



*This section focuses on the recommended trail alignment maps. The recommended alignment has been studied to determine the most appropriate, functional, and cost-effective option for each trail segment. Potential “spur” routes have also been identified, such as connections to scenic vistas, retail destinations, employment generators, transit, residential, trails, and other recreational areas.*

**Alignments are conceptual and subject to change based on landscape, topography, additional environmental analysis constraints, design requirements, costs, etc.**

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# SECTION FOUR TRAIL ALIGNMENT

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*Lighthouse Field State Beach, Steamer Lane, and the Santa Cruz Surfing Museum*



*Two-way cycle track on Beach Street near Santa Cruz Beach Boardwalk*



*Bicycle with surfboard carrier attachment*



*Scenic forest in Capitola*

## 4.0 TRAIL ALIGNMENT OVERVIEW

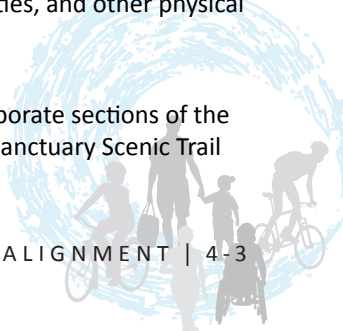
The alignments described in this section represent the preferred trail alignment along the railroad right-of-way and connections to existing and proposed on-street facilities, in the context of the project goals for the MBSST Network alignment through Santa Cruz County. The methodology used to identify the preferred alignment included the following criteria and objectives:

- Available width on railroad right-of-way
- Physical obstructions on railroad right-of-way including crossings
- Trail network for non-motorized modes of travel
- Adjacent land uses and accessibility
- Number and type of grade crossings
- Traffic volumes and speeds on adjacent roadways
- Access to major activity centers
- Integration into existing bicycle routes and pedestrian facilities
- Railroad grade crossings minimization
- Ability to utilize existing facilities
- Cost factors

The MBSST Network alignment along the upper coast of the county along State Highway 1 and the railroad right-of-way, and down the coast from Davenport to Watsonville has been divided into 20 segments with logical beginning and end points. The intent of this approach is to encourage each segment to be independently funded, designed, and constructed as a complete system until the adjacent segment phases are added to the MBSST Network. In some instances, a segment may cross jurisdictional boundaries, in which case the Santa Cruz County Regional Transportation Commission (RTC) will work with the appropriate jurisdictions to develop a coordination process and plan. In other instances, development of an interim alignment may be a necessary solution before reaching the long-term preferred alignment goal. In other instances still, only a portion of a segment may be built due to various constraints.

Each segment contains a brief statement on the boundary determination rationale which provides details on how the segment start and end points were determined. Segment boundaries were developed as a result of the opportunities and constraints analysis. This is followed by a detailed description of the existing and proposed facilities within the segment reach, including trail alignments, prominent geographical features, safety and hazards, access, amenities, and other physical points of interest.

The segments feature the alignment of the 32-mile Coastal Rail Trail, along with spur trails, and incorporate sections of the California Coastal Trail and the originally defined 11-mile core alignment found in the Monterey Bay Sanctuary Scenic Trail Standards Manual.





All trail segments include one or more of the following trail types:

### MULTI-USE PAVED PATH (CLASS I)

A multi-use paved path is based on the Caltrans-defined Class I bikeway. A Class I bike path provides bicycle travel on a paved right-of-way, completely separated from any street or highway. Virtually all of the Coastal Rail Trail will be a Class I facility. A multi-use paved path permits a variety of users, in addition to bicyclists, including walkers, joggers, wheelchair users, and non-motorized scooter users. Other forms of Class I pathways may include boardwalks usually used in wet lowlands, sensitive terrain, or sand dune areas. Bridge and culvert structures of varying size and spans are used to cross canyons, creeks, rivers, and other various steep terrain. Unless otherwise noted, the terms “trails” and “paths” in this document are used synonymously to refer to paved bike/pedestrian multi-use facilities, defined by Caltrans as a “Class I Bikeways (Bike Paths)” in the Caltrans Highway Design Manual, Chapter 1000, Bicycle Transportation Design, Topic 1003 - Bikeway Design Criteria.

### DESIGNATED BICYCLE LANE (CLASS II)

Designated bicycle lanes are synonymous with Caltrans-defined Class II bike lanes. Often referred to as a “bike lane,” an on-street bike lane provides a signed, striped, and stenciled lane for one-way travel on a street or highway.

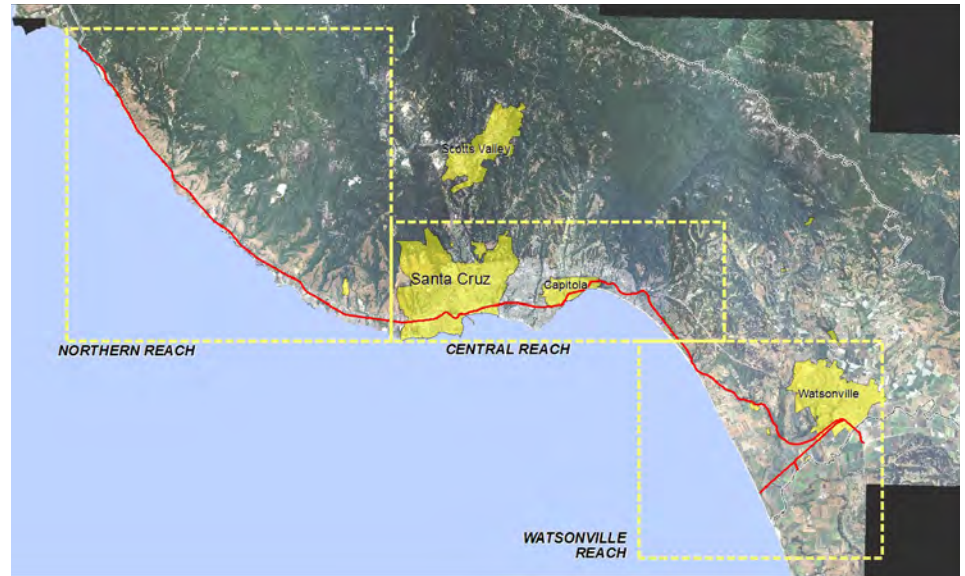
### ON-STREET BIKE ROUTE (CLASS III)

On-street bike routes are synonymous with Caltrans-defined Class III bike routes. Generally referred to as a “bike route,” an on-street bike route provides for shared use with motor vehicle traffic and is identified only by signing. Optional shared roadway bicycle marking pavement stencils are also available for use on Class III bike routes. Bikes may use the full lane, though signs may be needed to indicate sharing of the roadway.

### UNPAVED TRAIL SURFACE

Unpaved trail surfaces are located in the remote areas of the corridor, including the northernmost portion of the Northern Reach and the southernmost portion of the Watsonville Reach. Unpaved trails are typically five to six (5-6) feet wide through steep terrain or sensitive areas. To keep the trail as maintenance-free as possible, these trails are designed to avoid exceeding grades greater than twelve percent (12%) when possible. Unpaved trails may require some hand-tooled segments with drainage crossings that blend with the site character and slope as much as possible.

For more information regarding trail types, see Section 5.2.



Master Plan area showing reaches and overall trail

Multi-Use Rail Trail Facilities	
	Existing Paved
	Proposed Paved (Coastal Side of Tracks)
	Proposed Paved (Inland Side of Tracks)
Multi-Use Coastal Trail Facilities	
	Previously Defined MBSST Core Alignment On-Street
	Existing On-Street (Class II, Class III and/or Sidewalks)
	Proposed On-Street (Class II, Class III and/or Sidewalks)
	Existing Paved Off-Street (Class I)
	Proposed Paved Off-Street Multi-Use Path
	Existing Un-Paved Trail
	Proposed Un-Paved Trail
	Existing Shoreline Beach Route (Low Tide Access)
	Proposed Un-Paved Side Trail and Pacific Coast Bike Route (PCBR)
	At Grade Crossing
	Crossing of Railroad Tracks

Trail types legend for segment maps

### AT-GRADE RAIL AND ROAD CROSSINGS

Most segments include some combination of at-grade rail and/or road crossings. These crossings standards are located in Section 5.3.2. Custom crossing treatments are found in Appendix F.





Waddell Bluffs looking north



Waddell Bluffs



Año Nuevo Bay

## 4.1 SEGMENT 1 - WADDELL BLUFFS

Length: 1.06 miles (5,600 LF) - north county line to Waddell Beach parking

### 4.1.1 SEGMENT 1 BOUNDARY DETERMINATION

The northern and southernmost boundaries of Segment 1 were determined by the existing short stretch of narrow beachfront cliffs on the coastal side of Highway 1, the steep Waddell Bluffs inland of Highway 1, and the overall limited road right-of-way. The Waddell Bluffs geological erosion hazards define this short segment, posing safety challenges for all modes of travel from the northern Santa Cruz County line down the coast to Waddell Beach. The MBSST Network is constrained to the coastal side of the Highway 1 right-of-way which is limited to a narrow, paved road shoulder.

### 4.1.2 SEGMENT 1 DESCRIPTION

Segment 1 is the northernmost point of the MBSST Network in Santa Cruz County. The Highway 1 right-of-way is severely limited in width by the narrow sea cliffs on the coastal side of Highway 1 and the steep eroding cliffs above the roadway on the inland edge known as the Waddell Bluffs. This segment of the proposed alignment will consist of the existing paved road shoulders for bikes as a Class III facility along Highway 1 and limited room for a proposed unpaved shoulder for pedestrians on the coastal side of Highway 1. At present, in accordance with its coastal permit for seasonal sediment disposal, Caltrans dresses the unpaved seaward shoulder for pedestrian travel.

The eroding cliff faces of the Waddell Bluffs are considered a geological hazard that will be a long-term constraint for possible enhancements for the inland side of Highway 1 in this area. The main parking at Waddell Beach, down the coast from the Waddell Bluffs, is a safer and more feasible location for the trail's beginning and ending points in the north county. Waddell Beach currently provides vehicular parking, a regional bus stop, restroom facilities, drinking water, coastal access, scenic coastal views, and a junction point for the Skyline-to-the-Sea Trail system in Big Basin Redwoods State Park, on the inland side of Highway 1. It is anticipated that the new Big Basin Redwoods State Park General Plan will call for an underpass to safely connect Waddell Beach to inland portions of the park. Caltrans expects to replace the outmoded Waddell Creek Bridge on Highway 1 at an indefinite time in the future, as funds become available. This will present an opportunity to provide an underpass facility as recommended by the State Park General Plan. This segment is in proximity to thirteen (13) activity centers identified in Table 3.1.

Segment 1 proposed improvements include:

- 0.87 miles (4,600 LF) Class III on-street/road shoulder bike route
- 0.19 miles (1,000 LF) unpaved native soil trail
- Unpaved roadway shoulder on coastal side of Highway 1
- Fencing may be considered when project is implemented



**TABLE 4.1 Segment 1 - Waddell Bluffs**

<b>Segment Length</b>	<b>1.06 miles (5,600 feet) - Waddell Bluffs</b>
Rail Trail Portion	0.0 miles (0 LF)
Coastal Trail Portion	1.06 miles (5,600 LF)
<b>Segment Cost</b>	<b>\$107,120</b>

Rail Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Amenities (Fencing, Benches, Signage, Etc.)	1	Lump Sum	Varies	\$31,550
Bridge Structures	0	Each	Varies	\$0
At-Grade Crossings (Rail Tracks or Streets)	0	Each	Varies	\$0

**Rail Trail Construction SUBTOTAL \$31,550**

Coastal Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Unpaved Trail	1,000	Linear Feet	Varies	\$7,800
On Street Facilities (Unpaved Shoulder)	4,600	Linear Feet	\$6	\$27,600

**Coastal Trail Construction SUBTOTAL \$35,400**

COST SUMMARY	
<b>Construction TOTAL</b>	<b>\$66,950</b>
Design, Engineering, and PS&E (Plans, Specifications, and Estimates) (15%)	\$10,043
Environmental Permitting (10%)	\$6,695
Construction Management (15%)	\$10,043
Contingency (20%)	\$13,390
<b>SEGMENT TOTAL COST</b>	<b>\$107,120</b>

Segment Features	Description	Quantity
Segment Jurisdictional Area	Caltrans Right-Of-Way	-
Major Drainage	Waddell Creek	1
Existing Staging Areas/Rest Stops	Waddell Beach Parking Lot	1
Connection To Other Trails	Skyline to the Sea Trail, Big Basin State Park	1
Connection to Public Beach	Waddell Beach	1
Connection to Passive Park	Big Basin State Park	1



*Waddell Bluffs overlook*



*Waddell Beach parking, restrooms, and trailhead*



*Waddell Creek looking northeast*







# Monterey Bay Sanctuary Scenic Trail Network: Master Plan

## Proposed Trail Alignment SEGMENT 1 OF 20



### LEGEND

#### Multi-Use Rail Trail Facilities

- Existing Paved
- Proposed Paved (Coastal Side of Tracks)
- Proposed Paved (Inland Side of Tracks)

#### Multi-Use Coastal Trail Facilities

- Previously Defined MBSST Core Alignment On-Street
- Existing Paved Off-Street (Class I)
- Proposed Paved Off-Street Multi-Use Path (Class I)
- Existing On-Street (Class II, Class III and/or Sidewalks)
- Proposed On-Street (Class II, Class III and/or Sidewalks)
- Existing Un-Paved Trail
- Proposed Un-Paved Trail
- Existing Shoreline Beach Route (Low Tide Access)
- Proposed Un-Paved Side Trail and Pacific Coast Bike Route (PCBR)

#### Alignment Symbols

- Segment ID
- Segment Begin/End Point
- Proposed Coastal Alignment Segment ID
- Alignment Connection Point
- Alignment Terminus Point
- Trail Bridge
- At Grade Crossing
- Crossing of Railroad Tracks
- Existing RR Bridge Crossing

#### Geographic Features

- Assessor Parcels
- Parcels With Recorded Access
- Protected Public Areas in Fee
- Streams
- School Location

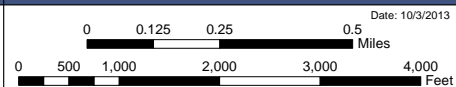
#### Transportation Features

- Public Parking
- Bus Stop
- Hwy 1 Bridge Crossing
- Santa Cruz Branch Rail Line Mile Posts

#### Existing Corridor Amenities

- Connection to Existing Trail
- Campground
- Public Restroom
- Barrier Free Facilities
- Overlook/Interpretive Sign
- Coastal Access
- Connection to Inland Trail Systems

### SOURCE AND REFERENCE DATA



- NOTES & SOURCES:
- 1) Base data from Santa Cruz County GIS.
  - 2) Aerial photo from NAIP - 2009.
  - 3) Existing bike path and railroad data from the SCCRTC.
  - 4) Protected Areas data from the Bay Area Protected Areas Database (BPAD) - 2011.
  - 5) Parcels with recorded access (provided/protected public access) data from the California Coastal Commission.
  - 6) Hillshade NED data from CaSIL - 10 meter elevation grid point resolution.

Figure 4-1 Segment 1 proposed trail alignment



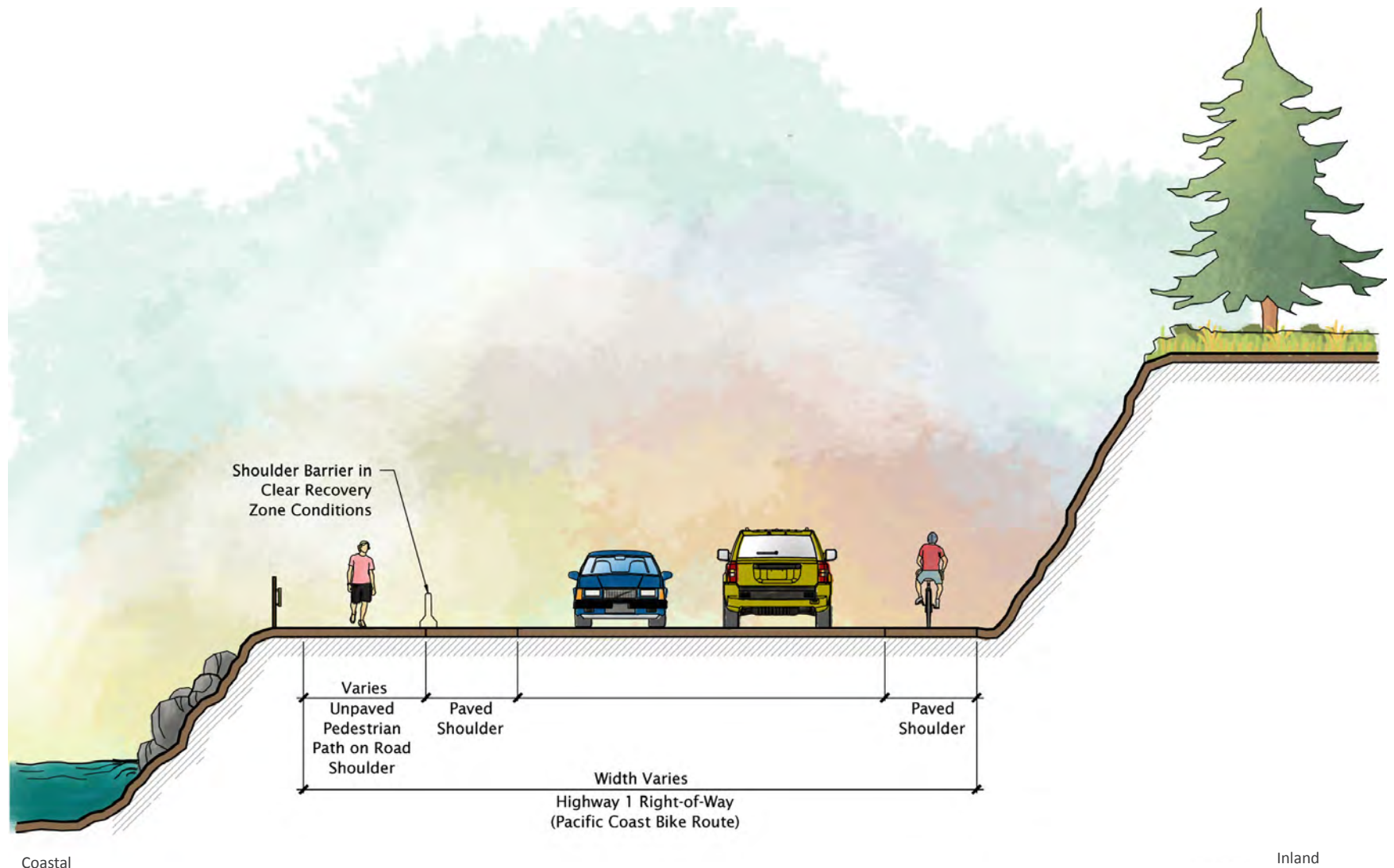


Figure 4-2 Segment 1 trail section - North of Waddell Creek





*Waddell Creek Bridge - too narrow for bicyclists*



*Greyhound Rock Beach*



*Picnic facilities at Greyhound Rock Beach*

## 4.2 SEGMENT 2 - GREYHOUND ROCK - CAL POLY BLUFFS

Length: 4.77 miles (25,170 LF) - Waddell Beach parking to Scott Creek

### 4.2.1 SEGMENT 2 BOUNDARY DETERMINATION

The Segment 2 boundary is determined by the existing Waddell Creek/Highway 1 bridge crossing down the coast to the existing Scott Creek Beach/Highway 1 bridge crossing. The corridor is consistently narrow, and may potentially require similar design improvement measures to link the publicly held lands from Greyhound Rock Beach down the coast to Scott Creek Beach. The trail alignment opportunity could include sharing portions of the coastal-side edge of Highway 1 Caltrans right-of-way and optional bluff-top trails within the Big Basin Redwoods State Park lands.

### 4.2.2 SEGMENT 2 DESCRIPTION

Segment 2 starts with the Highway 1/Waddell Creek Bridge crossing. The existing concrete bridge across Waddell Creek is narrow with no room to safely include adequate shoulders for bike access or pedestrian sidewalks. The future plans for the Highway 1 bridge replacement should consider at minimum, an eight- (8-) foot-wide shoulder and four- (4-) foot-wide sidewalks for safe bicycle/pedestrian access. The new bridge may be realigned to the inland side of the existing location so the old bridge can be repurposed as a multi-use path crossing for Waddell Creek. The private land on the coastal side of Highway 1, down the coast from Waddell Beach, limits the trail alignment to the Highway 1 right-of-way. This scenario continues for roughly one-quarter (1/4) mile down the coast to the Greyhound Rock Beach park boundary. Greyhound Rock Beach currently provides accessible parking, public restrooms, drinking water, a scenic overlook, and moderately difficult coastal access.

Along the coastal bluffs on the coastal side of Highway 1, there are areas between the coastal bluffs and the roadway edge for future trail facilities within Greyhound Rock Beach land. However, the land ownership changes from public to private roughly one-half (1/2) mile down the coast from the Greyhound Rock Beach public parking lot. There are three to four (3-4) locations where the road shoulder edge is adjacent to the coastal cliffs with no room for off-street trail facilities. These sporadic, narrow, cliff-edge locations range from one hundred (100) to several hundred LF. The existing paved road shoulders continue down the coast to Scott Creek Beach County Park; however, the existing narrow Highway 1 bridge crossing at Scott Creek does not include adequate paved shoulders for safe bicycle/pedestrian access. The road right-of-way at the bridge abutment has steep shoulders at the bridge approach, and Scott Creek meanders several hundred feet north along the coastal side of Highway 1 as it approaches the sea, leaving little to no room for an off-road trail connection in this stretch. Scott Creek Beach County Park currently provides visitor parking, coastal access, and a transit stop. The MBSST Network up the coast the from Scott Creek is forced into the State Highway 1 right-of-way due to both private land on the coastal side of Highway 1 and/or coastal cliff adjacency to the roadway shoulder. The feasibility of a sidepath on the coastal side of Highway 1 will be dependant primarily on available stable land and Caltrans' design standards. Side paths within the Highway 1 right-of-way and clear recovery zone distances will vary due to limited space between the coastal cliffs and the available room adjacent to the road shoulder. In many areas along Segment 2 between Scott Creek and Greyhound Rock Beach, there are areas where even a road shoulder is hardly achievable due to the narrow and eroding coastal bluffs. There are short stretches of side paths along the coastal side of Highway 1 where a shoulder may be possible. Most of this reach of the coast has existing road shoulders adjacent to steep sloping cliffs. Caltrans may require wider recovery zones where sidepaths are possible. Caltrans also requires a barrier for sidepaths in areas where the recovery zone is at a minimum distance or less. Caltrans indicates a preference for the use of traditional concrete or steel barriers with cable barriers allowable in certain circumstances between the recovery zone and path. This segment has close proximity to seven (7) activity centers identified in Table 3.1.

Segment 2 proposed improvements include:

- 4.77 miles of primarily existing road shoulder improvements due to limited available space and adjacent public land on the coastal side of State Highway 1
- Routine road edge clearing, signs, and shoulder pavement striping
- Fencing may be considered when project is implemented



**TABLE 4.2 Segment 2 - Greyhound Rock to Cal Poly Bluffs**

<b>Segment Length</b>	<b>4.77 miles (25,170 feet) - Greyhound Rock to Cal Poly Bluffs</b>
Rail Trail Portion	0.0 miles (0 LF)
Coastal Trail Portion	4.77 miles (25,170 LF)
<b>Segment Cost</b>	<b>\$308,032</b>

Rail Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Amenities (Fencing, Benches, Signage, Etc.)	1	Lump Sum	Varies	\$41,500
Bridge Structures	0	Each	Varies	\$0
At-Grade Crossings (Rail Tracks or Streets)	0	Each	Varies	\$0
<b>Rail Trail Construction SUBTOTAL</b>				<b>\$41,500</b>

Coastal Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Unpaved Trail	0	Linear Feet	Varies	\$0
On Street Facilities (Unpaved Shoulder)	25,170	Linear Feet	\$6	\$151,020
<b>Coastal Trail Construction SUBTOTAL</b>				<b>\$151,020</b>

<b>COST SUMMARY</b>	
<b>Construction TOTAL</b>	<b>\$192,520</b>
Design, Engineering, and PS&E (Plans, Specifications, and Estimates) (15%)	\$28,878
Environmental Permitting (10%)	\$19,252
Construction Management (15%)	\$28,878
Contingency (20%)	\$38,504
<b>SEGMENT TOTAL COST</b>	<b>\$308,032</b>

Segment Features	Description	Quantity
Segment Jurisdictional Area	Caltrans Right-of-Way, State Park Lands	-
Major Drainage	Waddell Creek, Scott Creek	2
Existing Staging Areas/Rest Stops	Greyhound Rock Beach Parking/Scott Creek Beach	2
Connection To Other Trails	Bluff-top trails at Greyhound Rock Beach Park	2
Connection to Public Beach	Greyhound Rock State Beach/Scott Creek Beach	2



*View from Greyhound Rock Beach overlook*



*Public access to Greyhound Rock Beach*



*Caltrans-approved cable barrier*





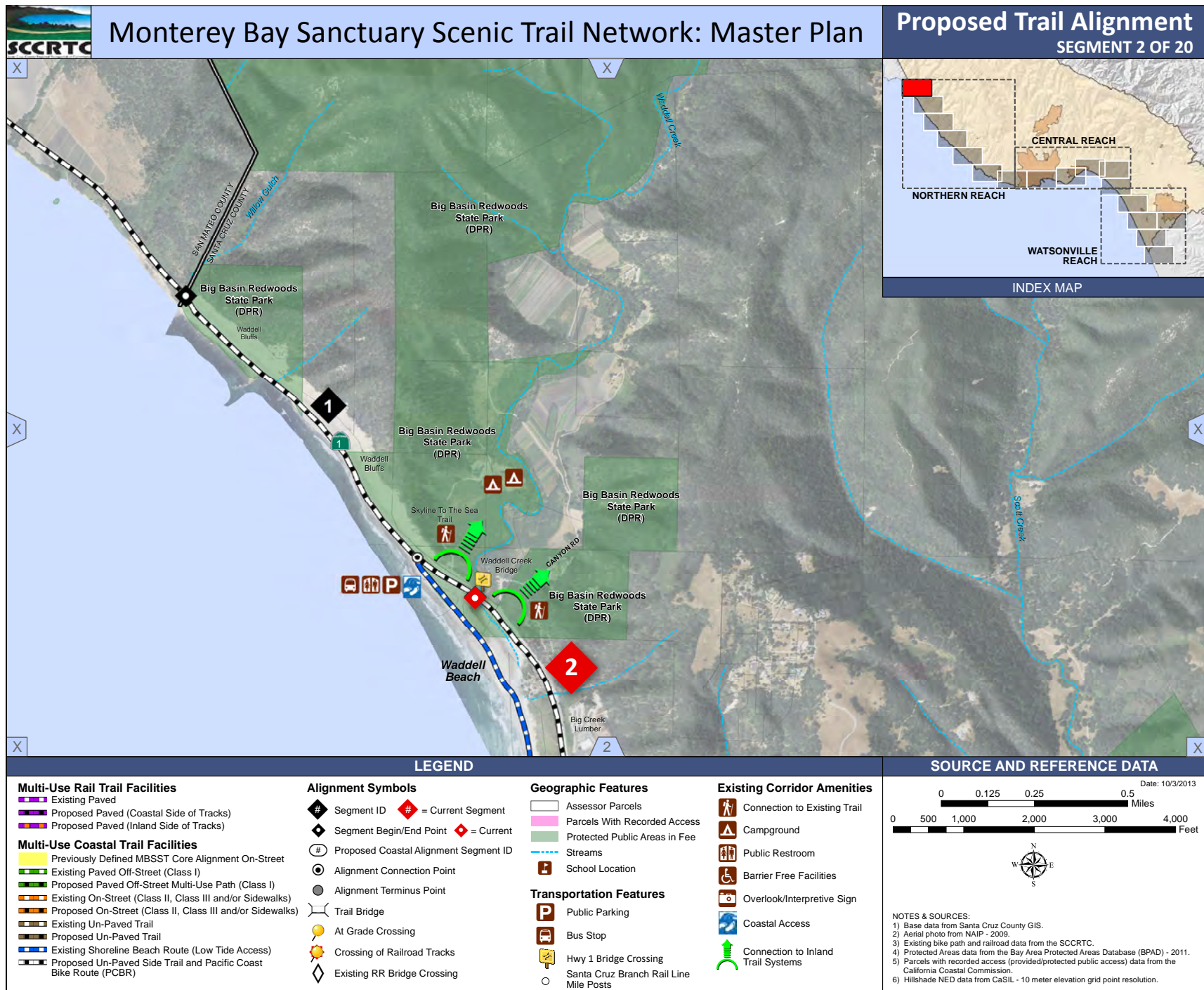


Figure 4-3 Segment 2 proposed trail alignment



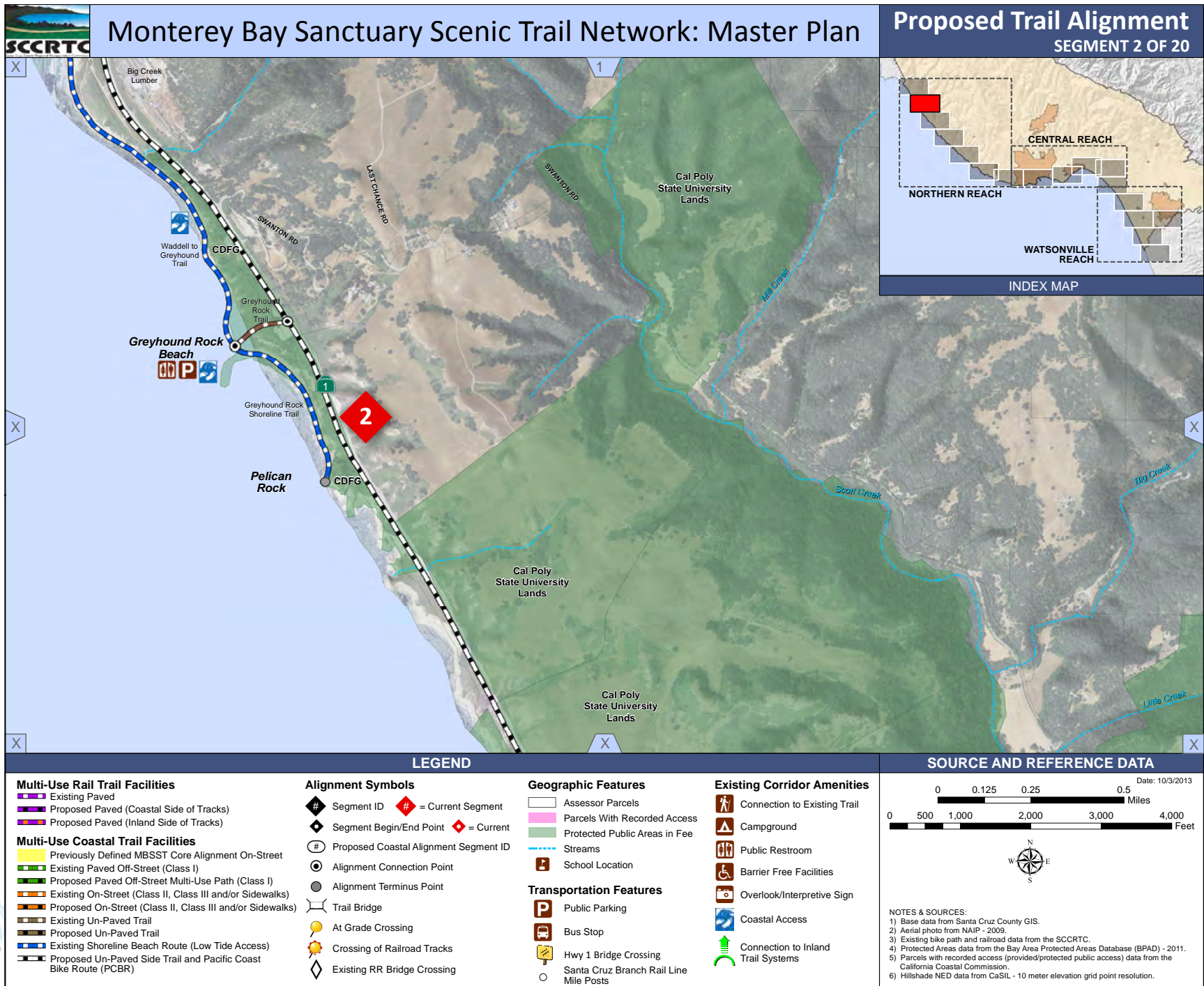
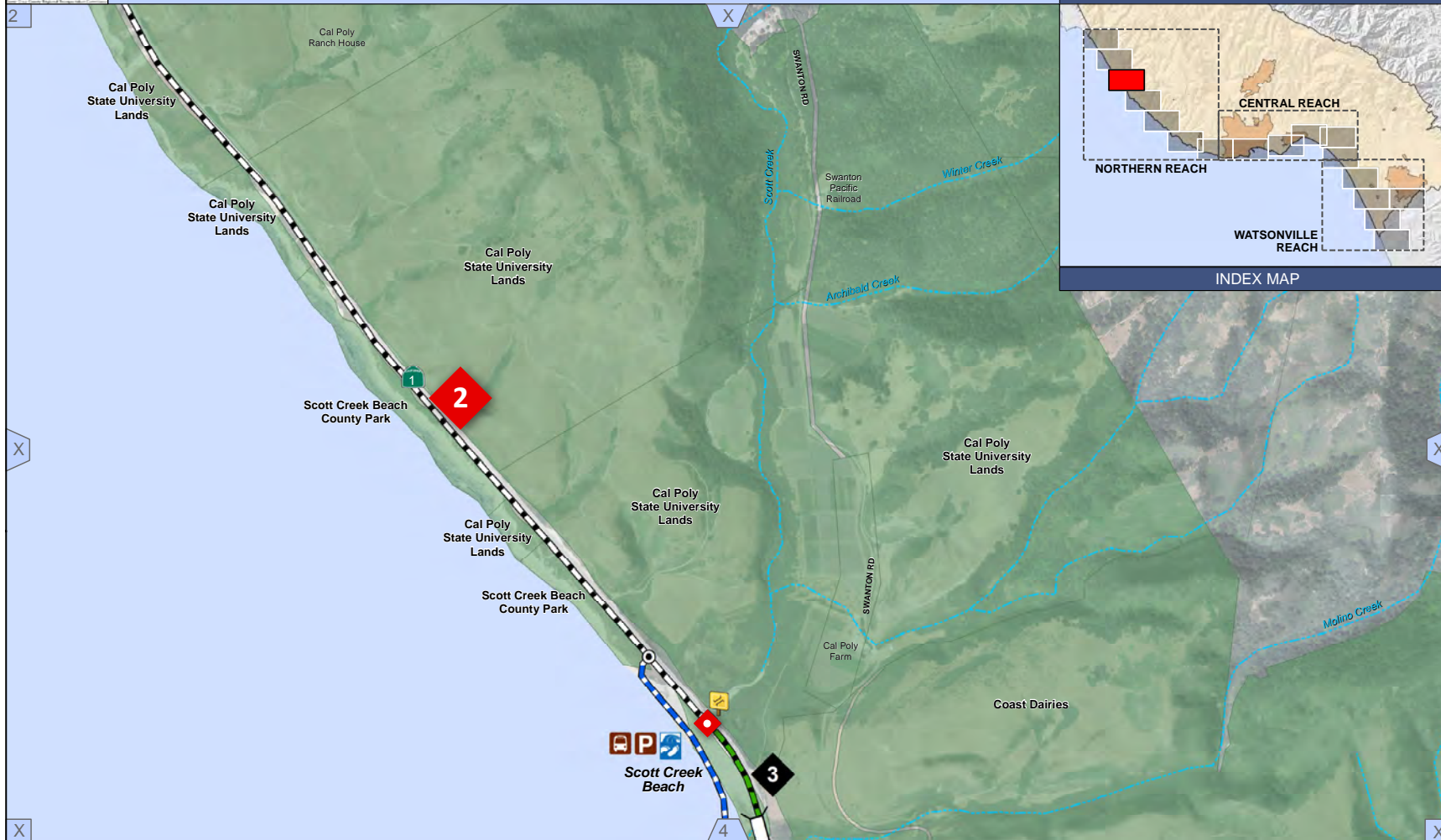


Figure 4-4 Segment 2 proposed trail alignment (continued)



# Monterey Bay Sanctuary Scenic Trail Network: Master Plan

## Proposed Trail Alignment SEGMENT 2 OF 20



### LEGEND

#### Multi-Use Rail Trail Facilities

- Existing Paved
- Proposed Paved (Coastal Side of Tracks)
- Proposed Paved (Inland Side of Tracks)

#### Multi-Use Coastal Trail Facilities

- Previously Defined MBSST Core Alignment On-Street
- Existing Paved Off-Street (Class I)
- Proposed Paved Off-Street Multi-Use Path (Class I)
- Existing On-Street (Class II, Class III and/or Sidewalks)
- Proposed On-Street (Class II, Class III and/or Sidewalks)
- Existing Un-Paved Trail
- Proposed Un-Paved Trail
- Existing Shoreline Beach Route (Low Tide Access)
- Proposed Un-Paved Side Trail and Pacific Coast Bike Route (PCBR)

#### Alignment Symbols

- Segment ID
- Segment Begin/End Point
- Proposed Coastal Alignment Segment ID
- Alignment Connection Point
- Alignment Terminus Point
- Trail Bridge
- At Grade Crossing
- Crossing of Railroad Tracks
- Existing RR Bridge Crossing

#### Geographic Features

- Assessor Parcels
- Parcels With Recorded Access
- Protected Public Areas in Fee
- Streams
- School Location

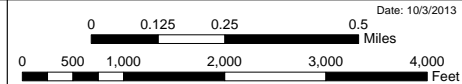
#### Transportation Features

- Public Parking
- Bus Stop
- Hwy 1 Bridge Crossing
- Santa Cruz Branch Rail Line Mile Posts

#### Existing Corridor Amenities

- Connection to Existing Trail
- Campground
- Public Restroom
- Barrier Free Facilities
- Overlook/Interpretive Sign
- Coastal Access
- Connection to Inland Trail Systems

### SOURCE AND REFERENCE DATA



- NOTES & SOURCES:
- 1) Base data from Santa Cruz County GIS.
  - 2) Aerial photo from NAIP - 2009.
  - 3) Existing bike path and railroad data from the SCCRTC.
  - 4) Protected Areas data from the Bay Area Protected Areas Database (BPAD) - 2011.
  - 5) Parcels with recorded access (provided/protected public access) data from the California Coastal Commission.
  - 6) Hillshade NED data from CaSIL - 10 meter elevation grid point resolution.

Figure 4-5 Segment 2 proposed trail alignment (continued)



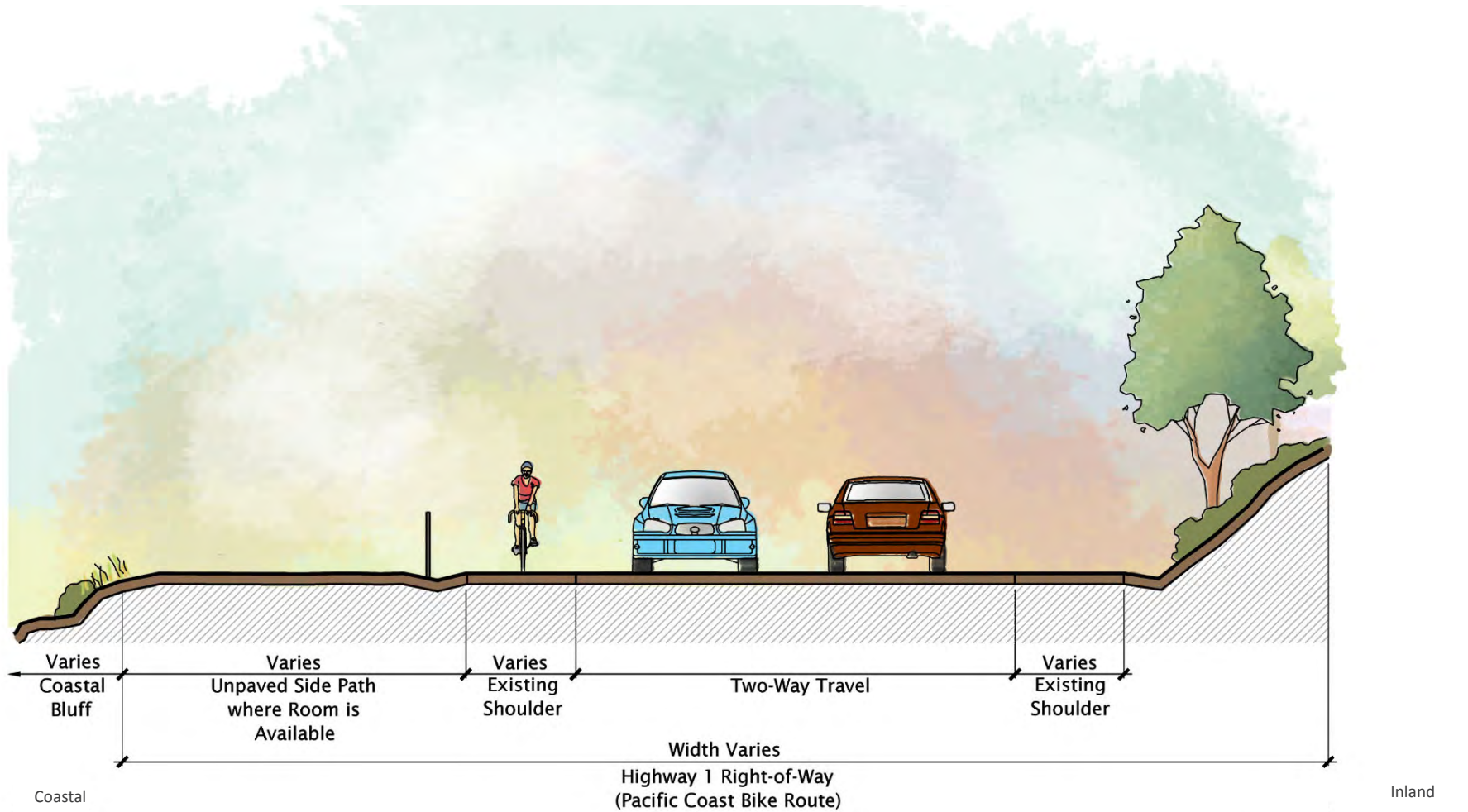


Figure 4-6 Segment 2 trail section





*Public restrooms and beach access at Davenport Landing Road*



*Public parking at Davenport Landing Road*



*Trail access to Davenport Landing Beach*

## 4.3 SEGMENT 3 - UPPER COAST DAIRIES AT SCOTT CREEK

Length: 1.11 miles (5,870 LF) - Scott Creek Beach Park to Davenport Landing Road

### 4.3.1 SEGMENT 3 BOUNDARY DETERMINATION

The boundary for Segment 3 is determined by the small northern stretch of Coast Dairies property from the Scott Creek Beach boundary to Davenport Landing Road. This segment is the first stretch where the publicly held coastal land is wider and offers more room for trail alignment options. The southernmost boundary terminates at the southern intersection of Davenport Landing Road and Highway 1. This intersection is the beginning point for the connection to the railroad corridor alignment down the coast from the Davenport Landing Road intersection.

