures). The dominant colors are contrasting gray (pavement) and light tan (structures). The smooth texture of the roadways contrast with the rigid texture of nearby structures. The scale of the roadways and Rail Trail dominate those of the vegetation and surrounding commercial buildings. Visually, the railroad tracks, Trout Gulch Road, Soquel Drive, and off-street parking dominate the foreground and middleground for viewers.

The overall visual quality is moderate-low. Vividness is moderate-low as there is no focal point and a mix of signage, parked cars, and other visual elements. Intactness is moderate-low as the existing roadway and signage dominates this viewpoint. Unity is moderate-low because the rail tracks and off-street

parking, combined with signage, striping, and other visual distractions, visually segment views between commercial uses on either side of the tracks.

#### Proposed Project Features

As shown in the simulation in Figure 14, the railroad tracks would remain in their current location. The parking spaces to the north of the rail alignment would be removed and replaced with a paved Class 1 bike and pedestrian trail. Gravel would be placed between the fence and rail ballast to discourage weed growth. A small post and wire fence would be added between the tracks and the proposed trail for pedestrian safety and to help visually define the trail. Additionally, a raised curb would separate the trail from the off-street parking lot to separate uses. New rail crossing arms and pavement markings for the Trout Gulch Road trail crossing would replace the existing infrastructure and markings.

#### Viewer Response

Viewer exposure is moderate because the photograph is from the perspective of a local street user and recreationist on the roadway and the number of views from this location would be limited to several hundred per day. In addition, the Rail Trail would be noticeable to viewers for up to a few minutes at a time, while adjacent commercial users would likely have substantially longer viewing durations. Viewer sensitivity is also moderate-high, with viewers focused on the corridor itself, the fact that most viewers are tourists or locals, and there are high local values as indicated by the number of policies and regulations related to aesthetics and visual resources. The overall level of viewer response would be moderate-high.

