



City of Watsonville

Trails & Bicycle Master Plan

for the Watsonville Scenic Trails Network



City of Watsonville

TRAILS & BICYCLE MASTER PLAN

for the Watsonville Scenic Trails Network

November 2012

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CITY OF WATSONVILLE

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Table of Contents

EXECUTIVE SUMMARY.....	1
1 INTRODUCTION.....	5
PURPOSE OF THE PLAN.....	6
Bicycle Transportation Account Compliance	6
THE PLANNING PROCESS	7
THE BENEFITS OF TRAILS & BIKEWAYS	7
VISIONS AND GOALS.....	8
2 EXISTING ENVIRONMENT	9
INTRODUCTION	10
Study Area	10
Land Use	10
OPPORTUNITIES & CONSTRAINTS	12
Water Bodies	12
Expansive Soils.....	15
Sensitive Biological Resources	17
EXISTING TRAIL NETWORK.....	20
EXISTING PLANNING EFFORTS.....	22
City of Watsonville.....	22
Santa Cruz County	25
Future Pajaro River Levee Flood Control Project	31
Santa Cruz Branch Rail Right-of-Way.....	32
Monterey Bay Sanctuary Scenic Trail.....	32
Pacific Coast Bike Route.....	33
California Coastal Trail	34
3 PROPOSED TRAIL & BICYCLE NETWORK.....	35
INTRODUCTION	36
TRAIL TYPES.....	36
PROPOSED TRAIL NETWORK	38
TRAIL SUBAREAS	41
Sub-area 1 – Pajaro River	42
Sub-area 2 – Salsipuedes Creek.....	46
Sub-area 3 – Corralitos Creek	49
Sub-area 4 – Buena Vista/Watsonville Airport	53
Sub-area 5 – Pajaro Valley High School	58
Sub-area 6 – Harkins Slough	61
Sub-area 7 – Lee Road	64

TABLE OF CONTENTS

Sub-area 8 – Lower City Sloughs.....	67
Sub-area 9 – Upper City Sloughs	71
Sub-area 10 – Northeast Watsonville	75
Sub-area 11 – Regional Trails.....	78
BIKEWAYS PLAN	81
Background	81
Types of Bicycle Travel	81
Existing and Proposed Bicycle Network	82
Existing and Proposed Bicycle Parking and Support Facilities.....	84
Existing and Proposed Bicycle Intermodal Facilities	84
Bicycle Safety and Education Programs.....	85
Bicycle Plan Consistency with Other Regional Plans	86
4 DESIGN GUIDELINES	89
INTRODUCTION	90
ADA REQUIREMENTS	90
WAYFINDING & SIGNAGE	92
TRAIL DETAILS AND STANDARDS.....	95
Greenway Trail	95
Nature Path	96
Street-based Trail	97
Levee Trail	98
Rail Trail	99
BIKEWAYS	101
ANCILLARY TRAIL FACILITIES & AMENITIES	103
Trail Intersections	104
Trail Structures	107
5 IMPLEMENTATION	113
INTRODUCTION	114
IMPLEMENTATION MEASURES	114
PHASING OF TRAIL PROJECTS	115
OPERATIONS & MAINTENANCE	118
Overview	118
Roles and Responsibilities	118
Maintenance Tasks and Operations	118
Recommended Maintenance.....	119
Trail Surface Maintenance Guidelines.....	121
Maintenance Costs.....	122

6 | REFERENCES 125

REFERENCES 127

APPENDIX 129

APPENDIX A BICYCLE PLAN PROPOSED PROJECTS..... 1

APPENDIX B BICYCLE PLAN CRITERIA TO MEET STATE

REQUIREMENTS 1

List of Figures

Figure ES-1: Aerial Photo of the City of Watsonville	3
Figure 2-1: Land Use	11
Figure 2-2: Watsonville Sloughs and Other Water Bodies.....	14
Figure 2-3: Expansive Soils	16
Figure 2-4: Sensitive Biological Resources at the Watsonville Municipal Airport.....	19
Figure 2-5: Existing Trail Network	21
Figure 2-6: Watsonville Vista 2030 General Plan Conceptual Trail Network Plan	24
Figure 3-1: Greater Watsonville Trail Master Plan	39
Figure 3-2: Sub-area 1 – Pajaro River North Trail Network.....	42
Figure 3-3: Sub-area 1A – Pajaro River North Trail Network.....	43
Figure 3-4: Sub-area 2 – Salsipuedes Creek Trail Network.....	46
Figure 3-5: Sub-area 3 – Corralitos Creek Trail Network.....	49
Figure 3-6: Sub-area 4 – Buena Vista/Watsonville Airport Trail Network	53
Figure 3-7: Sub-area 5 – Pajaro Valley High School Trail Network.....	58
Figure 3-8: Sub-area 6 – Harkins Slough Trail Network	61
Figure 3-9: Sub-area 7 – Lee Road Trail Network	64
Figure 3-10: Sub-area 8 – Lower City Sloughs Trail Network.....	67
Figure 3-11: Sub-area 9 – Upper City Sloughs Trail Network	71
Figure 3-12: Sub-area 10 – Northeast Watsonville Trail Network.....	75
Figure 3-13: Sub-area 11 – Regional Trails	78
Figure 3-14: Existing & Proposed Bicycle Network & Transit Facilities	83
Figure 4-1: ADA Accessible Greenway and Levee Trails	91

List of Tables

Table 3-1: Trail Types	37
Table 3-2: Commuter Bicycle Use	82
Table 4-1: Wayfinding and Signage Recommendations	93
Table 4-2: Ancillary Trail Facilities and Amenities Recommendations	110
Table 5-1: Prioritization of Proposed New Trail Segments	116
Table 5-2: Recommended Trail Maintenance Program	120

EXECUTIVE SUMMARY

Document Organization

The Watsonville Trails & Bicycle Master Plan is organized into the following chapters:

- Introduction
- Existing Environment
- Proposed Trail Network
- Design Guidelines
- Implementation
- References
- Appendices

Executive Summary

The purpose of the *Watsonville Trails & Bicycle Master Plan for the Watsonville Scenic Trails Network* is to develop a framework for building an integrated system of pathways and bikeways that will link residents to the outdoors. The future network will provide residents of Watsonville and the greater region with close-to-home and close-to-work access to pedestrian and bicycle trails that connect to the city's most popular destinations and surrounding natural areas, including the vast network of sloughs that are unique to south Santa Cruz County. These trails will serve the non-vehicular transportation and recreation needs and help to encourage quality, sustainable economic growth.

These trails will provide a variety of benefits that will ultimately affect the sustainability of the city's economic, environmental, and social health. These benefits include:

- Improving bicycle and pedestrian transportation;
- Improving health through active living;
- Clean air, productive sloughs, creeks and rivers, and protected wildlife and native plants;
- Enhancing cultural awareness and education about the Pajaro Valley's rich heritage and natural amenities; and
- Creating value and generating economic activity.