### 4.3.2 SEGMENT 3 DESCRIPTION

The Highway 1 corridor travels inland away from the coastal bluffs as it continues down the coast from Scott Creek Beach to the upper Coast Dairies property. The existing Highway 1 bridge over Scott Creek is narrow, lacking a standard width shoulder or sidewalk for non-motorized access across Scott Creek. It is recommended that plans for new highway bridge replacement should include bridge designs with road shoulders and sidewalks for safe bicycle and pedestrian access across Scott Creek. Down the coast from the Scott Creek Beach parking area, the corridor provides room for future off-street, multi-use facilities on the coastal side of Highway 1 down the coast to the intersection of Davenport Landing Road and Highway 1. This proposed multi-use facility follows an old rail bed. The abandoned rail bed falls away to the beach in one location where a new one-hundred-and-fifty- (150-) foot-long preengineered bridge will need to be installed to continue the path down the coast to Davenport Landing Road. Davenport Landing Road is narrow with steep slopes on the coastal side of the road and private homes on the inland side of the road as it curves downhill to the coastal access at Davenport Landing Beach. Davenport Landing Beach currently provides restrooms, coastal access, and public parking. This segment is in proximity of two (2) activity centers identified on Table 3.1

Segment 3 proposed improvements include:

- 1.11 miles (5,870 LF) multi-use paved path (Class I)
- One (1) preengineered bike/pedestrian bridge, one-hundred-and-fifty- (150-) foot span
- Fencing may be considered when project is implemented

**TABLE 4.3 Segment 3 - Upper Coast Dairies at Scott Creek**

<b>Segment Length</b>	<b>1.11 miles (5,870 LF) - Upper Coast Dairies at Scott Creek</b>
Rail Trail Portion	1.11 miles (5,870 LF)
Coastal Trail Portion	0.0 miles (0 LF)
<b>Segment Cost</b>	<b>\$2,550,096</b>

Rail Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Amenities (Fencing, Benches, Signage, Etc.)	1	Lump Sum	Varies	\$242,870
Bridge Structures	1	Each	Varies	\$400,000
At-Grade Crossings (Rail Tracks or Streets)	0	Each	Varies	\$0
<b>Rail Trail Construction SUBTOTAL</b>				<b>\$642,870</b>

Coastal Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	5,870	Linear Feet	Varies	\$950,940
Unpaved Trail	0	Linear Feet	Varies	\$0
On Street Facilities (Class II, III, and Sidewalks)	0	Linear Feet	Varies	\$0
<b>Coastal Trail Construction SUBTOTAL</b>				<b>\$950,940</b>

<b>COST SUMMARY</b>	
<b>Construction TOTAL</b>	<b>\$1,593,810</b>
Design, Engineering, and PS&E (Plans, Specifications, and Estimates) (15%)	\$239,072
Environmental Permitting (10%)	\$159,381
Construction Management (15%)	\$239,072
Contingency (20%)	\$318,762
<b>SEGMENT TOTAL COST</b>	<b>\$2,550,096</b>

Segment Features	Description	Quantity
Segment Jurisdictional Area	Caltrans, State Parks	2
Existing Staging Areas/Rest Stops	Scott Creek Beach/Davenport Landing Beach	2
Connection To Other Trails	Bluff-top trails	2
Connection to Public Beaches	Scott Creek Beach/Davenport Landing Beach	2



*Coast Dairies trail access*



*Davenport Roadhouse Restaurant and Inn*



*Davenport Beach*

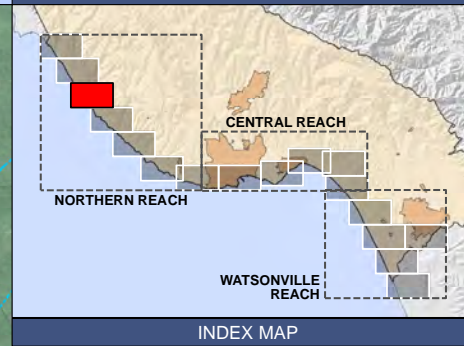






# Monterey Bay Sanctuary Scenic Trail Network: Master Plan

## Proposed Trail Alignment SEGMENT 3 OF 20



LEGEND				SOURCE AND REFERENCE DATA			
<b>Multi-Use Rail Trail Facilities</b> <ul style="list-style-type: none"><li> Existing Paved</li><li> Proposed Paved (Coastal Side of Tracks)</li><li> Proposed Paved (Inland Side of Tracks)</li></ul>		<b>Alignment Symbols</b> <ul style="list-style-type: none"><li> Segment ID  = Current Segment</li><li> Segment Begin/End Point  = Current</li><li> Proposed Coastal Alignment Segment ID</li><li> Alignment Connection Point</li><li> Alignment Terminus Point</li><li> Trail Bridge</li><li> At Grade Crossing</li><li> Crossing of Railroad Tracks</li><li> Existing RR Bridge Crossing</li></ul>		<b>Geographic Features</b> <ul style="list-style-type: none"><li> Assessor Parcels</li><li> Parcels With Recorded Access</li><li> Protected Public Areas in Fee</li><li> Streams</li><li> School Location</li></ul> <b>Transportation Features</b> <ul style="list-style-type: none"><li> Public Parking</li><li> Bus Stop</li><li> Hwy 1 Bridge Crossing</li><li> Santa Cruz Branch Rail Line Mile Posts</li></ul>		<b>Existing Corridor Amenities</b> <ul style="list-style-type: none"><li> Connection to Existing Trail</li><li> Campground</li><li> Public Restroom</li><li> Barrier Free Facilities</li><li> Overlook/Interpretive Sign</li><li> Coastal Access</li><li> Connection to Inland Trail Systems</li></ul>	
<b>Multi-Use Coastal Trail Facilities</b> <ul style="list-style-type: none"><li> Previously Defined MBSST Core Alignment On-Street</li><li> Existing Paved Off-Street (Class I)</li><li> Proposed Paved Off-Street Multi-Use Path (Class I)</li><li> Existing On-Street (Class II, Class III and/or Sidewalks)</li><li> Proposed On-Street (Class II, Class III and/or Sidewalks)</li><li> Existing Un-Paved Trail</li><li> Proposed Un-Paved Trail</li><li> Existing Shoreline Beach Route (Low Tide Access)</li><li> Proposed Un-Paved Side Trail and Pacific Coast Bike Route (PCBR)</li></ul>				<div>Date: 10/3/2013</div> <div> Miles</div> <div> Feet</div> <div></div>			
				<div>NOTES &amp; SOURCES:</div> <div>1) Base data from Santa Cruz County GIS.</div> <div>2) Aerial photo from NAIP - 2009.</div> <div>3) Existing bike path and railroad data from the SCRTC.</div> <div>4) Protected Areas data from the Bay Area Protected Areas Database (BPAD) - 2011.</div> <div>5) Parcels with recorded access (provided/protected public access) data from the California Coastal Commission.</div> <div>6) Hillshade NED data from CaSIL - 10 meter elevation grid point resolution.</div>			

Figure 4-7 Segment 3 proposed trail alignment



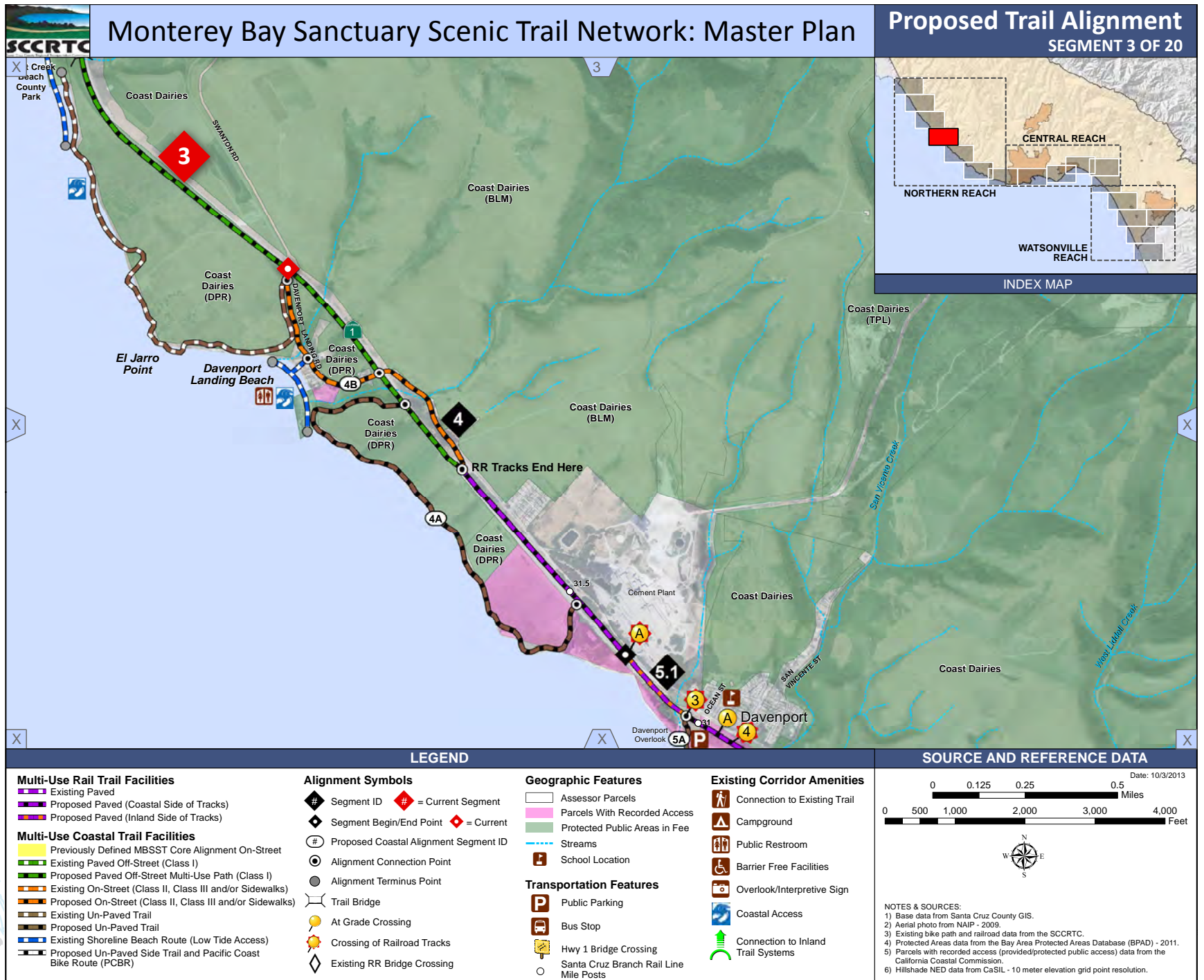


Figure 4-8 Segment 3 proposed trail alignment (continued)



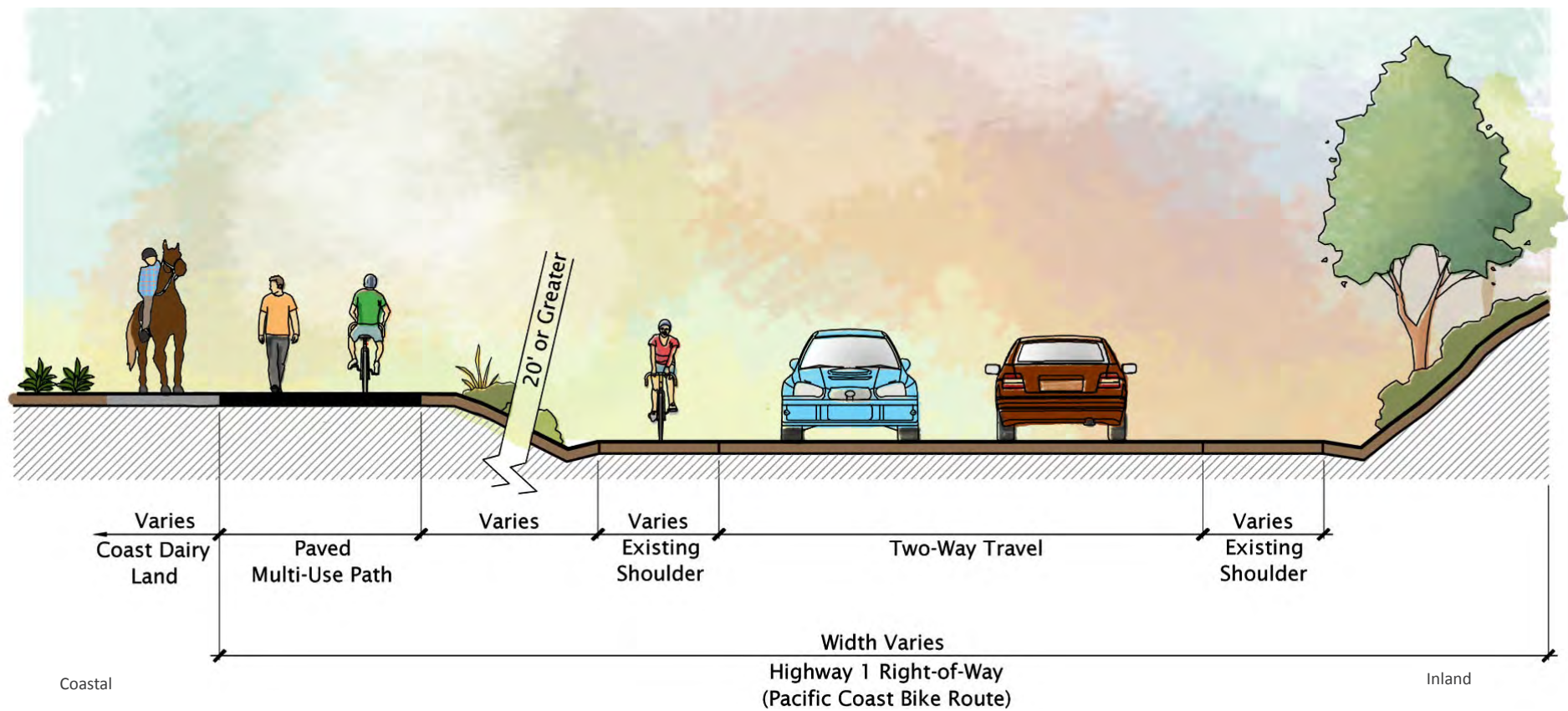


Figure 4-9 Segment 3 trail section





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*The community of Davenport with rail corridor and coastal trail*







*Rail maintenance road looking north*



*Rail maintenance road looking south*



*Trail access to Davenport Landing Beach*

## 4.4 SEGMENT 4 - DAVENPORT LANDING/END OF RAILROAD TRACKS

Length: 3.64 miles (19,280 LF) - Coast Dairies south to end of railroad tracks

### 4.4.1 SEGMENT 4 BOUNDARY DETERMINATION

The northernmost and southernmost boundaries for Segment 4 are determined by logical transition points from the Davenport Landing Road intersections with Highway 1 and Swanton Road. This offers a possible Highway 1 crossing point for the trail alignment and eventual connection to the railroad right-of-way on the inland side of Highway 1, just down the coast from Davenport Landing Road, Highway 1, and the Cement Plant Road intersections. The trail becomes a rail trail at this location and will follow the rail corridor down the coast to the Segment 4 terminus at the Highway 1 crossing of the railroad tracks.

### 4.4.2 SEGMENT 4 DESCRIPTION

The Coast Dairies land from Davenport Landing Road down the coast to the cement plant provides an opportunity for coastal bluff trails and a possible off-street, multi-use facility on the coastal side of the Highway 1 right-of-way. This area of Coast Dairies has existing agricultural operations with intermittent agricultural vehicle access roads and fences throughout. The upper portion of Segment 4 follows along the rail tracks beginning on the coastal side of the track between Highway 1 and the tracks. The Highway 1 rail crossing just before Davenport is at an acute angle as it crosses to the coastal side of Highway 1. The intersection has train warning signal lights and crossing arms for both northbound and southbound vehicle traffic. The coastal edge in this location primarily consists of steep cliffs with difficult and limited access to small coves and beaches down the coast from the town of Davenport. Coastal access is available through two (2) existing spur trail connections on Davenport Landing Road, and along a proposed bluff trail within the Coast Dairies property, down the coast from Davenport Landing Beach. This segment has proximity to five (5) activity centers identified in Table 3.1.

Segment 4 proposed improvements include:

- 1.38 miles (7,300 LF) multi-use rail trail (Class I)
- 1.41 miles (7,470 LF) bluff trail (Segment 4A)
- 0.85 miles (4,510 LF) on-street bike lanes (Segment 4B)
- One (1) Highway 1 crossing at Davenport Landing Road
- One (1) rail crossing in front of cement plant
- Three (3) road crossings
- Fencing may be considered when project is implemented



**TABLE 4.4 Segment 4 - Davenport Landing/End of Railroad Tracks**

<b>Segment Length</b>	<b>3.64 miles (19,280 LF) - Davenport Landing/End of Railroad Tracks</b>
Rail Trail Portion	1.38 miles (7,300 LF)
Coastal Trail Portion	2.26 miles (11,980 LF)
<b>Segment Cost</b>	<b>\$2,685,424</b>

Rail Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	7,300	Linear Feet	\$162	\$1,182,600
Amenities (Fencing, Benches, Signage, Etc.)	1	Lump Sum	Varies	\$113,300
Bridge Structures	0	Each	Varies	\$0
At-Grade Crossings (Rail Tracks or Streets)	5	Each	Varies	\$240,000

**Rail Trail Construction SUBTOTAL \$1,535,900**

Coastal Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Unpaved Trail	7,470	Linear Feet	\$7	\$52,290
On Street Facilities (Class II, III, and Sidewalks)	4,510	Linear Feet	\$20	\$90,200

**Coastal Trail Construction SUBTOTAL \$142,490**

COST SUMMARY	
<b>Construction TOTAL</b>	<b>\$1,678,390</b>
Design, Engineering, and PS&E (Plans, Specifications, and Estimates) (15%)	\$251,759
Environmental Permitting (10%)	\$167,839
Construction Management (15%)	\$251,759
Contingency (20%)	\$335,678
<b>SEGMENT TOTAL COST</b>	<b>\$2,685,424</b>

Segment Features	Description	Quantity
Segment Jurisdictional Area	Caltrans Right-of-Way, State Park Lands	-
State Highway Crossings	Davenport Landing Road and Cement Plant Road	2
Minor Roadway Crossings	Cement Plant Road Crossing	1
Trail At-Grade Railroad Crossings	Davenport	1
Existing Staging Areas/Rest Stops	Davenport Landing Beach	1
Connection To Other Trails	Bluff-top Trails at Coast Dairies	2
Connection to Public Beach	Davenport Landing Beach	1
Connection to Residential Area	Davenport Landing Community	1
Connection to Passive Park	Coast Dairies	1



*Bluff trail to scenic overlook*



*Coastal views from bluff trail*



*Davenport Landing Beach*



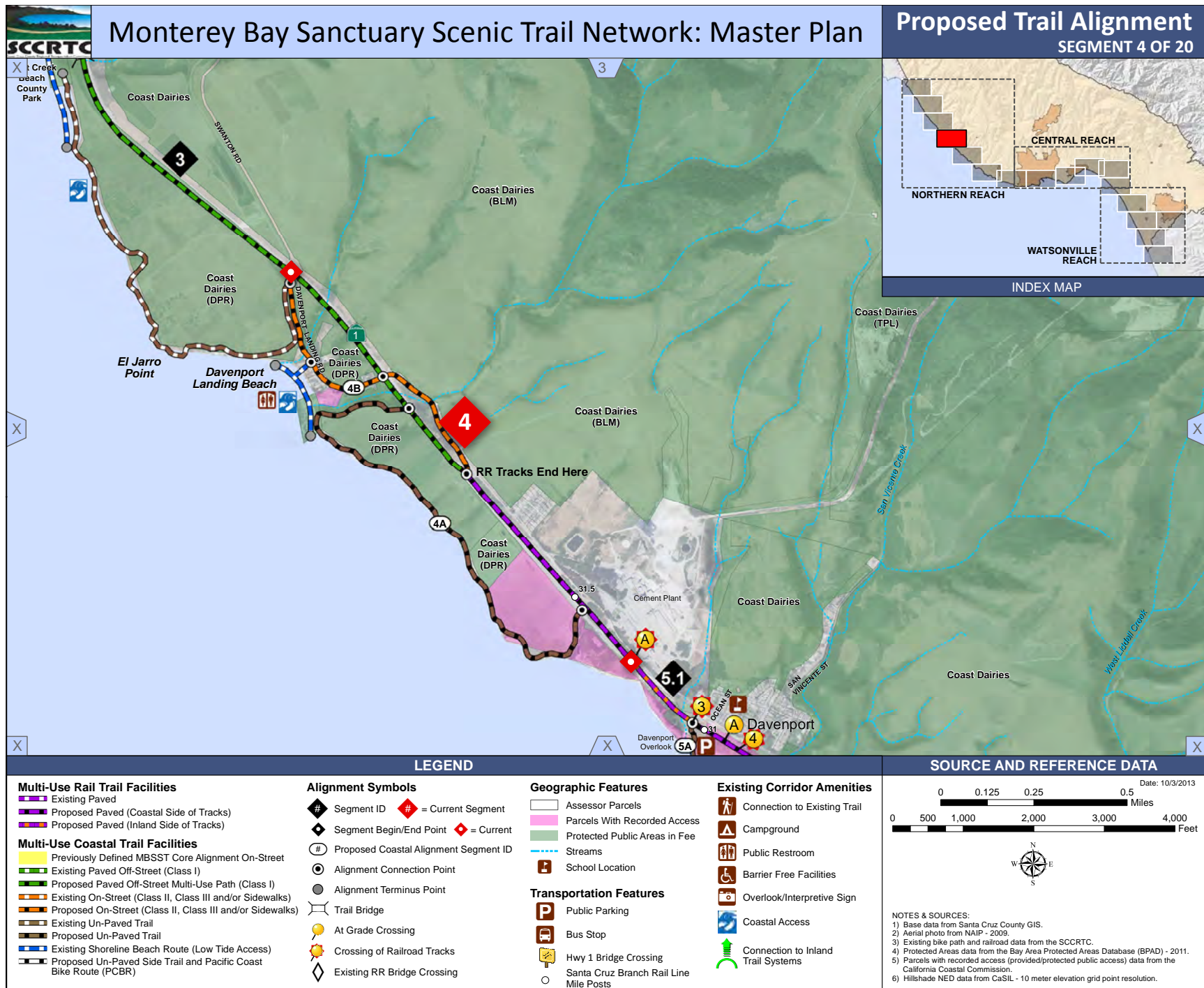


Figure 4-10 Segment 4 proposed trail alignment

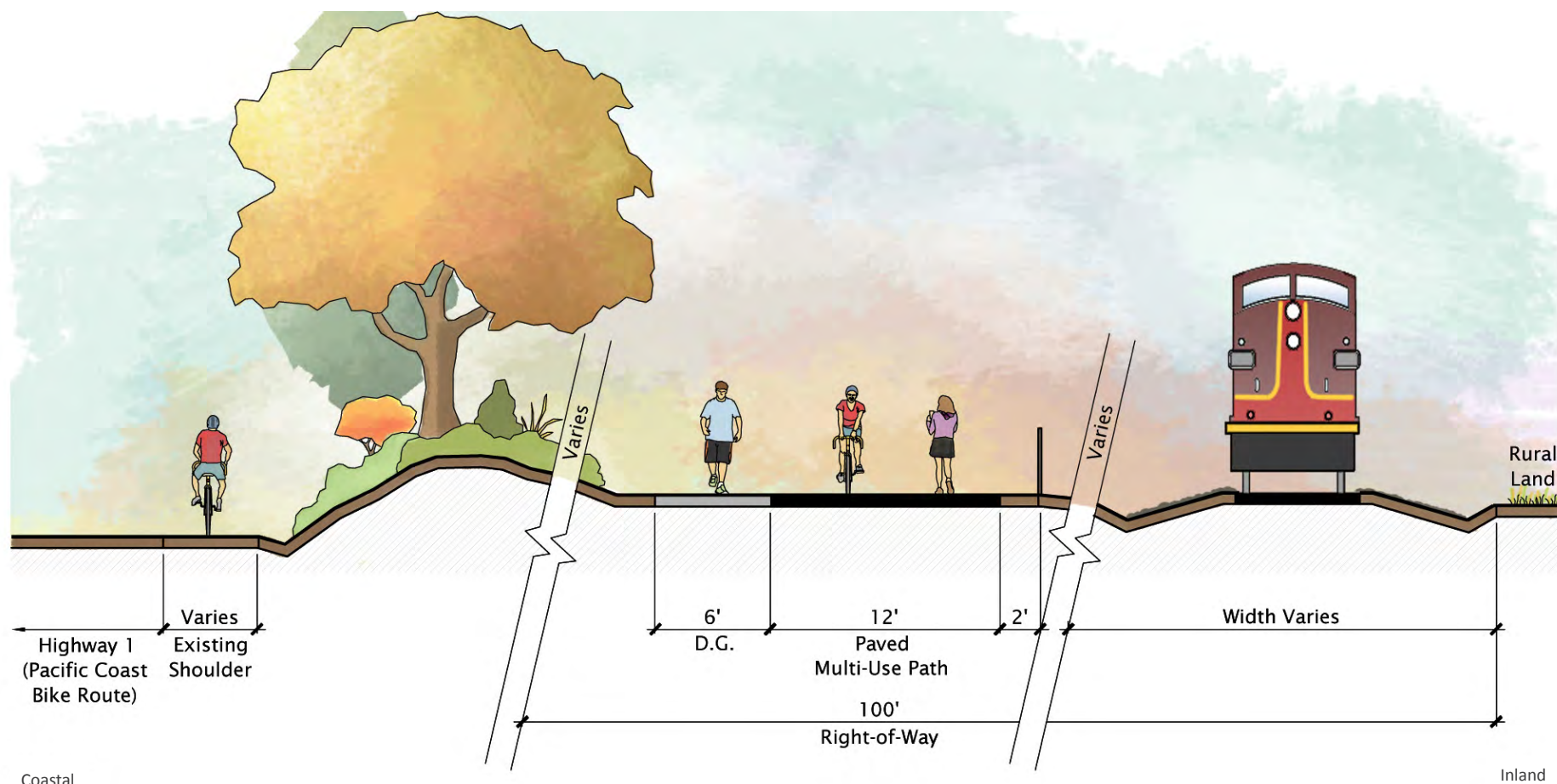


Figure 4-11 Segment 4 trail section







*Coast Dairies trail access*



*Wilder Ranch multi-use path*



*Wilder Ranch State Park signage*

## 4.5 SEGMENT 5 - DAVENPORT AND WILDER RANCH

Total Length: 10.55 miles (55,720 LF)

### 4.5.1 SEGMENT 5 BOUNDARY DETERMINATION

The boundary for Segment 5 stretches for 7.5 miles from Davenport to the existing Wilder Ranch staging area and trailhead parking lot. Natural surface paths make up the difference to connect to the coast. This segment is broken up into three subsegments (5.1, 5.2, and 5.3) due to both the overall distance of the segment and the similar site characteristics throughout the total segment length. Since the length of this segment spans a great distance, it may be financially more feasible to break it down into the following three subsegments in the planning efforts to manage the implementation efforts. The entire length of trail Segment 5, which includes all three subsegments, will essentially connect Davenport to the existing trail facilities in the city of Santa Cruz with a 10.5-mile trail. Segment 5 and Segment 6 of the trail system will provide equestrian connection from Wilder Ranch to Davenport. Existing equestrian parking and other support facilities are currently available down the coast at the Wilder Ranch trailhead. The new Coastal Rail Trail corridor will provide equestrian access from Wilder Ranch to Davenport. The equestrian use will include all of Segment 5 including each subsegment, and Segment 6 where existing use occurs presently.

### 4.5.2 SEGMENT 5 DESCRIPTIONS (SUBSEGMENTS 5.1, 5.2, 5.3)

#### SUBSEGMENT 5.1 (2.75 MILES)

This subsegment starts at the Highway 1 rail crossing (inland side of Highway 1) just up the coast from Downtown Davenport and ends at the existing Highway 1 informal pull-off parking area at Bonny Doon Beach. The entire town of Davenport is located on the inland side of Highway 1. On the coastal side of Highway 1, directly across the street from the town center, are two (2) large, empty dirt lots used as visitor parking. These pull-off areas are also used as parking to access the coastal cliffs and Davenport Overlook on the coastal side of the railroad tracks. There are no formal pathways or legal rail crossings to the coastal cliffs at this location. Beach users and tourists also use these informal access points to get down to Davenport Beach. Pedestrian access across Highway 1 to Downtown Davenport from the dirt parking lot lacks any signal-controlled pedestrian crossings or striped crosswalks. The northbound Highway 1 approach to Davenport is on an incline, with some site view constraints for people crossing to and from the dirt parking lots on the coastal side of Highway 1 to Davenport town center on the inland side of Highway 1. The rail tracks are on the coastal side of State Highway 1, and the proposed trail alignment will occur on the coastal side of the rail tracks. The rail tracks cross Highway 1 up the coast from Davenport, near the cement plant entrance. The existing rail crossing is currently equipped with signal warning lights and stop arms for the northbound and southbound traffic. The railroad bed runs parallel about one hundred (100) feet from the coastal side of Highway 1 fairly consistently as it heads down the coast along the Coast Dairies property. This segment continues one (1) mile south of Davenport to Bonny Doon Beach, with an informal paved public parking area including bike racks and coastal access to Bonny Doon Beach. Bonny Doon Beach is a small, sandy cove closed in by steep sea cliffs along the beach. The coastal side of the railroad bed has a fairly steep slope along this stretch with open views to the beach below. There are proposed unpaved coastal bluff trail options (Segment 5A on Figure 4-12 and Segments

5B and 5C on Figure 4-13) which provide additional access, overlooks, and pathway connections along the coastal edge of Coast Dairies (DPR - California Department of Parks and Recreation) property on Subsegment 5.1.

Subsegment 5.1 proposed improvements include:

- 1.49 miles (7,890 LF) multi-use paved path (Class I) along the coastal side rail right-of-way
- 1.26 miles (6,680 LF) native soil coastal bluff trails and coastal access between Davenport Beach and Yellow Bank Beach (this distance is comprised of Segments 5A, 5B, and 5C)
- One (1) rail crossing at spur trail connecting Davenport parking lot to rail trail, parking lot improvements to existing dirt lot, coastal side of Highway 1 in Davenport near the Davenport Overlook
- One (1) new signalized at-grade road crossing of Highway 1 in Davenport
- One (1) rail crossing at the Highway 1 crossing
- One (1) private road crossing
- Fencing may be considered when project is implemented

## SUBSEGMENT 5.2 (4.18 MILES)

This subsegment starts at Bonny Doon Beach parking lot and continues down the coast to Scaroni Road. The rail line parallels Highway 1 past Yellow Bank Beach. The proposed alignment will follow the coastal side of the Coastal Rail Trail corridor heading down the coast. Yellow Bank Beach is another small sandy beach cove with informal parking off of Highway 1, and non-formalized access across the rail tracks to the beach and coastal bluffs. As Highway 1 and the rail line continue down the coast, the two (2) corridors start to pull away from the coastal bluffs through Coast Dairies. The proposed Coastal Rail Trail will continue along the coastal side of the tracks. As the rail and Highway 1 corridor pulls farther from the coastal edge, it offers more opportunities for secondary coastal bluff trails along the Coast Dairies property. These proposed unpaved native soil trails (Segments 5D and 5E on Figure 4-13) offer alternate coastal access, scenic views, and other recreational opportunities linked by the proposed main rail trail spine. As the Coastal Rail Trail heads down the coast from the Coast Dairies property, it diverts away from its parallel track on Highway 1 as it crosses Scaroni Road, the rail tracks, and Majors Creek. This begins Subsegment 5.3 where the proposed trail approaches the larger coastal mesas and agricultural land within Wilder Ranch State Park.

Subsegment 5.2 proposed improvements include:

- 2.58 miles (13,630 LF) multi-use paved path (Class I) along the coastal side rail right-of-way
- 1.60 miles (8,430 LF) native soil coastal bluff trails (this distance is comprised of Segments 5D and 5E)
- One (1) rail crossing at upper Scaroni Road
- One (1) road crossing of upper Scaroni Road and two (2) additional private crossings
- Fencing may be considered when project is implemented



*Trail maintenance may include removing sand from trail and rail right-of-way*



*Agricultural roads sometimes encroach into the rail right-of-way*



*The Coastal Rail Trail should connect to existing trails whenever possible*







*Coast Dairies coastal trail*

### SUBSEGMENT 5.3 (3.62 MILES)

This subsegment begins at upper Scaroni Road and ends at the existing Wilder Ranch staging area. There are up to fifteen (15) at-grade vehicle crossings along the rail tracks from Scaroni Road to the Wilder Ranch State Park trailhead. The proposed trail alignment will continue down the coast along the coastal side rail right-of-way. From the beginning point of Subsegment 5.3 at upper Scaroni Road, there is a section of the rail right-of-way that is only twenty (20) feet wide. The twenty- (20-) foot rail right-of-way continues for a short stretch from upper Scaroni Road down the coast to mile marker 27 near lower Scaroni Road where it widens back to one hundred and twenty (120) feet. A more accurate and detailed survey of this narrow segment may help determine if the adjacent land is privately owned or part of the Wilder Ranch landholdings. If the adjacent land is privately owned, one (1) option to address this narrow right-of-way section will be to have the trail cross over to the inland side of the rail tracks at lower Scaroni Road and coordinate with Caltrans to share some of Highway 1 right-of-way to accommodate the trail. Once past the narrow section, the trail crosses back to the coastal side of the rail tracks at upper Scaroni Road and continues along the wider rail right-of-way. Further down the coast from Scaroni Road, existing rail crossings from Wilder Ranch will function as they have historically, with improvements consisting of warning signs along the proposed trail alignment at key trail access points and agricultural crossings. Fencing along the trail will be negotiated and coordinated with the State Parks Department, agricultural operators, and the RTC. Trail Subsegment 5.3 connects to multiple, existing, unpaved bluff-top trails along the edge of the agricultural fields and the coastal edge. There are several optional unpaved subsegment connector trails (Segment 5F on Figure 4-14) that will join existing gaps in the bluff trail. Equestrian use is already occurring in Wilder Ranch and the new rail trail will need to accommodate equestrian use as it connects through Wilder Ranch. The equestrian facilities may include soft-surface trail connectors adjacent to the paved path and signs addressing multi-use path etiquette and wayfinding. Current rules and regulations for equestrian use in Wilder Ranch will be applicable with the new multi-use paved path all the way to Davenport.

Subsegment 5.3 proposed improvements include:

- 3.51 miles (18,520 LF) multi-use path (Class I) along the coastal side rail right-of-way
- 0.11 miles (570 LF) native soil coastal bluff trails (Segment 5F)
- One (1) rail crossing at lower Scaroni Road
- One (1) road crossing of lower Scaroni Road and eleven (11) additional private crossings
- Fencing may be considered when project is implemented



**TABLE 4.5 Segment 5 - Davenport and Wilder Ranch**

<b>Segment Length</b>	<b>10.55 miles (55,720 LF) - Davenport and Wilder Ranch</b>
Rail Trail Portion	7.58 miles (40,040 LF)
Coastal Trail Portion	2.97 miles (15,680)
<b>Segment Cost</b>	<b>\$15,006,784</b>

Rail Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	40,040	Linear Feet	\$162	\$6,486,480
Amenities (Fencing, Benches, Signage, Etc.)	1	Lump Sum	Varies	\$1,369,220
Bridge Structures	0	Each	Varies	\$0
At-Grade Crossings (Rail Tracks or Streets)	21	Each	Varies	\$1,410,000

**Rail Trail Construction SUBTOTAL \$9,265,700**

Coastal Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Unpaved Trail	16,220	Linear Feet	\$7	\$113,540
On Street Facilities (Class II, III, and Sidewalks)	0	Linear Feet	Varies	\$0

**Coastal Trail Construction SUBTOTAL \$113,540**

COST SUMMARY	
<b>Construction TOTAL</b>	<b>\$9,379,240</b>
Design, Engineering, and PS&E (Plans, Specifications, and Estimates) (15%)	\$1,406,886
Environmental Permitting (10%)	\$937,924
Construction Management (15%)	\$1,406,886
Contingency (20%)	\$1,875,848
<b>SEGMENT TOTAL COST</b>	<b>\$15,006,784</b>

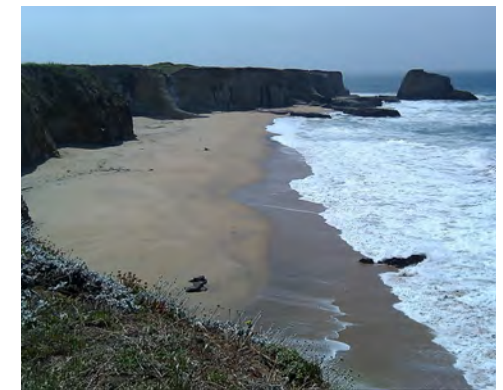
Segment Features	Description	Quantity
Segment Jurisdictional Area	State Parks, RTC - Rail ROW Owner, Caltrans	2
Minor Roadway Crossings	Scaroni Road, North and South	2
Private Road Crossings	Various non-paved Agricultural Roads	20
Trail At-Grade Railroad Crossings	Davenport, two (2) between mile markers 29.4 and 30.4	3
Rail Bridge Crossing (Wood Trestle)	Old Dairy Gulch	2
Minor Drainage	Multiple	14
Existing Staging Areas/Rest Stops	Bonny Doon Beach, Yellowbank Beach, Wilder Ranch	5
Connection To Other Trails	Wilder Ranch Trail System, Inland and Coastal Bluffs	2
Connection to Public Beaches	Davenport, Bonny Doon, Yellowbank, Laguna Creek Beach, Red-White-and-Blue, 4-Mile, 3-Mile, Sand Plant and Wilder Beaches	9
Connection to Passive Park		1



*Potential trail alignment adjacent to railroad tracks*



*Wilder Ranch trailhead with restrooms, drinking water, vehicle parking, and bike racks*



*Scenic overlook from coastal bluff trail*



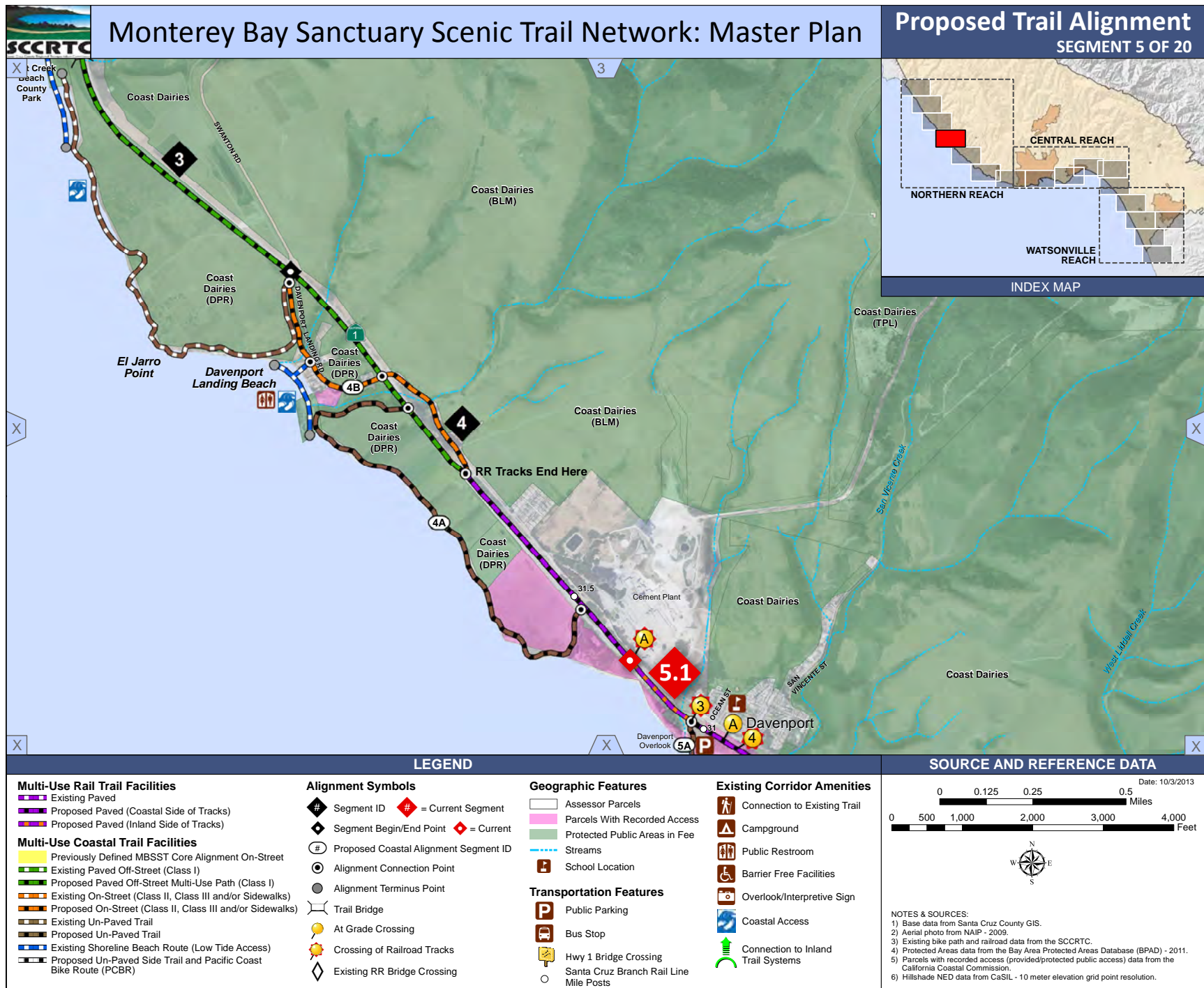


Figure 4-12 Segment 5 proposed trail alignment

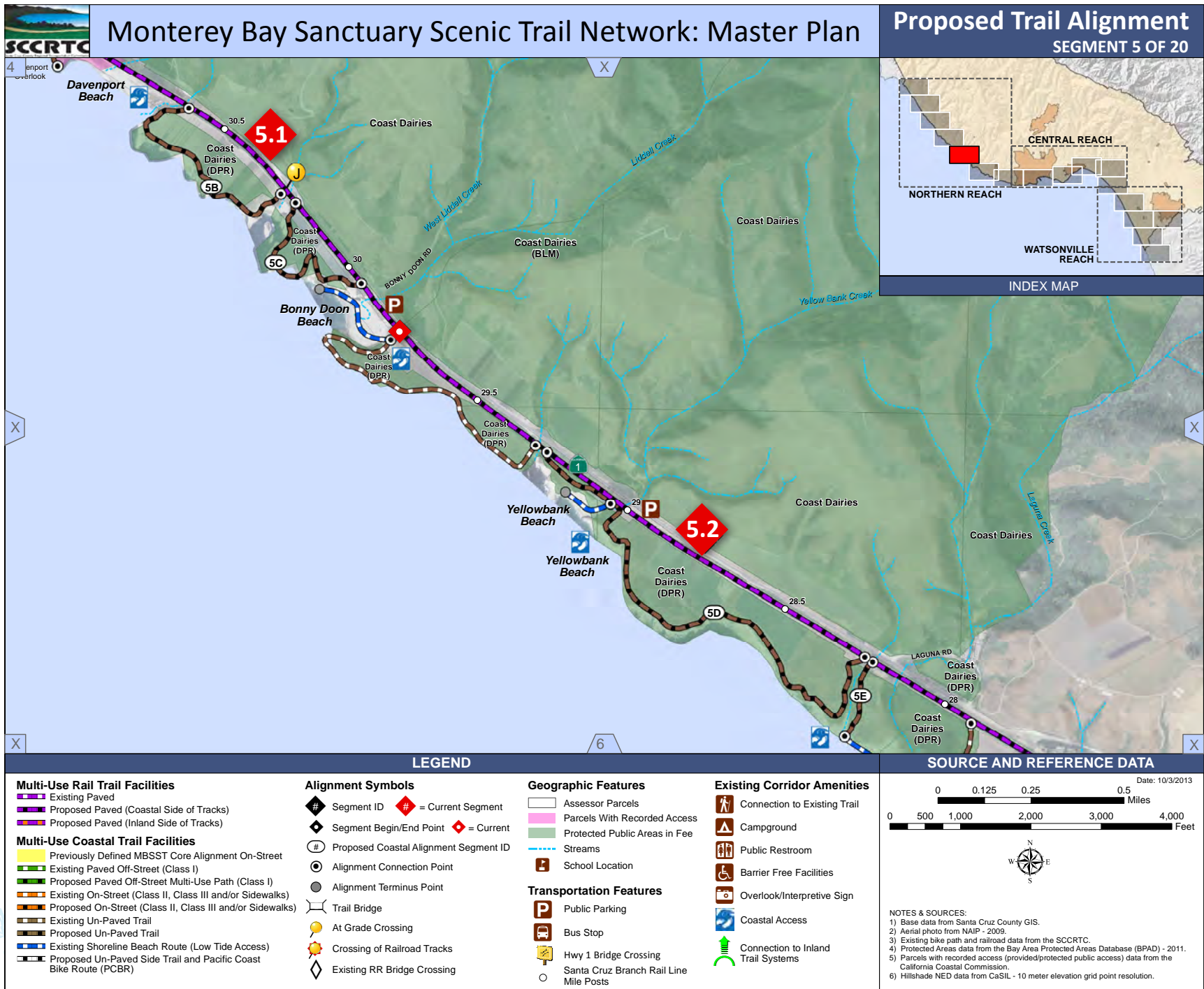


Figure 4-13 Segment 5 proposed trail alignment (continued)