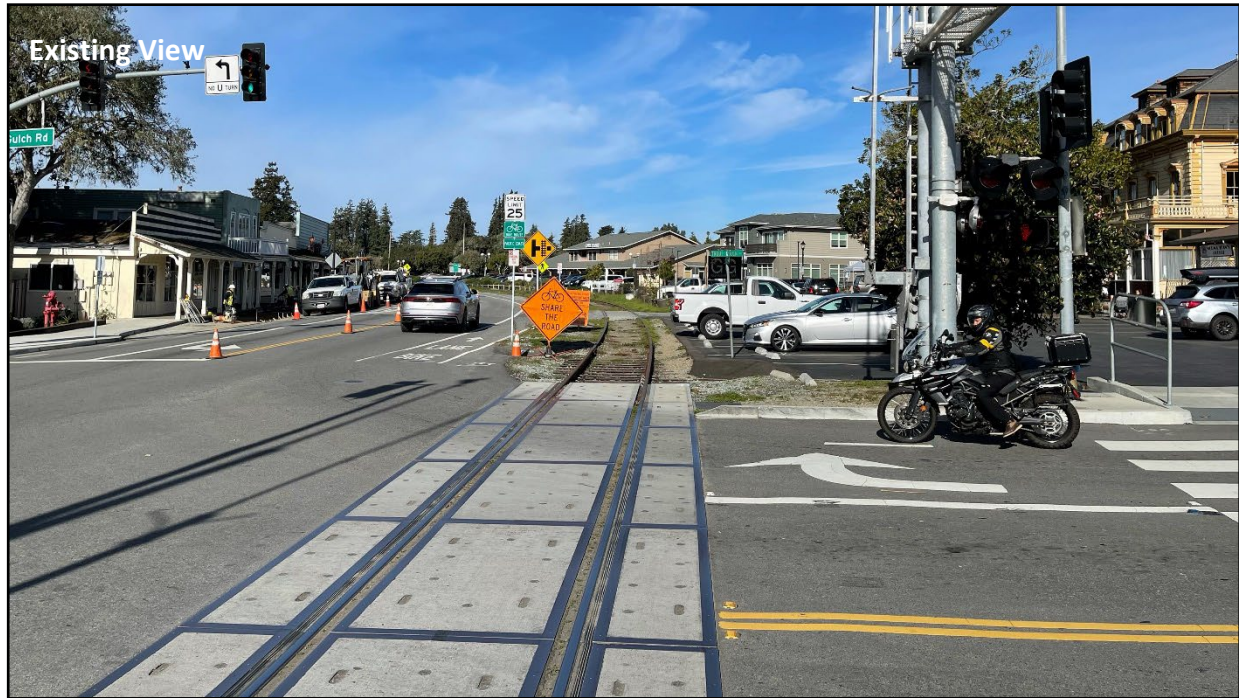
#### Resource Change

No major impacts to the existing roadways or vegetation are anticipated. The foreground of this viewpoint would consist mainly of the rail line and trail, with the overall character being dominated by the rail line and gravel treatment. The addition of a trail, gravel shoulders, post and wire fence, and curbing would replace some asphalt parking lots and the currently unmaintained rail right-of-way, which is overgrown with weeds in many locations. Re-striping of Trout Gulch Road and the replacement of rail crossing arms would be more consistent with the surrounding central business district aesthetic context. Therefore, the appearance of the Rail Trail would not degrade the anticipated views associated with Soquel Drive and the adjacent commercial properties, and changes to the visual quality and character are anticipated to be improved slightly by the unifying feature associated with the proposed trail. The resulting visual character would be slightly improved but would remain moderate.

The existing visual quality is moderate-low with moderate-low vividness, intactness, and unity. Although the proposed project would remove off-street parking, removing the signage and cars and replacing the parking lot with gravel and the paved trail would reduce visual clutter and open up views to create a more unified corridor. This would improve visual quality compared to existing conditions. As a result, the vividness, intactness, and unity would be improved to moderate. The resulting visual quality would be improved to moderate, and the overall resource change would be moderate-low.

Table 6, below, summarizes and compares the narrative ratings for visual resource change, viewer response and visual impacts.





*Source: Mark Thomas, April 2022.*

**Figure 14. Key View 4, Existing View and Simulated Conditions—from the intersection of Trout Gulch Road and Soquel Drive looking west.**

<b>Table 6. Key Viewpoint 4</b> <b>Anticipated Changes in Visual Quality, Visual Character, Viewer Exposure and Viewer Sensitivity</b> <i>View from the Intersection of Trout Gulch Road and Soquel Drive Looking West</i>		
<b>Visual Quality</b>		
<i>Attributes</i>	<i>Existing Condition</i>	<i>Proposed Project Condition</i>
Vividness/Memorability High (5): Striking; Low (1): Plain	Moderate-Low 2.0	Moderate-Low 2.25
Intactness High (5): Free of Encroaching Elements Low (1): Cluttered/Lacking Integrity	Moderate-Low 2.0	Moderate-Low 2.25
Unity High (5): Coherent/Harmonious Low (1): Disjointed/Jarring	Moderate-Low 2.0	Moderate 2.50
<b>Overall Visual Quality</b>	<b>Moderate-Low (2.00)</b>	<b>Moderate (2.33) +17%</b>
<b>Visual Character</b>		
Scale High (5): Small; Low (1): Monumental	Moderate 3.00	Moderate 3.00
Diversity High (5): Complex; Low (1): Monolithic	Moderate-High 4.00	Moderate-High 4.00
Continuity High (5): Harmonious; Low (1): Dissonant	Moderate 2.50	Moderate 3.00
Dominance High (5): Balanced; Low (1): Prominent/Unbalanced	Moderate-Low 1.75	Moderate-Low 2.00
<b>Overall Character</b>	<b>Moderate (2.81)</b>	<b>Moderate (3.00) +7%</b>
<b>Resource Change</b>	<b>Moderate (2.41)</b>	<b>Moderate (2.67) +11%*</b>
<b>Viewer Exposure</b>		
Location of Views High (5): In Foreground; Low (1): In Background	High 4.50	High 4.50
Number of Viewers High (5): Over 100,000; Low (1): Less than 50	Moderate 2.50	Moderate 2.50
Duration of Views High (5): More than 4 hours; Low (1): Less than 1 minute	Moderate 3.00	Moderate 3.00
<b>Overall Exposure</b>	<b>Moderate (3.33)</b>	<b>Moderate (3.33) 0%</b>
<b>Viewer Sensitivity</b>		
Attention of Viewer High (5): Observant; Low (1): Preoccupied	Moderate-High 3.75	Moderate-High 3.75
Viewer Awareness High (5): Focused on View; Low (1): Focused Away	Moderate-High 4.00	Moderate-High 4.00
Local Values and Goals High (5): Values Aesthetics Low (1): Does Not Value Aesthetics	High 4.50	High 4.50
<b>Overall Sensitivity</b>	<b>Moderate-High (4.08)</b>	<b>Moderate-High (4.08) 0%</b>
<b>Viewer Response</b>	<b>Moderate-High (3.69)</b>	<b>Moderate-High (3.71) +0.4%</b>