Based on stakeholder and public input, extensive fieldwork, research into related planning efforts, and a thorough analysis of aerial photographs, elevation contours and parcel data, the proposed trails and bicycle network is design to achieve the following objectives:

- Build upon the existing Watsonville Wetland trail network which constitutes the central core of the future region-wide trail system;
- Connect major destinations and serve as an opportunity for alternative transportation as well as recreation;
- Offer area residents a viable choice to walk or bike for their local trips;
- Provide opportunities for improving the personal health and fitness of individuals;
- Serve as a regional asset to residents and visitors of the greater Pajaro Valley and Monterey Bay region;
- Stimulate economic growth through increases in real property value and tourism;
- Enhance and protect the environmental quality of open spaces, sloughs, creeks and river corridors; and
- Conserve and tell the story of local culture, history, and environmental resources through interpretive signage.

The components of the plan are explained in further detail in the following chapters. An Aerial of the study area is shown in [Figure ES-1: Aerial Photo of the City of Watsonville](#).

Figure ES-1: Aerial Photo of the City of Watsonville



Source: RBF Consulting, 2012.

1 | INTRODUCTION

In this Chapter:

- Purpose of the Plan
- The Planning Process
- The Benefits of Trails & Bikeways
- Visions and Goals

PURPOSE OF THE PLAN

In August of 2011, the City of Watsonville commissioned RBF Consulting, Waterways Consulting, and Kittleson Environmental Consulting to prepare a citywide *Trails & Bicycle Master Plan for the Watsonville Scenic Trails Network* (the Master Plan), which is a component of the Watsonville Urban Greening Plan (UGP). The UGP will serve as the master set of documents that will guide and coordinate greening projects in the city. The UGP will be consistent with the state's planning policies as they pertain to the following priorities:

- Promote infill development and equity;
- Protect environmental and agricultural resources; and
- Encourage efficient development patterns.

The UGP is funded by Proposition 84 Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006.

The purpose of this Master Plan is to develop a framework for building an integrated system of trails and bikeways that will link residents to the outdoors. The future network will provide residents pedestrian and bicycle trails that connect to the city's parks, schools, transit facilities, commercial centers, and various public facilities. The future network will also serve transportation and recreation needs and help to encourage personal fitness and an improved quality of life. Building upon past planning efforts and existing facilities, this Master Plan contains detailed trail and bikeway recommendations and guidelines, which together form a comprehensive non-vehicular circulation network.

The design and construction for specific trail segments will be prepared at a future date and funding sources are identified and property acquisition and/or easements are completed. Because this is a conceptual planning study, environmental review for this Master Plan is exempt under Section 15262 of the California Environmental Quality Act (CEQA). However, CEQA will be required for each specific trail segment as part of the design and permit review process, prior to construction.

BICYCLE TRANSPORTATION ACCOUNT COMPLIANCE

The Bicycle Transportation Account (BTA) was created to implement the California Bicycle Transportation Act, Streets and Highway Code Sections 890-894 (1994). BTA money may be used for infrastructure projects aimed at improving bicycle commuting and safety. Only projects which are listed and described in the local Bicycle Transportation Plan are eligible to receive BTA funding. This Master Plan, with specific reference to the Bicycle Plan component, is consistent with the criteria stated in the California Streets and Highways Code section 891.2 listed in Bicycle Transportation Plan Checklist in Appendix B: *Bicycle Plan Criteria to Meet State Requirements*. The checklist also indicates the guidelines used in the preparation of the Plan and their location within the Plan. This Master Plan, with specific reference to the Bicycle Plan component, is in conformance with the criteria to meet State funding requirements and, therefore, the projects listed within the Bicycle Plan are eligible for BTA funding.

THE PLANNING PROCESS

The planning process started with the collection and analysis of existing plans and Geographic Information Systems (GIS) data. A kick-off meeting between city staff and the project consultants refined the initial work plan, which consisted of identifying an initial network of future trails and bikeways throughout the city. Field studies were conducted with staff and stakeholders to validate initial segment alignments. An opportunities and constraints assessment was then prepared to determine alignment feasibility and potential environmental impacts.

A Trails & Bicycle Master Plan Advisory Committee (see Acknowledgements), made up of various stakeholder interest groups, met throughout the development of the Master Plan to provide advice and recommendations and helped determine how the Master Plan could best serve the interests of the city as a whole as well as the broader Pajaro Valley and Monterey Bay region.

Draft recommendations were presented to the public for review, including opportunities for residents to speak with city staff and project consultants about any concerns, comments, or ideas for the Master Plan. In addition, comments were received during the public hearing process and were considered.

The Santa Cruz County Regional Transportation Commissions (RTC) Bicycle Advisory Committee also reviewed the Master Plan's recommendations. Final presentations concluded the effort with recommendations to officially adopt the Master Plan and to request RTC certification of the Plan as being compliant with the Streets and Highways Code.

THE BENEFITS OF TRAILS & BIKEWAYS

Trails and bikeways provide a variety of benefits that will ultimately affect the sustainability of the City of Watsonville's economic, environmental, and social health. These benefits include:

- Improving health through active living;
- Creating value and generating economic activity;
- Non-vehicular transportation options;
- Improved air quality;
- Enhancing cultural awareness and community identity; and
- Support/compliment flood protection efforts.

Numerous studies have made the positive link between trails and their benefits abundantly clear. The degree to which a particular type of benefit is realized depends largely upon the nature of the trail system being implemented. Although this Master Plan is primarily focused on trails for recreation and transportation, many conservation-related benefits apply.

VISIONS AND GOALS

The vision for the City of Watsonville's future trail network is derived from input from community residents, stakeholders, city staff, and the consultant team. Input was gathered via meetings, public hearings, and written comments. A fundamental part of this vision is that the trail network will contribute to the overall quality of life throughout the City of Watsonville. Given the benefits of trails described above, specific visions and goals of the Master Plan for Watsonville include the following:

- Develop a safe and interconnected city-wide network of trail and bicycle facilities that link together destinations and people, both locally and regionally;
- Develop a trail network that provides facilities and programs designed to expand and encourage active recreation, community strength, and alternative transportation;
- Enhance, protect, and preserve the environmental quality of open space, waterways and wildlife habitats;
- Stimulate economic growth through increased tourism and real property value, by developing a city-wide trail network; and
- Conserve and tell the story of local culture, history, and heritage through interpretive signage.
- Preserve and protect agricultural land while still providing opportunities for trail construction as long as it does not disrupt farming operations and is done so with the full support of the respective land owner(s) and farm operator(s).

2 | EXISTING ENVIRONMENT

In this Chapter:

- Introduction
- Opportunities & Constraints
- Existing Trail Network
- Existing Bicycle Network
- Existing Planning Efforts

INTRODUCTION

This chapter describes the existing conditions in the City of Watsonville that will inform the planning process of trail development. Land uses and popular destinations are discussed in relation to existing and proposed future trails. Existing parks and open space features, as well as existing environmental features are also discussed. And finally, previous and ongoing planning efforts are reviewed for their influence on trail development.

STUDY AREA

The City of Watsonville is the second largest city in Santa Cruz County. According to the 2010 Census, the City had a population of 51,199.