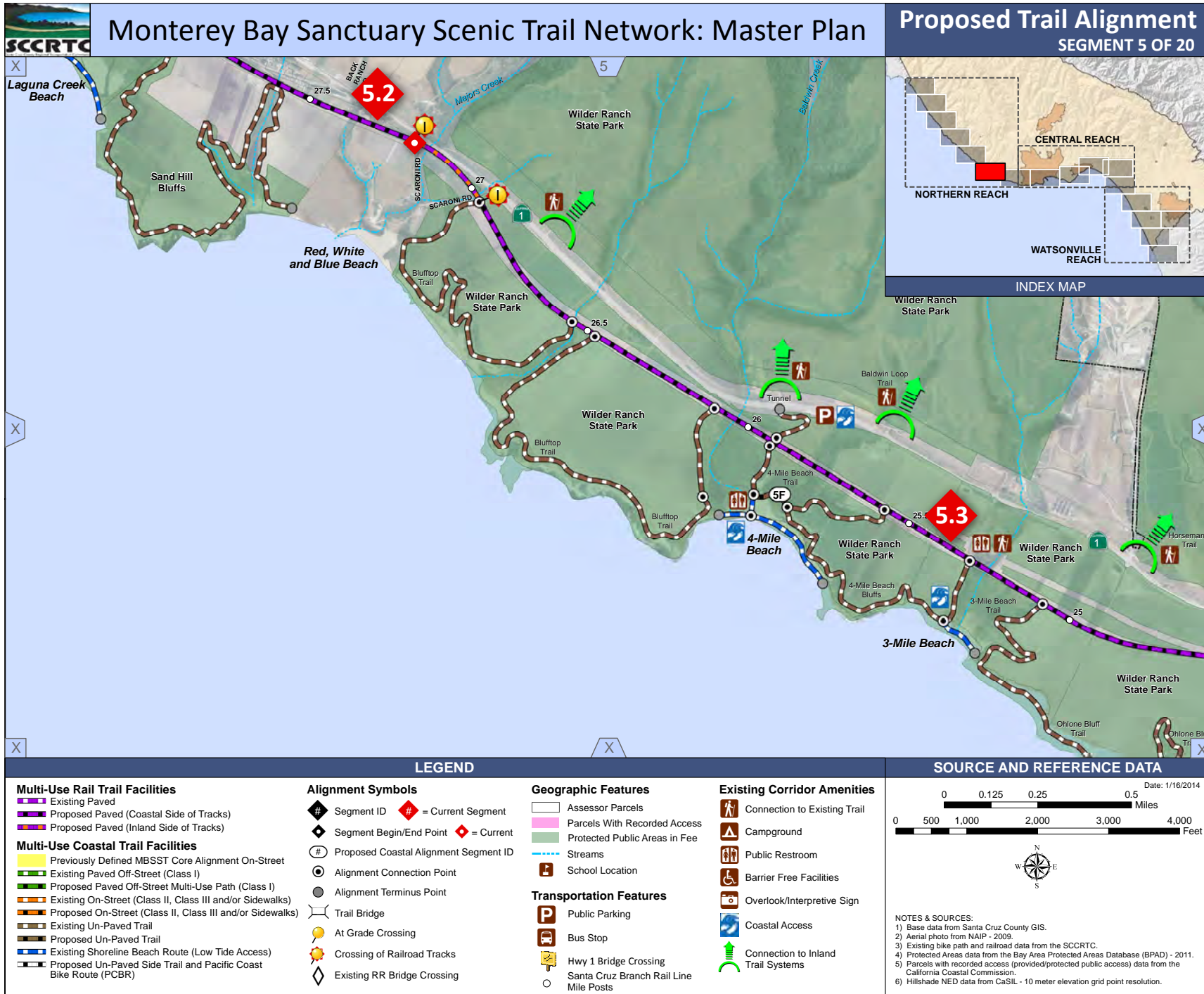


Figure 4-14 Segment 5 proposed trail alignment (continued)

**Monterey Bay Sanctuary Scenic Trail Network: Master Plan**

**Proposed Trail Alignment**  
SEGMENT 5 OF 20

**INDEX MAP**

**LEGEND**

**Multi-Use Rail Trail Facilities**

- Existing Paved
- Proposed Paved (Coastal Side of Tracks)
- Proposed Paved (Inland Side of Tracks)

**Multi-Use Coastal Trail Facilities**

- Previously Defined MBST Core Alignment On-Street
- Existing Paved Off-Street (Class I)
- Proposed Paved Off-Street Multi-Use Path (Class I)
- Existing On-Street (Class II, Class III and/or Sidewalks)
- Proposed On-Street (Class II, Class III and/or Sidewalks)
- Existing Un-Paved Trail
- Proposed Un-Paved Trail
- Existing Shoreline Beach Route (Low Tide Access)
- Proposed Un-Paved Side Trail and Pacific Coast Bike Route (PCBR)

**Alignment Symbols**

- Segment ID
- Segment Begin/End Point
- Proposed Coastal Alignment Segment ID
- Alignment Connection Point
- Alignment Terminus Point
- Trail Bridge
- At Grade Crossing
- Crossing of Railroad Tracks
- Existing RR Bridge Crossing

**Geographic Features**

- Assessor Parcels
- Parcels With Recorded Access
- Protected Public Areas in Fee
- Streams
- School Location

**Transportation Features**

- Public Parking
- Bus Stop
- Hwy 1 Bridge Crossing
- Santa Cruz Branch Rail Line Mile Posts

**Existing Corridor Amenities**

- Connection to Existing Trail
- Campground
- Public Restroom
- Barrier Free Facilities
- Overlook/Interpretive Sign
- Coastal Access
- Connection to Inland Trail Systems

**SOURCE AND REFERENCE DATA**

0 0.125 0.25 0.5 Miles  
0 500 1,000 2,000 3,000 4,000 Feet

Date: 1/16/2014

**NOTES & SOURCES:**

- Base data from Santa Cruz County GIS.
- Aerial photo from NAIP - 2009.
- Existing bike path and railroad data from the SCCRTC.
- Protected Areas data from the Bay Area Protected Areas Database (BPAD) - 2011.
- Parcels with recorded access (provided/protected public access) data from the California Coastal Commission.
- Hillshade NED data from CaSIL - 10 meter elevation grid point resolution.

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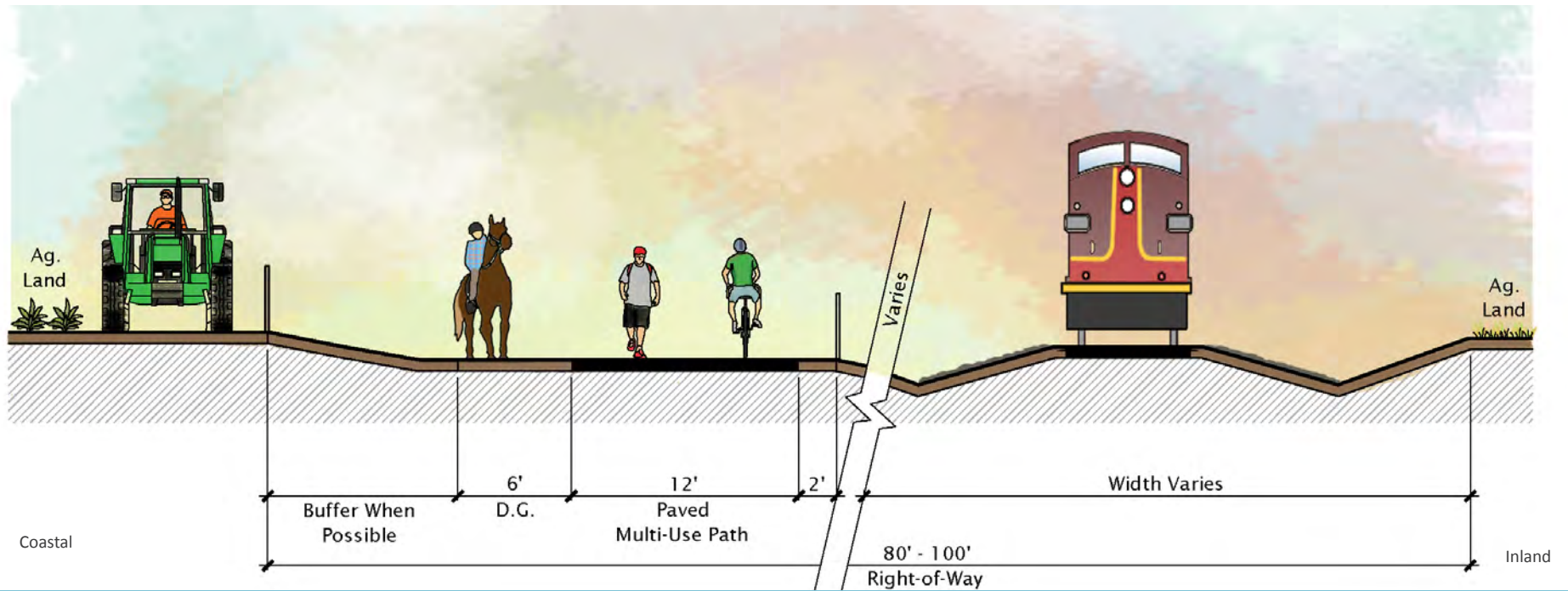


Figure 4-16a Segment 5 trail section

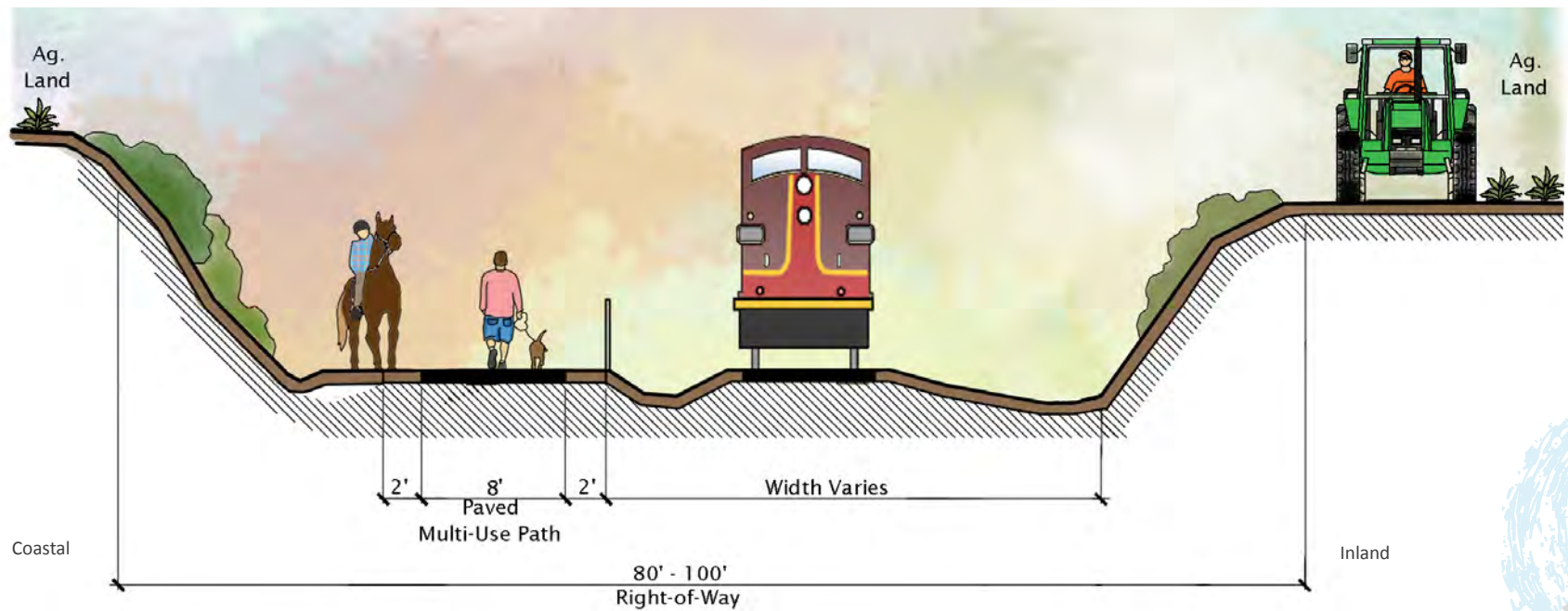


Figure 4-16b Segment 5 trail section with slope constraint







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*Wilder Ranch trailhead, coastal trail, and railroad tracks*







Bridge crossing over Antonelli Pond - needs new bridge to accommodate bikes and pedestrians



Antonelli Pond from the Moore Creek rail trestle bridge



Highway 1 proximity to railroad tracks - looking south

## 4.6 SEGMENT 6 - WILDER RANCH TRAILHEAD TO SHAFFER ROAD

Length: 1.49 miles (7,830 LF) - Wilder Ranch trailhead to Moore Creek

### 4.6.1 SEGMENT 6 BOUNDARY DETERMINATION

The Segment 6 boundary is delineated by both the existing trailhead facilities at Wilder Ranch and the existing, parallel multi-use trail system from Wilder Ranch trailhead down the coast past Shaffer Road, connecting to an existing unpaved trail at upper Antonelli Pond. This segment of the proposed Coastal Rail Trail has some level of duplication with the existing Wilder Ranch Class I multi-use facilities running parallel to the proposed Segment 6 along the coastal side of Highway 1. The northern connection point for Segment 6 occurs at the existing Old Cove Landing rail crossing from the Wilder Ranch trailhead. This is a good starting point for bikes and pedestrians to connect to the proposed Coastal Rail Trail. The existing Wilder Ranch staging area provides equestrian parking and a connection to 1.4 miles of equestrian trail facilities located within Segment 6. The Wilder Ranch trailhead also provides a regional rest stop with water, restrooms, and other trail support facilities. The terminus point for Segment 6 occurs down the coast to Shaffer Road on the northernmost side of Moore Creek rail bridge trestle crossing near Antonelli Pond.

### 4.6.2 SEGMENT 6 DESCRIPTION

Wilder Ranch State Park offers multiple existing trail alignments from its regional trailhead out to the coastal bluff tops and beaches. The trails connect to beaches within Wilder Ranch State Park up and down the coastal edge. Panther Beach at the mouth of Majors Creek; 4 Mile Beach at the mouth of Baldwin Creek; 3 Mile Beach, Sand Plant Beach, Fern Grotto, and Wilder Beach at the south end of the state park. A trail bridge crossing option is proposed across Antonelli Pond closer to Delaware Avenue, providing a shorter bridge span shown in Segment 6A. The proposed Segment 6 trail alignment continues down the coast through the center of Wilder Ranch State Park as it crosses Shaffer Road to the upper edge of the Moore Creek train trestle. The Wilder Ranch State Park trailhead provides parking, restrooms, and equestrian parking, and serves both travelers arriving by car or along the existing multi-use trail. An existing below-grade tunnel crossing of Highway 1 provides connectivity to existing trails leading to inland portions of the Wilder Ranch State Park trail network and the University of California Santa Cruz campus land. This segment is in proximity to seventeen (17) activity centers identified in Table 3.1. Although not evaluated as part of the project, a boardwalk-type treatment may be considered at a later date for a crossing over Antonelli Pond.

Segment 6 proposed improvements include:

- 1.36 miles (7,160 LF) multi-use paved path (Class I) along the coastal side of the rail right-of-way
- 0.13 miles (670 LF) native soil coastal bluff trails (Segment 6A)
- One (1) road crossing of Schaffer Road
- Two (2) culvert crossings up the coast from Wilder Ranch trailhead and three (3) additional private crossings
- Fencing may be considered when project is implemented



**TABLE 4.6 Segment 6 - Wilder Ranch Trailhead/Shaffer Road**

<b>Segment Length</b>	<b>1.49 miles (7,830 LF) - Wilder Ranch Trailhead/Shaffer Road</b>
Rail Trail Portion	1.36 miles (7,160 LF)
Coastal Trail Portion	0.13 miles (670 LF)
<b>Segment Cost</b>	<b>\$3,114,224</b>

Rail Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	7,160	Linear Feet	\$162	\$1,159,920
Amenities (Fencing, Benches, Signage, Etc.)	1	Lump Sum	Varies	\$469,100
Bridge Structures	0	Each	Varies	\$0
At-Grade Crossings (Rail Tracks or Streets)	6	Each	Varies	\$310,000
<b>Rail Trail Construction SUBTOTAL</b>				<b>\$1,939,020</b>

Coastal Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Unpaved Trail	670	Linear Feet	\$11	\$7,370
On Street Facilities (Class II, III, and Sidewalks)	0	Linear Feet	Varies	\$0
<b>Coastal Trail Construction SUBTOTAL</b>				<b>\$7,370</b>

<b>COST SUMMARY</b>	
<b>Construction TOTAL</b>	<b>\$1,946,390</b>
Design, Engineering, and PS&E (Plans, Specifications, and Estimates) (15%)	\$291,959
Environmental Permitting (10%)	\$194,639
Construction Management (15%)	\$291,959
Contingency (20%)	\$389,278
<b>SEGMENT TOTAL COST</b>	<b>\$3,114,224</b>

Segment Features	Description	Quantity
Segment Jurisdictional Area	State Parks, RTC - Rail ROW Owner	2
Private Road Crossings	Un-paved access roads	3
Major Drainage	Antonelli Pond/Moore Creek	1
Minor Drainage	Various	3
Existing Staging Areas/Rest Stops	Wilder Ranch	1
Connection To Other Trails	Wilder Ranch Trail System	3
Connection to Public Beaches	Wilder Beach, Younger Lagoon	2
Connection to Passive Park	Wilder Ranch State Park/Antonelli Pond	2
Connection to Sports Park		



*Antonelli Pond trail sign*



*Old Cove Landing Trail sign*



*Informal crossing at Shaffer Road*



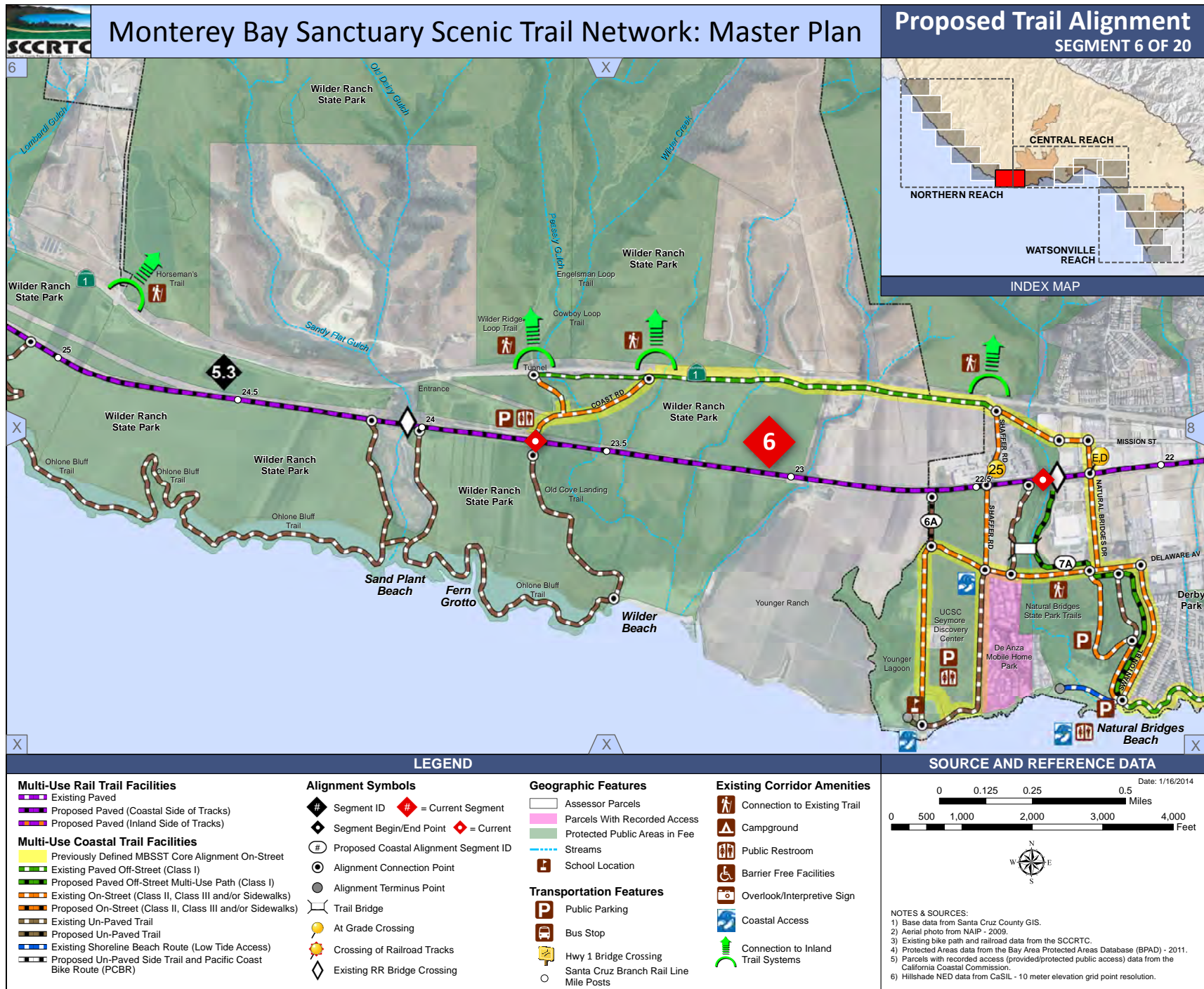


Figure 4-17 Segment 6 proposed trail alignment

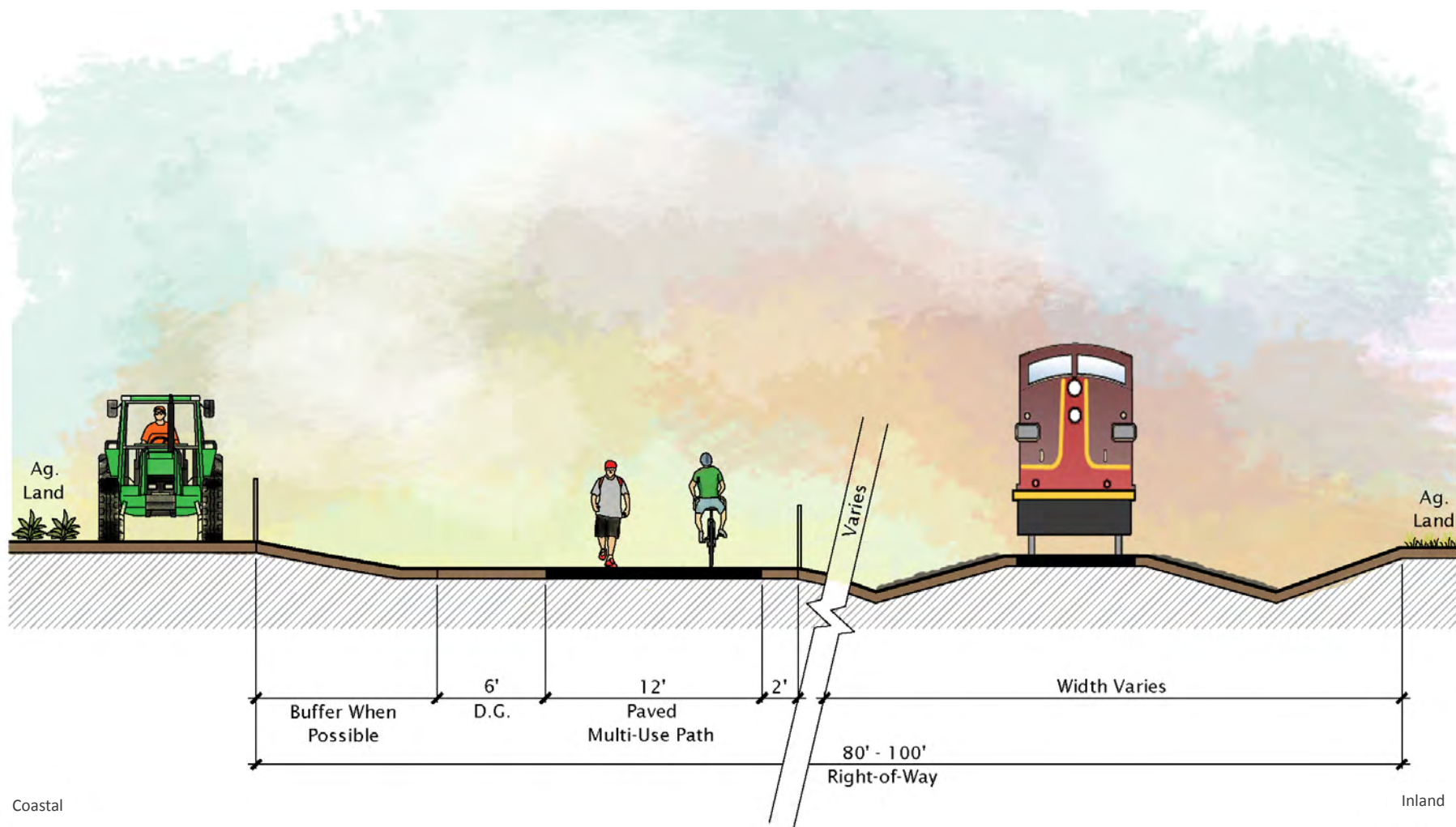


Figure 4-18 Segment 6 trail section



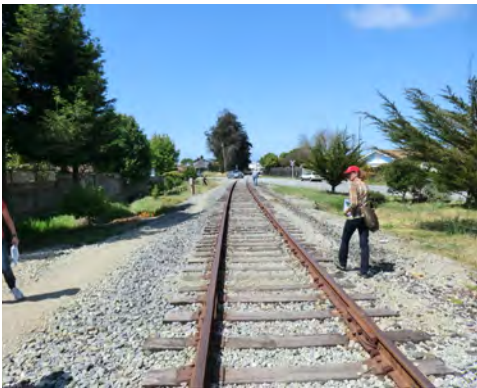




*Areas with excess right-of-way or underutilized land have potential to become trail staging areas*



*Vacant parcel south of the intersection of Rankin Street at Almar Avenue*



*Rail right-of-way at Seaside Street*

## 4.7

## SEGMENT 7 - COASTAL SANTA CRUZ

Length: 3.10 miles (16,340 LF) - Antonelli Pond to Pacific Avenue and Beach Street intersection

### 4.7.1

### SEGMENT 7 BOUNDARY DETERMINATION

The boundary for Segment 7 was determined due to its proximity to the Moore Creek rail trestle bridge, which serves as a logical segment start/end point as it presents a significant funding constraint. A parallel preengineered bridge on the coastal side of the rail trestle will be needed to cross Moore Creek. The segment terminus occurs down the coast near Depot Park in the city of Santa Cruz at the intersection of Beach Street and Coastal Cliff Drive. The Depot Park area includes a trailhead with vehicle parking, bicycle racks, playground, train depot, and trail connection to the Monterey Bay National Marine Exploration Center. The existing trailhead amenities provide an ideal start/end point that connects residential neighborhoods, schools, commercial, tourist destinations, coastal access, and industrial employment centers.

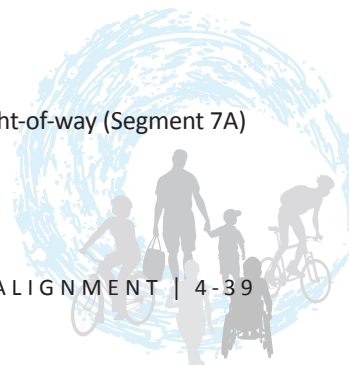
### 4.7.2

### SEGMENT 7 DESCRIPTION

The rail alignment setting changes significantly in this segment of the Central Reach. This segment of the proposed Coastal Rail Trail is at the epicenter of several existing trail system networks, as well as recreational facilities such as Wilder Ranch State Park, Younger Lagoon Reserve, Antonelli Pond Park, and Natural Bridges State Beach, and connectors to the Cliff Drive coastal walk. Beginning at the Moore Creek rail trestle bridge and heading down the coast, the rail line crosses an existing at-grade street crossing at Natural Bridges Drive and then travels down the coast through industrial, commercial, and residential areas for the next several miles. This segment of the rail line is flat and open with numerous at-grade street crossings. The proposed trail facility will follow within the rail right-of-way on the coastal side of the rail tracks with at-grade crossings at Swift Street, Fair Avenue, Almar Avenue, and Rankin Street. The Rankin Street at-grade crossing will provide an opportunity for the trail to cross from the coastal side of the tracks to the inland side and parallel the inland side rail right-of-way toward Neary Lagoon Park. The Rankin Street to Neary Lagoon stretch will involve up to six (6) additional at-grade residential street crossings. These residential streets are characterized by fairly slow vehicle speeds and low-volume traffic. The trail facility will follow the inland rail right-of-way to Neary Lagoon Park, where it will eventually cross two (2) diverter rail tracks to connect with the existing rail trail at Depot Park. The rail tracks are elevated above where Neary Lagoon is likely to flood during winter. The Coastal Rail Trail should also be elevated to the level of the rail to avoid flooding of the trail during winter. The two (2) diverter track crossings at Neary Lagoon Park will be incorporated with two (2) existing unsignalized maintenance vehicle rail at-grade crossings in the same general location. The proposed Coastal Rail Trail will connect with the existing Depot Park staging area. The existing Coastal Rail Trail from Depot Park parallels the rail track on the inland side, connects to the new Monterey Bay National Marine Sanctuary Exploration Center, and terminates at the Pacific Avenue and Beach Street intersection. The portion of the existing Coastal Rail Trail that is adjacent to the Exploration Center is only six (6) feet wide and will require upgrades to match the proposed minimum standard width of eight (8) feet when this segment of the trail facility is implemented. Segment 7 is in proximity to nine (9) different activity centers identified in Table 3.1.

Segment 7 proposed improvements include:

- 2.17 miles (11,450 LF) multi-use paved path (Class I) along rail right-of-way
- 0.08 miles (410 LF) on-street bike route
- 0.85 miles (4,480 LF) multi-use paved path (Class I) along the coastal side of the rail right-of-way (Segment 7A)
- Fourteen (14) street crossings
- Three (3) rail crossings and one (1) additional private crossing
- One (1) preengineered bike bridge (Moore Creek crossing)
- Existing staging area at Depot Park
- Fencing may be considered when project is implemented



**TABLE 4.7 Segment 7 - Coastal Santa Cruz**

<b>Segment Length</b>	<b>3.10 miles (16,340 LF) - Coastal Santa Cruz</b>
Rail Trail Portion	2.17 miles (11,450)
Coastal Trail Portion	0.93 miles (4,890 LF)
<b>Segment Cost</b>	<b>\$11,218,016</b>

Rail Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	11,450	Linear Feet	Varies	\$1,854,900
Amenities (Fencing, Benches, Signage, Etc.)	1	Lump Sum	Varies	\$580,600
Bridge Structures	1	Each	Varies	\$2,500,000
Staging Area Access	1	Each	\$80,000	\$80,000
At-Grade Crossings (Rail Tracks or Streets)	18	Each	Varies	\$1,270,000
<b>Rail Trail Construction SUBTOTAL</b>				<b>\$6,285,500</b>

Coastal Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	4,480	Linear Feet	Varies	\$725,760
Unpaved Trail	0	Linear Feet	Varies	\$0
On Street Facilities (Class II, III, and Sidewalks)	0	Linear Feet	\$20	\$0
<b>Coastal Trail Construction SUBTOTAL</b>				<b>\$725,760</b>

<b>COST SUMMARY</b>	
<b>Construction TOTAL</b>	<b>\$7,011,260</b>
Design, Engineering, and PS&E (Plans, Specifications, and Estimates) (15%)	\$1,051,689
Environmental Permitting (10%)	\$701,126
Construction Management (15%)	\$1,051,689
Contingency (20%)	\$1,402,252
<b>SEGMENT TOTAL COST</b>	<b>\$11,218,016</b>

Segment Features	Description	Quantity
Segment Jurisdictional Area	State Parks, RTC - Rail ROW Owner, City of Santa Cruz	3
Major Roadway Crossings	Natural Bridges Drive, Rankin Street	3
Minor Roadway Crossings	Various residential streets	11
Trail At-Grade Railroad Crossings	Rankin Street/Two crossings at Depot Park	3
Major Drainage	Antonelli Pond/ Moore Creek	1
Minor Drainage	Various	3
Rail Bridge Crossing (Wood Trestle)	Antonelli Pond/Moore Creek	1
Existing Staging Areas/Rest Stops	Wilder Ranch	1
Connection To Other Trails	Wilder Ranch Trail System	3
Within 1/4 mile of Public School	Pacific Collegiate School, Gateway School, United Methodist Church School, Bayview Elementary	5
Connection to Public Beach	Wilder Beach, Younger Lagoon	2
Connection to Commercial Area	Multiple	5
Connection to Residential Area	Multiple	4
Connection to Passive Park	Wilder Ranch/Neary Lagoon Park/Depot Site Park	3



*Intersection of Beach Street with Front Street, Marine Sanctuary Exploration Center in the background*



*Safety challenges are present at the intersection of Beach Street and Pacific Ave*



*Two-way cycle track separated from vehicles and pedestrians*



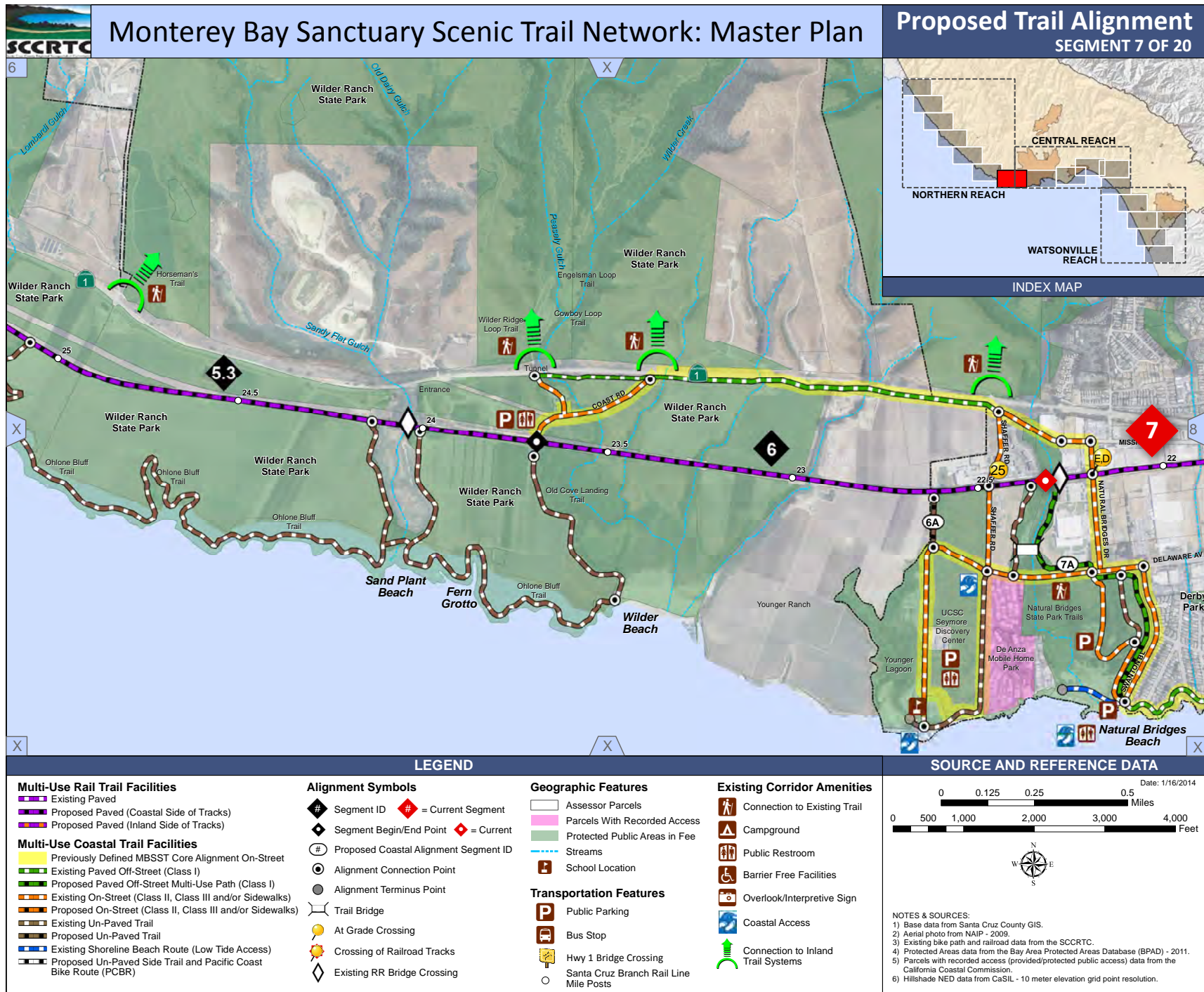


Figure 4-19 Segment 7 proposed trail alignment



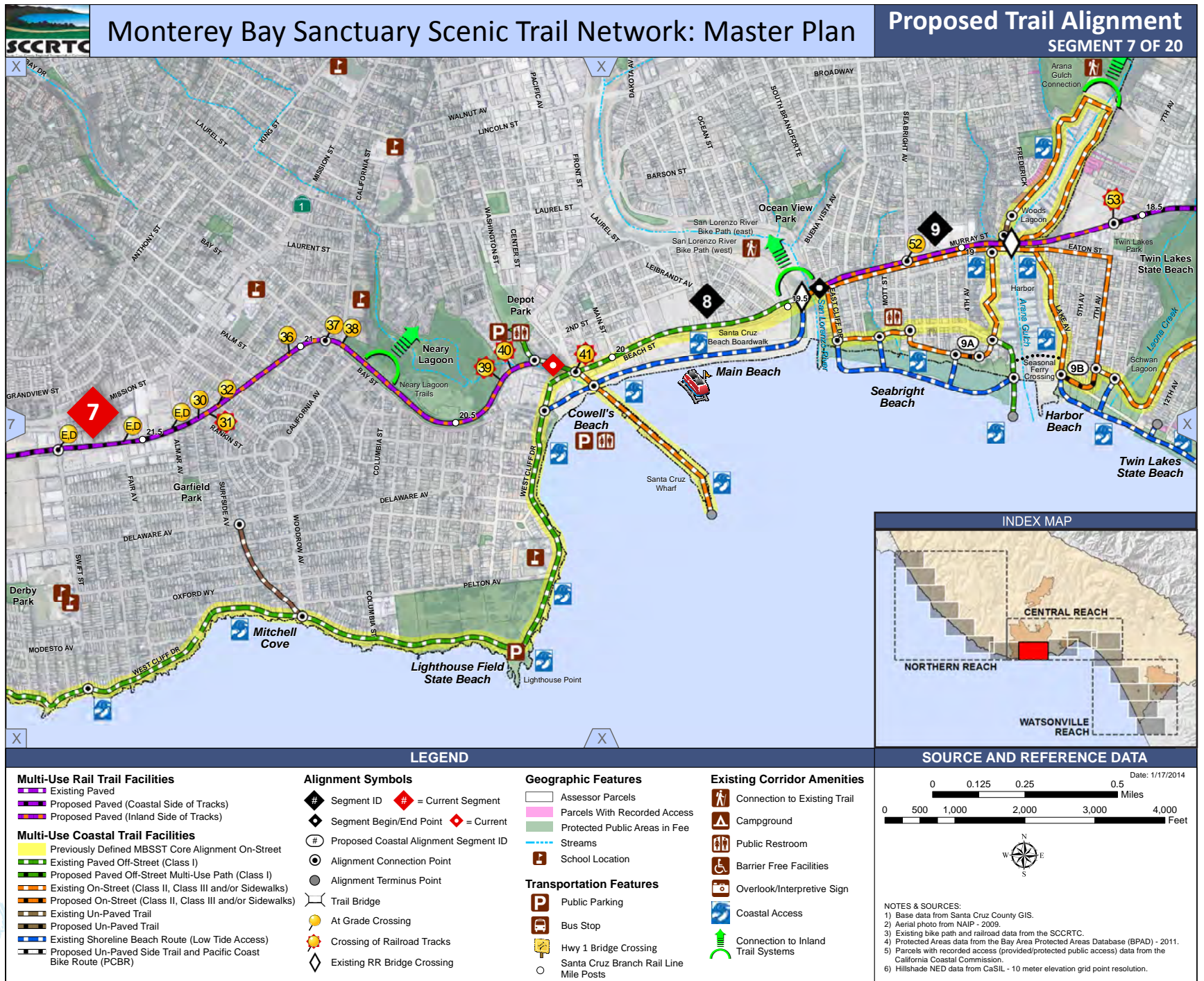


Figure 4-20 Segment 7 proposed trail alignment (continued)



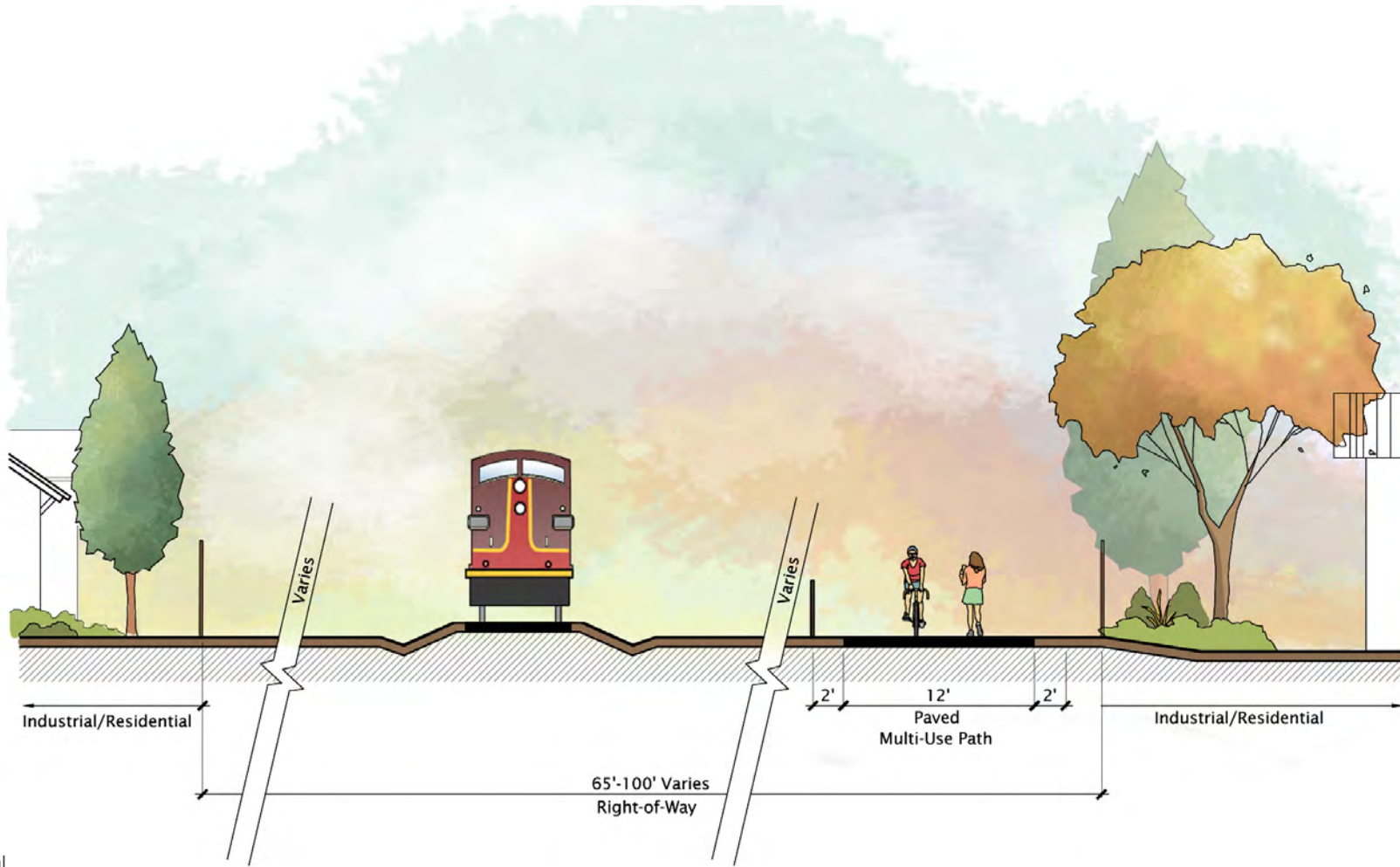


Figure 4-21 Segment 7 trail section





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*Cowell's Beach with railroad tracks emerging from trees*







*Santa Cruz Beach Boardwalk*



*Bike racks at the Santa Cruz Beach Boardwalk*



*Two-way cycle track adjacent to Santa Cruz Beach Boardwalk*

## 4.8 SEGMENT 8 - SANTA CRUZ BEACH BOARDWALK

Length: 0.77 miles (4,070 LF) - Beach Street intersection to San Lorenzo Rail Bridge Crossing

### 4.8.1 SEGMENT 8 BOUNDARY DETERMINATION

The boundaries for Segment 8 are determined by a well-defined existing facility that runs along Beach Street and the Santa Cruz Beach Boardwalk. It extends from Beach Street and the Pacific Street intersection to the San Lorenzo River Railroad Bridge.