\*Percent resource change – High: >50%, Moderate-high: 30-50%, Moderate: 20-30%, Moderate-Low: 10-20%, Low: <10%

## NO BUILD ALTERNATIVE

This VIA also considers the potential impacts of a No-Build Alternative. Under the No Build Alternative, the project would not be constructed and there would be no visual impacts on the existing visual character, visual quality, or affected viewer groups from the proposed project.

## IX. PROJECT VISUAL IMPACT SUMMARY

Table 7, below, provides the findings from each key view's analysis, summarizing the anticipated change to the visual resource, the anticipated viewer response to that change, and the overall anticipated visual impact. A summary of project visual impacts by key view follows Table 7. The proposed project would have two substantial visual effects through much of the corridor: (1) loss of mature vegetation that would be required for the construction of sound walls, retaining walls, and the widening of the SR 1 and the Aptos Creek Bridge, and (2) blocking of existing residential views by sound walls and retaining walls, most notably those properties which are directly adjacent to Aptos Creek and the Rail Trail.

As described in Section VIII, *Visual Impact*, changes in daytime and nighttime light and glare would be minimal. In addition, the proposed project falls within two Classified Landscape Freeway segments along SR 1 that, but project would include replacement landscaping along the affected areas of SR 1. This would include the replacement of skyline trees. Therefore, it is anticipated that the designation of these Classified Landscaped Freeway segments would not be affected.

Table 7. Summary of Key View Narrative Ratings					
Visual Assessment Unit	Key View	Alternative	Viewer Response	Resource Change	Visual Impact
State Route 1	1	N/A	MH	L	M
	2	N/A	MH	ML	M
	3	N/A	MH	L	M
Rail Trail	4	N/A	MH	ML	M

### Summary of Project Visual Impacts by Key View

#### Key View 1 (SR 1 Northbound at STA 264+00)

From Key View 1, views of a prefabricated pedestrian and bicycle bridge would be seen in place of the existing Southern Aptos Rail bridge, and a new rail bridge would be constructed immediately behind the pedestrian and bicycle bridge. The highway would be wider than existing, with one additional 12-foot-wide auxiliary lane in each direction and shoulders to meet current standards. These changes would result in the removal of mature vegetation and the placement of sound walls and retaining walls. These changes would affect the views of adjacent residential, recreational, and local street viewers, as well as the highway user's views of the natural vegetated environment of the SR 1 corridor.

The resulting visual impact from changes to the existing view are anticipated to be moderate. It is expected that the removal of mature vegetation would lessen the natural edge aesthetic of the highway and soundwalls would permanently block views out from the corridor. However, the height of the remaining vegetation behind the new soundwalls would allow for some "borrowed landscape" effect,



and the use of vines and shrub plantings along the walls and revegetating disturbed areas could help soften the appearance of the walls and areas affected by vegetation removal. The overall visual quality and character, with minimization measures, are anticipated to remain moderate-high, with moderate-high vividness, intactness, and moderate unity.