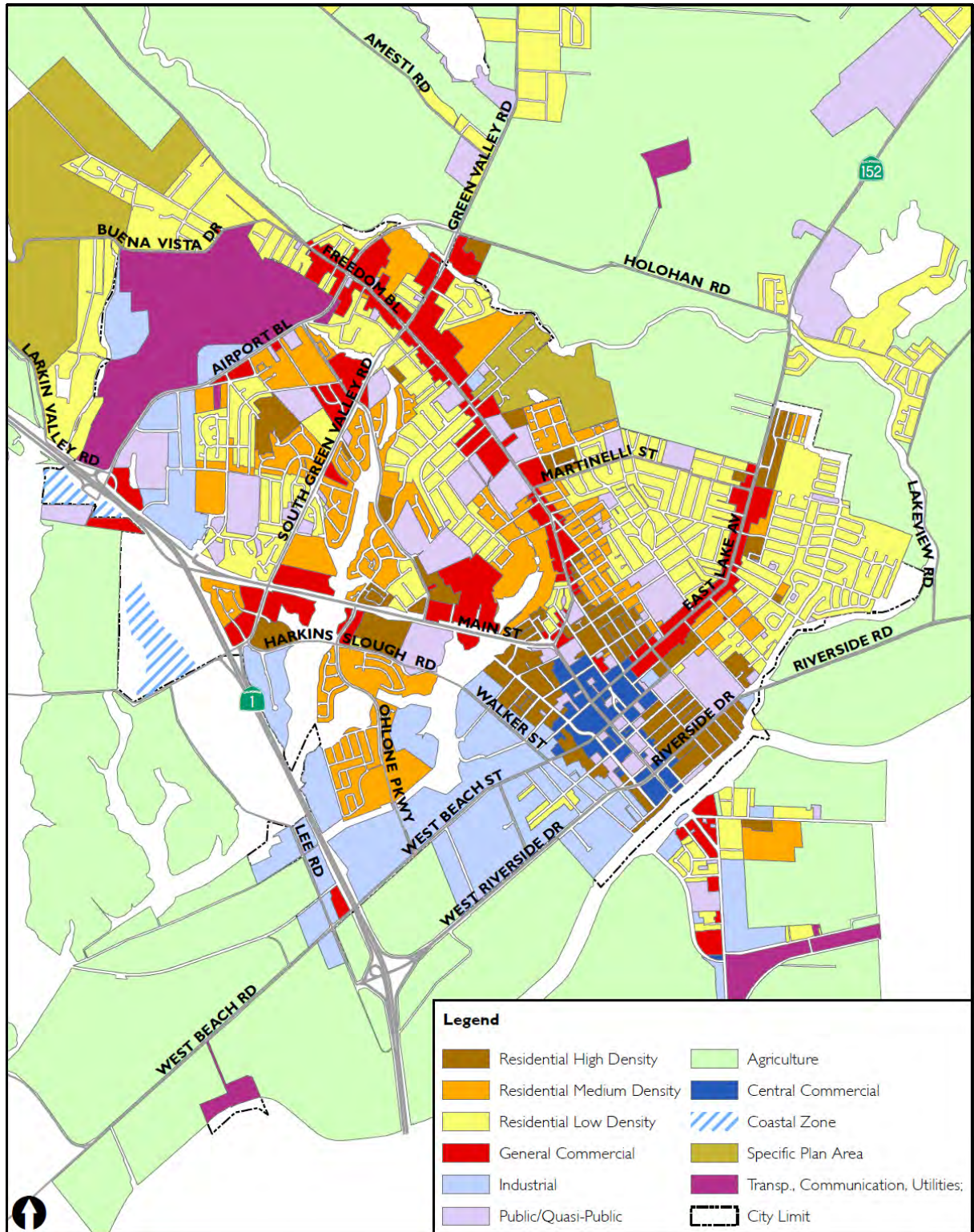
Watsonville is located in the agriculturally rich Pajaro Valley. Its economy centers predominantly around the farming industry. It is known for growing strawberries, apples, lettuce and a host of various vegetables and flowers.

The project study area includes the City of Watsonville as well as the regional areas that surround the city. This includes the Pajaro Dunes and Pajaro River to the southwest, and Pinto and College lakes to the east. It also includes the broader unincorporated areas of Santa Cruz County that surrounds the city. (See Figure ES-1: Aerial Photo of the City of Watsonville).

LAND USE

Figure 2-1: Land Use shows the Watsonville 2005 General Plan land use designations throughout the city. The residential areas, shown in yellow, orange, and light brown make up the majority of the city. Commercial uses are concentrated in downtown and along the major arterial roads of East Lake Avenue, Freedom Boulevard and Main Street. The industrial and employment uses are located primarily south and west of the downtown, in the Westridge Business Park (Westridge Drive) and around the Watsonville Municipal Airport. A majority of the land surrounding the city are agricultural and rural residential.

Figure 2-1: Land Use



Source: City of Watsonville and RBF Consulting, 2012.

OPPORTUNITIES & CONSTRAINTS

Greater Watsonville has a variety of natural and built amenities that afford important opportunities for trail development. There are also some challenges that will require creative design solutions as part of trail construction and maintenance.

WATER BODIES

WATSONVILLE SLOUGHS

As described in the Watsonville Sloughs Watershed Conservation and Enhancement Plan (Swanson, 2003), the environs of the Watsonville Sloughs are a highly valued and unique wetland resource situated adjacent to Monterey Bay and west of the city limits. Six individual sloughs (Watsonville, Harkins, Struve, West Branch Struve, Gallighan, and Hanson) drain a 12,500-acre (19.5 square miles) watershed from the coastal plain and foothills of southern Santa Cruz County into Monterey Bay. These sloughs sustain large wetland marsh and riparian habitats for a variety of wildlife and native plants. The adjoining hillsides and upland areas contain important wildlife areas including grassland, oak woodland and chaparral habitats. Economically important agricultural production occurs throughout much of the Watsonville Sloughs (the Sloughs) watershed along with wildlife habitat.

The Sloughs have a rich history of natural resource utilization beginning with the original hunter/gatherer Native American societies. Substantial changes occurred after European settlement began in the early 1800s with widespread clearing of native vegetation and reclamation of wetlands for agriculture. This led to hydrologic changes detrimental to native plants and wildlife habitat, culminating in large losses of wetlands and native habitats during land reclamation efforts in the late 1800s and early 1900s.

A marked decline in open space and habitat accelerated after World War II with an expansion of urban areas around the City of Watsonville. All of these changes fragmented the Sloughs, reduced water circulation and groundwater recharge, and introduced a number of pollutants to the waterways and remaining natural wetlands. As a result, the Watsonville Sloughs system has been listed as an impaired water body under the Federal Clean Water Act (Section 303d) for elevated levels of pesticides, sediment, oils and grease, metals and pathogens.

In recent years, as the drainage system constructed during the reclamation era has decayed, large areas of agricultural land have been seasonally inundated resulting in a significant loss of agricultural production. This process has been further accelerated with the accompaniment of a trend of land subsidence over large areas and urban expansion upstream adding more runoff that has further taxed the drainage system. Although a greater area of inundation can be viewed by some as favorable to the overall wetlands value of the Sloughs, (particularly with expanded open water habitat for winter migratory waterfowl and wetland vegetation), it has been coupled with reduced water circulation, eutrophication, and a reduction in the general biotic health of the aquatic ecosystem. In their current condition, and despite the reversion to wetlands, the natural resources of the Sloughs exist well below their potential value. Simultaneously, agricultural productivity has been adversely affected by the same conditions.