### 4.8.2 SEGMENT 8 DESCRIPTION

This existing segment of the trail alignment consists of a two-way cycle track, which follows the coastal side of Beach Street to the San Lorenzo River Rail Bridge. The two-way cycle track continues between the pedestrian beach boardwalk and the one-way travel lanes along Beach Street. The rail tracks traverse down the middle of Beach Street's two-lane, one-way street. The bike path crosses the rail tracks mid-block as the rail line merges to the rail bridge crossing of the San Lorenzo River. The existing bike path currently crosses the train tracks at an extreme angle, posing a problem for bike tires crossing the rail track openings and creating poor visibility of cyclist and train operators where the tracks and trail converge. The existing cycle track terminates at Beach Street and 3rd Street with a short gap through a public parking lot to connect to the San Lorenzo River Trail system. Bicyclist and pedestrians continue down the coast and across the San Lorenzo River using the existing, narrow, rail bridge pedestrian crossing. A new preengineered bike and pedestrian bridge will be proposed to cross the San Lorenzo River. There are up to fifty-three (53) activity centers in proximity of Segment 8. Details can be found in Table 3.1

Segment 8 proposed improvements include:

- 0.77 miles (4,070 LF) existing Class II bike lanes
- One (1) new preengineered bike and pedestrian bridge, four hundred- (400-) foot span
- Improvements of striping to existing cycle track with future roadway roundabout at Pacific Avenue and Beach Street (2000 LF)
- Upgrade existing rail trail to the minimum eight- (8-) foot standard from Depot Park to the intersection of Pacific Avenue and Beach Street
- One (1) rail crossing with upgrades to Beach Street and Pacific Avenue intersection
- Two (2) street crossings with upgrades to Beach Street and Pacific Avenue intersection
- Fencing may be considered when project is implemented



**TABLE 4.8 Segment 8 - Santa Cruz Beach Boardwalk**

<b>Segment Length</b>	<b>0.77 miles (4,070 LF) - Santa Cruz Beach Boardwalk</b>
Rail Trail Portion	0.0 miles (0 LF)
Coastal Trail Portion	0.77 miles (4,070 LF)
<b>Segment Cost</b>	<b>\$10,314,240</b>

Rail Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Amenities (Fencing, Benches, Signage, Etc.)	1	Lump Sum	Varies	\$56,400
Bridge Structures	1	Each	Varies	\$6,000,000
At-Grade Crossings (Rail Tracks or Streets)	3	Each	Varies	\$350,000

**Rail Trail Construction SUBTOTAL \$6,406,400**

Coastal Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Unpaved Trail	0	Linear Feet	Varies	\$0
On Street Facilities (Class II, III, and Sidewalks)	2,000	Linear Feet	\$20	\$40,000

**Coastal Trail Construction SUBTOTAL \$40,000**

**COST SUMMARY**

<b>Construction TOTAL</b>	<b>\$6,446,400</b>
Design, Engineering, and PS&E (Plans, Specifications, and Estimates) (15%)	\$966,960
Environmental Permitting (10%)	\$644,640
Construction Management (15%)	\$966,960
Contingency (20%)	\$1,289,280
<b>SEGMENT TOTAL COST</b>	<b>\$10,314,240</b>

Segment Features	Description	Quantity
Segment Jurisdictional Area	RTC - Rail ROW Owner, City of Santa Cruz	2
Major Roadway Crossings	Beach and West Cliff	1
Trail At-Grade Railroad Crossings	Existing Crossing on Beach Street	1
Rail Bridge Crossing (Wood Trestle)	Existing Crossing on San Lorenzo Bridge	1
Railroad right-of-way, 35' wide or less	At existing San Lorenzo Bridge Location	1
Major Drainage	San Lorenzo River (existing bridge crossing)	1
Existing Staging Areas/Rest Stops	New Visitor Center/Santa Cruz Beach Wharf/Boardwalk	3
Connection To Other Trails	San Lorenzo River Trail System	1
Connection to Public Beach	Cowell's Beach, Main Beach	2
Connection to Commercial Area	Downtown Santa Cruz	1
Connection to Residential Area	Multiple	2
Connection to Passive Park	Main Beach/Cowell's Beach	2



*Cycle track adjacent to boardwalk*



*Entrance sign to the Santa Cruz Wharf*



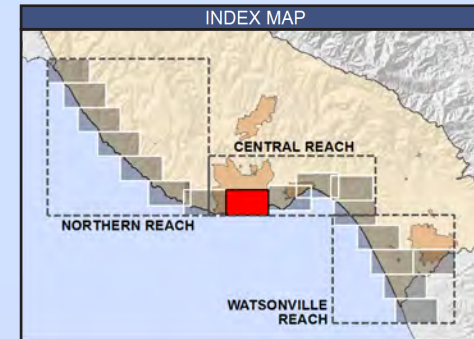
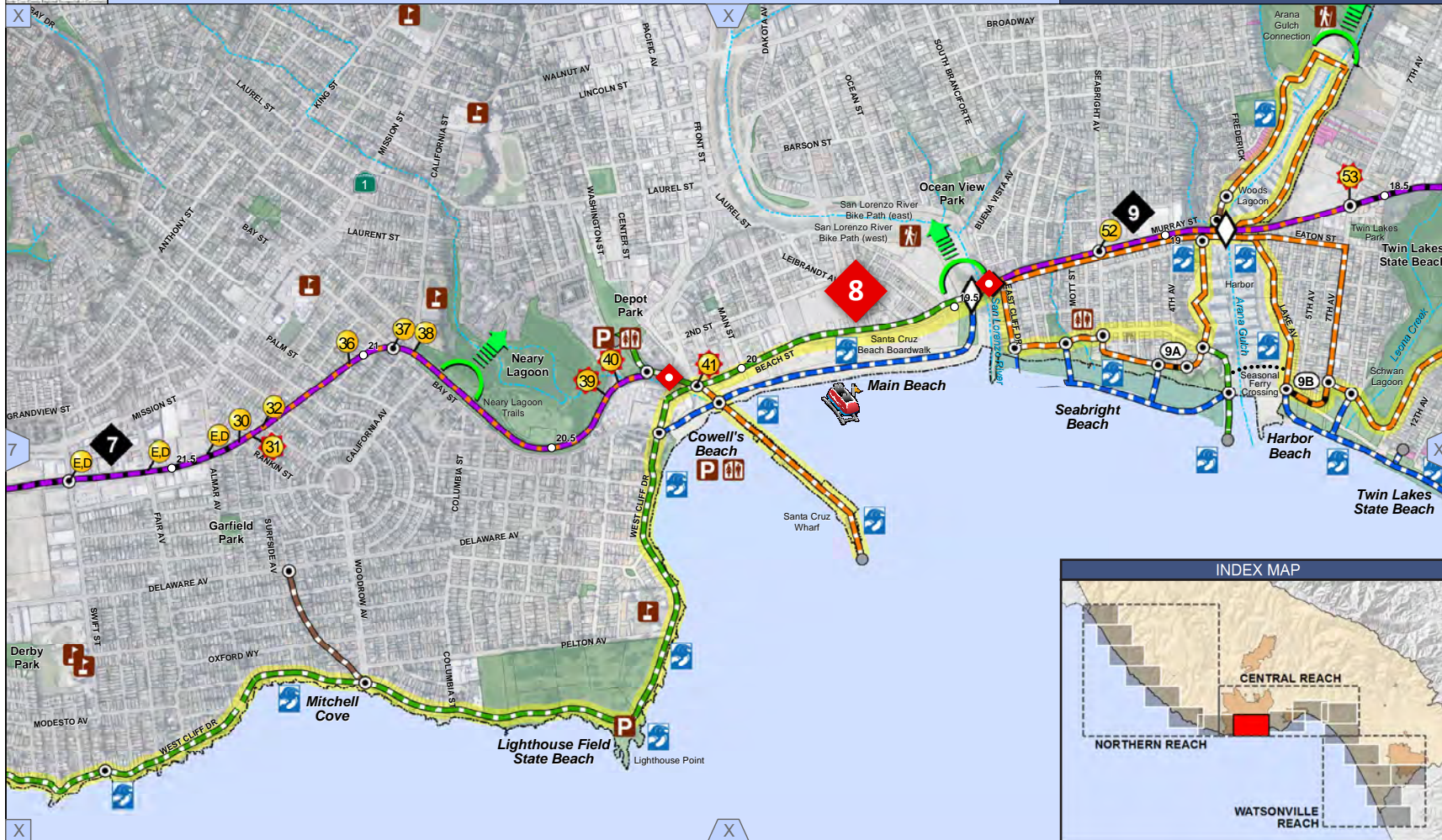
*Rail track interface*





# Monterey Bay Sanctuary Scenic Trail Network: Master Plan

## Proposed Trail Alignment SEGMENT 8 OF 20



LEGEND			
<b>Multi-Use Rail Trail Facilities</b>		<b>Alignment Symbols</b>	
Existing Paved		Segment ID	
Proposed Paved (Coastal Side of Tracks)		Segment Begin/End Point	
Proposed Paved (Inland Side of Tracks)		Proposed Coastal Alignment Segment ID	
<b>Multi-Use Coastal Trail Facilities</b>		Alignment Connection Point	
Previously Defined MBSST Core Alignment On-Street		Alignment Terminus Point	
Existing Paved Off-Street (Class I)		Trail Bridge	
Proposed Paved Off-Street Multi-Use Path (Class I)		At Grade Crossing	
Existing On-Street (Class II, Class III and/or Sidewalks)		Crossing of Railroad Tracks	
Proposed On-Street (Class II, Class III and/or Sidewalks)		Existing RR Bridge Crossing	
Existing Un-Paved Trail		<b>Geographic Features</b>	
Proposed Un-Paved Trail		Assessor Parcels	
Existing Shoreline Beach Route (Low Tide Access)		Parcels With Recorded Access	
Proposed Paved Side Trail and Pacific Coast Bike Route (PCBR)		Protected Public Areas in Fee	
		Streams	
		School Location	
		<b>Transportation Features</b>	
		Public Parking	
		Bus Stop	
		Hwy 1 Bridge Crossing	
		Santa Cruz Branch Rail Line Mile Posts	
		<b>Existing Corridor Amenities</b>	
		Connection to Existing Trail	
		Campground	
		Public Restroom	
		Barrier Free Facilities	
		Overlook/Interpretive Sign	
		Coastal Access	
		Connection to Inland Trail Systems	

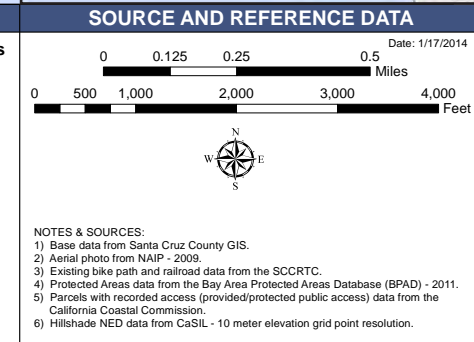


Figure 4-22 Segment 8 proposed trail alignment

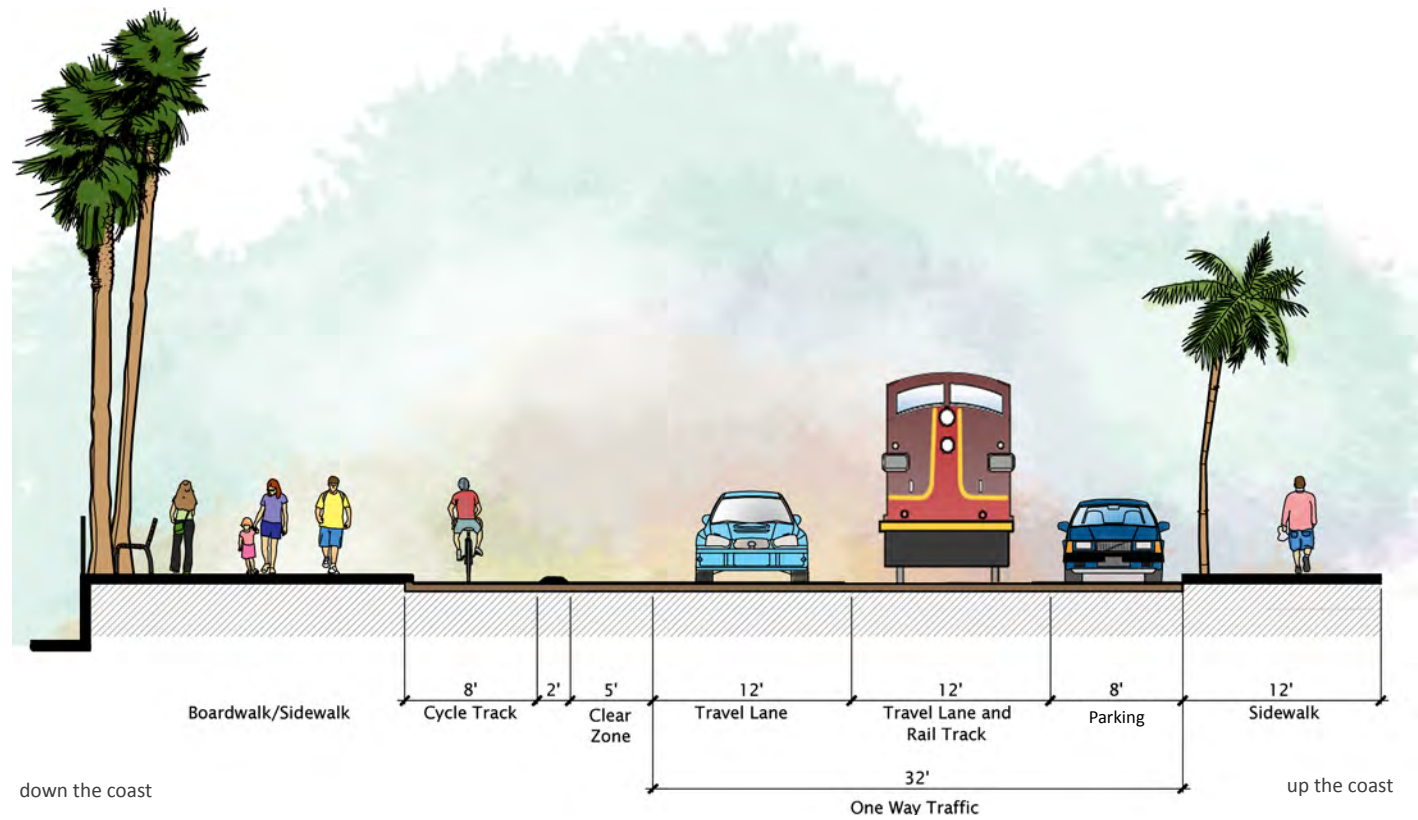


Figure 4-23 Segment 8 trail section







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*Santa Cruz Beach Boardwalk*







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*Santa Cruz Beach Boardwalk with railroad bridge*





## 4.9 SEGMENT 9 - TWIN LAKES

Length: 1.73 miles (9,140 LF) - coastal side of San Lorenzo Rail Bridge to 17th Avenue

### 4.9.1 SEGMENT 9 BOUNDARY DETERMINATION

The boundaries for Segment 9 are based on connections to existing facilities at the San Lorenzo Bridge crossing down the coast to the 17th Avenue entrance to the Simpkins Swim Center. This segment of the proposed alignment will make a significant, safe, multi-use path connection from the Main Beach waterfront and the San Lorenzo River to the harbor, Twin Lakes State Beach, and the neighborhoods surrounding the Simpkins Swim Center

### 4.9.2 SEGMENT 9 DESCRIPTION

The existing San Lorenzo River Rail Bridge offers pedestrian access on the bridge superstructure. The attached pedestrian walkway on the inland side of the rail bridge is narrow and difficult to accommodate passing pedestrians and cyclists walking their bikes across the bridge. The current pedestrian and bike access along Murray Street down the coast to Seabright Avenue is primarily an on-street Class II bike lane and a four- (4-) foot-wide sidewalk on the coastal side of Murray Street. The sidewalk on Murry Street ends at Mott Avenue, one (1) block before Seabright Avenue, and merges onto the small frontage street of Murray, connecting to Seabright Avenue. The city of Santa Cruz has plans to add a designated right-turn lane to the westbound side of Murray Street at Seabright to help with through traffic flow. The proposed Coastal Rail Trail continues down the coast to 7th Avenue. The 7th Avenue at-grade railroad crossing provides a safe rail track crossing for the proposed Coastal Rail Trail to switch from the inland side of the tracks to the coastal side of the rail tracks to eventually cross Twin Lakes State Beach to Simpkins Swim Center.

There are two (2) existing bridges crossing Woods Lagoon (the Santa Cruz small craft harbor) along Murray Street—one (1) is the existing rail bridge and the other is the existing Murray Street roadway bridge paralleling the coastal side of the rail bridge. The four- (4-) foot-wide bike lanes continue across the existing narrow vehicle bridge along with the four- (4-) foot-wide sidewalk located on the coastal side of the bridge. At the bridge abutment there are pedestrian stairs leading from the Murray Street corridor down to the existing trail system within Woods Lagoon/harbor. There are plans to retrofit the existing vehicle bridge crossing at this location, which will include upgrades to pedestrian and bike facility crossings of Woods Lagoon/harbor. As the rail bridge and Murray Street bridge head down the coast across Woods Lagoon, the Murray Street and rail alignments begin to pull away from one another. Murray Street merges into Eaton Street and eventually ends just past 7th Avenue. The existing bike lanes and sidewalks continue down Eaton Street to 7th Avenue. The railroad alignment continues down the coast after the harbor crossing, and the right-of-way opens up down the corridor toward Schwan Lagoon. A new preengineered trail bridge will be needed running parallel to the rail bridge at upper Schwan Lagoon, as will a smaller preengineered trail bridge (or large culvert) crossing at a drainage between Live Oak and El Dorado Avenues. A new bike and pedestrian at-grade crossing is proposed adjacent to the Simpkins Family Swim Center parking lot to access El Dorado Avenue on the inland side of the tracks. The proposed Coastal Rail Trail will parallel the Simpkins Family Swim Center to 17th Avenue. Segment 9 connects to forty-six (46) activity centers and multiple residential neighborhoods identified in Table 3.1.

Segment 9 proposed improvements include:

- 1.53 miles (8,100 LF) multi-use paved path (Class I)
- 0.20 miles (1,040 LF) on-street facilities (Segments 9A and 9B)
- One (1) new preengineered bike/pedestrian bridge crossing over the harbor
- One (1) new preengineered bike/pedestrian bridge crossing Upper Schwan Lagoon
- One (1) new preengineered bike/pedestrian bridge crossing (rail culvert crossing) near El Dorado Avenue
- Four (4) road crossings (Mott Avenue, Seabright Avenue, 7th Avenue)
- Two (2) rail crossings (trail spur at El Dorado Avenue, 7th Avenue)
- Fencing may be considered when project is implemented



**TABLE 4.9 Segment 9 - Twin Lakes**

<b>Segment Length</b>	<b>1.73 miles (9,140 LF) - Twin Lakes</b>
Rail Trail Portion	1.53 miles (8,100 LF)
Coastal Trail Portion	0.20 miles (1,040 LF)
<b>Segment Cost</b>	<b>\$11,914,384</b>

Rail Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	8,100	Linear Feet	Varies	\$1,640,250
Amenities (Fencing, Benches, Signage, Etc.)	1	Lump Sum	Varies	\$240,000
Bridge Structures	3	Each	Varies	\$5,000,000
At-Grade Crossings (Rail Tracks or Streets)	6	Each	Varies	\$560,000
<b>Rail Trail Construction SUBTOTAL</b>				<b>\$7,440,250</b>

Coastal Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Unpaved Trail	0	Linear Feet	Varies	\$0
On Street Facilities (Class II, III, and Sidewalks)	1,040	Linear Feet	\$6	\$6,240
<b>Coastal Trail Construction SUBTOTAL</b>				<b>\$6,240</b>

<b>COST SUMMARY</b>	
<b>Construction TOTAL</b>	<b>\$7,446,490</b>
Design, Engineering, and PS&E (Plans, Specifications, and Estimates) (15%)	\$1,116,974
Environmental Permitting (10%)	\$744,649
Construction Management (15%)	\$1,116,974
Contingency (20%)	\$1,489,298
<b>SEGMENT TOTAL COST</b>	<b>\$11,914,384</b>

Segment Features	Description	Quantity
Segment Jurisdictional Area	City/County of Santa Cruz, RTC-Rail ROW Owner, Port District	-
Minor Roadway Crossings	Seabright Street, 7th Ave, 17th Ave	3
Trail At-Grade Railroad Crossings	Seabright Street	1
Rail Bridge Crossing (Wood Trestle)	Woods Lagoon	1
Rail Bridge Crossing (Concrete)	Twin Lakes	1
Rail Bridge Crossing (Concrete)	Leona Creek	1
Minor Drainage	Leona Creek	1
Existing Staging Areas/Rest Stops	Simkin's Swim Center	1
Connection To Other Trails	Woods Lagoon/Arana Gulch	2
Within 1/4 Mile of Public School	Multiple	3
Connection to Commercial Area	Multiple	3
Connection to Passive Park	Twin Lakes/Twin Lakes State Beach	4
Connection to Sports Park	Simkin's Swim Center	1



*Rail right-of-way with residential units backing onto the corridor*



*Twin Lakes State Beach and Schwan Lagoon trail access*



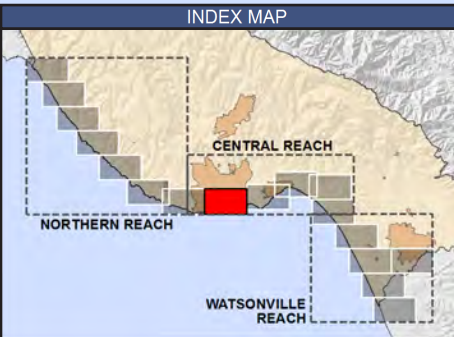
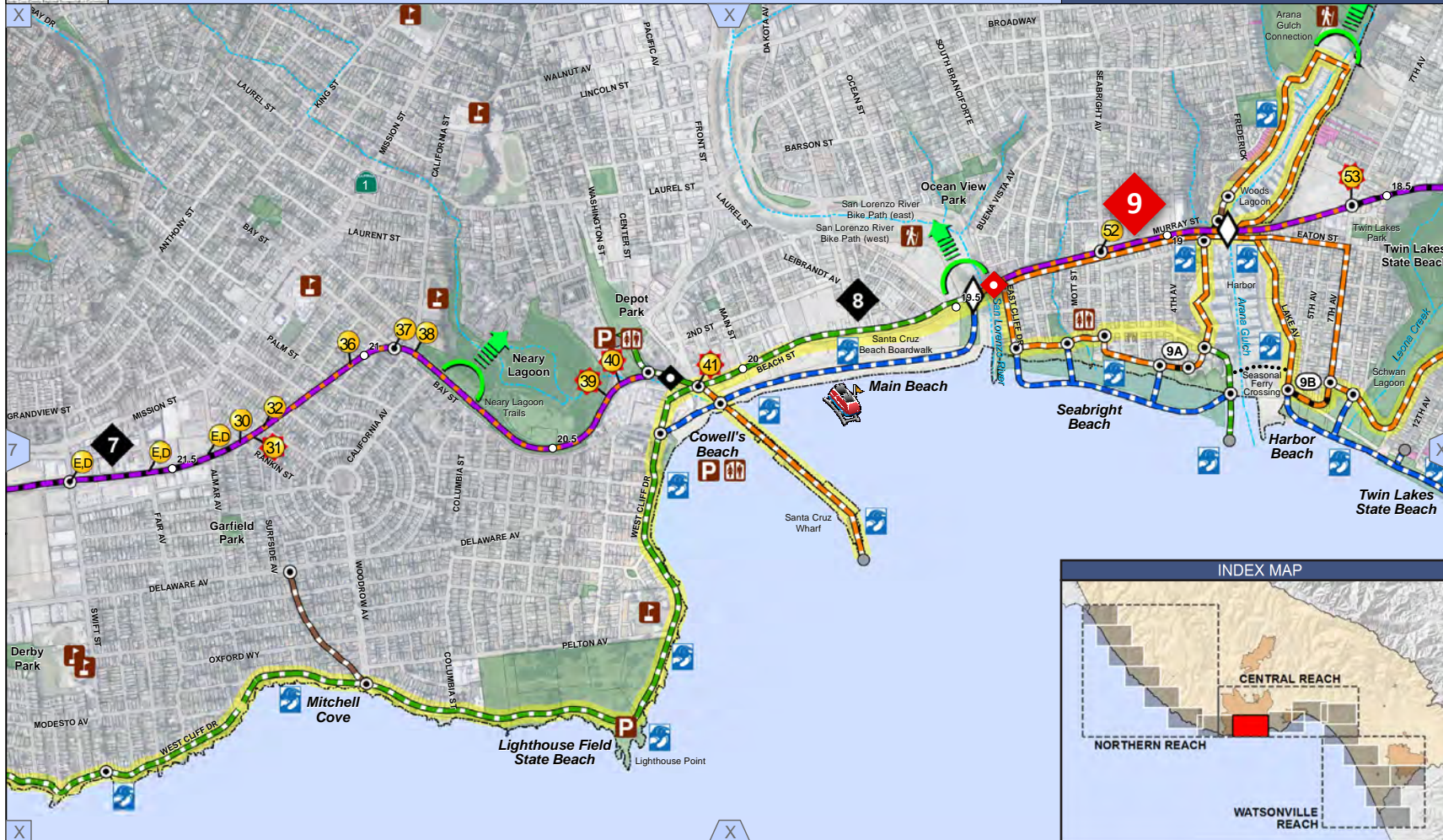
*Woods Lagoon/the harbor*





# Monterey Bay Sanctuary Scenic Trail Network: Master Plan

## Proposed Trail Alignment SEGMENT 9 OF 20



LEGEND			
<b>Multi-Use Rail Trail Facilities</b> <ul style="list-style-type: none"><li>Existing Paved</li><li>Proposed Paved (Coastal Side of Tracks)</li><li>Proposed Paved (Inland Side of Tracks)</li></ul>		<b>Geographic Features</b> <ul style="list-style-type: none"><li>Assessor Parcels</li><li>Parcels With Recorded Access</li><li>Protected Public Areas in Fee</li><li>Streams</li><li>School Location</li></ul>	
<b>Multi-Use Coastal Trail Facilities</b> <ul style="list-style-type: none"><li>Previously Defined MBSST Core Alignment On-Street</li><li>Existing Paved Off-Street (Class I)</li><li>Proposed Paved Off-Street Multi-Use Path (Class I)</li><li>Existing On-Street (Class II, Class III and/or Sidewalks)</li><li>Proposed On-Street (Class II, Class III and/or Sidewalks)</li><li>Existing Un-Paved Trail</li><li>Proposed Un-Paved Trail</li><li>Existing Shoreline Beach Route (Low Tide Access)</li><li>Proposed Un-Paved Side Trail and Pacific Coast Bike Route (PCBR)</li></ul>		<b>Transportation Features</b> <ul style="list-style-type: none"><li>Public Parking</li><li>Bus Stop</li><li>Hwy 1 Bridge Crossing</li><li>Santa Cruz Branch Rail Line Mile Posts</li></ul>	
<b>Alignment Symbols</b> <ul style="list-style-type: none"><li>Segment ID</li><li>Segment Begin/End Point</li><li>Proposed Coastal Alignment Segment ID</li><li>Alignment Connection Point</li><li>Alignment Terminus Point</li><li>Trail Bridge</li><li>At Grade Crossing</li><li>Crossing of Railroad Tracks</li><li>Existing RR Bridge Crossing</li></ul>		<b>Existing Corridor Amenities</b> <ul style="list-style-type: none"><li>Connection to Existing Trail</li><li>Campground</li><li>Public Restroom</li><li>Barrier Free Facilities</li><li>Overlook/Interpretive Sign</li><li>Coastal Access</li><li>Connection to Inland Trail Systems</li></ul>	

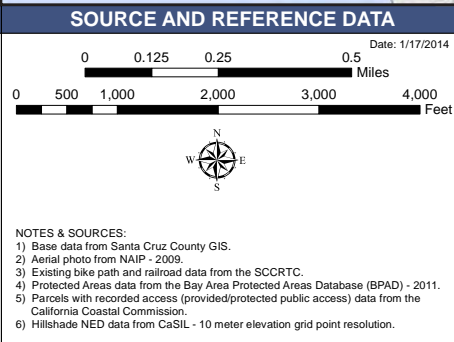


Figure 4-24 Segment 9 proposed trail alignment







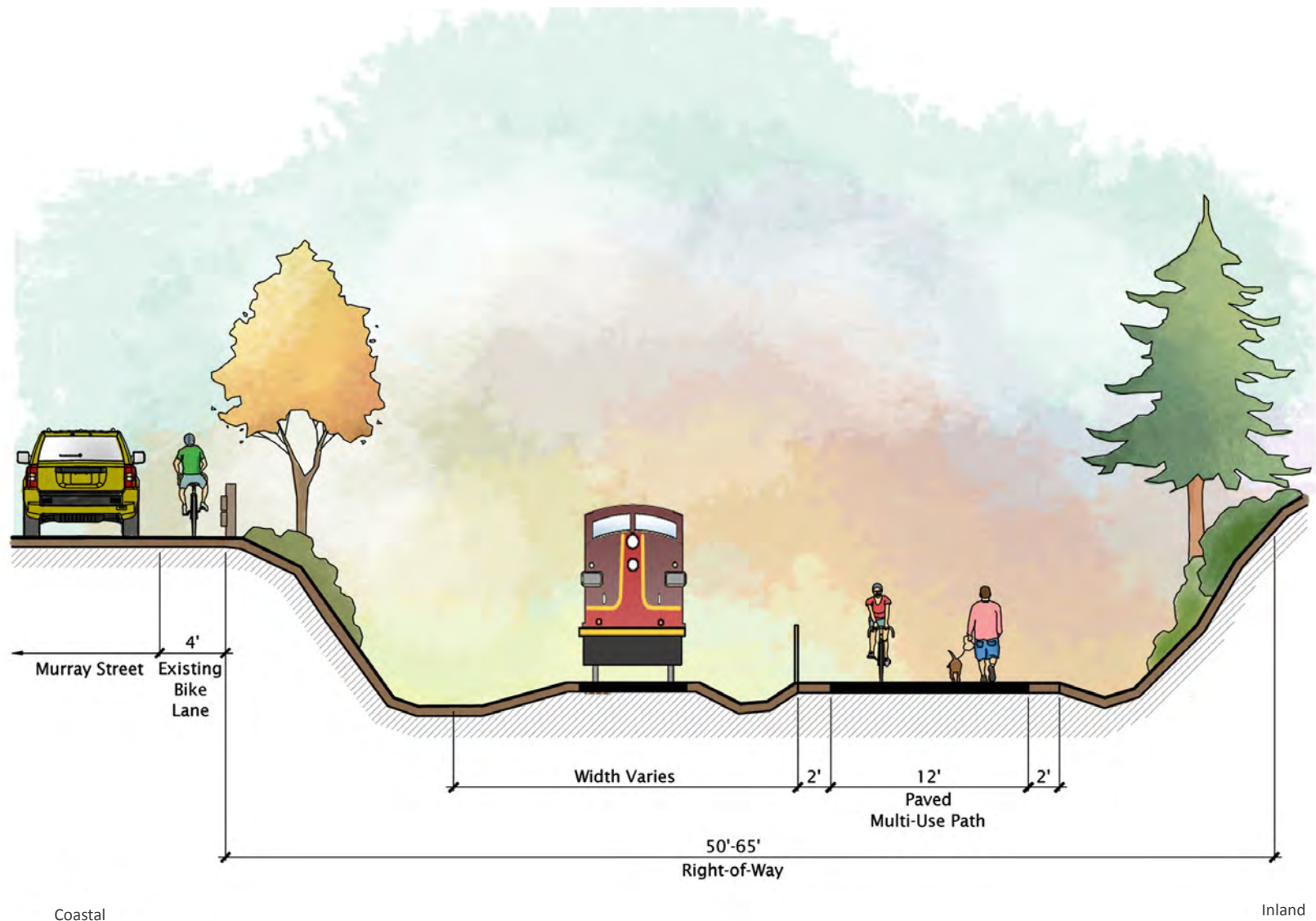


Figure 4-26 Segment 9 trail section





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*Santa Cruz Harbor*





*Railroad tracks adjacent to Jade Street Park*



*Unauthorized paths and bike jumps illustrate the need for trail improvements*



*Residential unit adjacent to railroad tracks at the 47th Avenue and Portola Drive intersection*

## 4.10 SEGMENT 10 - LIVE OAK - JADE STREET PARK

Length: 1.50 miles (7,940 LF) - 17th Avenue at-grade railroad crossing to Jade Street Park at 47th Avenue

### 4.10.1 SEGMENT 10 BOUNDARY DETERMINATION

The boundary for Segment 10 begins at the inland side of the 17th Avenue intersection, and extends down the coast through Live Oak and past Jade Street Park, ending at 47th Avenue in Capitola. This segment of the railroad right-of-way is only thirty- (30-) feet wide and will require rail track relocation to accommodate the trail within the right-of-way. To relocate the tracks, coordination will be needed with Iowa Pacific (locally doing business as Santa Cruz and Monterey Bay Railway), as it owns a twenty- (20-) foot easement, as well as state and federal regulatory agencies, as needed.

### 4.10.2 SEGMENT 10 DESCRIPTION

The segment of the railroad right-of-way from the 17th Avenue at-grade crossing heading down the coast is only thirty to thirty-four- (30 to 34-) feet wide. This narrow right-of-way does not allow enough room for the rail tracks and two-way trail alignment to come together without realigning the railroad track bed. This issue is exacerbated due to several adjacent property owners who have encroached into the railroad right-of-way. Approximately one (1) mile of rail track will need to be moved to accommodate the Coastal Rail Trail. The rough estimate provided by the rail operators is one (1) million dollars per mile to move the track and associated signals. The cost for moving rail tracks is included in the project cost estimate. The assessment of which side of the rail track the trail will align will be determined in greater detail with future rail track realignment plans. The proposed alignment will also include a preengineered bike/pedestrian bridge over Rodeo Gulch Creek on the inland side of the rail trestle bridge. This narrow right-of-way scenario continues down the coast one-and-a-quarter (1 1/4) miles to Jade Street Park at 47th Avenue in the city of Capitola. The existing surface street bike lanes and pedestrian sidewalks between 17th Avenue and 47th Avenue will serve as interim access until design solutions for this segment of the Coastal Rail Trail route are completed. The existing Opal Cliff Drive Class III corridor will serve as the alternate route. Opal Cliff Drive currently has no sidewalks. Segment 10 connects to thirty-four (34) activity centers identified in detail in Table 3.1.

Segment 10 proposed improved include:

- 1.50 miles (7,940 LF) multi-use paved path (Class I) along the rail right-of-way
- Relocation of approximately 1.0 mile (5,280 LF) of rail track and signal arm assemblies
- One (1) preengineered bike/pedestrian bridge crossing at Rodeo Gulch Creek two hundred- (200-) foot span
- Four (4) non-signalized street crossings (17th Avenue, 30th Avenue, 38th Avenue, 41st Avenue)
- One (1) at-grade rail crossing
- Fencing may be considered when project is implemented



**TABLE 4.10 Segment 10 - Live Oak to Jade Street Park**

<b>Segment Length</b>	<b>1.50 miles (7,940 LF) - Live Oak to Jade Street Park</b>
Rail Trail Portion	1.50 miles (7,940 LF)
Coastal Trail Portion	0.0 miles (0 LF)
<b>Segment Cost</b>	<b>\$9,707,440</b>

Rail Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	7,940	Linear Feet	Varies	\$4,215,700
Amenities (Fencing, Benches, Signage, Etc.)	1	Lump Sum	Varies	\$801,450
Bridge Structures	1	Each	Varies	\$450,000
At-Grade Crossings (Rail Tracks or Streets)	5	Each	Varies	\$600,000

**Rail Trail Construction SUBTOTAL \$6,067,150**

Coastal Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Unpaved Trail	0	Linear Feet	Varies	\$0
On Street Facilities (Class II, III, and Sidewalks)	0	Linear Feet	Varies	\$0

**Coastal Trail Construction SUBTOTAL \$0**

**COST SUMMARY**

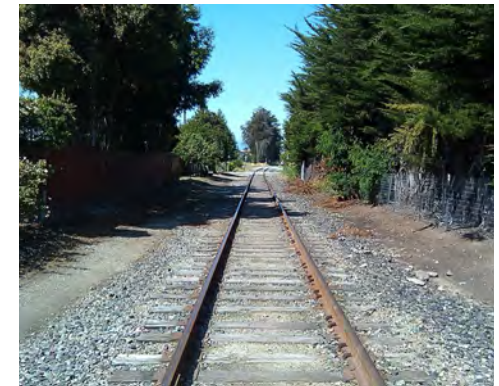
<b>Construction TOTAL</b>	<b>\$6,067,150</b>
Design, Engineering, and PS&E (Plans, Specifications, and Estimates) (15%)	\$910,073
Environmental Permitting (10%)	\$606,715
Construction Management (15%)	\$910,073
Contingency (20%)	\$1,213,430

**SEGMENT TOTAL COST \$9,707,440**

Segment Features	Description	Quantity
Segment Jurisdictional Area	City of Capitola, RTC - Rail ROW Owner, County of Santa Cruz	-
Minor Roadway Crossings	30th Ave, 38th Ave, 41st Ave, 47th Ave	4
Trail At-Grade Railroad Crossings	17th Ave, 47th Ave	2
Rail Bridge Crossing (Wood Trestle)	Rodeo Creek Gulch Crossing	1
Railroad right-of-way, 35' wide or less	Entire Segment Length	1.50 miles
Minor Drainage	Rodeo Creek Gulch	1
Existing Staging Areas/Rest Stops	Jade Park	1
Within 1/4 Mile of Public School	Del Mar Elementary, Cypress High School, Shoreline Middle School, Live Oak Elementary	4
Connection to Commercial Area	Light industrial, retail, commercial	3
Connection to Residential Area	Multiple	6
Connection to Sports Park	Jade Street Park, Simpkin's Swim Center, Brommer Park	3
Other	Santa Cruz County Sheriff Services, Central Fire Protection Services, Santa Cruz County Road Maintenance	3



*Jade Street Park*



*Railroad right-of-way with just enough room to accommodate a multi-use path*

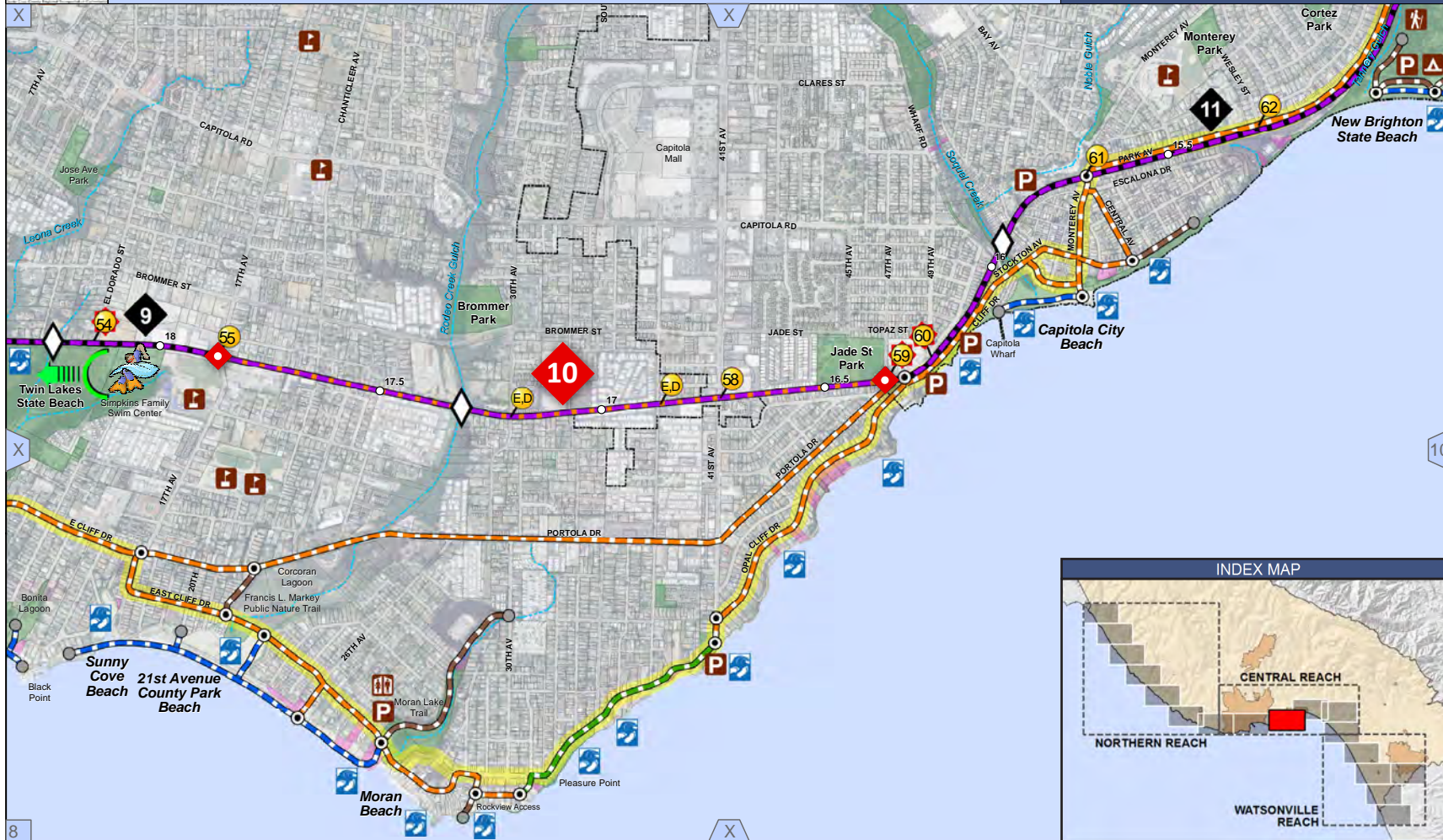
**Includes \$1,000,000 for track relocation**





# Monterey Bay Sanctuary Scenic Trail Network: Master Plan

## Proposed Trail Alignment SEGMENT 10 OF 20



**Multi-Use Rail Trail Facilities**

- Existing Paved
- Proposed Paved (Coastal Side of Tracks)
- Proposed Paved (Inland Side of Tracks)

**Multi-Use Coastal Trail Facilities**

- Previously Defined MBSST Core Alignment On-Street
- Existing Paved Off-Street (Class I)
- Proposed Paved Off-Street Multi-Use Path (Class I)
- Existing On-Street (Class II, Class III and/or Sidewalks)
- Proposed On-Street (Class II, Class III and/or Sidewalks)
- Existing Un-Paved Trail
- Proposed Un-Paved Trail
- Existing Shoreline Beach Route (Low Tide Access)
- Proposed Un-Paved Side Trail and Pacific Coast Bike Route (PCBR)

**Alignment Symbols**

- Segment ID
- Segment Begin/End Point
- Proposed Coastal Alignment Segment ID
- Alignment Connection Point
- Alignment Terminus Point
- Trail Bridge
- At Grade Crossing
- Crossing of Railroad Tracks
- Existing RR Bridge Crossing

**Geographic Features**

- Assessor Parcels
- Parcels With Recorded Access
- Protected Public Areas in Fee
- Streams
- School Location

**Transportation Features**

- Public Parking
- Bus Stop
- Hwy 1 Bridge Crossing
- Santa Cruz Branch Rail Line Mile Posts

**Existing Corridor Amenities**

- Connection to Existing Trail
- Campground
- Public Restroom
- Barrier Free Facilities
- Overlook/Interpretive Sign
- Coastal Access
- Connection to Inland Trail Systems

**INDEX MAP**

Map showing the location of Segment 10 within the larger Monterey Bay Sanctuary Scenic Trail Network, highlighting the Central Reach, Northern Reach, and Watsonville Reach.