### **Key View 2 (South Aptos Bridge looking West)**

From Key View 2, views of the highway would be wider than the existing, due to the addition of one new 12-foot-wide auxiliary lane in each direction and expanded shoulders to meet current standards. Along the southbound lanes, a retaining wall would be built to minimize tree removals and retain the alignment of Moosehead Drive, and a sound wall would also be built adjacent to the South Aptos Rail Bridge to minimize traffic noise for adjacent residents. These changes would result in the removal of substantial mature vegetation. The retaining wall and sound wall would introduce new vertical surfaces along this segment of highway, but aesthetic treatments would ensure that they blend with the natural landscape and do not detract from views. Large skyline trees, native shrubs, and plantings would also be planted to replace trees and vegetation removed for construction, minimizing impacts.

The resulting visual impact from changes to the existing view are anticipated to be moderate. It is expected that the removal of mature vegetation would lessen the natural edge aesthetic of the highway and the retaining wall and sound wall would permanently block views out from the corridor. However, the height of the remaining vegetation behind the new soundwalls would allow for some “borrowed landscape” effect, and the use of aesthetic treatments on the walls, vines and shrub plantings along the walls, and revegetating disturbed areas could help soften the appearance of the walls and areas affected by vegetation removal. The overall visual quality and character, with minimization measures, is anticipated to be reduced to moderate, with moderate-high vividness and moderate intactness and unity.

### **Key View 3 (Freedom Boulevard Overcrossing looking West)**

From Key View 3, changes to views along SR 1 would include a narrowed, fully paved median and a concrete barrier added to accommodate an additional auxiliary lane in each direction, creating a more unified highway corridor. The shoulders would be widened to meet current standards and painted red where buses would utilize them. Additionally, the northbound on-ramp would be realigned slightly, and a constraining surface treatment added to the gore of the ramp. No vegetation along the southbound lanes of the highway would be affected. However, some existing, low-quality shrubs would be removed along the northbound lanes, but new highway plantings would be installed and would provide greater visual interest and minimize visual changes. The appearance of these changes would not be outside of the anticipated views associated with the highway.

The resulting visual impact from changes to the existing view are anticipated to be moderate. The proposed improvements from this perspective improve the overall visual quality of the view. This is mostly in part due to the existing dirt median detracting from the existing view and the existing character of the highway remaining consistent with what is expected for a highway user. The degree of change to the visual character and visual quality is anticipated to be relatively minor. The overall visual quality and character, with minimization measures, is anticipated to remain moderate, with moderate vividness, intactness, and unity.

#### **Key View 4 (Intersection of Trout Gulch Road and Soquel Drive looking West)**

From Key View 4, views of the railroad tracks would remain in their current location and the addition of the trail, gravel shoulders, post and wire fence, and curbing would replace some asphalt parking lots and the currently unmaintained rail right-of-way. No major impacts to the existing roadways or vegetation are anticipated, and re-stripping of Trout Gulch Road and the replacement of rail crossing arms would be more consistent with the surrounding central business district aesthetic context. Therefore, the appearance of the Rail Trail would not degrade the anticipated views associated with Soquel Drive and the adjacent commercial properties, and changes to the visual quality and character are anticipated to be improved slightly by the unifying feature associated with the proposed trail.

The resulting visual impact from changes to the existing view are anticipated to be moderate. The proposed improvements from this perspective improve the overall visual quality of the view. This is mostly in part due to the existing rail corridor, off-street parking, and signage detracting from the existing view due to visual clutter. The degree of change to the visual character and visual quality is anticipated to reduce visual clutter and provide greater visual continuity between commercial uses on either side of the rail line and trail. In addition, the proposed improvements remain consistent with what is expected for a local street for affected viewers. The overall visual quality and character, with minimization measures, is anticipated to improve from moderate-low to moderate, with moderate vividness, intactness, and unity.