Various agencies and organizations, including Santa Cruz County, the City of Watsonville, Watsonville Wetlands Watch, the Resource Conservation District for Santa Cruz County, and the Land Trust of Santa Cruz County have been actively engaged in restoration and preservation efforts to lands within the Watsonville Sloughs.

OTHER WATER BODIES

PINTO LAKE

Pinto Lake is located north of the city and east of Highway 152. Pinto Lake Park is a 78.50 acre Community park owned by the City of Watsonville and operated by the Parks and Community Services Department. It provides for a number of significant recreational activities including a camping, boating, fishing, birding, a softball field, picnic areas, playgrounds and a boat ramp to the lake itself.

Pinto Lake County Park is a 183 acre regional park that is owned and managed by the County of Santa Cruz Department of Public Works. Amenities include playgrounds, picnic areas, ball fields, a fishing pier and a disc golf course.

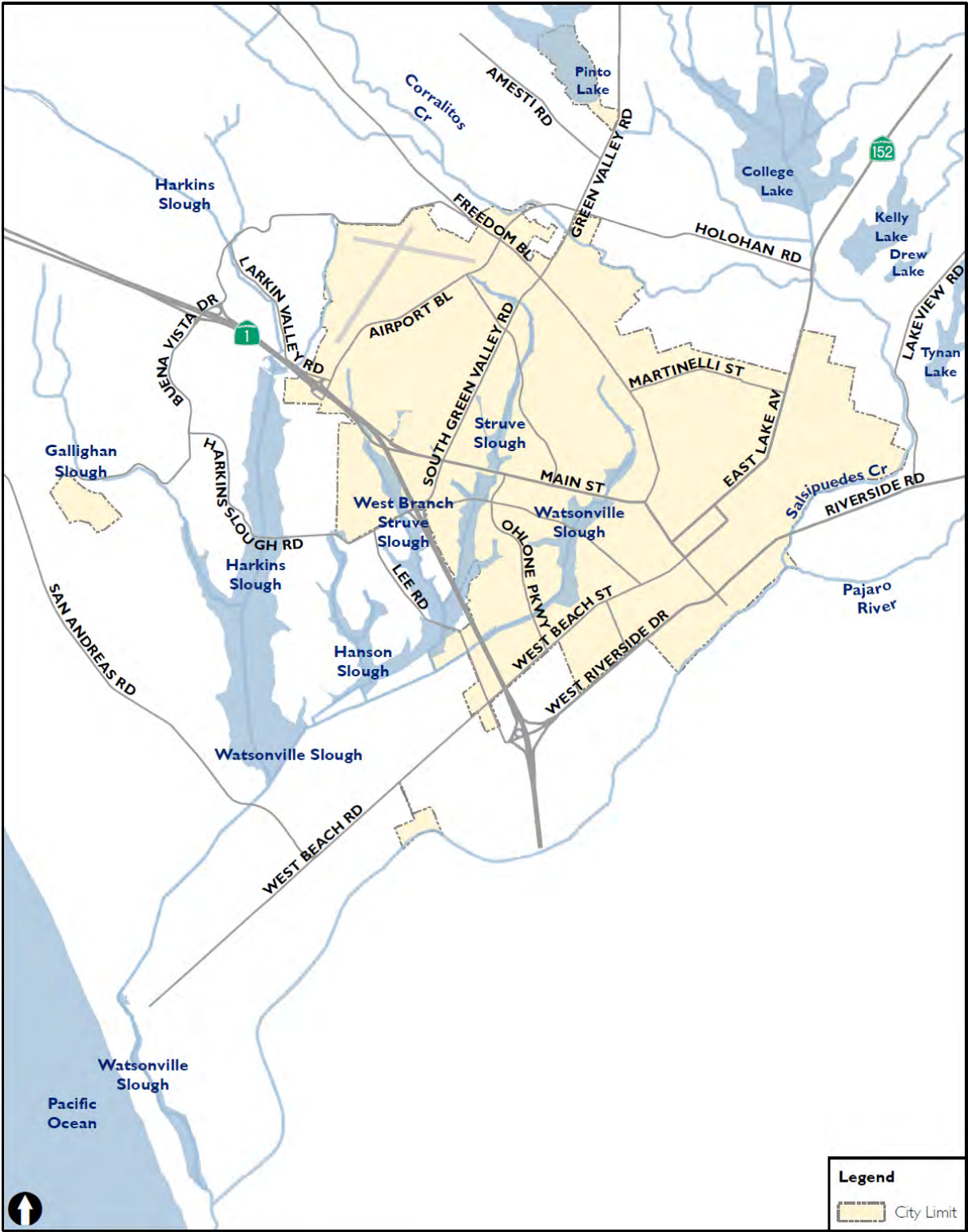
COLLEGE LAKE

College Lake is a seasonal lake located near the Santa Cruz County Fair grounds and is bordered by East Lake Avenue (Highway 152) and Paulsen Road. The lake is fed by a few small creeks during the rainy season, and it eventually drains into Salsipuedes Creek. College Lake is usually dried up by late spring or summer and the land area is used for farming.

Other lakes, located south east of Highway 152 include Kelly Lake, Drew Lake, and Tynan Lake.

The Watsonville Sloughs and other water bodies associated with this Master Plan are shown in Figure 2-2: [Watsonville Sloughs and Other Water Bodies](#).

Figure 2-2: Watsonville Sloughs and Other Water Bodies



Source: City of Watsonville and RBF Consulting, 2012.