**SOURCE AND REFERENCE DATA**

0 0.125 0.25 0.5 Miles  
0 500 1,000 2,000 3,000 4,000 Feet

DATE: 1/17/2014

NOTES & SOURCES:  
1) Base data from Santa Cruz County GIS.  
2) Aerial photo from NAIP - 2009.  
3) Existing bike path and railroad data from the SCCRTC.  
4) Protected Areas data from the Bay Area Protected Areas Database (BPAD) - 2011.  
5) Parcels with recorded access (provided/protected public access) data from the California Coastal Commission.  
6) Hillshade NED data from CaSIL - 10 meter elevation grid point resolution.

Figure 4-27 Segment 10 proposed trail alignment



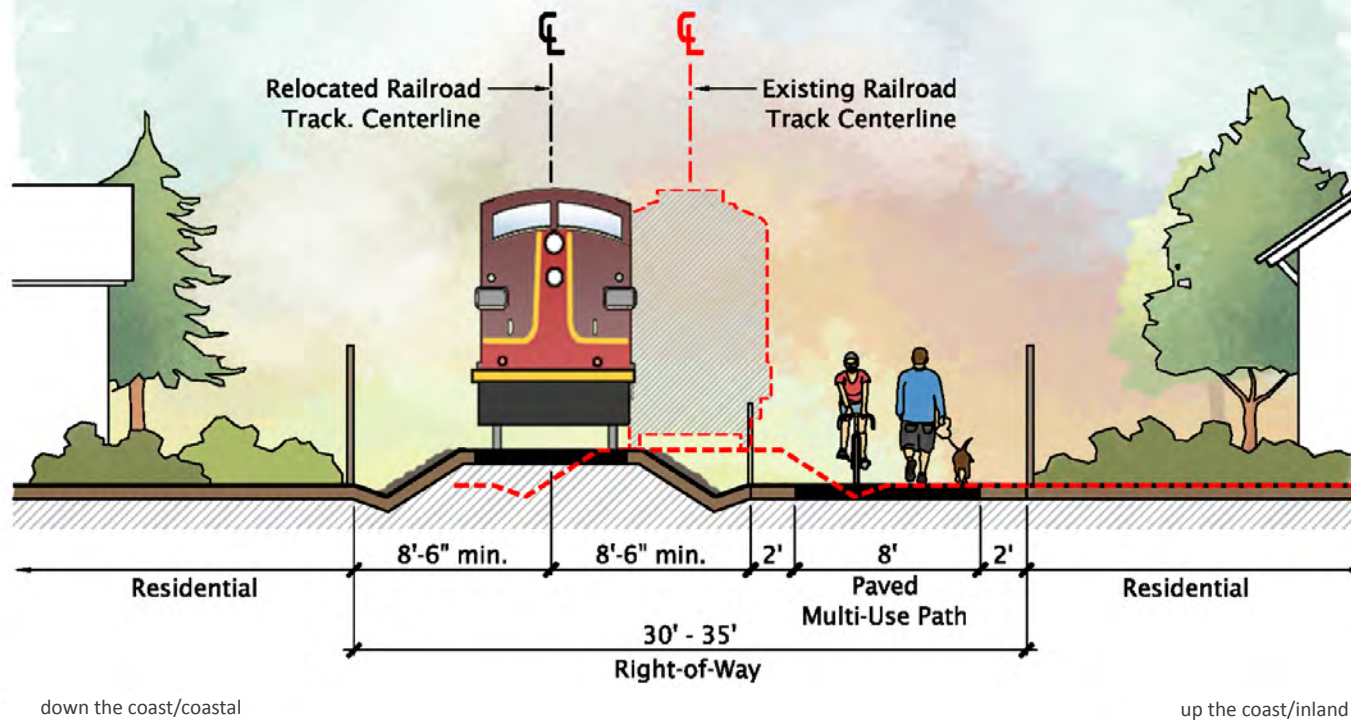


Figure 4-28 Segment 10 trail section



## 4.11 SEGMENT 11 - CAPITOLA - SEACLIFF

Length: 3.20 miles (16,880 LF) - Jade Street Park at 47th Avenue to State Park Drive

### 4.11.1 SEGMENT 11 BOUNDARY DETERMINATION

The boundary for Segment 11 is determined by the terminus of Segment 10 at Jade Street Park. Segment 11 runs from Jade Street Park at 47th Avenue down the coast 3.2 miles to State Park Drive. This segment is impacted by extreme topography, dense urban development, and infrastructure constraints through Capitola. The existing on-street bike and pedestrian facilities will need to support the connection for the Coastal Rail Trail until Segments 10 and 11 can be completed.

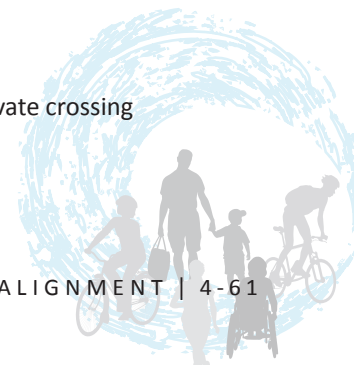
### 4.11.2 SEGMENT 11 DESCRIPTION

The rail right-of-way heading down the coast toward Capitola along Cliff Drive has diagonal parking spaces that encroach from Cliff Drive, on the coastal side of the tracks, and steep sloping grades up to an existing pedestrian overlook adjacent to Prospect Avenue on the inland side of the tracks. This stretch will need retaining walls or to be rerouted with grade changes to accommodate the trail on the inland side of the tracks. The greatest challenge in this segment is the rail trestle crossing of Soquel Creek. The current rail trestle passes through a historic district. There are current discussions about improvements to this bridge trestle due to structural conditions. Coastal trail access through this area will need to continue on existing surface streets and sidewalks to cross Soquel Creek and navigate through Capitola Village. Future plans for the rail trestle replacement should include a new bike/pedestrian facility in the bridge design. This crossing could also consider an iconic bike and pedestrian bridge that will span the five hundred- (500-) foot-long Soquel Creek crossing. This iconic bridge will require intricate design solutions to accommodate the footings and superstructure in the severely limited space below the bridge. The cost for this larger iconic bridge structure has not yet been determined and does not appear in this Master Plan.

The proposed Coastal Rail Trail will continue down the coast from Soquel Creek through the Monterey Avenue at-grade crossing on the inland side of the tracks. As the rail line heads down the coast past Monterey Avenue, the tracks merge closer to the coastal edge as it approaches New Brighton State Beach. This area of the corridor offers access to the existing trail network within the park, access to the beach, and unobstructed views down the coast. While an at-grade street crossing is not currently being proposed at the Coronado Street intersection to provide access from Cortez Park to New Brighton State Beach, the feasibility of this should be considered at a later date. A preengineered bridge will be needed to cross over the state beach parking lot access road as the train tracks curve down the coast through the state beach property. A preengineered trail bridge will be needed across Borregas Creek close to the state beach boundary. The proposed trail will remain on the coastal side of the tracks all the way through the state beach to the existing at-grade crossing of Estates Drive. From Estates Drive down the coast, the rail right-of-way narrows as it parallels Poplar Street. The rail corridor along the length of Poplar Street to Mar Vista Drive is just thirty-four- (34-) feet wide. The trail will be forced between a narrow landscape buffer between Poplar Street and the railroad corridor. The trail alignment will continue down the coastal side of the tracks, after crossing the Mar Vista Drive intersection using the existing crosswalks. The existing crosswalks, and possibly the roadway intersection corners, will need to be modified to provide a safe crossing for bicyclists and pedestrians. The rail corridor is flanked by residential housing on both sides all the way to the State Park Drive at-grade crossing. This segment connects with nine (9) activity centers listed in Table 3.1.

Segment 11 proposed facilities include:

- 3.20 miles (16,880 LF) multi-use paved path (Class I) along the rail right-of-way
- Bike and pedestrian facilities to be included in any design plans for new rail bridge replacement of the Soquel Creek rail crossing
- Two (2) preengineered bike/pedestrian bridges (one [1] at New Brighton State Beach parking lot and one [1] at Borregas Creek)
- Five (5) at-grade street crossings (47th Street, Monterey Avenue, New Brighton Road, Estates Drive, Mar Vista Drive)
- One (1) private at-grade street crossing (Grove Lane) and one (1) private at-grade crossing at 48th Street and one (1) additional private crossing
- One (1) rail crossing at 47th street
- Fencing may be considered when project is implemented



**TABLE 4.11 Segment 11 - Capitola-Sea Cliff**

<b>Segment Length</b>	<b>3.20 miles (16,880 LF) - Capitola-Sea Cliff</b>
Rail Trail Portion	3.20 miles (16,880)
Coastal Trail Portion	0.0 miles (0 LF)
<b>Segment Cost</b>	<b>\$8,868,336</b>

Rail Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	16,880	Linear Feet	Varies	\$3,815,910
Amenities (Fencing, Benches, Signage, Etc.)	1	Lump Sum	Varies	\$551,800
Bridge Structures	2	Each	Varies	\$400,000
At-Grade Crossings (Rail Tracks or Streets)	9	Each	Varies	\$775,000
<b>Rail Trail Construction SUBTOTAL</b>				<b>\$5,542,710</b>

Coastal Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Unpaved Trail	0	Linear Feet	Varies	\$0
On Street Facilities (Class II, III, and Sidewalks)	0	Linear Feet	Varies	\$0
<b>Coastal Trail Construction SUBTOTAL</b>				<b>\$0</b>

<b>COST SUMMARY</b>	
<b>Construction TOTAL</b>	<b>\$5,542,710</b>
Design, Engineering, and PS&E (Plans, Specifications, and Estimates) (15%)	\$831,407
Environmental Permitting (10%)	\$554,271
Construction Management (15%)	\$831,407
Contingency (20%)	\$1,108,542
<b>SEGMENT TOTAL COST</b>	<b>\$8,868,336</b>

Segment Features	Description	Quantity
Segment Jurisdictional Area	City of Capitola, RTC - Rail ROW Owner, State Parks, County of Santa Cruz	-
Major Roadway Crossings	Cliff Drive	1
Minor Roadway Crossings	Monterey Ave, New Brighton Road	3
Private Road Crossings	Grove Street	1
Trail At-Grade Railroad Crossings	Cliff Drive, Grove Street, Mar Vista Drive	3
Rail Bridge Crossing (Wood Trestle)	Soquel Creek Crossing	1
Rail Bridge Crossing (Concrete)	Tannery Gulch, Borregas Creek Crossings	2
Railroad right-of-way, 35' wide or less	Near Poplar Street	1,200 linear feet
Major Drainage	Soquel Creek	1
Minor Drainage	Tannery Gulch in New Brighton State Beach, Bodegas Creek (also in New Brighton)	2
Existing Staging Areas/Rest Stops	Cliff Drive, New Brighton State Beach	2
Connection To Other Trails	Nisene Trails, California Coastal Trail	2
Within 1/4 Mile of Public School	New Brighton Middle School, Delta High School, Mar Vista Elementary School, Cabrillo College	4
Connection to Public Beach	Capitola City Beach, New Brighton State Beach	2
Connection to Commercial Area	Downtown Capitola	1
Connection to Residential Area	Numerous residential areas in Capitola	6
Connection to Passive Park	Soquel Creek Park, Noble Gulch Park, New Brighton State Beach, Seacliff State Beach	4



*Railroad tracks overlooking Capitola Wharf and Capitola Village*



*Railroad trestle - pedestrian and bicyclists will benefit from improved crossing conditions*



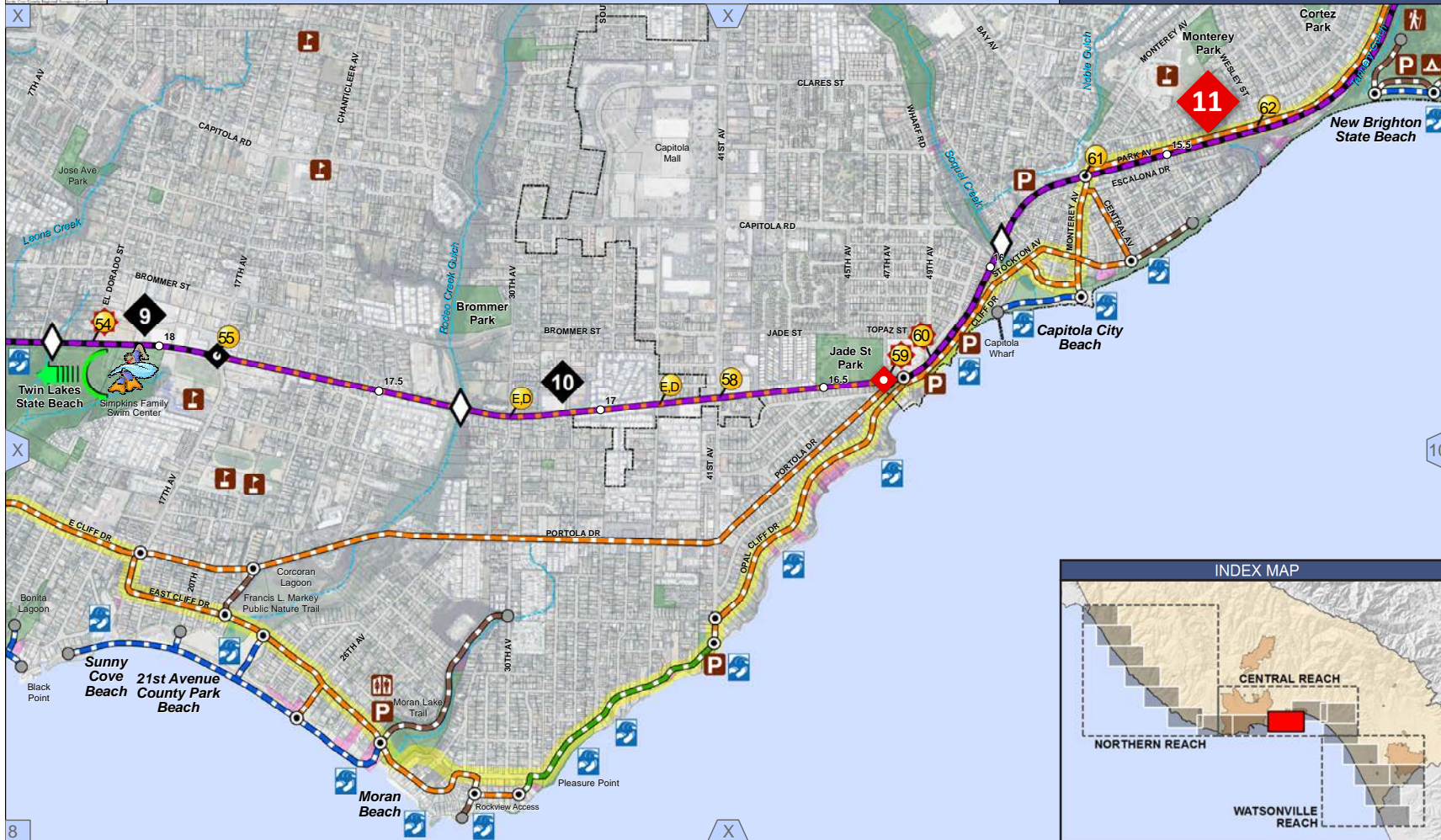
*Forest area near New Brighton State Beach*



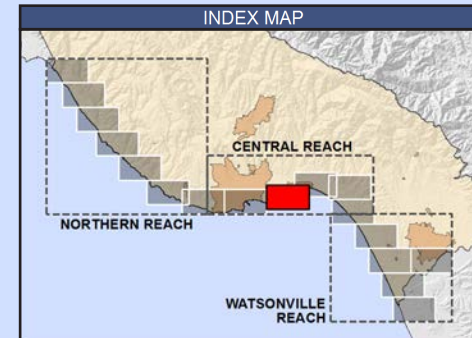


# Monterey Bay Sanctuary Scenic Trail Network: Master Plan

## Proposed Trail Alignment SEGMENT 11 OF 20



Multi-Use Rail Trail Facilities		Alignment Symbols		Geographic Features		Existing Corridor Amenities	
Existing Paved		Segment ID	= Current Segment	Assessor Parcels		Connection to Existing Trail	
Proposed Paved (Coastal Side of Tracks)		Segment Begin/End Point	= Current	Parcels With Recorded Access		Campground	
Proposed Paved (Inland Side of Tracks)		Proposed Coastal Alignment Segment ID		Protected Public Areas in Fee		Public Restroom	
Multi-Use Coastal Trail Facilities		Alignment Connection Point		Streams		Barrier Free Facilities	
Previously Defined MBSST Core Alignment On-Street		Alignment Terminus Point		School Location		Overlook/Interpretive Sign	
Existing Paved Off-Street (Class I)		Trail Bridge		Public Parking		Coastal Access	
Proposed Paved Off-Street Multi-Use Path (Class I)		At Grade Crossing		Bus Stop		Connection to Inland Trail Systems	
Existing On-Street (Class II, Class III and/or Sidewalks)		Crossing of Railroad Tracks		Hwy 1 Bridge Crossing			
Proposed On-Street (Class II, Class III and/or Sidewalks)		Existing RR Bridge Crossing		Santa Cruz Branch Rail Line Mile Posts			
Existing Un-Paved Trail							
Proposed Un-Paved Trail							
Existing Shoreline Beach Route (Low Tide Access)							
Proposed Un-Paved Side Trail and Pacific Coast Bike Route (PCBR)							



SOURCE AND REFERENCE DATA	
Date: 1/17/2014	
NOTES & SOURCES:	
1) Base data from Santa Cruz County GIS.	
2) Aerial photo from NAIP - 2009.	
3) Existing bike path and railroad data from the SCCRTC.	
4) Protected Areas data from the Bay Area Protected Areas Database (BPAD) - 2011.	
5) Parcels with recorded access (provided/protected public access) data from the California Coastal Commission.	
6) Hillshade NED data from CaSIL - 10 meter elevation grid point resolution.	

Figure 4-29 Segment 11 proposed trail alignment



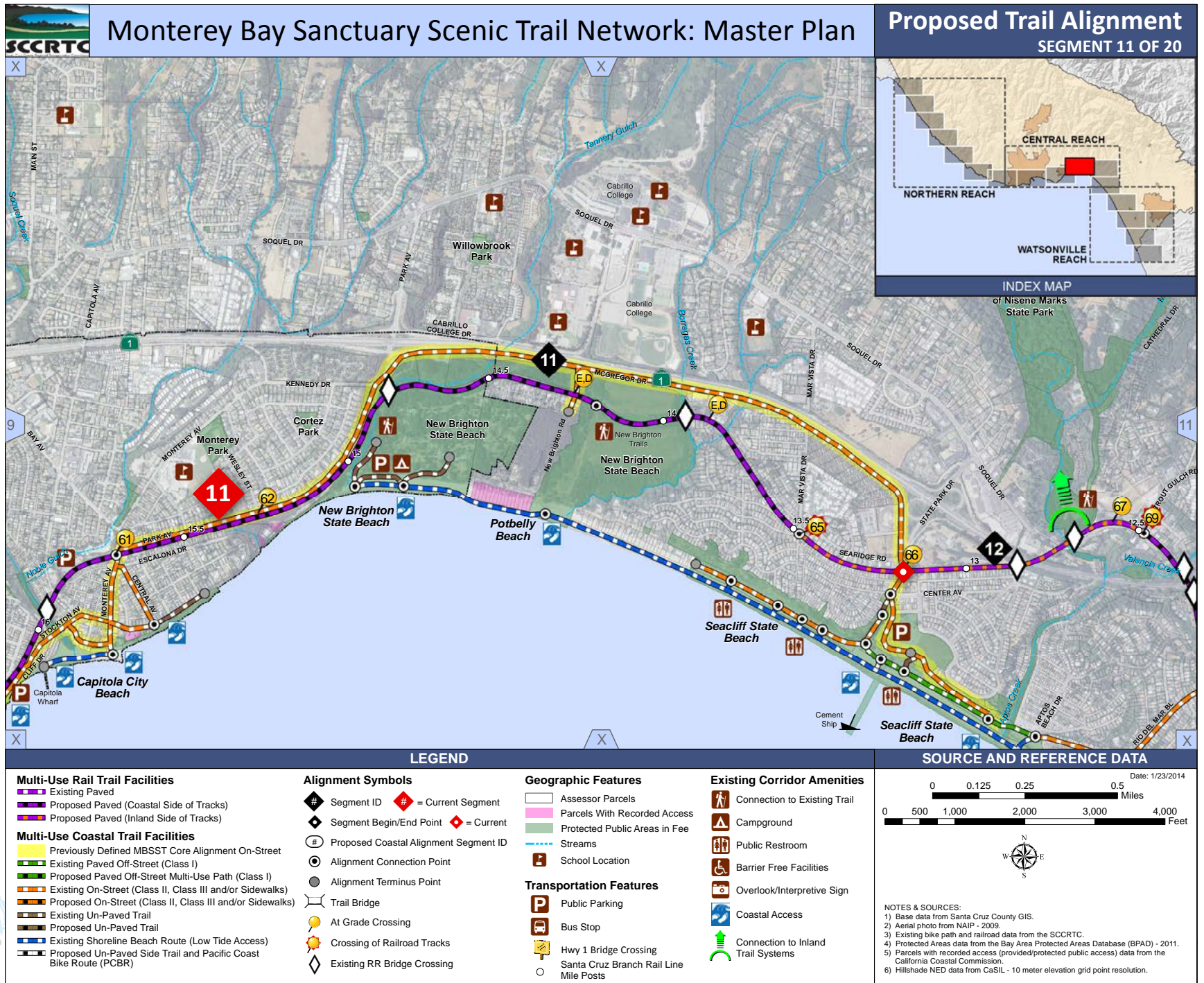


Figure 4-30 Segment 11 proposed trail alignment (continued)



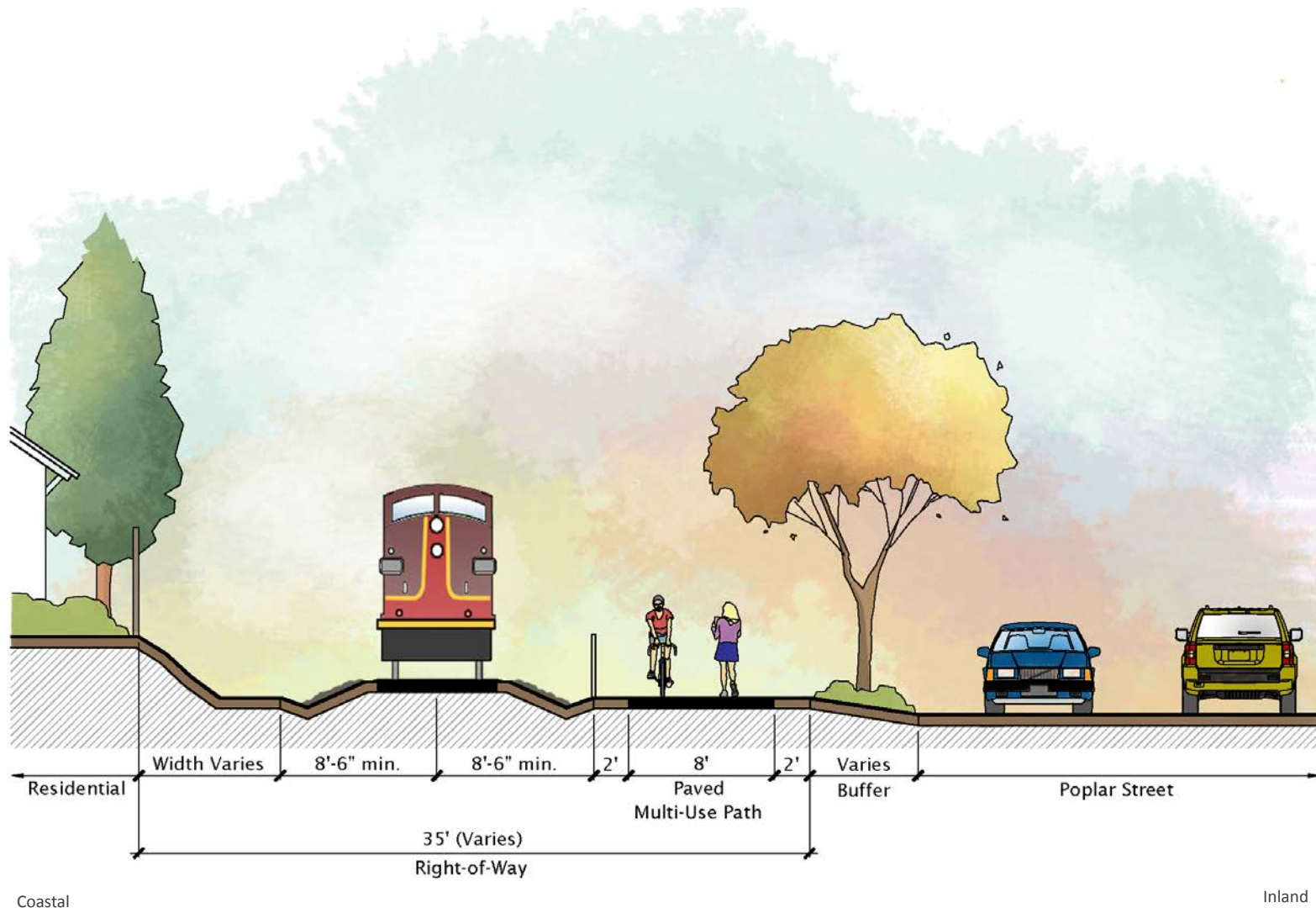


Figure 4-31 Segment 11 trail section

\* Note: This segment also includes portions of the multi-use path on the coastal side of tracks.







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*Capitola Village with historic railroad trestle*





*Railroad bridge over Soquel Drive at Aptos Street*



*Railroad bridge south of Soquel Drive*



*Aptos Village signage*

## 4.12 SEGMENT 12 - APTOS VILLAGE

Length: 1.14 miles (6,030 LF) - State Park Drive to Rio Del Mar Boulevard

### 4.12.1 SEGMENT 12 BOUNDARY DETERMINATION

The boundaries for Segment 12 are determined by State Park Drive at the north and Rio Del Mar Boulevard to the south because the rail line tracks divert at these two (2) points to cross over Highway 1 to Aptos Village, and then divert back to cross State Highway 1 again, heading south back to the coast. This segment presents unique and difficult challenges and will require multiple agency coordination and supporting infrastructure to implement.

### 4.12.2 SEGMENT 12 DESCRIPTION

This segment of the proposed Coastal Rail Trail presents considerable challenges with respect to bridges. From the rail crossing of State Park Drive heading down the coast, the railroad tracks eventually cross over both the north and south lanes of State Highway 1 on a concrete bridge. The track line continues several hundred feet on an earthen embankment inland of State Highway 1, then onto a steel rail bridge crossing over Soquel Drive and Aptos Creek. The upper Highway 1 concrete bridge could be retrofitted to accommodate bike and pedestrian facilities. The crossings over Soquel Drive and Aptos Creek will require a new preengineered bike and pedestrian bridge to connect to Aptos Village. As the rail line enters Aptos Village, the tracks are constrained on both sides by vehicle parking along Soquel Drive on the coastal side of the tracks and a commercial parking lot on the inland side. The trail will cross Aptos Creek Road paralleling the inland side of the rail tracks. The parking areas along Soquel Drive will need to be adjusted to accommodate the trail as it parallels the railroad tracks. The trail will cross from the inland side of the rail tracks to the coastal side at Trout Gulch Road. As the Coastal Rail Trail leaves Aptos Village heading down the coast, the tracks have two (2) additional bridge crossings—one (1) steel truss bridge over Valencia Creek drainage and Soquel Drive, and another narrow concrete bridge structure crossing back over Highway 1. The Coastal Rail Trail will require three (3) new preengineered bridges and one (1) retrofit to the northern Highway 1 concrete bridge crossing. Segment 12 connects with nine (9) activity centers identified in Table 3.1.

Segment 12 proposed facilities include:

- 1.14 miles (6,030 LF) multi-use paved path (Class I) along the rail right-of-way
- Three (3) preengineered bike/pedestrian bridges (bridge spans vary)
- One (1) retrofit of northern Highway 1 concrete bridge for bike and pedestrian facility
- Three (3) at-grade street crossings (State Park Drive, Aptos Creek Road, Trout Gulch Road)
- One (1) rail crossing at Trout Gulch Road
- Fencing may be considered when project is implemented



**TABLE 4.12 Segment 12 - Aptos Village**

<b>Segment Length</b>	<b>1.14 miles (6,030 LF) - Aptos Village</b>
Rail Trail Portion	1.14 miles (6,030 LF)
Coastal Trail Portion	0.0 miles (0 LF)
<b>Segment Cost</b>	<b>\$10,831,696</b>

Rail Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	6,030	Linear Feet	Varies	\$2,264,760
Amenities (Fencing, Benches, Signage, Etc.)	1	Lump Sum	Varies	\$430,050
Bridge Structures	4	Each	Varies	\$3,600,000
At-Grade Crossings (Rail Tracks or Streets)	4	Each	Varies	\$475,000
<b>Rail Trail Construction SUBTOTAL</b>				<b>\$6,769,810</b>

Coastal Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Unpaved Trail	0	Linear Feet	Varies	\$0
On Street Facilities (Class II, III, and Sidewalks)	0	Linear Feet	Varies	\$0
<b>Coastal Trail Construction SUBTOTAL</b>				<b>\$0</b>

<b>COST SUMMARY</b>	
<b>Construction TOTAL</b>	<b>\$6,769,810</b>
Design, Engineering, and PS&E (Plans, Specifications, and Estimates) (15%)	\$1,015,472
Environmental Permitting (10%)	\$676,981
Construction Management (15%)	\$1,015,472
Contingency (20%)	\$1,353,962
<b>SEGMENT TOTAL COST</b>	<b>\$10,831,696</b>

Segment Features	Description	Quantity
Segment Jurisdictional Area	RTC - Rail ROW Owner, Caltrans Right-of-Way, State Parks, County of Santa Cruz	-
State Highway Crossings	Two rail bridge crossings over Highway 1	2
Minor Roadway Crossings	Trout Gulch Road, State Park Drive, Aptos Creek Road	3
Trail At-Grade Railroad Crossings	Trout Gulch Road	1
Rail Bridge Crossing (Steel Trestle)	Soquel Drive, Soquel Drive - Twice at Aptos	2
Rail Bridge Crossing (Concrete)	Two at Highway 1	2
Minor Drainage	Aptos Creek, Valencia Creek	2
Existing Staging Areas/Rest Stops	Aptos Village Park	1
Connection To Other Trails	Nisene Trail	1
Within 1/4 Mile of Public School	Valencia Elementary School	1
Connection to Public Beach	Seacliff State Beach	1
Connection to Commercial Area	Aptos Village	1
Connection to Residential Area	Multiple in Capitola and Aptos	2
Connection to Passive Park	Nisen Marks State Park	1
Connection to Tourist Destination	Seacliff Village	1



*Railroad bridge over Soquel Drive and Aptos Creek*



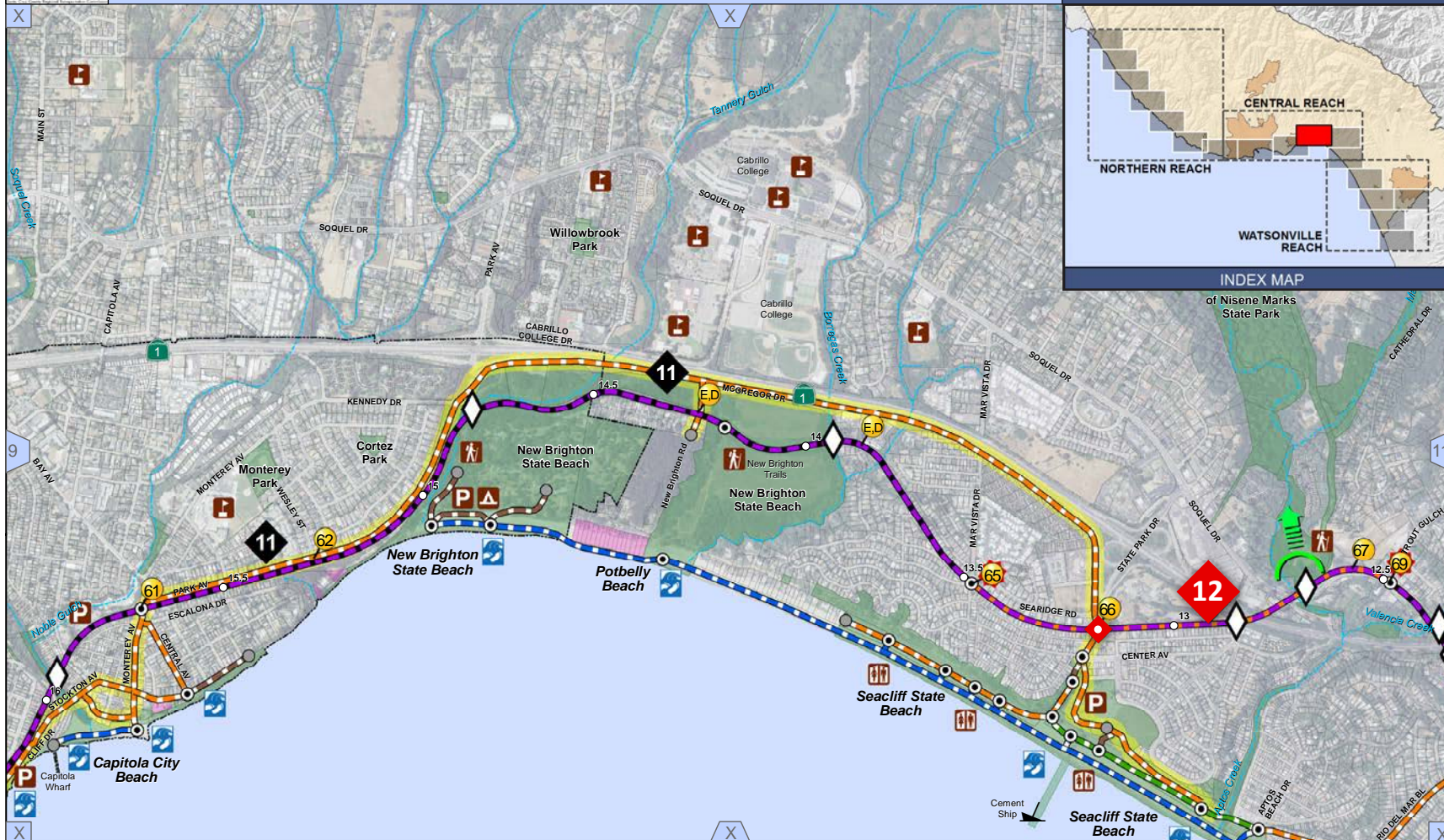
*Railroad tracks opposite Aptos Station*





# Monterey Bay Sanctuary Scenic Trail Network: Master Plan

## Proposed Trail Alignment SEGMENT 12 OF 20



**LEGEND**

**Multi-Use Rail Trail Facilities**

- Existing Paved
- Proposed Paved (Coastal Side of Tracks)
- Proposed Paved (Inland Side of Tracks)

**Multi-Use Coastal Trail Facilities**

- Previously Defined MBSST Core Alignment On-Street
- Existing Paved Off-Street (Class I)
- Proposed Paved Off-Street Multi-Use Path (Class I)
- Existing On-Street (Class II, Class III and/or Sidewalks)
- Proposed On-Street (Class II, Class III and/or Sidewalks)
- Existing Un-Paved Trail
- Proposed Un-Paved Trail
- Existing Shoreline Beach Route (Low Tide Access)
- Proposed Un-Paved Side Trail and Pacific Coast Bike Route (PCBR)

**Alignment Symbols**

- Segment ID
- Segment Begin/End Point
- Proposed Coastal Alignment Segment ID
- Alignment Connection Point
- Alignment Terminus Point
- Trail Bridge
- At Grade Crossing
- Crossing of Railroad Tracks
- Existing RR Bridge Crossing

**Geographic Features**

- Assessor Parcels
- Parcels With Recorded Access
- Protected Public Areas in Fee
- Streams
- School Location

**Transportation Features**

- Public Parking
- Bus Stop
- Hwy 1 Bridge Crossing
- Santa Cruz Branch Rail Line Mile Posts

**Existing Corridor Amenities**

- Connection to Existing Trail
- Campground
- Public Restroom
- Barrier Free Facilities
- Overlook/Interpretive Sign
- Coastal Access
- Connection to Inland Trail Systems

**SOURCE AND REFERENCE DATA**

Date: 1/23/2014

0 0.125 0.25 0.5 Miles

0 500 1,000 2,000 3,000 4,000 Feet

NOTES & SOURCES:  
1) Base data from Santa Cruz County GIS.  
2) Aerial photo from NAIP - 2009.  
3) Existing bike path and railroad data from the SCCRTC.  
4) Protected Areas data from the Bay Area Protected Areas Database (BPAD) - 2011.  
5) Parcels with recorded access (provided/protected public access) data from the California Coastal Commission.  
6) Hillshade NED data from CaSIL - 10 meter elevation grid point resolution.

Figure 4-32 Segment 12 proposed trail alignment



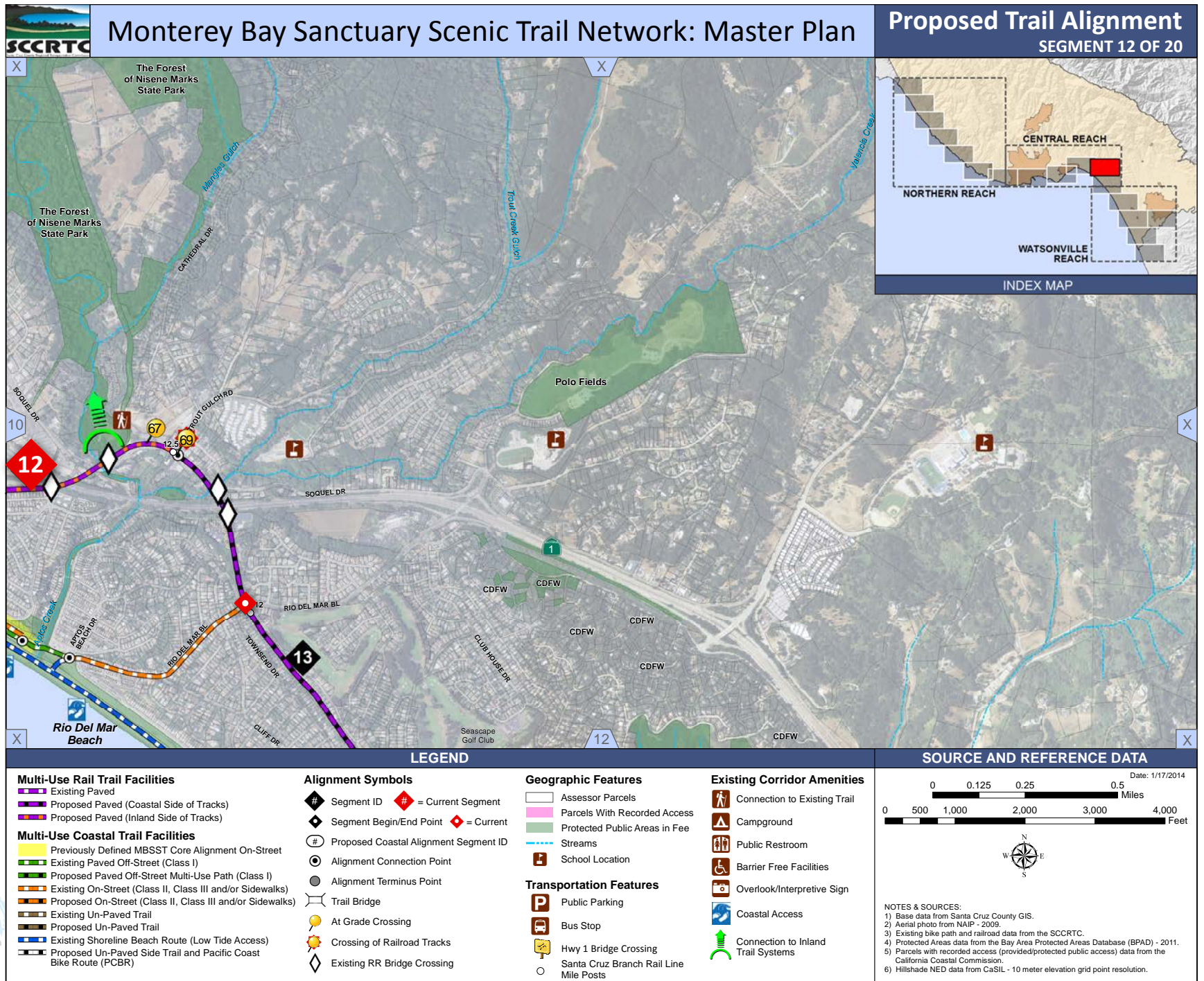


Figure 4-33 Segment 12 proposed trail alignment (continued)



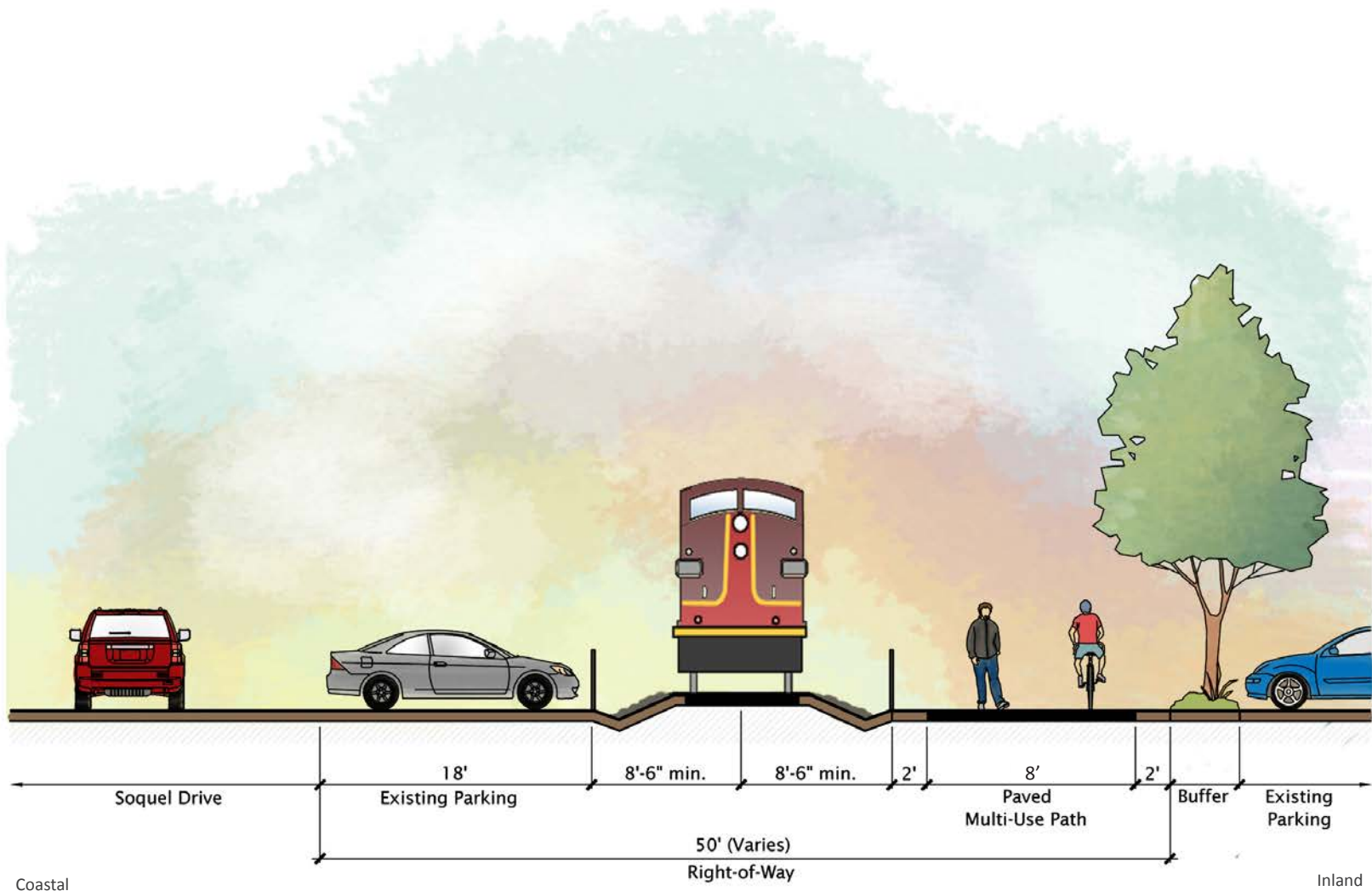


Figure 4-34 Segment 12 trail section







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Seacliff State Beach







*Rio del Mar State Beach is an ideal “spur” connection to the Coastal Rail Trail*



*Unique architecture abounds along the Rio Del Mar beach frontage*



*Rio Del Mar Beach connects to Seacliff State Beach, providing miles of coastal walking opportunities*

## 4.13 SEGMENT 13 - RIO DEL MAR - HIDDEN BEACH

Length: 0.85 miles (4,510 LF) - Rio Del Mar Boulevard to Cliff Drive/Hidden Beach

### 4.13.1 SEGMENT 13 BOUNDARY DETERMINATION

The northern boundary for Segment 13 is determined by the grade-separated Rio Del Mar Boulevard bridge crossing of the rail corridor where the proposed Coastal Rail Trail will connect to the existing on-street Class III bike route. The north end of Segment 13 is a good start/end point for the proposed trail, while the complicated series of bridges connecting Aptos Village in Segment 12 are designed and implemented. The south end of the segment ends at the Hidden Beach rail trestle crossing.