#### **Consistency with Plans and Policies**

The proposed project is located within the Coastal Zone, as defined by Santa Cruz County and the State of California. In addition, the *Santa Cruz County General Plan*, *Aptos Village Plan*, and County Code provide guidance and policies that support quality design and the use of native landscaping, preserving natural buffers and significant trees, improving the visual character and quality of the County, development and design review, and protecting SR 1, a County-designated scenic route. There are no views of the ocean or coastal areas from either SR 1 or the Coastal Rail Trail Segment 12. Construction of the proposed project would require grading and removal of vegetation to accommodate the proposed widening, bridge replacements, and construction of new bridges. The grading, retaining wall structures, sound walls, and loss of vegetation would be visible to viewers traveling through the area. In addition, small portions of commercial properties would be acquired, and parking lots converted, to accommodate the Rail Trail. However, the changes that would result from construction of the proposed project can be accomplished without substantial visual impact on the resources within both the SR 1 and Coast Rail Trail VAUs. Although new visual features would be introduced and some vegetation would be removed, the proposed project would aim to replace plantings where space allows. In addition, aesthetic treatments would be applied to sound walls, retaining walls, and bridge structures. Therefore, changes would generally be in keeping with the existing visual character, would often result in slight improvements in visual quality, and would not negatively affect views associated with the Coastal Zone or the County-designated scenic route. Therefore, the proposed project would be consistent with Coastal Zone protections and *Santa Cruz County General Plan*, *Aptos Village Plan*, and County Code policies.

#### **Temporary Construction Visual Impacts**

Construction activities along SR 1 and the Rail Trail would introduce considerable heavy equipment and associated vehicles, including backhoes, compactors, tractors, cranes, and trucks, into the viewshed of the composite viewer group. Signs and other markings, and warnings for lane shifts and closures to

accommodate the progression of construction activities would be visually prominent during construction. The proposed project would be constructed over three years. Construction of the bridges would be the most intensive visually because it would require more grading, falsework, and final built structures in the form of retaining walls, support piers, and decking associated with the new bridge. These temporary changes are not considered adverse for roadway users because of the short intervals of time that those users would be in contact with the project site. Residents and viewers at adjacent businesses would experience greater visual response to construction activities, but it would not be sufficiently heightened to change the composite group viewer response.

Construction work for the Build Alternative would be done primarily during daylight hours from 7:00 a.m. to 6:00 p.m. However, night-time work and temporary closures of lanes and roadways may be necessary along SR 1. Therefore, high-intensity nighttime lighting would be needed. Because the use of such lighting would be minimized and directed away from sensitive residential receptors, it is anticipated that residential receptors would be minimally affected the used of high-intensity nighttime lighting during construction.

### **Resource Change**

Construction of the Build Alternative would result in temporary visual changes that would not adversely affect the existing visual quality of the SR 1 VAU or Rail Trail VAU for an extended period of time. Therefore, project construction would result in a short-term resource change to these VAUs that is considered moderate-low. The resulting temporary visual impacts on views, the existing visual character and quality, and light and glare would be moderate-low.

## **X. CUMULATIVE VISUAL IMPACT**

Cumulative impacts are those resulting from past, present and reasonably foreseeable future actions, combined with the potential visual impacts of this project. For this project, it has been determined that the following cumulative visual impacts may occur.

The projects analyzed in the program-level VIA, including Tier I and Tier II projects, as well as the projects included in Section 5.9 of that document, Cumulative Impacts, were considered for the cumulative impacts analysis in this VIA. The other projects included in the program-level VIA included the Route 1/Route 17 Merge Lanes Project and the Route 1 Auxiliary Lanes Project between Soquel Drive and Morrissey Boulevard (Caltrans 2013). The program-level VIA found that there would be overall cumulative changes to the SR 1 corridor related to soundwalls and retaining walls, wider pavement sections, and reduced planting areas. The anticipated changes from the additional lanes would increase the built environment of the corridor and replace the current vegetated visual appearances with one more associated with hardscape/paving elements. Furthermore, views from the highway corridor into adjacent areas would become increasingly limited by soundwalls. Because this project was part of those included in the program-level VIA's cumulative impact analysis, and would include soundwalls, retaining walls, wider pavement sections, reduced planting areas, and increasingly limited views due to soundwalls, it would contribute to the cumulative changes to the SR 1 corridor identified in the program-level VIA. It was anticipated that the overall cumulative changes to the corridor under the Tier I Alternatives, coupled with the previous projects, would substantially change the visual environment along the Route 1 corridor.