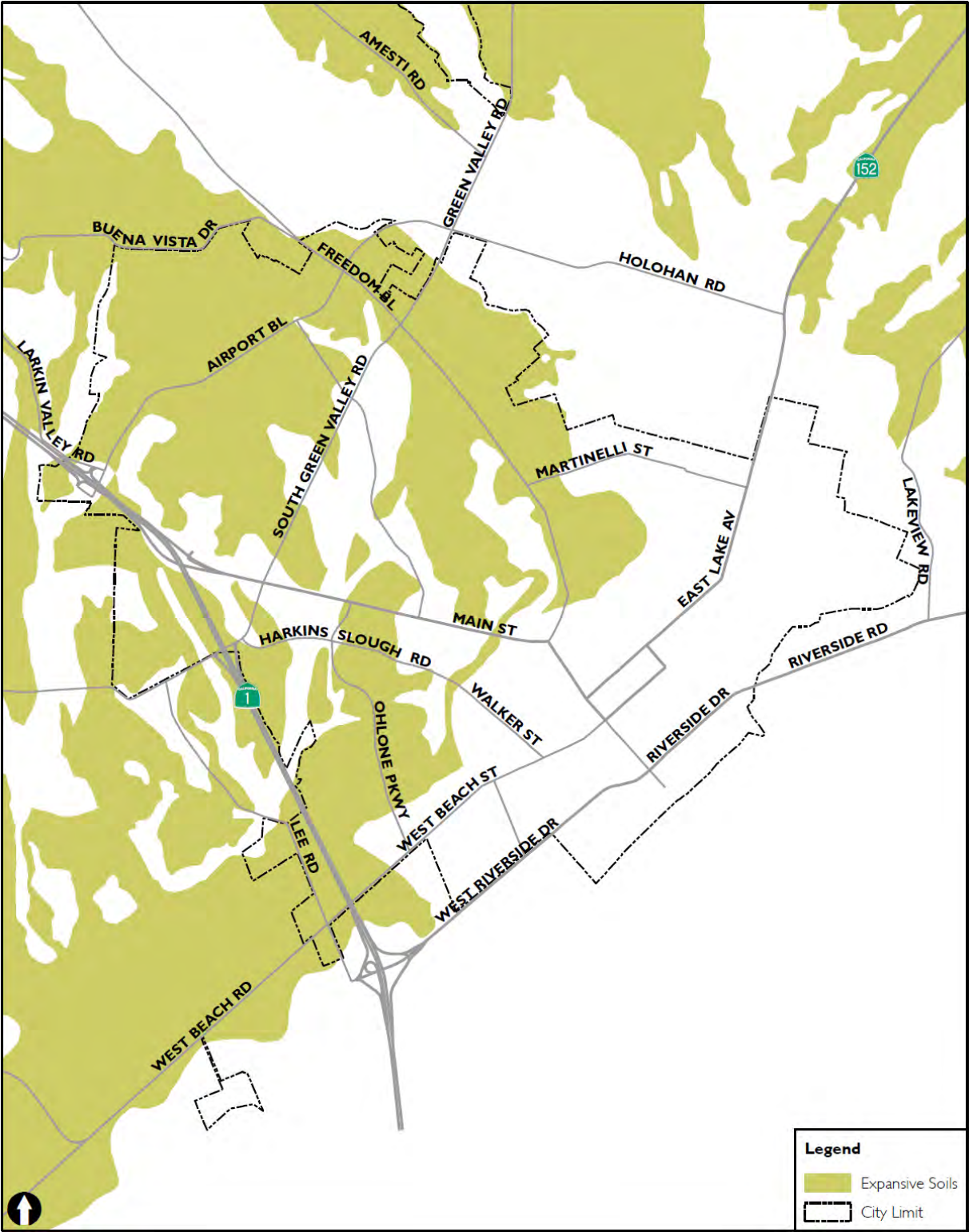
EXPANSIVE SOILS

Expansive soils are common throughout the Pajaro Valley. They typically contain clay-rich natural topsoil and subsurface soil with a high shrink-swell potential. These clay-rich soils contain montmorillonite and other minerals that swell under wet conditions and shrink under dry conditions. As shown in [Figure 2-3: Expansive Soils](#), a majority of these soils have moderate to high shrink-swell potential. Expansive soils are especially common to the areas near Sloughs. Damage to structures, such as cracked foundations, can result from differential movement and from several alternating periods of shrink and swell. Similarly, they often cause cracking and other surface modifications to trails and pathways.

As such, many parts of the existing trail system in Watsonville that are prone to expansive soils have utilized a combination of different stabilization methods to ensure that the finished trail surface remains serviceable. These have included:

- Over-excavation, moisture conditioning and re-compaction of sub-grade materials;
- Installation of geosynthetic stabilizers, such as pavement reinforcing fabric;
- Installation of subsurface drainage blankets at select locations to minimize soil saturation within the trail alignment;
- Placement of a thickened base course (typically drain rock); and
- Use of flexible pavements that can accommodate soil movement.

Figure 2-3: Expansive Soils



Source: City of Watsonville and RBF Consulting, 2012.

SENSITIVE BIOLOGICAL RESOURCES

The City of Watsonville is located in the Pajaro Valley of southern Santa Cruz County, a productive agricultural region with a distinctly rural character. The planning area encompasses significant, though disturbed, natural areas, including wetland habitat within the Watsonville Sloughs, important remnants of riparian habitat along the Sloughs, the Pajaro River, Pinto Lake and Salsipuedes and Corralitos Creeks, and small areas of intact oak woodland and grasslands. These areas provide important habitat for wildlife, including migratory birds and several species listed under the federal and state Endangered Species Acts.

WATSONVILLE, STRUVE, AND HARKINS SLOUGHS

The most significant biological resource in the planning area is the system of sloughs and marshes that drain the Pajaro Basin and flow into Monterey Bay. Seasonal and perennial freshwater marsh occurs within the channels of the Watsonville Sloughs. Within and adjacent to the low flow channels of these Sloughs, permanently moist soils support rhizomatous perennial hydrophytes (water-loving plants) including cattail (*Typha* spp.), bur-reed (*Sparganium eurycarpum*), and bulrush (*Scirpus* spp.). During the winter months, open aquatic habitat is available in the deepest areas of the Sloughs. In contrast, higher zones within the marsh dry out in summer and are colonized by perennial herbs such as bur marigold (*Bidens laevis*), dock (*Rumex* spp.), and rush (*Juncus* spp.).

In general, these Sloughs are highly degraded by agricultural runoff, urban fill for roadway crossings, and invasion by non-native species. Himalayan knotweed (*Polygonum polystachyum*), a noxious weed of seasonally-moist soils, and feathered mosquitofern (*Azolla pinnata*), introduced for mosquito control, are particularly pervasive. Upland areas surrounding the Sloughs are also highly degraded by invasive fennel (*Foeniculum vulgare*) and Harding grass (*Phalaris aquatica*), which greatly reduce habitat quality for wildlife.

Restoration and protection of the Sloughs has been an ongoing priority by the city in coordination with Watsonville Wetlands Watch and other agencies and organizations. Additional wetland enhancements are planned for the future and outlined in the Watsonville Sloughs Resource Conservation and Enhancement Plan (Santa Cruz County 2003). The entire Watsonville Slough system has been designated an Area of Special Biological Importance by the California Department of Fish and Game (CDFG), and is identified as a Significant Biological Resource in Santa Cruz County's Growth Management Plan and the County's Local Coastal Program Land Use Plan.

RIPARIAN FOREST AND SCRUB

The Pajaro River, Watsonville Slough system, Corralitos Creek, Salsipuedes Creek, and various drainage swales throughout the planning area provide important remnants of riparian habitat. Arroyo willow (*Salix lasiolepis*) and red willow (*Salix laevigata*) dominate these areas, often to the point of shading out understory species. Fremont cottonwood (*Populus fremontii*) and California sycamore (*Platanus racemosa*) are occasional associates. Understory vegetation, when present, is typically a dense thicket of California blackberry (*Rubus ursinus*) and non-native species such as Harding grass, fennel, and poison hemlock (*Conium maculatum*). The upper reaches of these riparian corridors, particularly within the Buena Vista area, are degraded by stands of planted blue-gum

eucalyptus (*Eucalyptus globulus*). Riparian areas are protected by the California Department of Fish & Game through regulations in Sections 1601-1603 of the Fish and Game Code, and are recognized as sensitive by Santa Cruz County.