### 4.13.2 SEGMENT 13 DESCRIPTION

This segment will provide pedestrian and bike access down the coast to Hidden Beach from Rio Del Mar Boulevard. The access at Rio Del Mar Boulevard will require a ramp down to the existing below-grade rail crossing of Rio Del Mar Boulevard. The proposed trail will ramp down, under the coastal side of Rio Del Mar Bridge, and continue down the coast along the Coastal Rail Trail on the coastal side of the tracks. This section of the rail line is in a trapezoidal corridor with steep sides flanked by residential lots on both sides. The trail segment through this stretch may need small retaining walls on the outside edge of the uphill slopes to accommodate the width of the trail. The close proximity to the residential lots may require privacy fences on the rail right-of-way boundary. The segment ends at the Hidden Beach rail trestle. Hidden Beach includes an existing staging area below the rail trestle. The crossing will require a new preengineered bike/pedestrian bridge, with the south abutment landing adjacent to the rail trestle abutment. This landing point will allow access under the existing rail trestle to continue the trail along the inland side of the tracks as it heads down the coast, and will provide access to the existing Hidden Beach parking lot below the coastal side of the existing rail trestle on Cliff Drive. The Hidden Beach parking lot and existing beach access trail can also serve as a trailhead for the Coastal Rail Trail. This segment connects with seven (7) activity centers identified in Table 3.1.

Segment 13 proposed improvements include:

- 0.85 miles (4,510 LF) multi-use paved path (Class I) along the coastal side rail right-of-way
- One (1) undercrossing connection to Rio Del Mar Boulevard
- One (1) preengineered bike/pedestrian bridge, two hundred- (200-) foot span
- One (1) existing staging area at Hidden Beach
- Fencing may be considered when project is implemented



**TABLE 4.13 Segment 13 - Rio Del Mar-Hidden Beach**

<b>Segment Length</b>	<b>0.85 miles (4,510 LF) - Rio Del Mar-Hidden Beach</b>
Rail Trail Portion	0.85 miles (4,510 LF)
Coastal Trail Portion	0.0 miles (0 LF)
<b>Segment Cost</b>	<b>\$3,306,112</b>

Rail Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	4,510	Linear Feet	Varies	\$973,620
Amenities (Fencing, Benches, Signage, Etc.)	1	Lump Sum	Varies	\$2,700
Bridge Structures	1	Each	Varies	\$1,000,000
Staging Area Access	1	Each	\$30,000	\$30,000
At-Grade Crossings (Rail Tracks or Streets)	1	Each	Varies	\$60,000
<b>Rail Trail Construction SUBTOTAL</b>				<b>\$2,066,320</b>

Coastal Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Unpaved Trail	0	Linear Feet	Varies	\$0
On Street Facilities (Class II, III, and Sidewalks)	0	Linear Feet	Varies	\$0
<b>Coastal Trail Construction SUBTOTAL</b>				<b>\$0</b>

<b>COST SUMMARY</b>	
<b>Construction TOTAL</b>	<b>\$2,066,320</b>
Design, Engineering, and PS&E (Plans, Specifications, and Estimates) (15%)	\$309,948
Environmental Permitting (10%)	\$206,632
Construction Management (15%)	\$309,948
Contingency (20%)	\$413,264
<b>SEGMENT TOTAL COST</b>	<b>\$3,306,112</b>

Segment Features	Description	Quantity
Segment Jurisdictional Area	RTC - Rail ROW Owner, County of Santa Cruz	-
Rail Bridge Crossing (Wood Trestle)	Hidden Beach Park	1
Existing Staging Areas/Rest Stops	Hidden Beach	1
Connection To Other Trails	California Coastal Trail	1
Connection to Public Beach	Hidden Beach	1
Connection to Commercial Area	Multiple	5
Connection to Residential Area	Hidden Beach	1
Connection to Passive Park	Private Golf Course	1



Trail access to Hidden Beach Park from Dry Creek Road



Train tracks and trestle near Hidden Beach Park



Rio del Mar pedestrian path



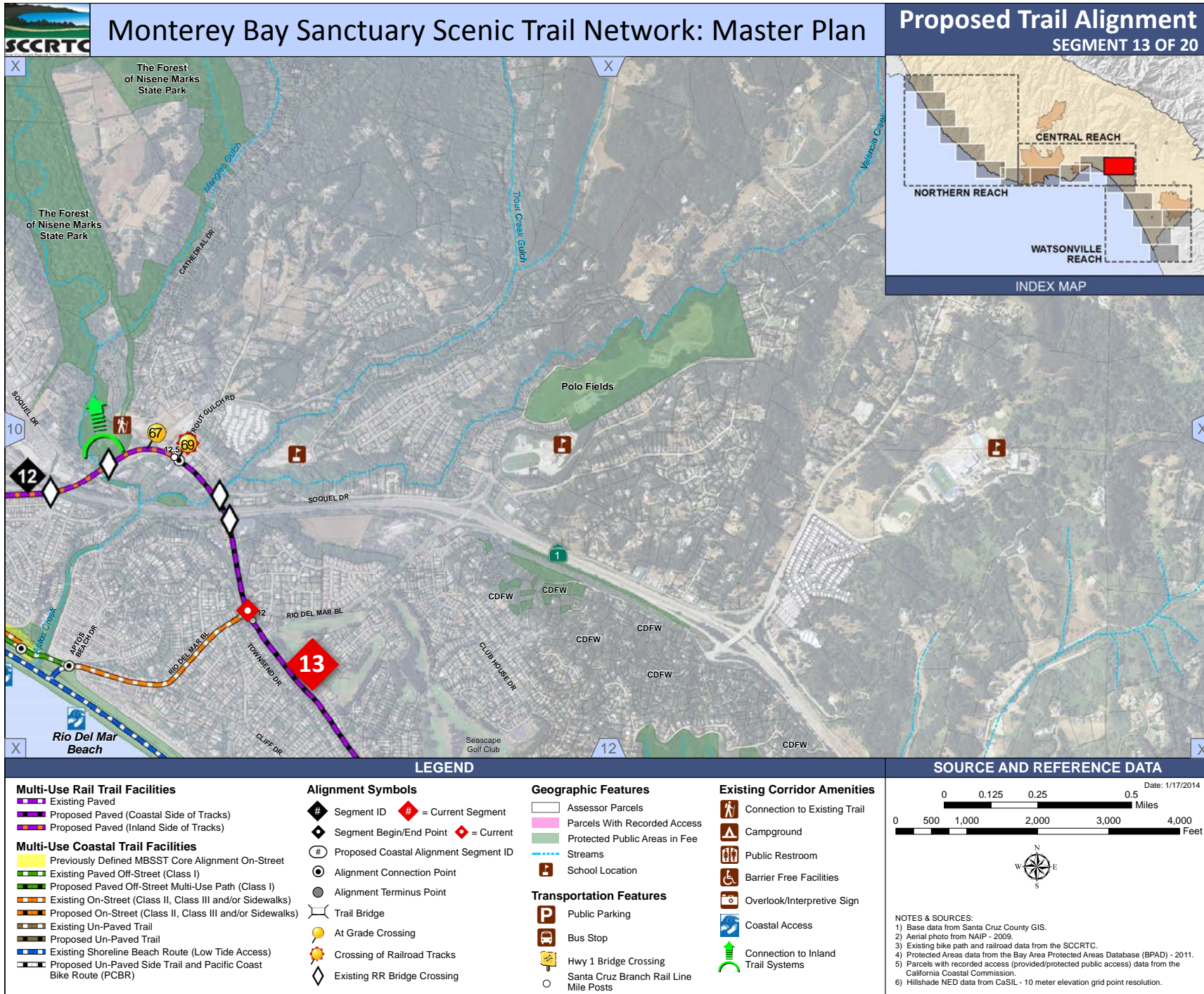


Figure 4-35 Segment 13 proposed trail alignment



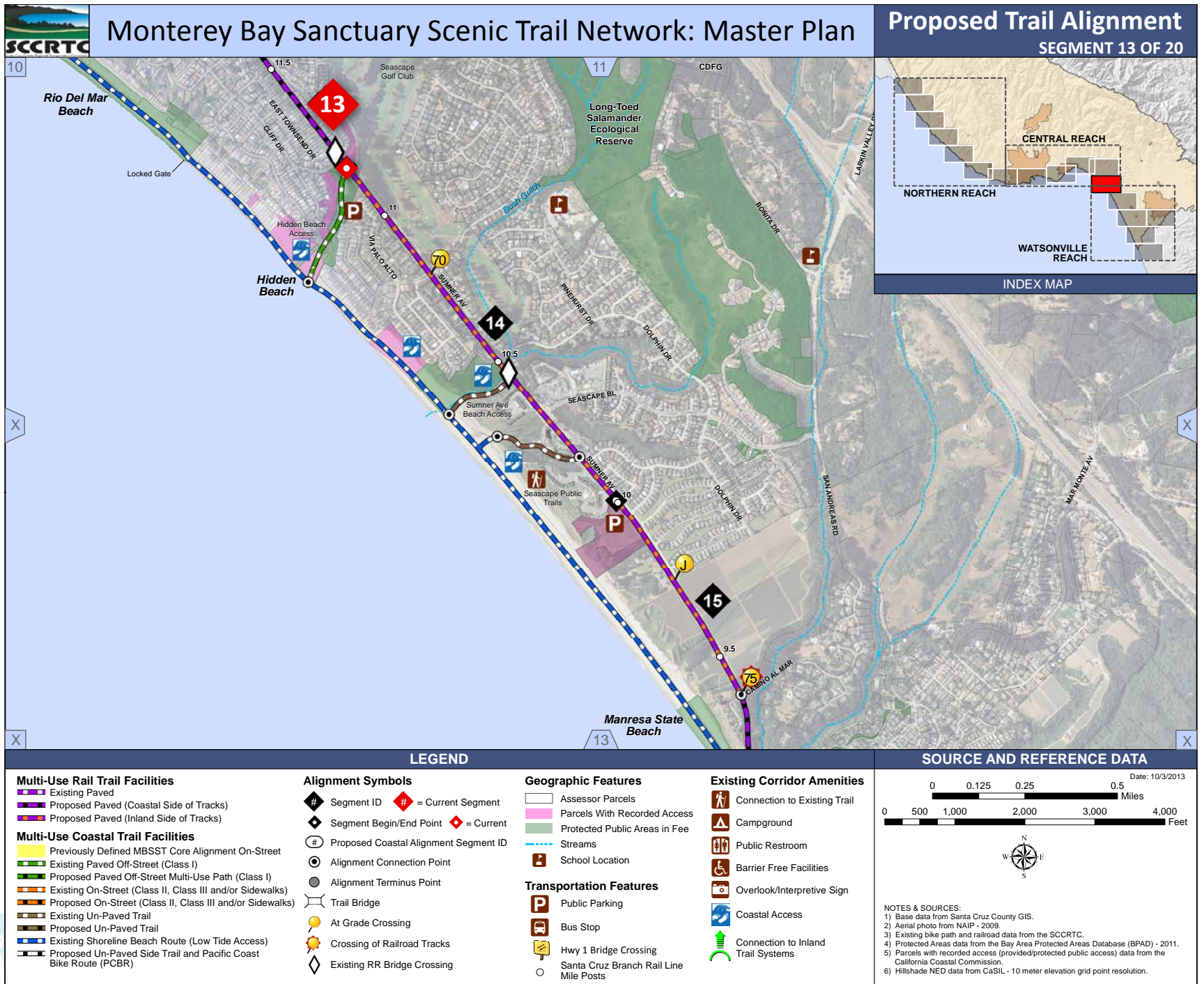


Figure 4-36 Segment 13 proposed trail alignment (continued)



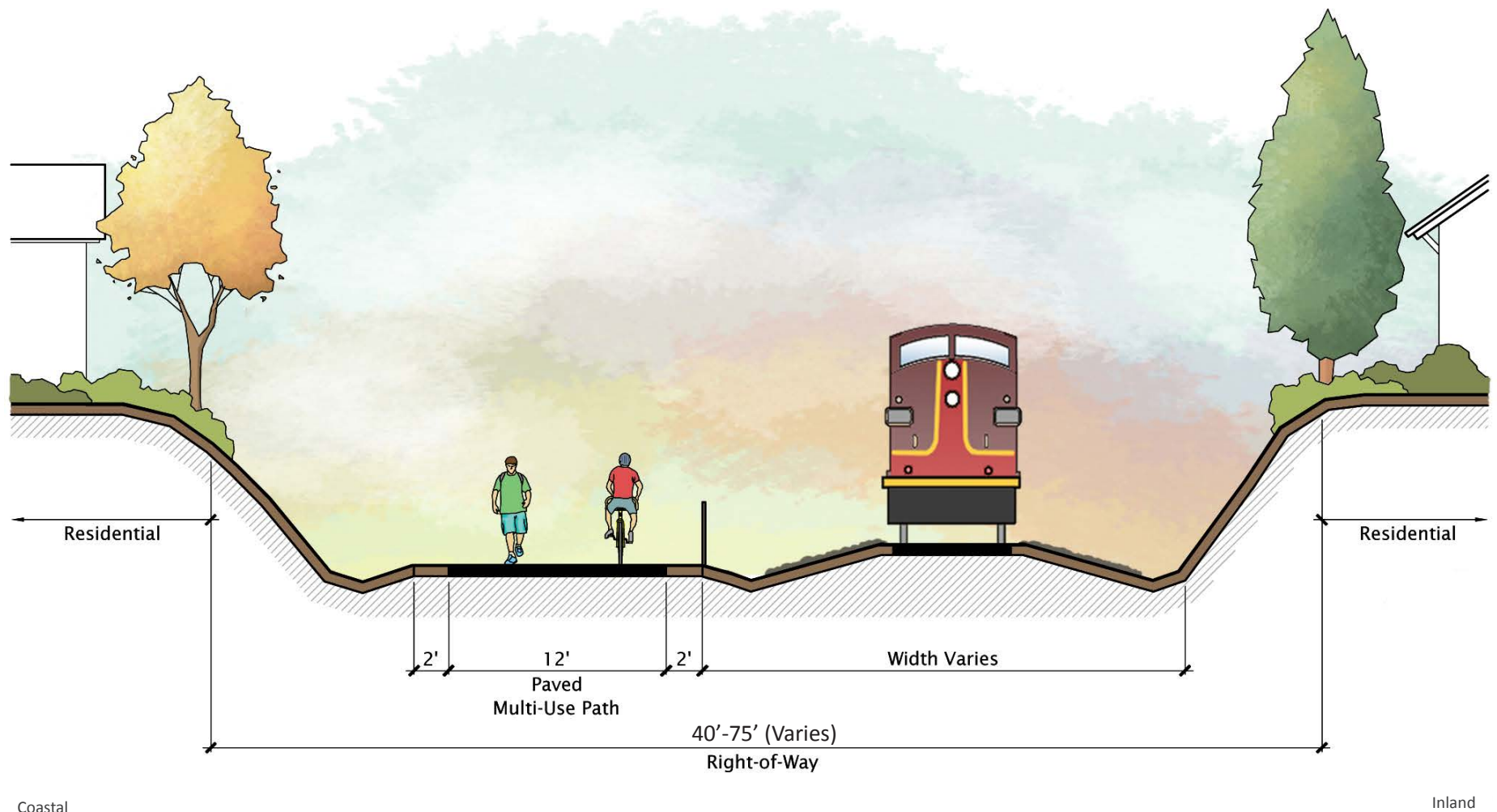


Figure 4-37 Segment 13 trail section





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Seacliff State Beach





*Railroad crossing at Seascap Resort*



*Railroad crossing at southern end of Seascap Resort*



*Seascap Resort railroad crossing looking north*

## 4.14 SEGMENT 14 - SEASCAPE

Length: 1.17 miles (6,160 LF) - Cliff Drive/Hidden Beach to Seascap Park

### 4.14.1 SEGMENT 14 BOUNDARY DETERMINATION

Segment 14 begins at the existing Hidden Beach parking lot off Cliff Drive on the coastal side of the train trestle abutment. This segment continues along the inland side of the rail tracks to the existing parking lot at Seascap Park.

### 4.14.2 SEGMENT 14 DESCRIPTION

The Hidden Beach parking lot provides a good access point for this segment of the proposed Coastal Rail Trail. A crossing at the existing trail trestle will be needed to continue the trail down the coast from the Rio Del Mar segment. The proposed trail will use the existing rail trestle as a grade-separated crossing on the south abutment, and will cross underneath the tracks to the inland side of the rail corridor between Sumner Avenue and the train tracks. Further down the coast, small retaining walls on the inland side of the trail tread may be required to secure the uphill slope along the corridor. The proposed Coastal Rail Trail will continue on the inland side of the tracks next to Sumner Avenue, with an at-grade street crossing of Clubhouse Drive. The proposed trail continues down the coast between Sumner Avenue and the rail tracks to the next trestle crossing near Sumner Avenue and Dolphin Drive. This proposed trail crossing can avoid a bridge crossing if the trail follows the grade toward the coastal edge of Sumner Avenue, connecting back to the rail right-of-way near the south bridge abutment. This alignment option also connects the proposed Coastal Rail Trail with an existing public coastal trailhead on Sumner Avenue. The proposed trail alignment continues down the coast between Sumner Avenue and the inland side rail right-of-way to an at-grade signaled street crossing of Sumner Avenue and Seascap Boulevard. This crossing will require relocating electrical control boxes and other utilities to accommodate the proposed trail tread. Segment 14 ends on the inland side of the rail tracks at an existing non-signalized, at-grade rail crossing just inland of the Seascap Park public parking lot. This location also provides the proposed Coastal Rail Trail with existing trailhead parking, staging area access, and a good terminus for segmented implementation phasing. Segment 14 connects with ten (10) activity centers identified in Table 3.1.

Segment 14 proposed improvements include:

- 1.17 miles (6,160 LF) multi-use paved path (Class I) along the inland rail right-of-way
- Two (2) at-grade road crossings (Clubhouse Drive, Seascap Blvd.)
- One (1) trail undercrossing of the existing rail bridge at Hidden Beach
- Fencing may be considered when project is implemented



**TABLE 4.14 Segment 14 - Seascape**

<b>Segment Length</b>	<b>1.17 miles (6,160 LF) - Seascape</b>
Rail Trail Portion	1.17 miles (6,160 LF)
Coastal Trail Portion	0.0 miles (0 LF)
<b>Segment Cost</b>	<b>\$2,079,872</b>

Rail Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	6,160	Linear Feet	Varies	\$1,192,320
Amenities (Fencing, Benches, Signage, Etc.)	1	Lump Sum	Varies	\$7,600
Bridge Structures	0	Each	Varies	\$0
At-Grade Crossings (Rail Tracks or Streets)	3	Each	Varies	\$100,000
<b>Rail Trail Construction SUBTOTAL</b>				<b>\$1,299,920</b>

Coastal Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Unpaved Trail	0	Linear Feet	Varies	\$0
On Street Facilities (Class II, III, and Sidewalks)	0	Linear Feet	Varies	\$0
<b>Coastal Trail Construction SUBTOTAL</b>				<b>\$0</b>

<b>COST SUMMARY</b>	
<b>Construction TOTAL</b>	<b>\$1,299,920</b>
Design, Engineering, and PS&E (Plans, Specifications, and Estimates) (15%)	\$194,988
Environmental Permitting (10%)	\$129,992
Construction Management (15%)	\$194,988
Contingency (20%)	\$259,984
<b>SEGMENT TOTAL COST</b>	<b>\$2,079,872</b>

Segment Features	Description	Quantity
Segment Jurisdictional Area	RTC - Rail ROW Owner, County of Santa Cruz	-
Minor Roadway Crossings	Clubhouse Drive, Seascape Boulevard	2
Rail Bridge Crossing (Wood Trestle)	South Hidden Beach Railroad Mile Post 10.5	1
Minor Drainage	Bush Gulch Railroad Mile Post 10.5	1
Existing Staging Areas/Rest Stops	Hidden Beach, Seascape Park	2
Connection To Other Trails	California Coastal Trail, Pacific Coast Bike Route, Seascape Public Trail	3
Within 1/4 Mile of Public School	Rio Del Mar Elementary School	1
Connection to Public Beach	Hidden Beach, Seascape Park	2
Connection to Residential Area	Multiple	4
Connection to Passive Park	Seascape Park	1



*Seascape Resort rail crossing and drainage*



*Southern access to Seascape Resort looking northeast*



*Narrow rail corridor will require grading of slopes to accommodate a multi-use path*



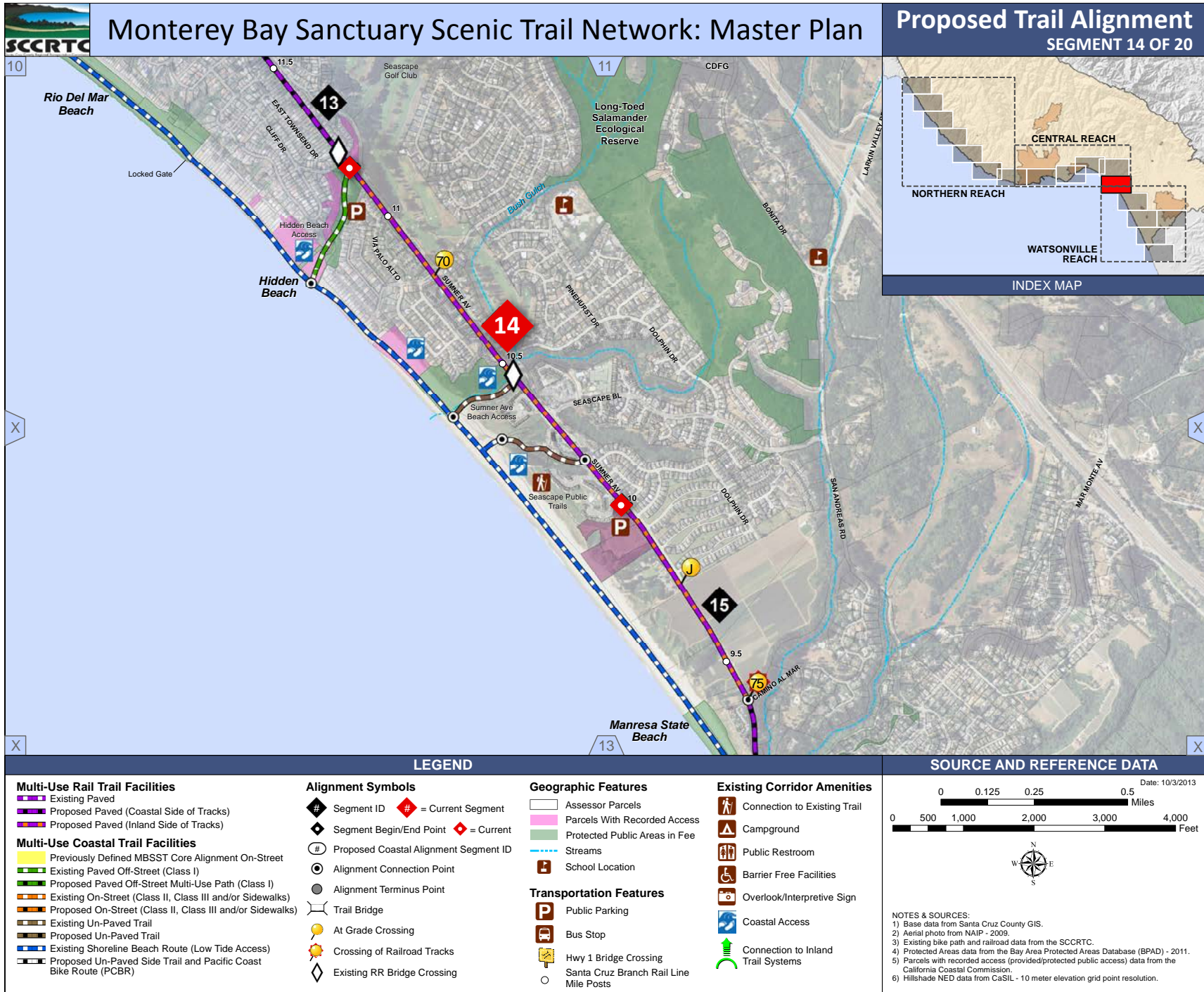


Figure 4-38 Segment 14 proposed trail alignment

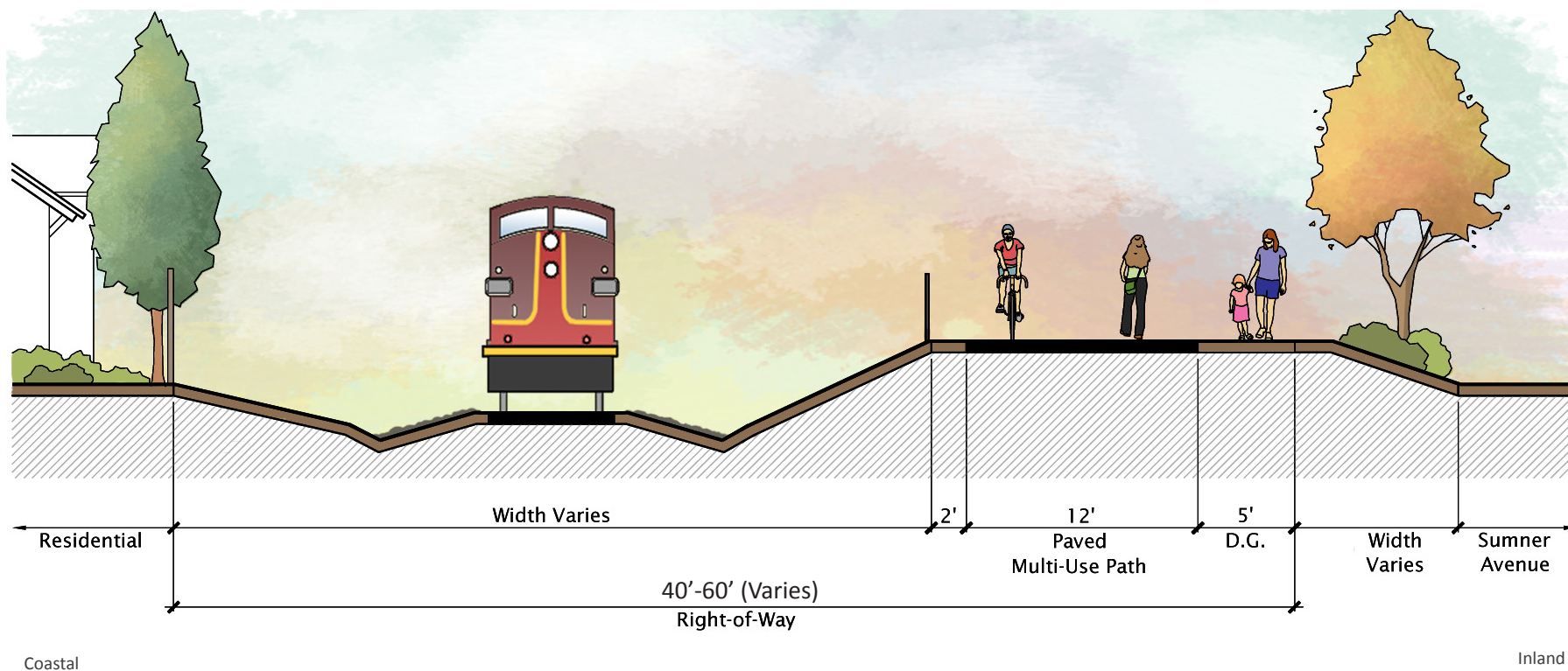


Figure 4-39 Segment 14 trail section





## 4.15 SEGMENT 15 - MANRESA STATE BEACH

Length: 1.37 miles (7,240 LF) - Seascapes Park to Manresa State Beach Railroad Bridge at San Andreas Road

### 4.15.1 SEGMENT 15 BOUNDARY DETERMINATION

Segment 15 is relatively short, beginning at Seascapes Park at the northern boundary and connecting down the coast to the Manresa State Beach Railroad Bridge at San Andreas Road. This segment poses engineering, grading, and grade-separated crossing challenges. Although short, this segment provides good multi-use connectivity with safe accessible trail options linking the California Coastal Trail.

### 4.15.2 SEGMENT 15 DESCRIPTION

Segment 15 begins at Seascapes Park, adjacent to the coastal side of Sumner Road, and continues down the coast along the inland side of the rail right-of-way. Sumner Road ends just down the coast from Seascapes Park and the proposed trail alignment continues, crossing over a driveway spur of Sumner Road and on the inland side rail right-of-way adjacent to a short stretch of agricultural land. The alignment eventually crosses the existing at-grade street crossing at Camino Al Mar, just north of railroad mile marker number 9, then the trail switches back to the coastal side of the tracks. The proposed Coastal Rail Trail continues down the coast along the coastal side of the tracks where it reaches a significant rail trestle crossing at La Selva Beach. This crossing connects the proposed trail to an existing public parking lot with coastal access down to La Selva Beach, which is situated below the south rail trestle abutment.

The proposed trail crossing at the La Selva railroad bridge may require the following options for the drainage crossing:

- (1) An independent bike/pedestrian bridge structure on the inland side of the existing rail trestle with a landing near the south bridge abutment, crossing over the existing trail to the beach and landing to the inland side of the existing public parking lot;
- (2) A hybrid retrofit of the existing trestle superstructure with a bike/pedestrian crossing which utilizes the existing rail bridge for some of the lateral support of the new retrofit, but not completely supporting the retrofit with the new rail bridge structure;
- (3) Inclusion of a bike/pedestrian crossing as part of a future rail trestle replacement; or
- (4) Use of existing on-street facilities until a new rail trestle is designed and implemented.

The proposed Coastal Rail Trail alignment continues down the coast from the La Selva Beach crossing along the inland side of the rail corridor. The proposed trail will cross the rail tracks at an existing at-grade vehicular rail crossing to continue along the coastal side of the tracks. This existing at-grade vehicle crossing is down the coast from railroad mile marker number 9, and does not currently have signal flashers or warning devices. Once the proposed Coastal Rail Trail is on the coastal side of the tracks, the physical constraints vary from steep slopes, private roadways, adjacent private property lines, narrow railroad right-of-way, and another rail bridge crossing over the San Andreas Road/Pacific Coast Bike Route. This segment connects with seven (7) activity centers identified in Table 3.1.

Segment 15 proposed improvements include:

- 1.37 miles (7,240 LF) multi-use paved path (Class I) along the inland rail right-of-way
- Two (2) private at-grade road crossings (Sumner Avenue, Camino Al Mar) and two (2) additional private crossings
- Two (2) preengineered rail bridge crossings (one [1] three-hundred- [300-] foot span at La Selva, and one [1] two hundred and twenty-five- [225-] foot span at San Andreas Road)
- One (1) rail at-grade crossing (Camino Al Mar)
- Fencing may be considered when project is implemented



**TABLE 4.15 Segment 15 - Manresa State Beach**

<b>Segment Length</b>	<b>1.37 miles (7,240 LF) - Manresa State Beach</b>
Rail Trail Portion	1.37 miles (7,240 LF)
Coastal Trail Portion	0.0 miles (0 LF)
<b>Segment Cost</b>	<b>\$4,735,680</b>

Rail Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	7,240	Linear Feet	Varies	\$1,425,600
Amenities (Fencing, Benches, Signage, Etc.)	1	Lump Sum	Varies	\$4,200
Bridge Structures	2	Each	Varies	\$1,450,000
At-Grade Crossings (Rail Tracks or Streets)	5	Each	Varies	\$80,000

**Rail Trail Construction SUBTOTAL \$2,959,800**

Coastal Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Unpaved Trail	0	Linear Feet	Varies	\$0
On Street Facilities (Class II, III, and Sidewalks)	0	Linear Feet	Varies	\$0

**Coastal Trail Construction SUBTOTAL \$0**

**COST SUMMARY**

<b>Construction TOTAL</b>	<b>\$2,959,800</b>
Design, Engineering, and PS&E (Plans, Specifications, and Estimates) (15%)	\$443,970
Environmental Permitting (10%)	\$295,980
Construction Management (15%)	\$443,970
Contingency (20%)	\$591,960
<b>SEGMENT TOTAL COST</b>	<b>\$4,735,680</b>

Segment Features	Description	Quantity
Segment Jurisdictional Area	RTC - Rail ROW Owner, State Parks, County of Santa Cruz	-
Major Roadway Crossings	Grade separated - San Andreas Road	1
Minor Roadway Crossings	Camino Al Mar	1
Rail Bridge Crossing (Timber Trestle)	Manresa State Beach crossing	1
Rail Bridge Crossing (Concrete)	San Andreas Road crossing	1
Minor Drainage	Manresa State Beach	1
Existing Staging Areas/Rest Stops	Manresa State Beach, Seascape Park	2
Connection To Other Trails	California Coastal Trail, Pacific Coast Bike Route	2
Connection to Public Beach	Manresa State Beach	1
Connection to Residential Area	Rural residential	1



*Views of scenic open space*



*Pacific Coast Bike route located parallel to the railroad tracks*



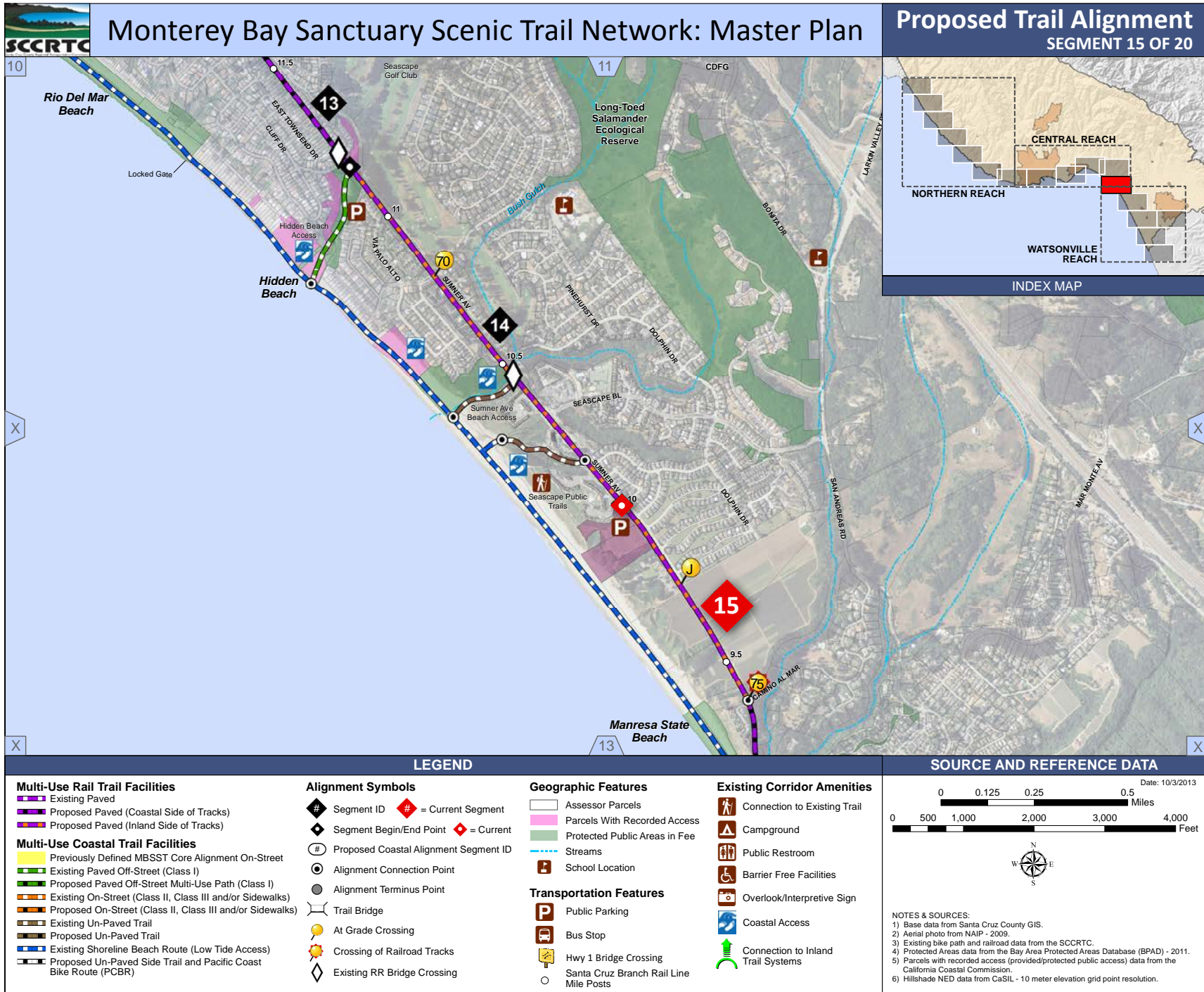


Figure 4-40 Segment 15 proposed trail alignment



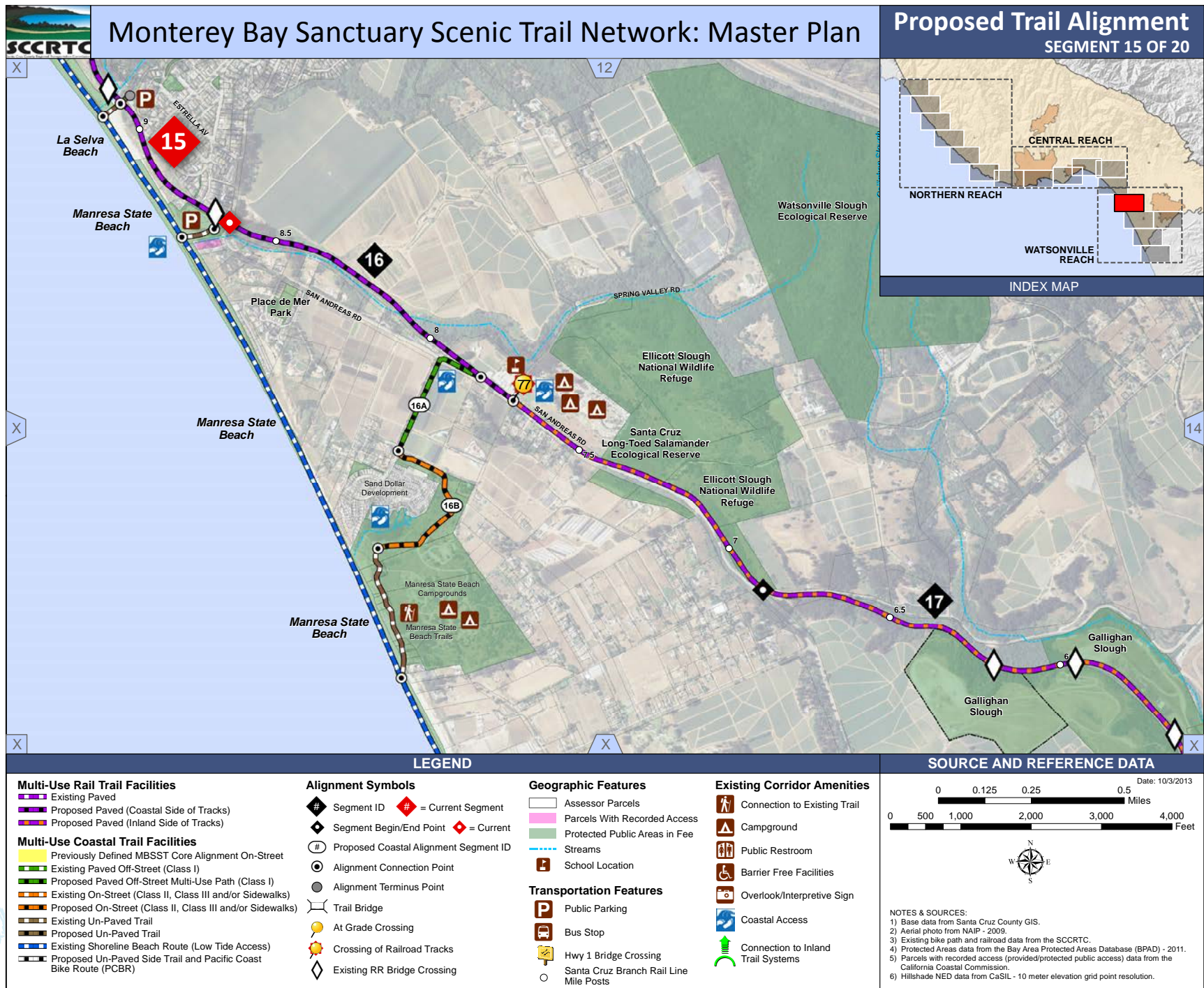


Figure 4-41 Segment 15 proposed trail alignment (continued)



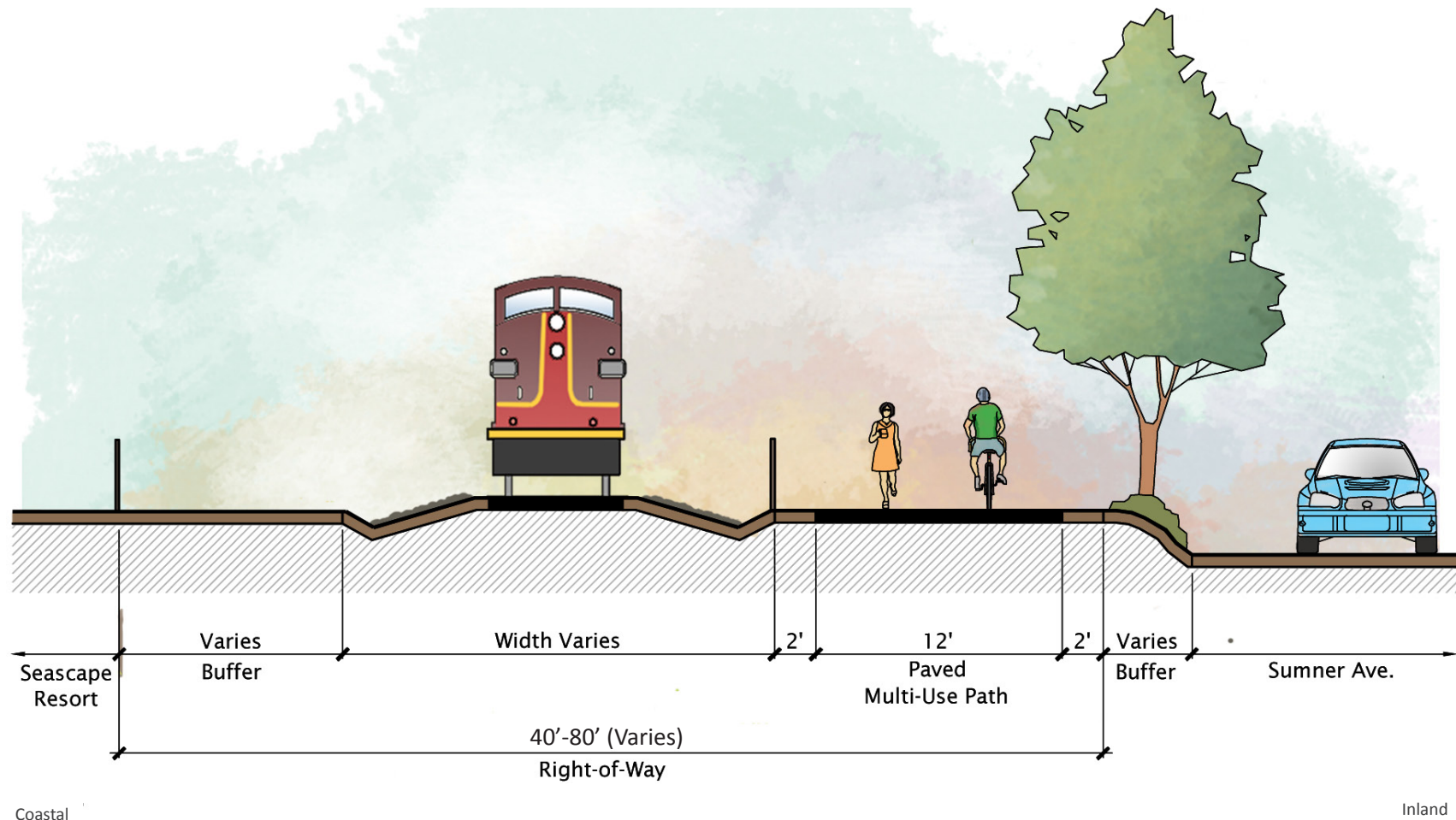


Figure 4-42 Segment 15 trail section





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Manresa State Beach, parking area, beach access, and train tracks







*Railroad tracks adjacent to agricultural lands*



*Inn overlooking agricultural lands and railroad tracks*



*Campground provides a unique destination opportunity to bike and camp*

## 4.16 SEGMENT 16 - ELLICOTT SLOUGH

Length: 2.66 miles (14,030 LF) - down the coast from Railroad Bridge abutment at San Andreas Road to Buena Vista Drive

### 4.16.1 SEGMENT 16 BOUNDARY DETERMINATION

Beginning at the southernmost side abutment or the existing rail bridge crossing of San Andreas Road at Manresa State Beach, most of Segment 16 falls between the rail corridor and San Andreas Road/Pacific Bike Route to Buena Vista Drive. This is a short stretch, but is consistent in its setting of following both the rail corridor and the San Andreas Road corridor as the rail line heads inland toward Watsonville.