The Rail Trail improvements would be minor and would not degrade the existing visual character and quality of the project corridor. It also would not increase light and glare. It would be consistent with



local policies governing aesthetics and visual quality. Therefore, the Rail Trail improvements would not result in cumulative visual impacts.

## **XI. AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES**

Caltrans and the FHWA mandate that a qualitative/aesthetic approach should be taken to address visual quality loss in the project area. This approach fulfills the letter and the spirit of FHWA requirements because it addresses the actual cumulative loss of visual quality due to a project. This approach also results in avoidance, minimization, and/or mitigation measures that can lessen or compensate for a loss in visual quality. The inclusion of aesthetic features in the project design, discussed in *Section II, Project Description*, can help generate public acceptance of a project. This section describes additional avoidance, minimization, and/or mitigation measures to address specific visual impacts. These will be designed and implemented with concurrence of the District Landscape Architect. The following measures to avoid or minimize visual impacts from the Tier I Visual Impact Assessment from July 2013 will be incorporated into the project:

- VA-1 Aesthetic Guidelines.** Work with the community during preliminary design to develop Aesthetic Guidelines for the project improvements through a formalized structure that allows community input.
- VA-2 Existing Vegetation Preservation.** During design and construction, save and protect as much existing vegetation in the corridor as feasible, especially eucalyptus and other skyline trees.
- VA-3 Tree Survey.** Survey exact locations for trees (by arborist) and include in the plan set.
- VA-4 Drip Zone Protection.** Protect the drip zone of isolated trees and provide temporary fencing.
- VA-5 Existing Plantings Protection.** Protect large areas of existing plantings and preserve with temporary fencing.
- VA-6 Sound Wall Treatments.** During design and construction, develop construction plans that apply aesthetic treatments to the sound walls.
- VA-7 Sound Wall Vine Plantings.** Include vine plantings on one or both sides of soundwalls where feasible (given Caltrans setback and maintenance requirements). If vines are only planted on one side of the wall, include vine portals in the design of the wall to accommodate vine access to both sides of the wall.
- VA-8 Retaining Wall Treatments.** During design and construction, develop construction plans that apply aesthetic treatments to the retaining walls.
- VA-9 Bridge Aesthetics.** During design and construction, develop construction plans that apply aesthetic treatments to the proposed bridges in the corridor.
- VA-10 Bridge Railing Aesthetics.** If bridge rail is used at the creek crossing retaining walls, use Type 80 rail with aesthetic treatment.
- VA-11 Median Barrier Aesthetics.** Include aesthetic treatments on concrete median barriers consistent with the visual character of the corridor and the adjacent community.
- VA-12 Fence Replacement.** Replace existing chain link fencing between SR 1 and adjacent frontage roads with ornamental fencing (applies where there is no sound wall).

- VA-13 Landscaping and Revegetation.** During design and construction, landscape and revegetate disturbed areas to the greatest extent feasible (given Caltrans setback and maintenance requirements).
- VA-14 Skyline Trees.** Include skyline trees in the planting pallet to reduce the scale of the new highway elements.
- VA-15 Frontage Road Planting.** Include infill shrub planting between SR 1 and adjacent frontage roads to the maximum extent possible.
- VA-16 Fence Vine Planting.** Include vines on a minimum of 20 percent of the fencing between SR 1 and adjacent frontage roads.
- VA-17 Irrigation.** Where horticulturally appropriate, provide a permanent irrigation system for all plantings.
- VA-18 Maintenance/Establishment Period.** Include an extended 3-year maintenance/establishment period as part of the construction period to provide a single source of maintenance during the construction and through the establishment of vegetation.

## **XII. CONCLUSIONS**

Even with implementation of the measures listed above, extensive visual impacts would remain, regardless of the project alternative. The listed measures, combined with proposed project features such as replacement landscaping and aesthetic treatments to walls, would lessen the negative visual change to the corridor. However, some of the detrimental visual impacts would remain because of the inherent alteration of scale, increased hard surface, and loss of vegetative character.

## **XIII. REFERENCES**

### **Written References**

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## **Personal Communications**

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