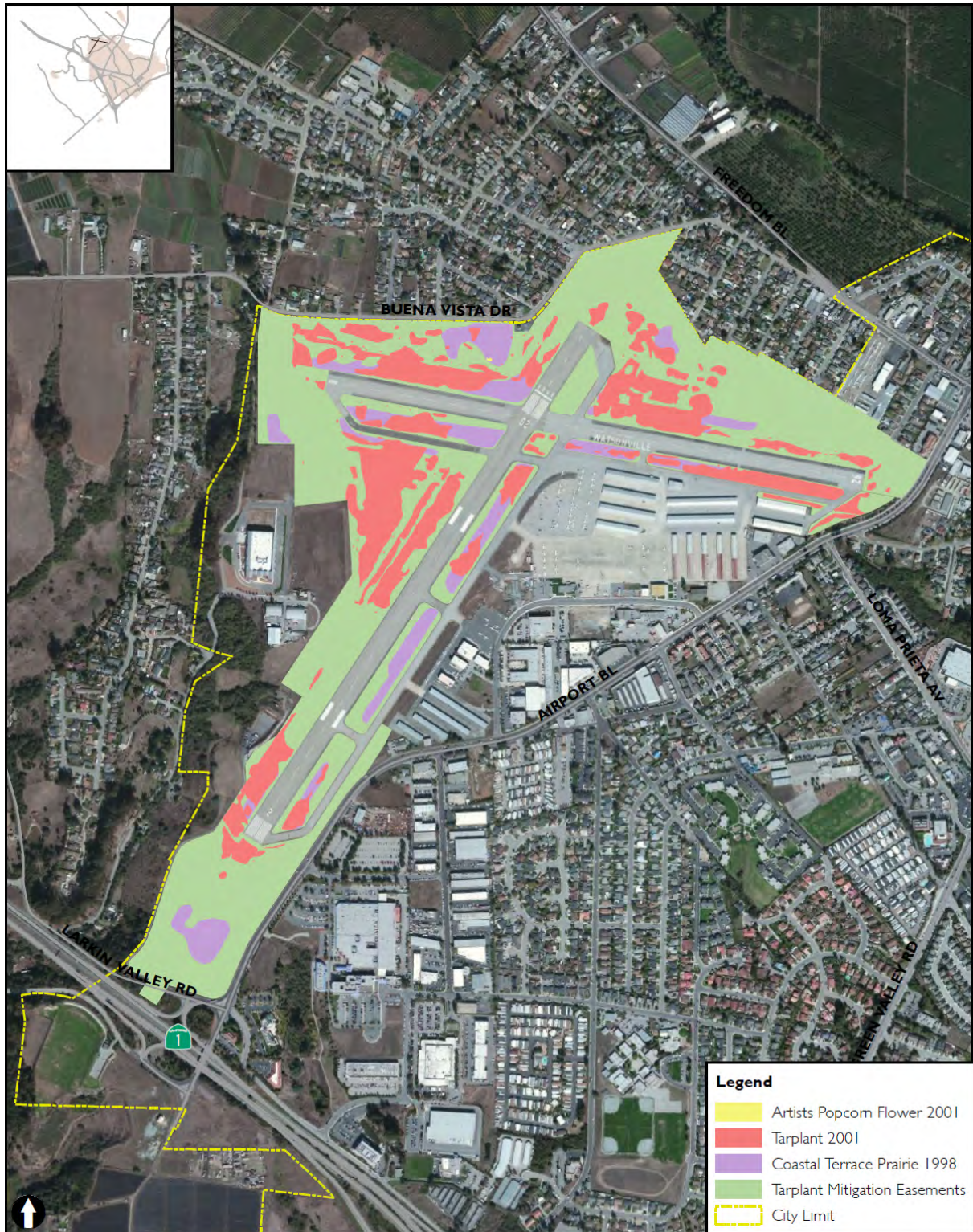
WATSONVILLE MUNICIPAL AIRPORT

The undeveloped portions of the Watsonville Municipal Airport is dominated by annual, non-native grass species, and is defined as California annual grassland as per the California Native Diversity Data Base (CNDDDB) classification. There are also scattered inclusions of native grasses and other native herbaceous species.

Annual grasslands are also present and are comprised of mostly non-native annual grass species, including native bunchgrasses which are scattered and relatively few (Watsonville Municipal Airport Master Plan Draft EIR, 2002).

Based on a survey completed in 2002, the Watsonville Municipal Airport supports the largest population of Santa Cruz Tarplant known. It also contains small pockets of artist's popcorn-flower's and San Francisco popcorn-flower's. All of these plant species are designated as Special Status Plant Species, which warrant special protection. The location of these species, as well as Tarplant Mitigation Easement areas are shown in [Figure 2-4: Sensitive Biological Resources at the Watsonville Municipal Airport](#).

Figure 2-4: Sensitive Biological Resources at the Watsonville Municipal Airport



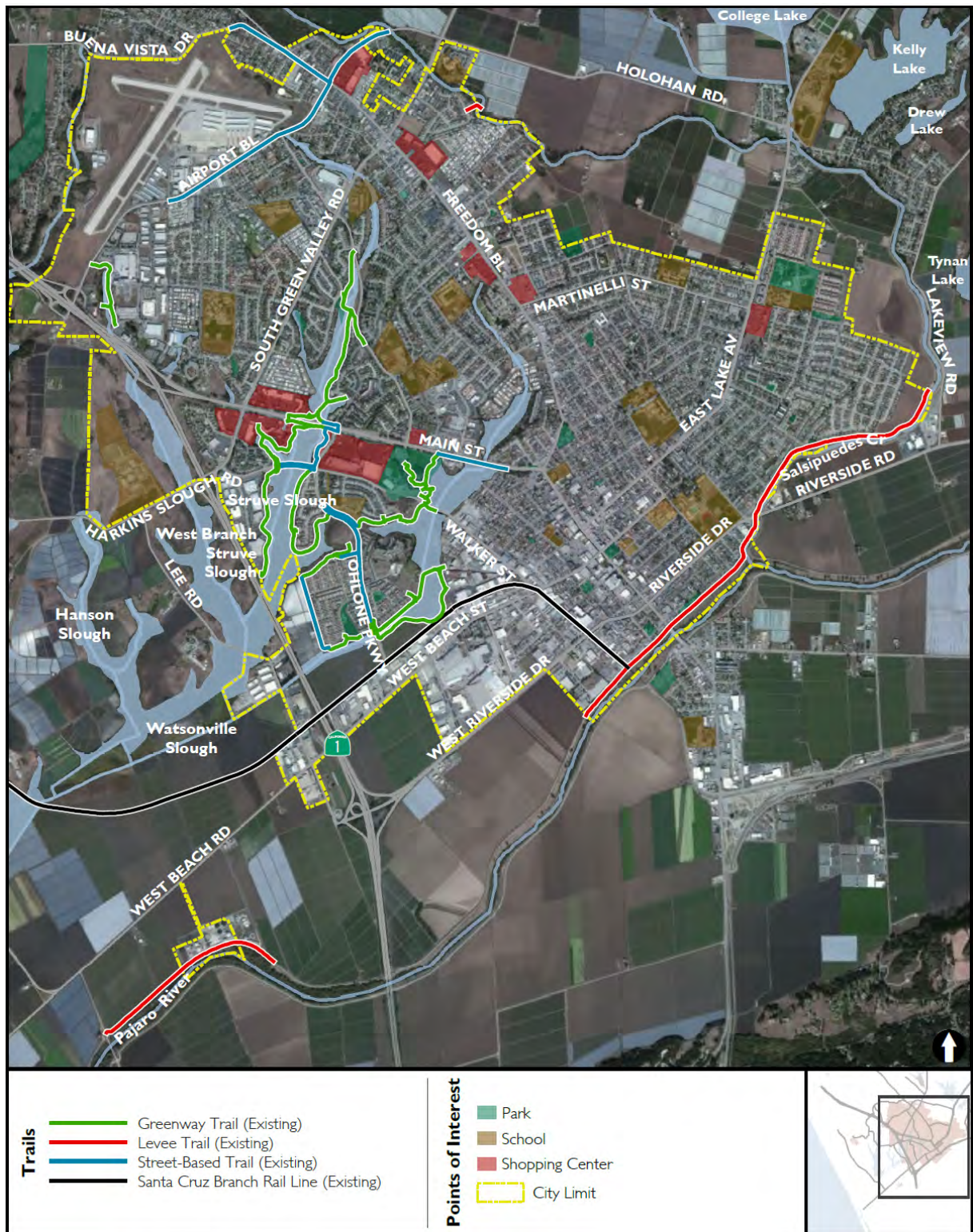
Source: City of Watsonville and RBF Consulting, 2012.