### 4.16.2 SEGMENT 16 DESCRIPTION

Segment 16 begins at the south San Andreas Road rail bridge abutment where the rail line begins to diverge from the coastal edge and heads inland toward Watsonville.

South of the bridge over San Andreas Road, the Coastal Rail Trail will follow the coastal side of the rail tracks all the way to Spring Valley Road where it crosses the roadway and switches to the inland side of the rail tracks. The trail continues down the coast, paralleling the tracks along the Ellicott Slough National Wildlife Refuge area. The trail segment continues down the coast across Peaceful Valley Road and ends at the Buena Vista Drive and San Andreas Road intersection. This segment connects with nineteen (19) activity centers identified in Table 3.1.

Segment 16 proposed improvements include:

- 1.78 miles (9,400 LF) multi-use paved path (Class I) along the rail right-of-way
- 0.40 miles (2,100 LF) multi-use paved path (Class I) coastal trail (Segment 16A)
- 0.48 miles (2,530 LF) Class II bike lanes (Segment 16B)
- Two (2) at-grade road crossings (Spring Valley Road, Peaceful Valley Road)
- One (1) at-grade rail crossing (Spring Valley Road)
- Fencing may be considered when project is implemented

**TABLE 4.16 Segment 16 - Ellicott Slough**

<b>Segment Length</b>	<b>2.66 miles (14,030 LF) - Ellicott Slough</b>
Rail Trail Portion	1.78 miles (9,400 LF)
Coastal Trail Portion	0.88 miles (4,630 LF)
<b>Segment Cost</b>	<b>\$3,613,600</b>

Rail Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	9,400	Linear Feet	Varies	\$1,522,800
Amenities (Fencing, Benches, Signage, Etc.)	1	Lump Sum	Varies	\$9,900
Bridge Structures	0	Each	Varies	\$0
At-Grade Crossings (Rail Tracks or Streets)	3	Each	Varies	\$335,000

**Rail Trail Construction SUBTOTAL \$1,867,700**

Coastal Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	2,100	Linear Feet	Varies	\$340,200
Unpaved Trail	0	Linear Feet	Varies	\$0
On Street Facilities (Class II, III, and Sidewalks)	2,530	Linear Feet	\$20	\$50,600

**Coastal Trail Construction SUBTOTAL \$390,800**

COST SUMMARY	
<b>Construction TOTAL</b>	<b>\$2,258,500</b>
Design, Engineering, and PS&E (Plans, Specifications, and Estimates) (15%)	\$338,775
Environmental Permitting (10%)	\$225,850
Construction Management (15%)	\$338,775
Contingency (20%)	\$451,700
<b>SEGMENT TOTAL COST</b>	<b>\$3,613,600</b>

Segment Features	Description	Quantity
Segment Jurisdictional Area	RTC - Rail ROW Owner, State Parks, School Dist., State DFG, County of Santa Cruz	-
Segment Length	Manresa State Beach at San Andreas Road to Buena Vista Dr.	1.78 miles
Minor Roadway Crossings	Spring Valley Road	1
Trail At-Grade Railroad Crossings	Spring Valley Road	1
Existing Staging Areas/Rest Stops	Manresa State Beach	1
Within 1/4 Mile of Public School	Renaissance High School	1
Connection to Public Beach	Manresa State Beach	1
Connection to Residential Area	Rural	1
Connection to Passive Park	Ellicott Slough National Wildlife Refuge	1



Manresa State Beach parking, bike racks, and beach access



Train trestle adjacent to Manresa State Beach



Scenic Manresa State Beach



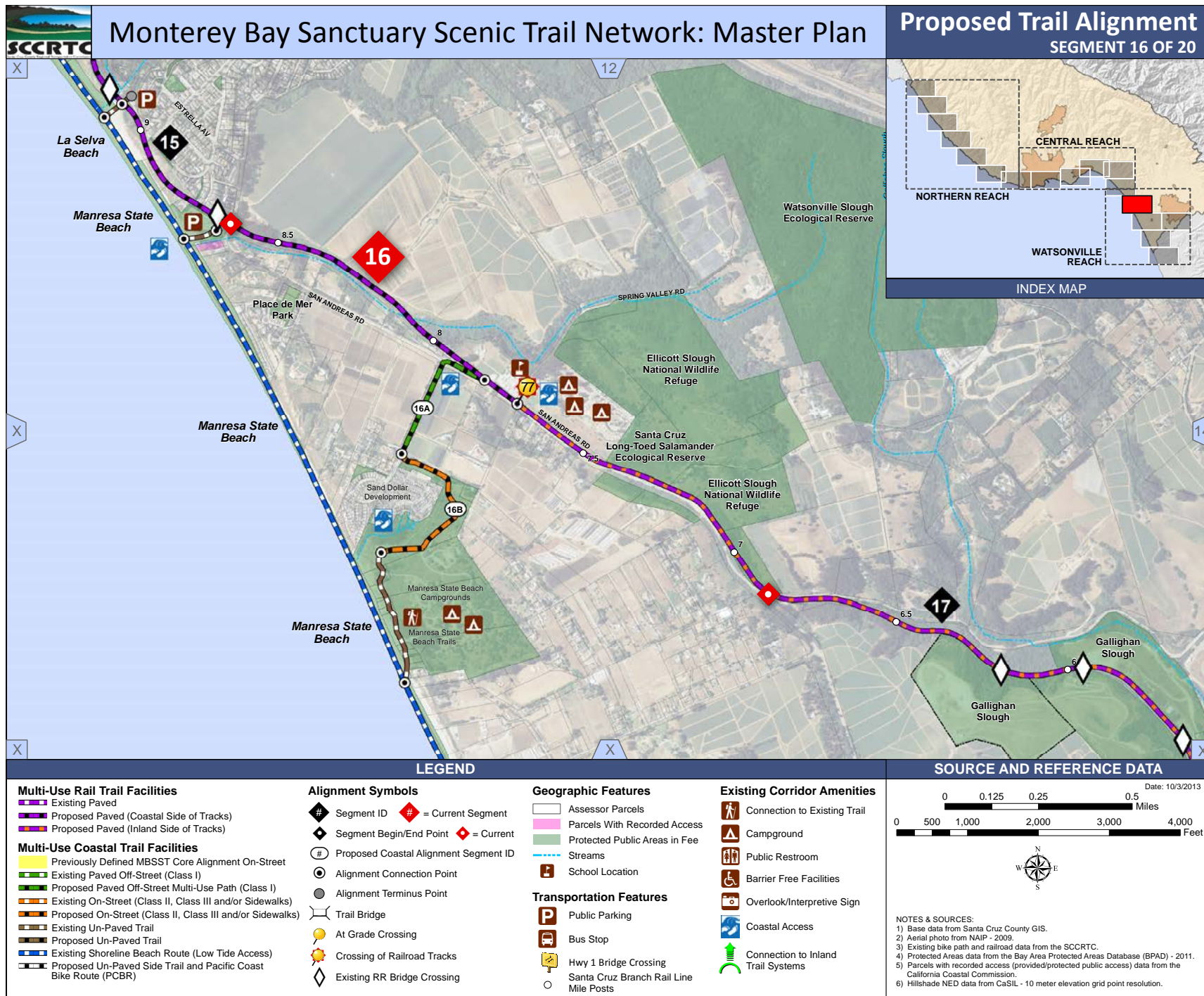


Figure 4-43 Segment 16 proposed trail alignment

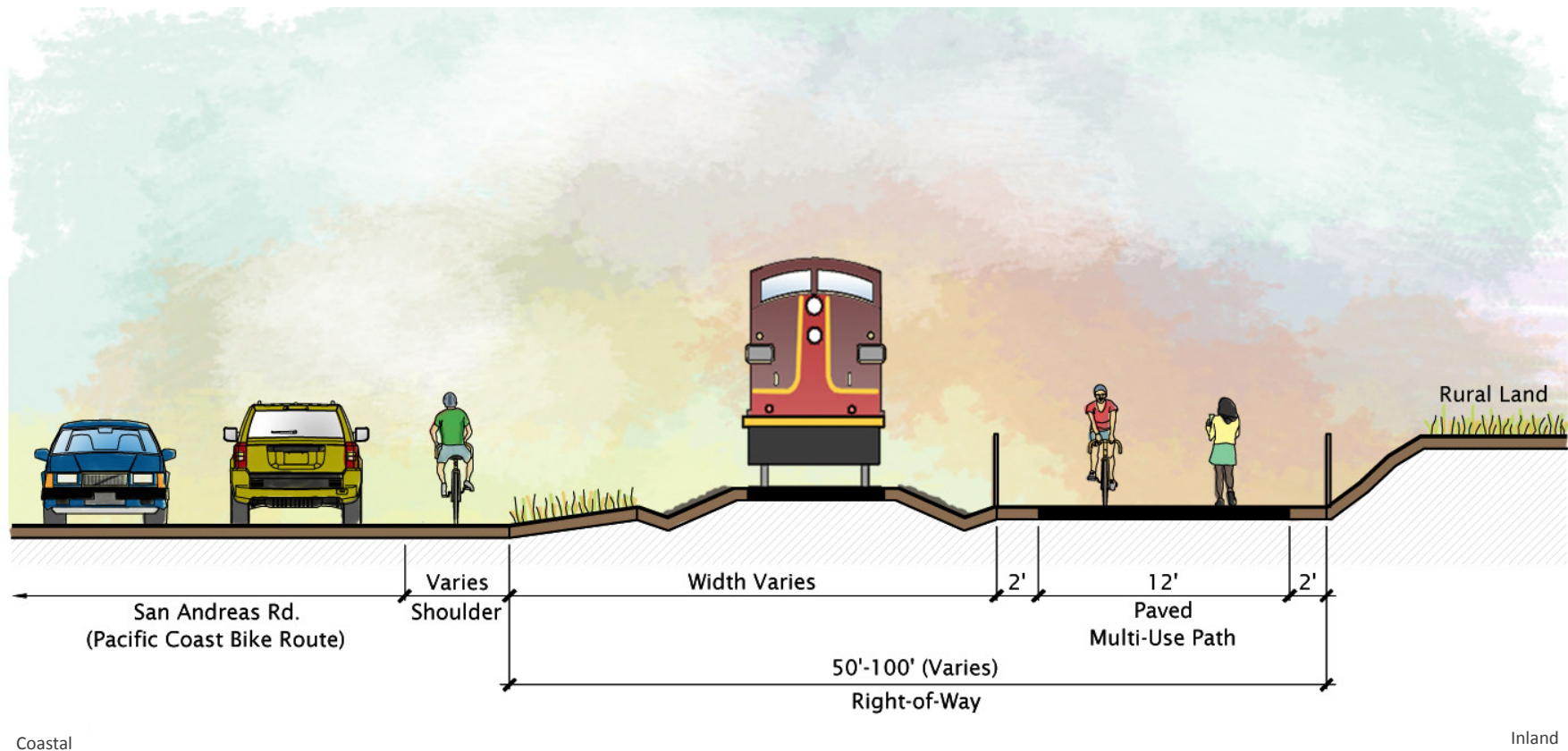


Figure 4-44 Segment 16 trail section







*Harkins Slough train trestle*



*Harkins Slough fauna*



*Harkins Slough looking south*

## 4.17 SEGMENT 17 - HARKINS SLOUGH

Length: 4.00 miles (21,140 LF) - Buena Vista Drive and San Andreas Road intersection to Lee Road

### 4.17.1 SEGMENT 17 BOUNDARY DETERMINATION

The Segment 17 boundary is determined by the physical setting and the change in rail corridor character from the northern starting point at San Andreas Road down the coast to Harkins Slough, a primary branch of Watsonville Slough. This is the one (1) spot where the rail corridor diverts away from the coastal edge and heads inland as it continues down the coast to Watsonville.

### 4.17.2 SEGMENT 17 DESCRIPTION

Starting from the intersection crossing at San Andreas Road and Buena Vista Drive, the proposed Coastal Rail Trail will parallel Gallighan Slough to its convergence with Harkins Slough, following the inland side of the rail tracks. The rail right-of-way width varies from forty-five (45-) feet wide to one-hundred-and-forty-eight- (148-) feet wide as it continues along the steep slope just down the coast from mile marker 7 to mile marker 4.5 at the Harkins Slough trestle. The Segment 17 stretch will require retaining walls to create a bench for the trail tread. This segment is heavily wooded with several smaller rail trestle bridge crossings over small drainages and sloping ravines. The proposed Coastal Rail Trail will follow the inland rail right-of-way along several agricultural fields, a mineral quarry, and wooded slopes as it descends towards the Gallighan Slough-Harkins Slough wetland area. The alignment will require several preengineered bridges and culverts to cross several of the drainages along the steep slopes. Harkins Slough is the largest freshwater slough in California's Central Coast region, and the four-hundred- (400-) foot crossing of the slough may require a boardwalk bridge structure adjacent to the rail line to reach down the coastal side of the slough. A possible interim alignment will divert the trail from the rail line at Gallighan Slough to an on-road alignment at Rountree Lane, Harkins Slough Road, and Lee Road, and will reconnect with the rail at the Lee Road junction. (This alignment was not evaluated or identified in this Master Plan.) The trail will require fencing along the agricultural operations and there is one (1) private, agricultural, dirt road, non-signalized rail crossing west of Lee Road. This segment connects with four (4) activity centers identified in Table 2.1.

Segment 17 proposed improvements include:

- 4.0 miles (21,140 LF) multi-use paved path (Class I) along the inland rail right-of-way
- Seven (7) rail bridge/culvert crossings of varying lengths
- One (1) private farm road crossing (one-half [1/2] mile west of Lee Road)
- One (1) private road crossing at Buena Vista Drive and one (1) additional private crossing
- This segment also includes fencing for agricultural operations and safety; additional fencing may be considered when project is implemented

**TABLE 4.17 Segment 17 - Harkins Slough**

<b>Segment Length</b>	<b>4.00 miles (21,140 LF) - Harkins Slough</b>
Rail Trail Portion	4.00 miles (21,140 LF)
Coastal Trail Portion	0.0 miles (0 LF)
<b>Segment Cost</b>	<b>\$19,961,888</b>

Rail Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	21,140	Linear Feet	Varies	\$5,212,980
Amenities (Fencing, Benches, Signage, Etc.)	1	Lump Sum	Varies	\$233,200
Bridge Structures	7	Each	Varies	\$7,000,000
At-Grade Crossings (Rail Tracks or Streets)	3	Each	Varies	\$30,000

**Rail Trail Construction SUBTOTAL \$12,476,180**

Coastal Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Unpaved Trail	0	Linear Feet	Varies	\$0
On Street Facilities (Class II, III, and Sidewalks)	0	Linear Feet	Varies	\$0

**Coastal Trail Construction SUBTOTAL \$0**

COST SUMMARY	
<b>Construction TOTAL</b>	<b>\$12,476,180</b>
Design, Engineering, and PS&E (Plans, Specifications, and Estimates) (15%)	\$1,871,427
Environmental Permitting (10%)	\$1,247,618
Construction Management (15%)	\$1,871,427
Contingency (20%)	\$2,495,236
<b>SEGMENT TOTAL COST</b>	<b>\$19,961,888</b>

Segment Features	Description	Quantity
Segment Jurisdictional Area	RTC - Rail ROW Owner, City of Watsonville, California Dept. of Fish and Wildlife (CDFW)	-
Rail Bridge Crossing (Wood Trestle)	Various bridges along segment	4
Major Drainage	Watsonville Slough	1
Minor Drainage	Various drainages along segment	2



Existing Watsonville Slough trail



Harkins Slough looking south



Existing Watsonville Slough trail





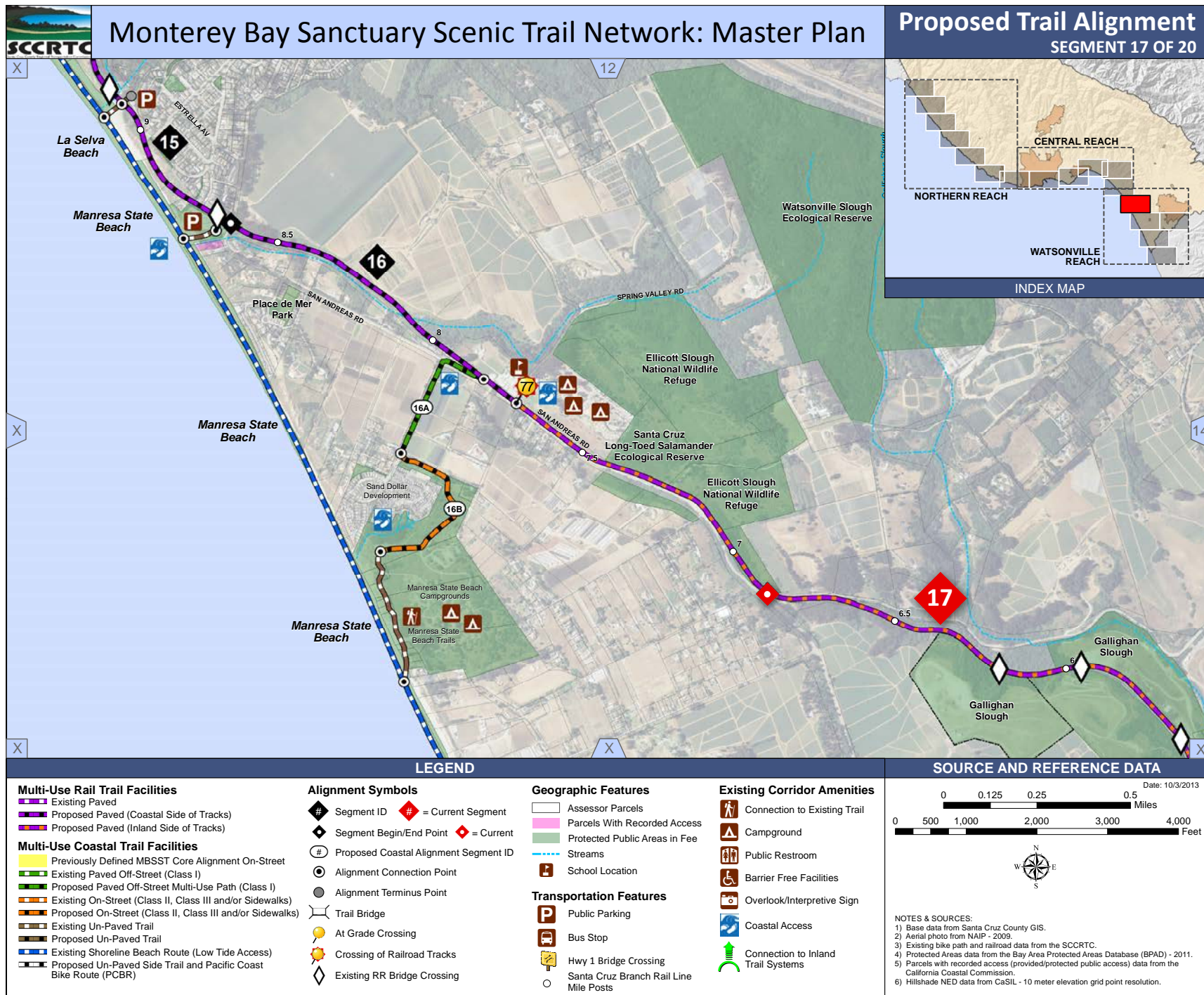


Figure 4-45 Segment 17 proposed trail alignment

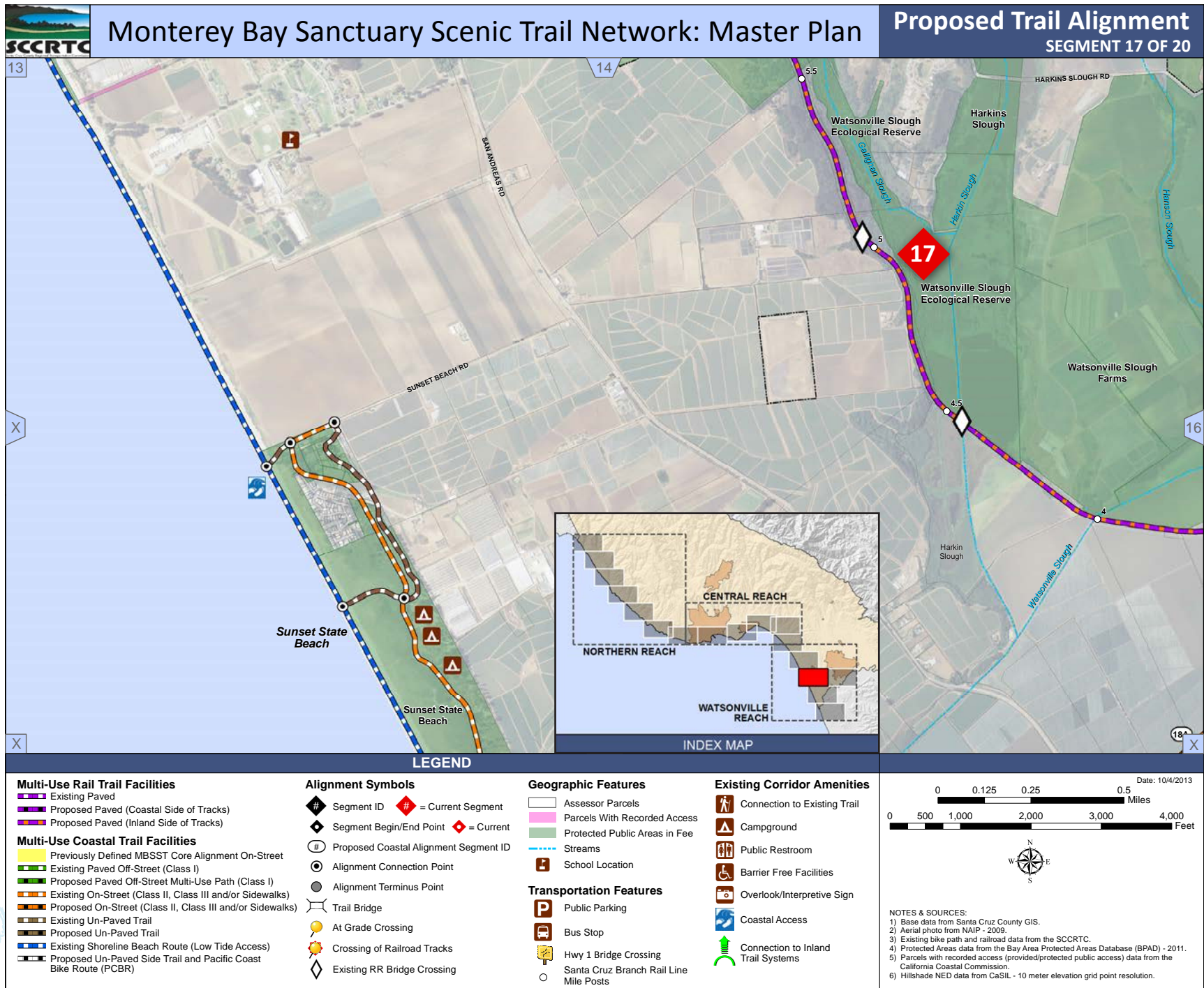


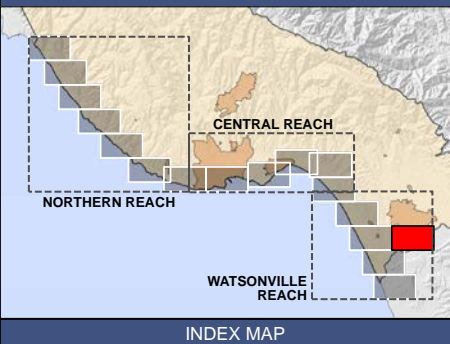
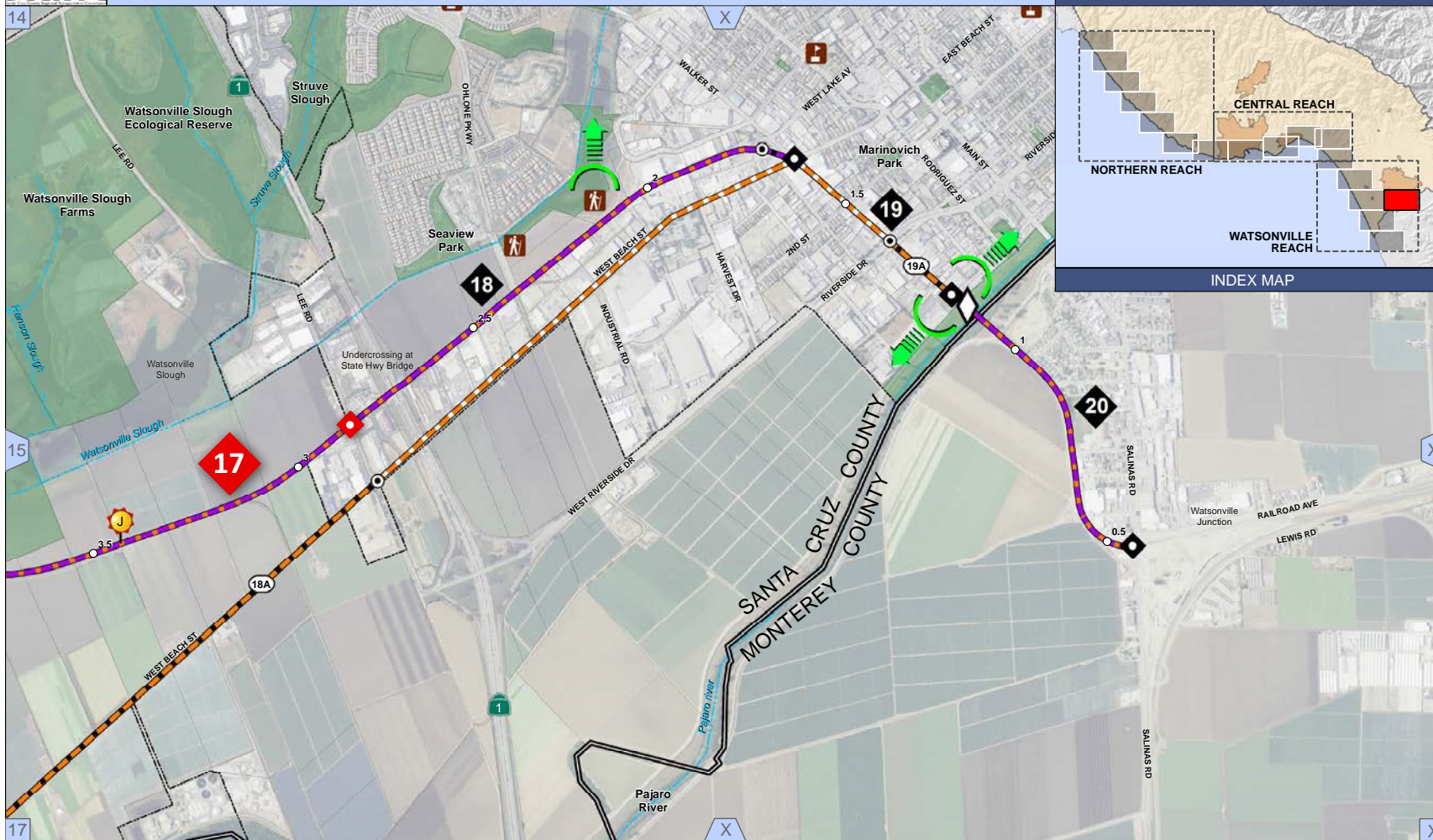
Figure 4-46 Segment 17 proposed trail alignment (continued)





# Monterey Bay Sanctuary Scenic Trail Network: Master Plan

## Proposed Trail Alignment SEGMENT 17 OF 20



LEGEND		SOURCE AND REFERENCE DATA	
<b>Multi-Use Rail Trail Facilities</b>	<b>Alignment Symbols</b>	<b>Geographic Features</b>	<b>Existing Corridor Amenities</b>
<ul style="list-style-type: none"><li>Existing Paved</li><li>Proposed Paved (Coastal Side of Tracks)</li><li>Proposed Paved (Inland Side of Tracks)</li></ul>	<ul style="list-style-type: none"><li>Segment ID</li><li>Segment Begin/End Point</li><li>Proposed Coastal Alignment Segment ID</li><li>Alignment Connection Point</li><li>Alignment Terminus Point</li><li>Trail Bridge</li><li>At Grade Crossing</li><li>Crossing of Railroad Tracks</li><li>Existing RR Bridge Crossing</li></ul>	<ul style="list-style-type: none"><li>Assessor Parcels</li><li>Parcels With Recorded Access</li><li>Protected Public Areas in Fee</li><li>Streams</li><li>School Location</li></ul>	<ul style="list-style-type: none"><li>Connection to Existing Trail</li><li>Campground</li><li>Public Restroom</li><li>Barrier Free Facilities</li><li>Overlook/Interpretive Sign</li><li>Coastal Access</li><li>Connection to Inland Trail Systems</li></ul>
<b>Multi-Use Coastal Trail Facilities</b>		<b>Transportation Features</b>	
<ul style="list-style-type: none"><li>Previously Defined MBSST Core Alignment On-Street</li><li>Existing Paved Off-Street (Class I)</li><li>Proposed Paved Off-Street Multi-Use Path (Class I)</li><li>Existing On-Street (Class II, Class III and/or Sidewalks)</li><li>Proposed On-Street (Class II, Class III and/or Sidewalks)</li><li>Existing Un-Paved Trail</li><li>Proposed Un-Paved Trail</li><li>Existing Shoreline Beach Route (Low Tide Access)</li><li>Proposed Un-Paved Side Trail and Pacific Coast Bike Route (PCBR)</li></ul>		<ul style="list-style-type: none"><li>Public Parking</li><li>Bus Stop</li><li>Hwy 1 Bridge Crossing</li><li>Santa Cruz Branch Rail Line Mile Posts</li></ul>	

Date: 10/3/2013

0 0.125 0.25 0.5 Miles

0 500 1,000 2,000 3,000 4,000 Feet

North Arrow

**NOTES & SOURCES:**

- 1) Base data from Santa Cruz County GIS.
- 2) Aerial photo from NAIP - 2009.
- 3) Existing bike path and railroad data from the SCCRTC.
- 4) Protected Areas data from the Bay Area Protected Areas Database (BPAD) - 2011.
- 5) Parcels with recorded access (provided/protected public access) data from the California Coastal Commission.
- 6) Hillshade NED data from CaSIL - 10 meter elevation grid point resolution.

Figure 4-47 Segment 17 proposed trail alignment (continued)



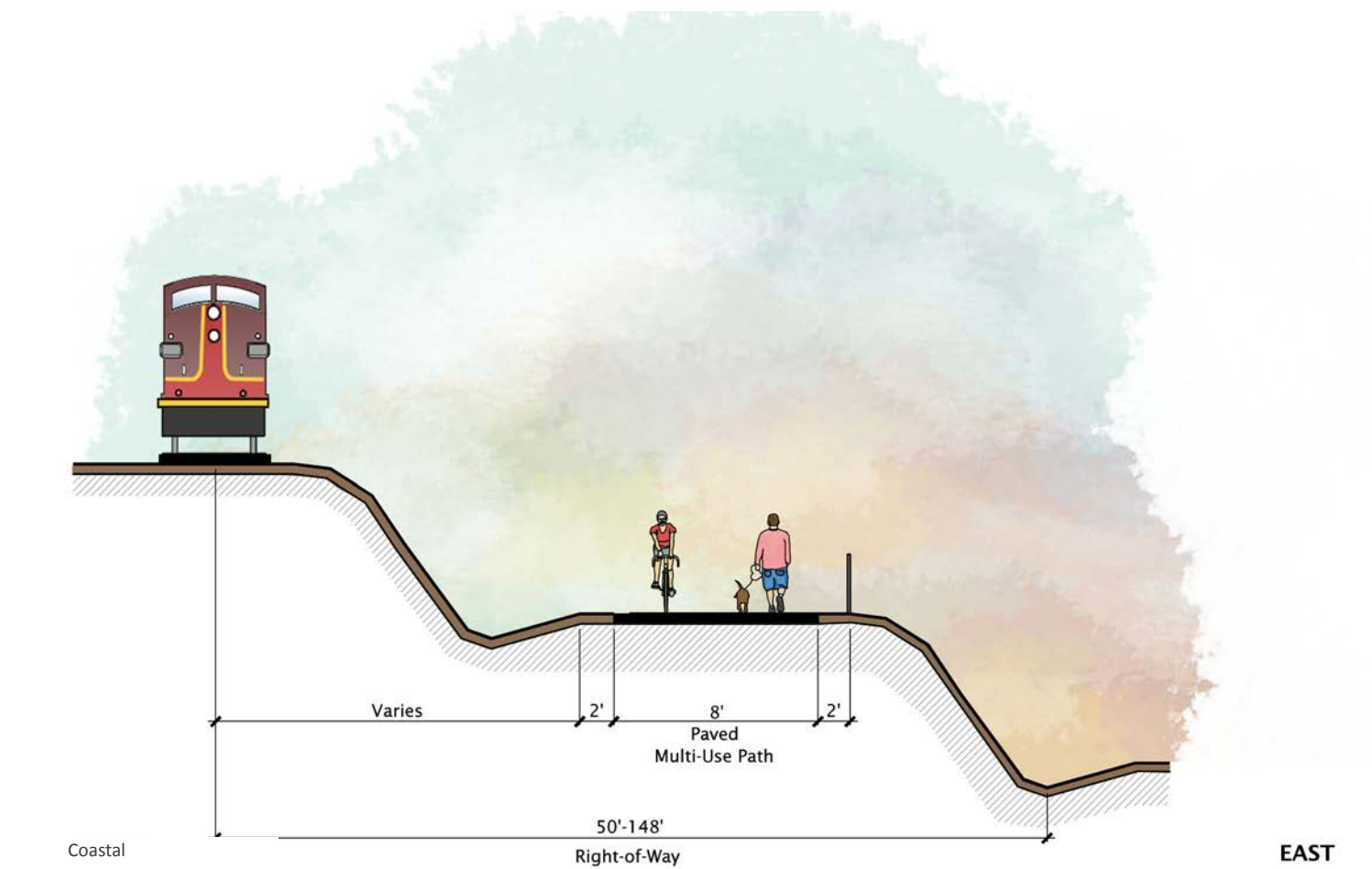


Figure 4-48 Segment 17 trail section







*Watsonville agriculture along Beach Road*



*Watsonville agriculture along Beach Road*



*Watsonville agriculture along Beach Road*

## 4.18 SEGMENT 18 - WATSONVILLE SLOUGH OPEN SPACE TRAILS

Length: 4.01 miles (21,170 LF) - Lee Road to Walker Street

### 4.18.1 SEGMENT 18 BOUNDARY DETERMINATION

Segment 18 starts at the railroad crossing at Lee Road and continues down the coast to Walker Street. This segment connects Downtown Watsonville to the existing trail network in the Watsonville Slough Wetlands.

### 4.18.2 SEGMENT 18 DESCRIPTION

Segment 18 will require coordination with the City of Watsonville, Caltrans, and adjacent local farm owners and operators. Segment 18 begins at Lee Road, which will include a road crossing, and follows the rail right-of-way on the inland side as it continues down the coast, crossing under the Highway 1 bridge structure near Lee Road into Watsonville. The proposed alignment crosses the Ohlone Parkway at-grade rail crossing and connects to the Watsonville Wetland trail system. This segment ends following the industrial areas on the inland side of the tracks just as they connect to Walker Street in the city of Watsonville. Segment 18 connects with three (3) activity centers identified in Table 3.1.

Segment 18 proposed improvements include:

- 1.20 miles (6,350 LF) multi-use paved path (Class I) along the inland rail right-of-way
- 2.81 miles (14,820 LF) Class II bike lanes (Segment 18A: Watsonville Slough at Sunset State Beach to San Andreas Road, and Segment 18B: Thurwacher Road to Lee Road.)
- One (1) rail culvert crossing
- Two (2) road crossings (one [1] at Lee Road and one [1] at Ohlone Parkway)
- This segment also includes fencing for agricultural operations and safety; additional fencing may be considered when project is implemented

**TABLE 4.18 Segment 18 - Watsonville Slough Open Space Trails**

<b>Segment Length</b>	<b>4.01 miles (21,170 LF) - Watsonville Open Space Trails</b>
Rail Trail Portion	1.20 miles (6,350 LF)
Coastal Trail Portion	2.81 miles (14,820 LF)
<b>Segment Cost</b>	<b>\$3,010,720</b>

Rail Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	6,350	Linear Feet	Varies	\$1,028,700
Amenities (Fencing, Benches, Signage, Etc.)	1	Lump Sum	Varies	\$416,600
Bridge Structures	0	Each	Varies	\$0
At-Grade Crossings (Rail Tracks or Streets)	3	Each	Varies	\$140,000
<b>Rail Trail Construction SUBTOTAL</b>				<b>\$1,585,300</b>

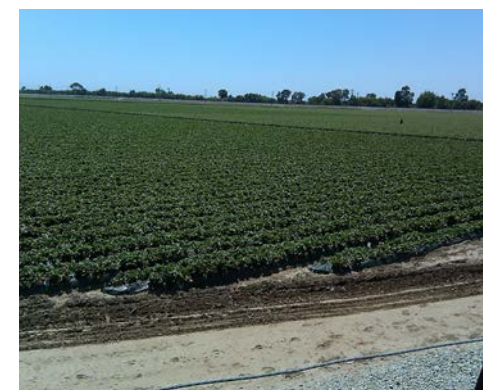
Coastal Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Unpaved Trail	0	Linear Feet	Varies	\$0
On Street Facilities (Class II)	14,820	Linear Feet	\$20	\$296,400
<b>Coastal Trail Construction SUBTOTAL</b>				<b>\$296,400</b>

<b>COST SUMMARY</b>	
<b>Construction TOTAL</b>	<b>\$1,881,700</b>
Design, Engineering, and PS&E (Plans, Specifications, and Estimates) (15%)	\$282,255
Environmental Permitting (10%)	\$188,170
Construction Management (15%)	\$282,255
Contingency (20%)	\$376,340
<b>SEGMENT TOTAL COST</b>	<b>\$3,010,720</b>

Segment Features	Description	Quantity
Segment Jurisdictional Area	City of Watsonville, Flood Control, RTC - Rail ROW Owner, County of Santa Cruz	-
Minor Roadway Crossings	Lee Road, Ohlone Parkway	2
Private Road Crossings	Farm field access roads	2
Existing Staging Areas/Rest Stops	Watsonville Wetlands	1
Connection To Other Trails	Watsonville Wetlands	1
Within 1/4 Mile of Public School	Landmark Elementary School	1
Connection to Residential Area	Seaview Ranch	1



*Row crops adjacent to the railroad corridor*



*Scenic agricultural fields*



*Agriculture employee parking*

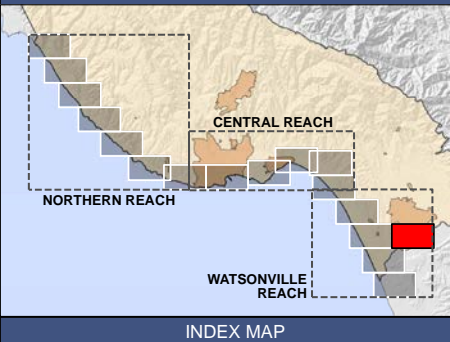






# Monterey Bay Sanctuary Scenic Trail Network: Master Plan

## Proposed Trail Alignment SEGMENT 18 OF 20



LEGEND		SOURCE AND REFERENCE DATA	
<b>Multi-Use Rail Trail Facilities</b>	<b>Alignment Symbols</b>	<b>Geographic Features</b>	<b>Existing Corridor Amenities</b>
<ul style="list-style-type: none"><li>Existing Paved</li><li>Proposed Paved (Coastal Side of Tracks)</li><li>Proposed Paved (Inland Side of Tracks)</li></ul>	<ul style="list-style-type: none"><li>Segment ID</li><li>Segment Begin/End Point</li><li>Proposed Coastal Alignment Segment ID</li><li>Alignment Connection Point</li><li>Alignment Terminus Point</li><li>Trail Bridge</li><li>At Grade Crossing</li><li>Crossing of Railroad Tracks</li><li>Existing RR Bridge Crossing</li></ul>	<ul style="list-style-type: none"><li>Assessor Parcels</li><li>Parcels With Recorded Access</li><li>Protected Public Areas in Fee</li><li>Streams</li><li>School Location</li></ul>	<ul style="list-style-type: none"><li>Connection to Existing Trail</li><li>Campground</li><li>Public Restroom</li><li>Barrier Free Facilities</li><li>Overlook/Interpretive Sign</li><li>Coastal Access</li><li>Connection to Inland Trail Systems</li></ul>
<b>Multi-Use Coastal Trail Facilities</b>		<b>Transportation Features</b>	
<ul style="list-style-type: none"><li>Previously Defined MBSST Core Alignment On-Street</li><li>Existing Paved Off-Street (Class I)</li><li>Proposed Paved Off-Street Multi-Use Path (Class I)</li><li>Existing On-Street (Class II, Class III and/or Sidewalks)</li><li>Proposed On-Street (Class II, Class III and/or Sidewalks)</li><li>Existing Un-Paved Trail</li><li>Proposed Un-Paved Trail</li><li>Existing Shoreline Beach Route (Low Tide Access)</li><li>Proposed Un-Paved Side Trail and Pacific Coast Bike Route (PCBR)</li></ul>		<ul style="list-style-type: none"><li>Public Parking</li><li>Bus Stop</li><li>Hwy 1 Bridge Crossing</li><li>Santa Cruz Branch Rail Line Mile Posts</li></ul>	

Date: 10/3/2013

0 0.125 0.25 0.5 Miles

0 500 1,000 2,000 3,000 4,000 Feet

North Arrow

NOTES & SOURCES:

- 1) Base data from Santa Cruz County GIS.
- 2) Aerial photo from NAIP - 2009.
- 3) Existing bike path and railroad data from the SCCRTC.
- 4) Protected Areas data from the Bay Area Protected Areas Database (BPAD) - 2011.
- 5) Parcels with recorded access (provided/protected public access) data from the California Coastal Commission.
- 6) Hillshade NED data from CaSIL - 10 meter elevation grid point resolution.