EXISTING TRAIL NETWORK

The City of Watsonville currently supports 9.8 miles of slough and levee trails, comprising 14.3 acres. There are 6.9 miles of slough trails that extend along Lower and Upper Struve Sloughs and around Watsonville Slough. The remaining 2.9 miles of levee trails extend along the northerly side of the Pajaro River and Salsipuedes Creek (City of Watsonville 2009). The location of these trails are shown in Figure 2-5: Existing Trail Network.



Figure 2-5: Existing Trail Network



Source: City of Watsonville and RBF Consulting, 2012.

EXISTING PLANNING EFFORTS

CITY OF WATSONVILLE

WATSONVILLE URBAN GREENING PLAN

The City of Watsonville is currently working on the development of an Urban Greening Plan (UGP). The UGP will guide and coordinate the City's greening projects and improve the sustainability and livability of this community, in concert with the goals of the Strategic Growth Council. The planning process was funded by the California Department of Natural Resources from Proposition 84 grant funds.

The UGP consists of the following components:

- Citywide Bicycle & Pedestrian Trails;
- Greening/Restoration for Trail Corridors & Adjacent Areas;
- Street Trees Plan or Guidelines;
- Community Gardens;
- Plant Palette & Landscaping Guidelines & Policy; and
- Green Roof & Cool Roof Design Guidelines.

WATSONVILLEVISTA 2030 GENERAL PLAN

The WatsonvilleVISTA 2030 General Plan (General Plan) represents the comprehensive update of the Watsonville 2005 General Plan. A draft of the WatsonvilleVISTA 2030 General Plan was prepared in May 2006 but was not adopted by the City Council due to legal issues. These issues have now been addressed and the 2030 General Plan is scheduled for adoption by the Watsonville City Council in early 2013.

The General Plan outlines future community growth and objectives. It includes policies that promote Watsonville as a livable community with a compact urban center with access to jobs and housing. The General Plan will accommodate an additional 4,100 new households and 7,500 new jobs over the next 20-25 years. Approximately half of this new growth would be achieved by amending land-use designations and zoning within certain neighborhood areas within the City to allow higher density residential uses and/or mixed of uses than are currently allowed. The remaining new growth would be accommodated by designating three specific plan areas currently outside of the City limits for residential, neighborhood commercial, and employment-related development. These specific plan areas are Buena Vista, Atkinson Lane, and Manabe-Ow.

The General Plan promotes pedestrian and bicycle connections throughout the city and encourages citizens to use alternative modes of transportation.

The Recreation, Parks and Open Space element of the General Plan addresses trails as part of Goal 9.3, and is described below:

Goal 9.3 Provide a network of trails along natural areas to promote safe travelways and appreciation of sloughs, creeks, and the Pajaro River.

The city shall develop and maintain a trail system that encourage both appreciation and respect for natural habit and provide safe, secure passageways in and around the community.

Policy 9.3.1 Trail Systems.

Implementation

9.3.11 *Protection of slough, riparian corridors and other environmentally sensitive areas.*

The city shall continue to protect its sloughs and riparian corridors and other environmentally sensitive areas as provided for in the Environmental Resources Element.

9.3.12 *Continuous Trail Network.*

The city shall strive to make a more continuous network by requiring cooperation with adjacent jurisdictions to establish trails and linear open space between sloughs and riparian corridors, as indicated in Figure 9.6 and described below through the preparation of a Trails Master Plan (see [Figure 2-6: Watsonville Vista 2030 General Plan Conceptual Trail Network Plan](#)). Trail alignments shall be coordinated with all necessary jurisdictions and abut undevelopable land, where practical, to provide trail users with expansive views.

Within the Buena Vista area, a linear open space with trails shall be pursued in coordination with the County to link trails anticipated along Corralitos Creek and Harkins Slough. In addition, Buena Vista Park shall have a trail that extends from Buena Vista Drive to Larkin Valley Road.

The city shall seek to extend trails along Struve Slough to Airport Boulevard, and shall endeavor to install landscaped trails along Airport Boulevard and Green Valley Road, to connect trails anticipated along Struve Slough and Corralitos Creek.

The city shall endeavor to establish trail connections between Watsonville Slough and the Pajaro River through cooperation with various county, state and interested groups. Potential alignments include: a landscaped trail along Ohlone Parkway and extending south near the Urban Limit Line, and/or along Walker Street as part of an enhanced streetscape with bike lanes.

9.3.13 *Regional Trail System.*

The city shall encourage the development of a regional trail system which may include improvements and expansion of the levee, wetlands, and other trails.

Figure 2-6: Watsonville Vista 2030 General Plan Conceptual Trail Network Plan



PARKS AND RECREATION FACILITIES MASTER PLAN

The 2009 Parks and Recreation Facilities Master Plan provides an overarching plan for the development and implementation of future parks and recreational opportunities throughout the City of Watsonville over the next 20 years. It also describes a process and priorities for managing the Parks and Community Services Department's commitments so that new requests and initiative are considered in light of existing conditions and funding requirements.



The City of Watsonville oversees 184 acres of park land in 26 existing Pocket, Neighborhood and Community parks. The city's park system consists of a variety of recreation attractions, such as parks, playgrounds, sports fields, natural areas and open space, trails, recreation facilities, and access to the wetlands and levee trail system. In addition to parkland resources, the Parks and Community Services staff maintains various landscaped areas throughout the city including street medians in Vista Montana.

Residents of Watsonville believe that access to trails and bikeways is a very high priority, and in fact ranked them higher than any other recreation activity. As part of the development of the Parks and Recreation Facilities Master Plan, 87% of respondents to a phone survey responded that walking, hiking, or running was very/somewhat important. 80% of the respondents said that biking was very/somewhat important. In discussions at community workshops, participants were very supportive of restoring and expanding the trail system throughout the city and surrounding region using greenway and bikeway strategies.

SANTA CRUZ COUNTY

SANTA CRUZ COUNTY GENERAL PLAN

The 1994 General Plan and Local Coastal Program for the County of Santa Cruz contains policies and programs to guide future growth and development in a manner consistent with the goals and quality of life desired by Santa Cruz County citizens. Policies within the General Plan become the basis for all future land use and expansion decisions.

The General Plan calls for the establishment of a system of hiking, bicycling, and equestrian trails that provide access and connect to parks, riparian corridors, and beaches within the County. Trails are envisioned to be implemented through publicly-owned lands, easements, and dedications.