Figure 4-49 Segment 18 proposed trail alignment



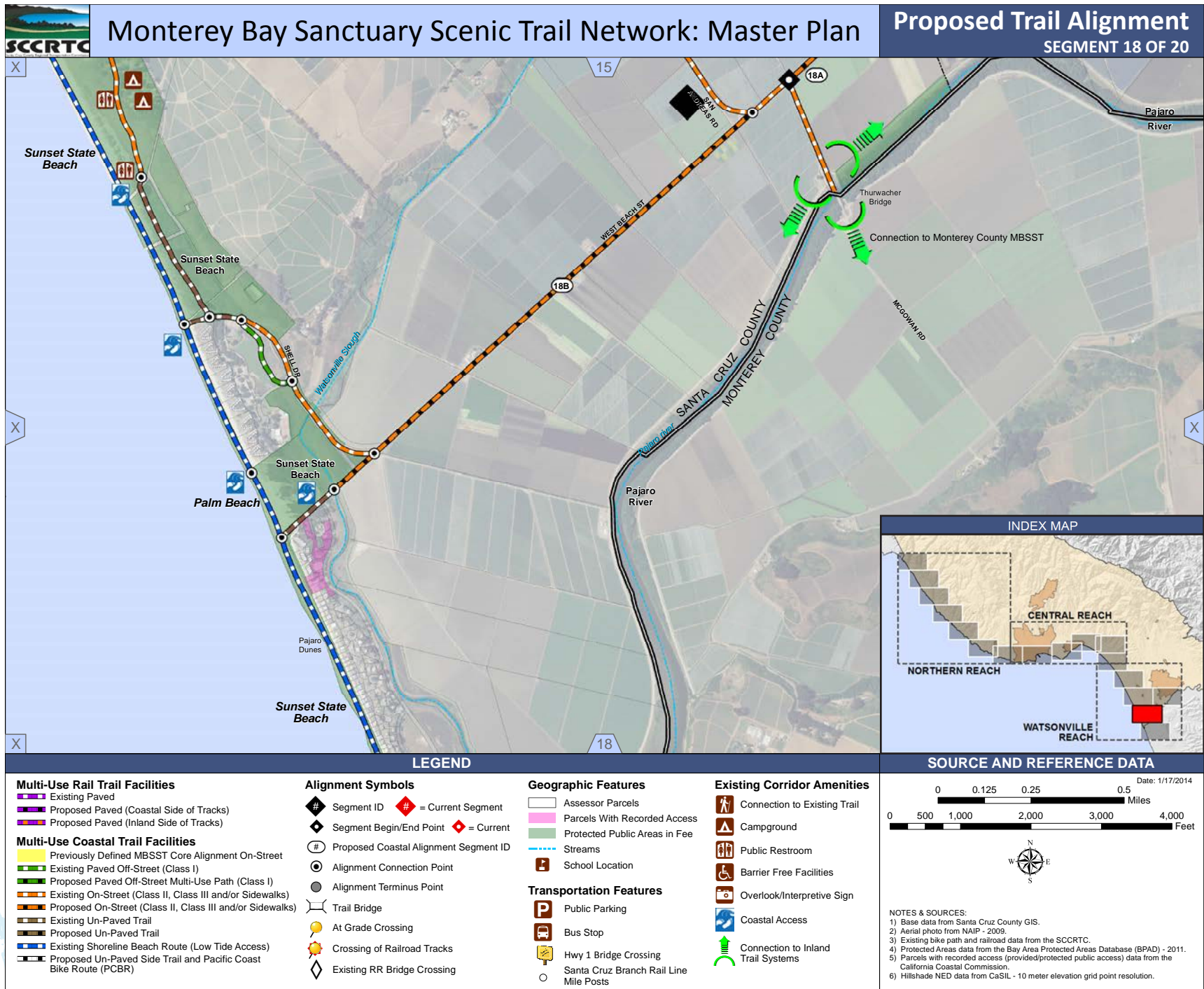


Figure 4-50 Segment 18 proposed trail alignment (continued)



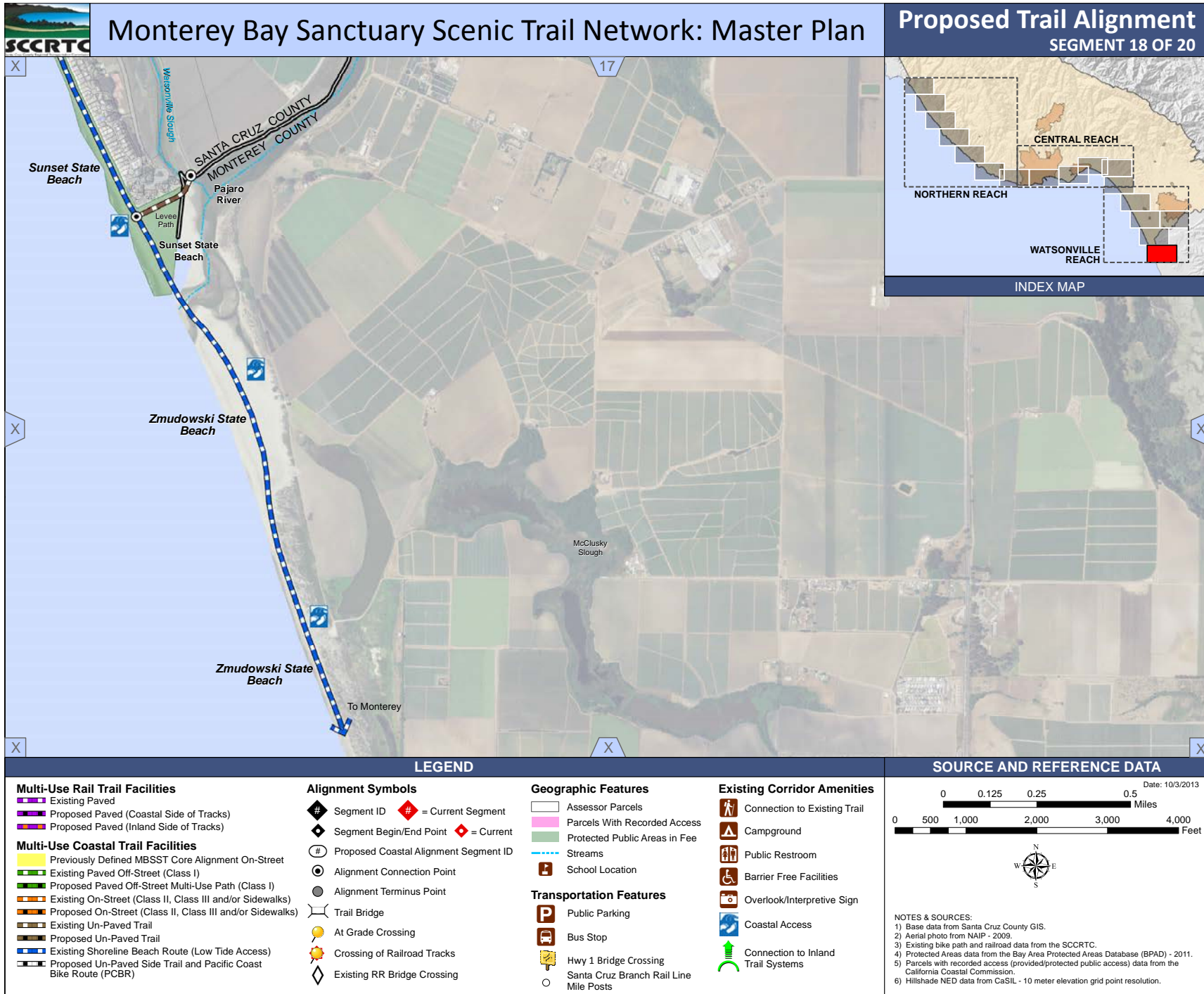
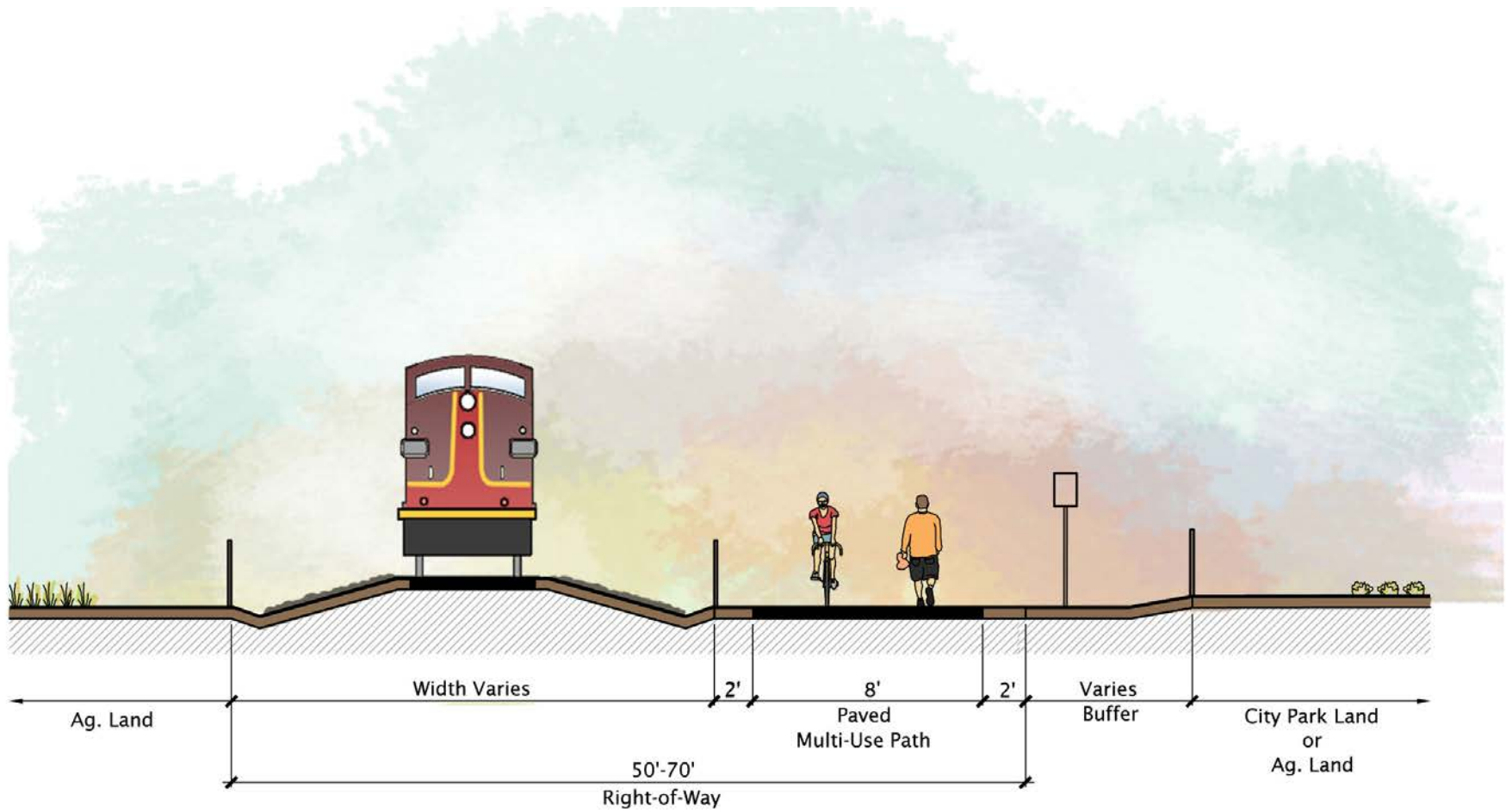


Figure 4-51 Segment 18 proposed trail alignment (continued)



down the coast/coastal

up the coast/inland

Figure 4-52 Segment 18 trail section







*Walker Street industrial area adjacent to railroad corridor*



*Murals adjacent to the rail corridor on Walker Street in Watsonville*



*Industrial fence and road located in close proximity to the railroad tracks*

## 4.19 SEGMENT 19 - WALKER STREET, CITY OF WATSONVILLE

Length: 0.47 miles (2,460 LF) - Walker Street to North Bank of the Pajaro River

### 4.19.1 SEGMENT 19 BOUNDARY DETERMINATION

Segment 19, from the intersection of Walker Street and West Beach Street, is both a multi-use path and an on-street facility. It begins near railroad mile marker 2 and continues to the southernmost end of Walker Street at the Pajaro River Bridge.

### 4.19.2 SEGMENT 19 DESCRIPTION

Segment 19 will be part of Watsonville's bike facility network. Segment 19 starts as an existing Class II bike lane and sidewalk facility at the intersection of Walker Street and West Beach Street. Currently, the rail tracks are situated in the centerline of Walker Street and the existing Class II bike lanes and sidewalks on Walker Street end at the intersection of Walker Street and West Riverside Drive. Segment 19A begins at the Walker Street and Riverside intersection and end at the Pajaro River levee. This segment of Walker Street needs consistent sidewalks and curb ramps. Class II bike lanes are also proposed along both sides of Walker Street from the Riverside Drive intersection all the way to the terminus of Walker Street to connect the Pajaro River Levee Trail. Segment 19 connects with fifteen (15) activity centers identified in Table 3.1.

Segment 19 proposed improvements include:

- 0.29 miles (1,510 LF) existing Class II bike lane along Walker Street right-of-way
- 0.18 miles (950 LF) proposed Class II bike lane along Walker Street right-of-way (Segment 19A)
- New sidewalks on the inland side of Walker Street from the intersection of W. Riverside Drive to the end of Walker Street, connecting to the Pajaro River

**TABLE 4.19 Segment 19 - Walker Street, City of Watsonville**

<b>Segment Length</b>	<b>0.47 miles (2,460 feet) - Walker Street, City of Watsonville</b>
Rail Trail Portion (Existing - Walker Street)	0.29 miles (1,510 LF)
Coastal Trail Portion (Proposed - Walker Street)	0.18 miles (950 LF)
<b>Segment Cost</b>	<b>\$381,280</b>

Rail Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Amenities (Fencing, Benches, Signage, Etc.)	0	Lump Sum	Varies	\$159,300
Bridge Structures	0	Each	Varies	\$0
At-Grade Crossings (Rail Tracks or Streets)	1	Each	Varies	\$60,000

**Rail Trail Construction SUBTOTAL \$219,300**

Coastal Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Unpaved Trail	0	Linear Feet	Varies	\$0
On Street Facilities (Class II and Sidewalks - 19A)	950	Linear Feet	\$20	\$19,000

**Coastal Trail Construction SUBTOTAL \$19,000**

#### COST SUMMARY

<b>Construction TOTAL</b>	<b>\$238,300</b>
Design, Engineering, and PS&E (Plans, Specifications, and Estimates) (15%)	\$35,745
Environmental Permitting (10%)	\$23,830
Construction Management (15%)	\$35,745
Contingency (20%)	\$47,660
<b>SEGMENT TOTAL COST</b>	<b>\$381,280</b>

Segment Features	Description	Quantity
Segment Jurisdictional Area	City of Watsonville, Flood Control	-
Connection To Other Trails	Pajaro River	1
Within 1/4 Mile of Public School	Radcliff Elementary	2
Connection to Commercial Area	Walker Street and Downtown Watsonville	1
Connection to Residential Area	Multiple	2
State Highway Crossings	State Route 129 (Riverside Drive)	1
Major Road Crossings	West Beach Street	1
Minor Roadway Crossings	Second Street	1
Within 1/4 Mile of Public School	Radcliff Elementary, Ceiba College Prep	2



*Railroad tracks with Highway 1 in the background*



*Railroad tracks with hotel in the background*



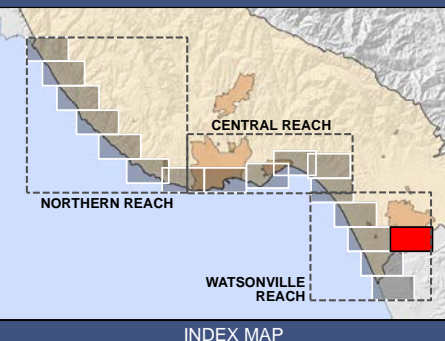
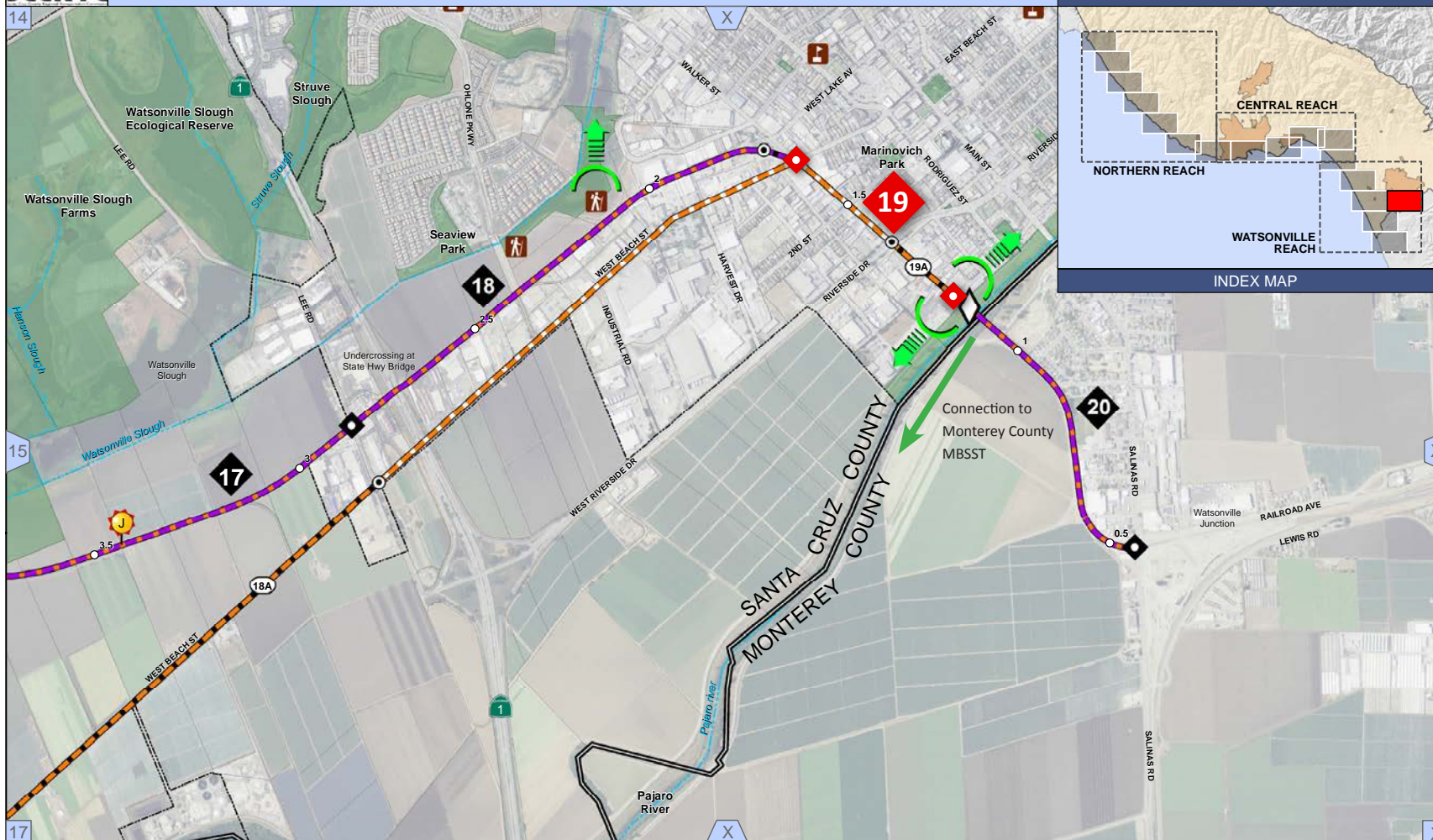
*Pajaro River Levee Trail park sign*





# Monterey Bay Sanctuary Scenic Trail Network: Master Plan

## Proposed Trail Alignment SEGMENT 19 OF 20



LEGEND		SOURCE AND REFERENCE DATA		
<b>Multi-Use Rail Trail Facilities</b> <ul style="list-style-type: none"><li>Existing Paved</li><li>Proposed Paved (Coastal Side of Tracks)</li><li>Proposed Paved (Inland Side of Tracks)</li></ul>	<b>Alignment Symbols</b> <ul style="list-style-type: none"><li>Segment ID</li><li>Segment Begin/End Point</li><li>Proposed Coastal Alignment Segment ID</li><li>Alignment Connection Point</li><li>Alignment Terminus Point</li><li>Trail Bridge</li><li>At Grade Crossing</li><li>Crossing of Railroad Tracks</li><li>Existing RR Bridge Crossing</li></ul>	<b>Geographic Features</b> <ul style="list-style-type: none"><li>Assessor Parcels</li><li>Parcels With Recorded Access</li><li>Protected Public Areas in Fee</li><li>Streams</li><li>School Location</li></ul> <b>Transportation Features</b> <ul style="list-style-type: none"><li>Public Parking</li><li>Bus Stop</li><li>Hwy 1 Bridge Crossing</li><li>Santa Cruz Branch Rail Line Mile Posts</li></ul>	<b>Existing Corridor Amenities</b> <ul style="list-style-type: none"><li>Connection to Existing Trail</li><li>Campground</li><li>Public Restroom</li><li>Barrier Free Facilities</li><li>Overlook/Interpretive Sign</li><li>Coastal Access</li><li>Connection to Inland Trail Systems</li></ul>	<p>Date: 10/3/2013</p> <p>0 0.125 0.25 0.5 Miles</p> <p>0 500 1,000 2,000 3,000 4,000 Feet</p> <p>NOTES &amp; SOURCES:</p> <ol style="list-style-type: none"><li>1) Base data from Santa Cruz County GIS.</li><li>2) Aerial photo from NAIP - 2009.</li><li>3) Existing bike path and railroad data from the SCCRTC.</li><li>4) Protected Areas data from the Bay Area Protected Areas Database (BPAD) - 2011.</li><li>5) Parcels with recorded access (provided/protected public access) data from the California Coastal Commission.</li><li>6) Hillshade NED data from CaSIL - 10 meter elevation grid point resolution.</li></ol>

Figure 4-53 Segment 19 proposed trail alignment

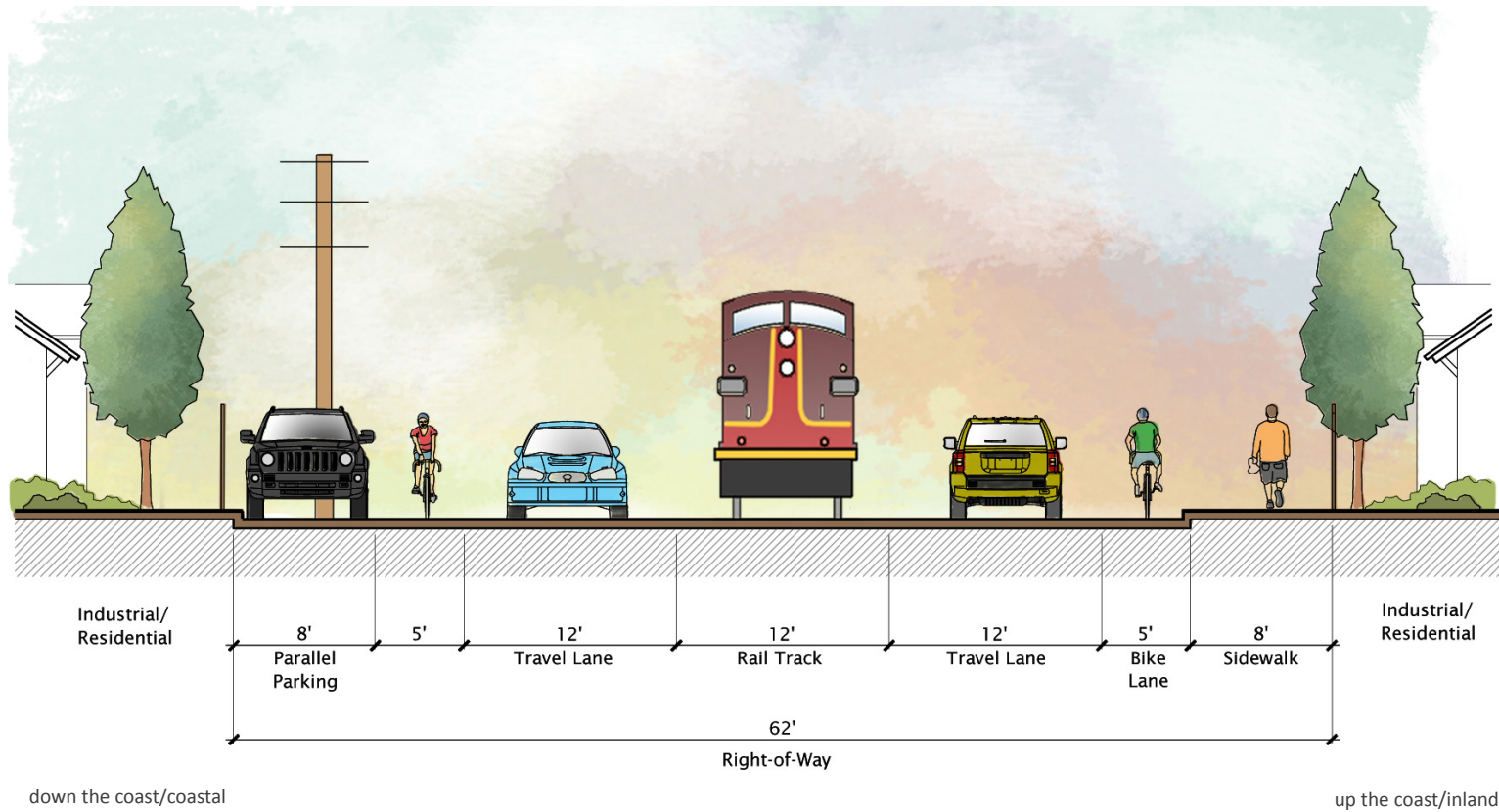


Figure 4-54 Segment 19 trail section





*Pajaro River levee looking south*



*Pajaro River railroad bridge*



*Homeless encampment adjacent to the Pajaro River*

- One (1) at-grade street crossing at Riverside Drive
- Additional fencing may be considered when project is implemented

## 4.20 SEGMENT 20 - PAJARO RIVER

Length: 0.74 mile (3,930 LF) - North Bank of the Pajaro River to Porter Street

### 4.20.1 SEGMENT 20 BOUNDARY DETERMINATION

Segment 20 is the last segment of the railroad corridor starting at the rail trestle crossing of the Pajaro River and concluding at the proposed Coastal Rail Trail down the coast where the rail line meets Salinas Road.

### 4.20.2 SEGMENT 20 DESCRIPTION

This segment is a short connection that includes a new preengineered bridge crossing at the Pajaro River. This connection will occur on the inland side of the river rail trestle crossing and will provide regional connection to the existing and proposed Pajaro River levee-top trail in Watsonville. The proposed rail trail alignment will continue along the inland side of the tracks connecting adjacent neighborhoods and schools and ending at the Salinas Road right-of-way. This terminus at Salinas Road is planned to someday continue inland from Salinas Road to a future rail station on Railroad Avenue and a regional connection inland of the county line toward San Benito County and the city of Gilroy. The terminus of Segment 20 connects to the Monterey County bike path, as identified by the Transportation Agency for Monterey County (TAMC). This segment connects with five (5) activity centers identified in Table 3.1.

While a footbridge or crossing of the Pajaro River and Watsonville Slough are not being proposed as part of this Master Plan, they will provide high-quality beach access. These links are regionally important because the levee-top trail proposed by the City of Watsonville Trails and Greenways Master Plan has the potential not only to complete beach access from the city of Watsonville, but also to provide Coastal Rail Trail continuity around the southern reach of the Monterey Bay. Therefore, a study should be conducted at a later date to identify and evaluate various ways for crossing the Pajaro River and the Watsonville Slough in order to connect the Santa Cruz County portion of the MBSST Network to its Monterey County counterpart and to maximize coastal access opportunities.

Segment 20 proposed improvements include:

- 0.74 miles (3,930 LF) multi-use paved path (Class I) along the inland rail right-of-way
- One (1) new preengineered bike/pedestrian bridge at the Pajaro River crossing, two-hundred- (200-) foot span
- 3,930 feet of fencing for agricultural operations and safety, additional fencing may be considered when project is implemented



**TABLE 4.20 Segment 20 - Pajaro River**

<b>Segment Length</b>	<b>0.74 miles (3,930 LF) - Pajaro River</b>
Rail Trail Portion	0.74 miles (3,930 LF)
Coastal Trail Portion	0.0 miles (0 LF)
<b>Segment Cost</b>	<b>\$3,009,136</b>

Rail Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	3,930	Linear Feet	Varies	\$636,660
Amenities (Fencing, Benches, Signage, Etc.)	1	Lump Sum	Varies	\$244,050
Bridge Structures	1	Each	Varies	\$1,000,000
At-Grade Crossings (Rail Tracks or Streets)	0	Each	Varies	\$0

**Rail Trail Construction SUBTOTAL \$1,880,710**

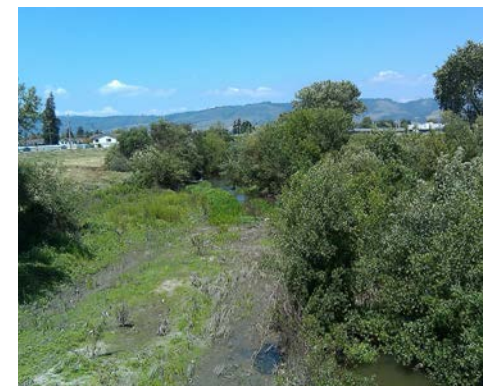
Coastal Trail Components	Quantity	Unit	Unit Price	Cost
Paved Multi-Use Path	0	Linear Feet	Varies	\$0
Unpaved Trail	0	Linear Feet	Varies	\$0
On Street Facilities (Class II, III, and Sidewalks)	0	Linear Feet	Varies	\$0

**Coastal Trail Construction SUBTOTAL \$0**

**COST SUMMARY**

<b>Construction TOTAL</b>	<b>\$1,880,710</b>
Design, Engineering, and PS&E (Plans, Specifications, and Estimates) (15%)	\$282,107
Environmental Permitting (10%)	\$188,071
Construction Management (15%)	\$282,107
Contingency (20%)	\$376,142
<b>SEGMENT TOTAL COST</b>	<b>\$3,009,136</b>

Segment Features	Description	Quantity
Segment Jurisdictional Area	City of Watsonville, Flood Control, Monterey County	-
Rail Bridge Crossing (Wood Trestle)	Pajaro River	1
Major Drainage	Pajaro River	1
Connection To Other Trails	Pajaro River, Watsonville Trail Network	2
Within 1/4 Mile of Public School	Pajaro Middle School	1
Connection to Commercial Area	Salinas Road/County Road G12	1
Connection to Residential Area	South Watsonville	1
Connection to Sports Park	Pajaro Middle School fields	1



*Pajaro River looking northeast*



*Railroad bridge over the Pajaro River at Walker Street*



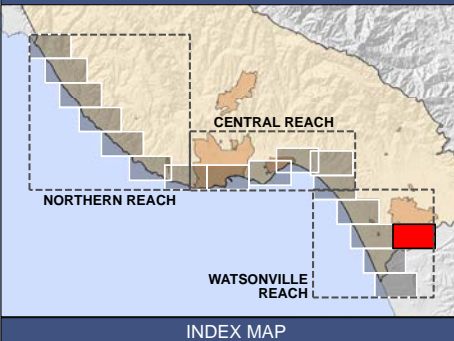
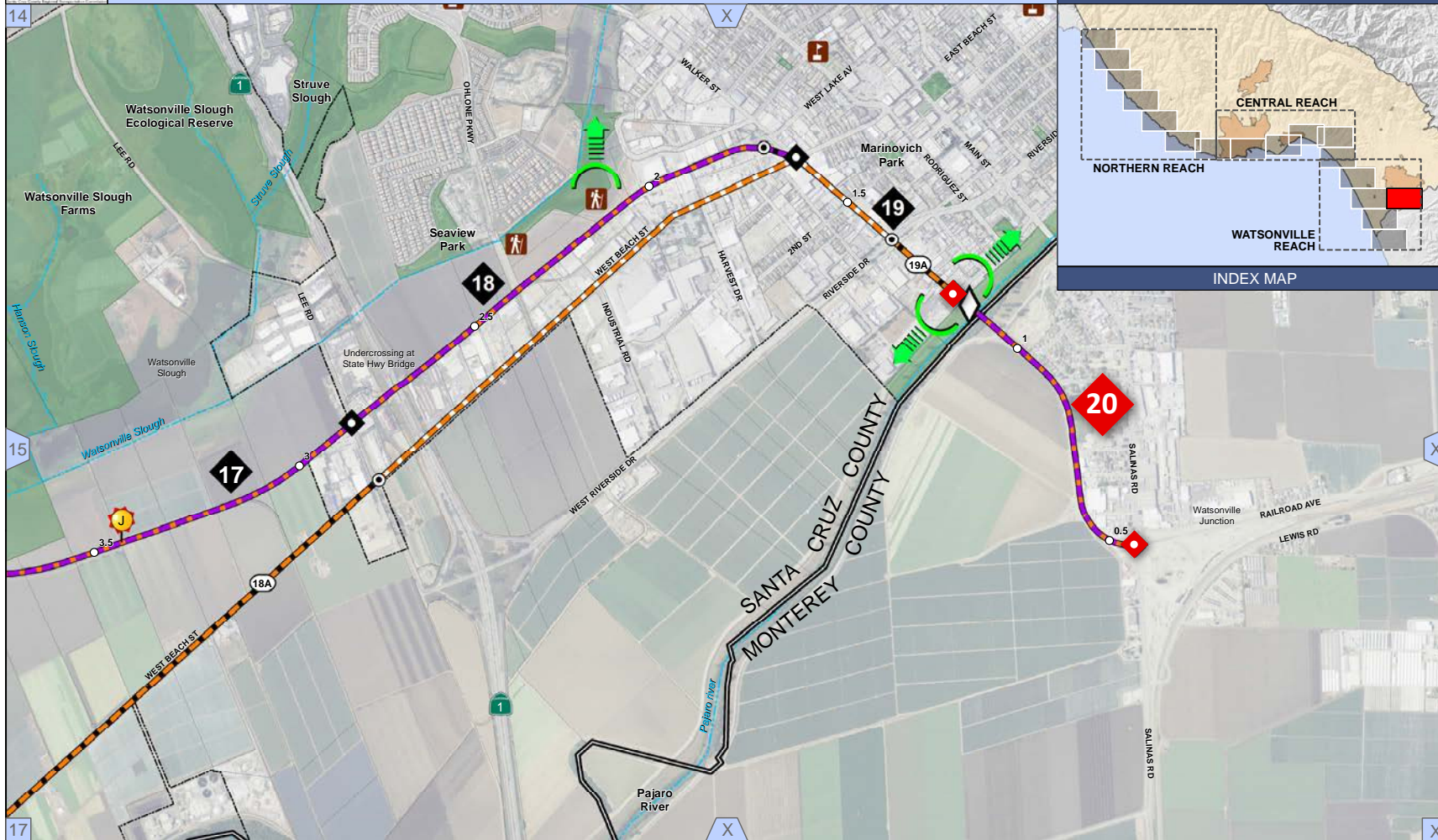
*Pedestrians walking over the Pajaro River railroad bridge*





# Monterey Bay Sanctuary Scenic Trail Network: Master Plan

## Proposed Trail Alignment SEGMENT 20 OF 20



### LEGEND

#### Multi-Use Rail Trail Facilities

- Existing Paved
- Proposed Paved (Coastal Side of Tracks)
- Proposed Paved (Inland Side of Tracks)

#### Multi-Use Coastal Trail Facilities

- Previously Defined MBSST Core Alignment On-Street
- Existing Paved Off-Street (Class I)
- Proposed Paved Off-Street Multi-Use Path (Class I)
- Existing On-Street (Class II, Class III and/or Sidewalks)
- Proposed On-Street (Class II, Class III and/or Sidewalks)
- Existing Un-Paved Trail
- Proposed Un-Paved Trail
- Existing Shoreline Beach Route (Low Tide Access)
- Proposed Un-Paved Side Trail and Pacific Coast Bike Route (PCBR)

#### Alignment Symbols

- Segment ID
- Segment Begin/End Point
- Proposed Coastal Alignment Segment ID
- Alignment Connection Point
- Alignment Terminus Point
- Trail Bridge
- At Grade Crossing
- Crossing of Railroad Tracks
- Existing RR Bridge Crossing

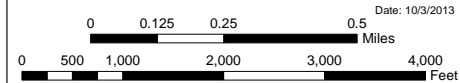
#### Geographic Features

- Assessor Parcels
- Parcels With Recorded Access
- Protected Public Areas in Fee
- Streams
- School Location
- Public Parking
- Bus Stop
- Hwy 1 Bridge Crossing
- Santa Cruz Branch Rail Line Mile Posts

#### Existing Corridor Amenities

- Connection to Existing Trail
- Campground
- Public Restroom
- Barrier Free Facilities
- Overlook/Interpretive Sign
- Coastal Access
- Connection to Inland Trail Systems

### SOURCE AND REFERENCE DATA



- NOTES & SOURCES:
- 1) Base data from Santa Cruz County GIS.
  - 2) Aerial photo from NAIP - 2009.
  - 3) Existing bike path and railroad data from the SCCRTC.
  - 4) Protected Areas data from the Bay Area Protected Areas Database (BPAD) - 2011.
  - 5) Parcels with recorded access (provided/protected public access) data from the California Coastal Commission.
  - 6) Hillshade NED data from CaSIL - 10 meter elevation grid point resolution.

Figure 4-55 Segment 20 proposed trail alignment

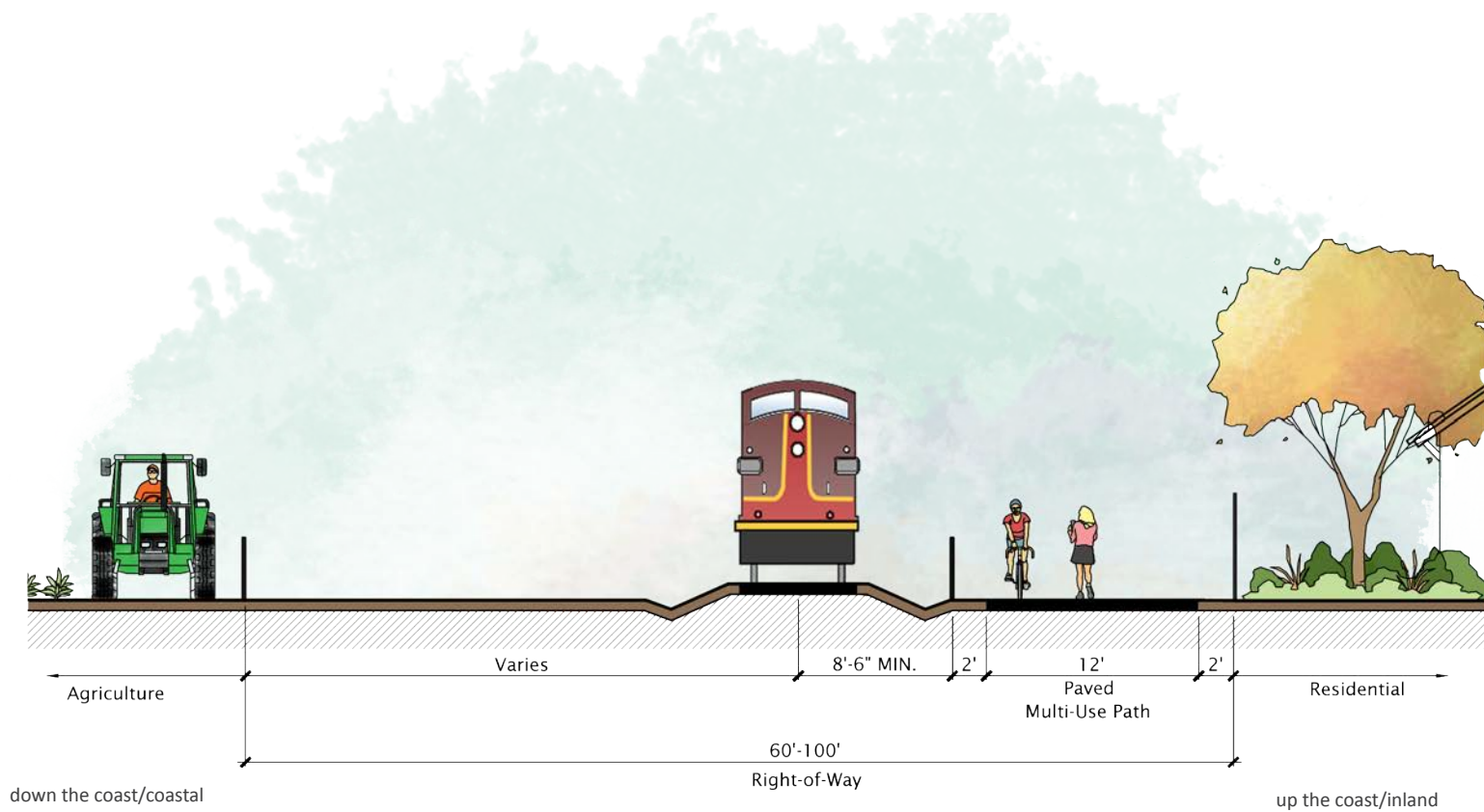


Figure 4-56 Segment 20 trail section