The Parks, Recreation and Public Facilities chapter of the General Plan addresses trails as part of Objective 7.6, and is described below:

Objective 7.6 Trails and Recreation Corridors

To establish a countywide system of hiking, bicycling and equestrian trails which provides access to and connects the various parks, recreation areas, beaches and urban areas. To link the County trail system with the proposed state trail system between the state parks, adjoining counties, and cities within the County. To obtain trail easements by utilizing existing publicly owned land, and by acquisitions by dedication, in full compliance with Government Code Section 65909(a) for developments and Government Code Sections 66475.4(b) and 66748.1 et seq. for land divisions, provided that state and federal constitutional rights of land owners are not violated.

Policy 7.6.2 Trail Easements

Obtain trail easements by encouraging private donation of land, by public purchase, or by the dedication of trail easements, in full compliance with California Government Code Section 65909(a) for development permits and Government Code Sections 66475.4(b) and 66478.1 et seq. for land divisions, provided that state and federal constitutional rights of landowners are not violated. Within urban areas, obtain trail easement dedication within the specified buffer areas adjacent to riparian corridors and wetlands, and/or within the riparian corridor, subject to the above requirements, when consistent with the Riparian Corridor Protection ordinance and all other policies and ordinances protecting sensitive habitats. Any trail easements so obtained legally from the respective property owners, and only after adequate funds exist to implement a trail maintenance plan, providing for security measures, fire protection, erosion control, trail rules enforcement, and similar areas of concern. Notwithstanding the foregoing, it is the policy of Santa Cruz County to accept offers to dedicate coastal access, complete, open, and maintain or assist other public agencies or private non-profit groups to complete, open, and maintain coastal accessways between the first public road and the shoreline as soon as it is feasible. This policy is not intended and shall not be construed as authorizing the exercise of the County's regulatory power in a manner which will take or damage private property for public use without the payment of just compensation in violation of the Constitution of the State of California or of the United States. (See California Public Resource Code Section 30010.)

Policy 7.6.3 Utilization of Existing Easements

Seek to utilize existing publicly owned lands where possible to implement the trail system, subject to policy 7.6.2.

Policy 7.6.8 Trail Funding and Construction

When utilizing roadside betterment funds in the development of bicycle, pedestrian and equestrian trails, construct such trails off the pavement within the public right-of-way and separated from traffic by an appropriate distance. Include trail design and construction in all public road development projects on designated trail routes, subject to policy 7.6.2.

Policy 7.6.9 Trail Design

Locate, design and develop trails so as to minimize the impact on the areas through which they travel, subject to policy 7.6.2, habitat and resource protection policies and ordinances, and subject to regular monitoring to identify times and/or locations of adverse impacts and trail degradation. Trails should fit the contour of the land; brush removal and/or grading should be minimal or nonexistent, and access should be controlled where necessary. Ensure that environmental or safety risks are eliminated or mitigated to the greatest extent possible. Prohibit the use of motorized vehicles on trails, and discourage their use by installation of effective barriers at the trailhead. Develop specific criteria for appropriate setbacks for each project.

Objective 7.7c Beach Access

To maintain or provide access, including visual access, to every beach to which a granted access exists or to which the public has acquired a right of access through use, as established through judicial determination of prescriptive rights, and acquisition through appropriate legal proceedings, in order to ensure one access to every pocket beach and convenient, well distributed access to long sandy beaches, subject to policy 7.6.2.

Policy 7.7.5 Coastal Bicycle Route

Provide for safe bicycle travel along the coastal corridor by developing a coordinated, continuous bicycle route parallel to the shoreline, subject to policy 7.6.2.

Policy 7.7.6 Hiking and Biking Trail Network

Subject to policy 7.6.2, establish a system of hiking and bicycle trails and bridges which provides access to and connects the various parks, recreation areas, beaches, and urban areas. For example, develop trails to link Nisene Marks State Park with Seacliff State Beach. Link the County trail system between the state parks and provide a lateral trail route along the coast. Design trails to be accessible to persons with disabilities where resources can be protected.

Policy 7.7.7 Equestrian Access to Beaches

Allow equestrian access to the beaches where conflicts with other beach usage can be resolved, subject to policy 7.6.2.

Policy 7.7.8 Equestrian Trail Network

Establish equestrian trails which provide access to designated parks, recreation areas, and beaches where equestrian uses are permitted where use conflicts and potential impacts can be resolved, subject to policy 7.6.2.

Policy 7.7.10 Protecting Existing Beach Access

Protect existing pedestrian, and, where appropriate, equestrian and bicycle access to all beaches to which the public has a right of access, whether acquired by grant or through use, as established through judicial determination of prescriptive rights, and acquisition through appropriate legal proceedings. Protect such beach access

through permit conditions such as easement dedication or continued maintenance as an accessway by private group, subject to policy 7.6.2.

Policy 7.7.22 Access to Environmentally Sensitive Habitats

Obtain controlled public access to environmentally sensitive habitats through grants, dedication of easements or other means, including as a condition of new development approval, subject to policy 7.6.2. Open the access only for education or nature study purposes, and only when improvements and management are adequate to protect the resources.

Policy 7.7.24 Environmentally Damaging Trails

Reduce the number of trails to destinations where the present level of use is causing deterioration to sensitive habitats or serious erosion problems. Restore damaged or deteriorated areas, and monitor all trails for future resource damage and restore as needed.

Policy 7.7.27 Accessways and Agricultural Areas

Minimize the number of accessways through and adjacent to agricultural areas. Delineate the accessways adjacent to agricultural areas, so it is clear where the public is allowed. As needed, use such methods as low barriers, fences, thorny hedges, and paving.

Policy 7.7.28 Separating Agricultural Fields and Accessways

Require separation of agricultural fields and identified accessways by as much distance as practicable and further providing buffer zones, elevation separations, fencing, landscaping with natural vegetation where practicable.

Policy 7.7.29 Separating Access Users from Toxic Spraying

Require separation of access users from aerial and highly toxic spraying, and post the hazard of aerial and highly toxic spraying. Consider, where appropriate, provisions of a gate at the road and a sign on the gate for pesticide spray warnings.

SANTA CRUZ COUNTY ZONING CODE

Portions of the proposed trail network are located in Santa Cruz County and as such may be required to comply with County regulations. These regulations apply to both private and public activities including those of the County and other such governmental agencies that are not exempted by State or Federal law. .

16.20 GRADING REGULATIONS

The purpose of the County's Grading Regulations is to safeguard health, safety, and the public welfare; to minimize erosion and the extent of grading; to protect fish and wildlife; to protect the watersheds; to ensure the natural appearance of grading projects; and to otherwise protect the natural environment of Santa Cruz County.

This chapter sets forth rules and regulations to control all grading, including excavations, earthwork, road construction, dredging, diking, fills and embankments; establishes the

administrative procedure for issuance of permits; and provides for approval of plans and inspections. This chapter

16.30 RIPARIAN CORRIDOR AND WETLANDS PROTECTION

The purpose of this chapter is to minimize and to eliminate any development activities in the riparian corridor, preserve, protect, and restore riparian corridors for: protection of wildlife habitat; protection of water quality; protection of aquatic habitat; protection of open space, cultural, historical, archaeological and paleontological, and aesthetic values; transportation and storage of floodwaters; prevention of erosion.

16.32 SENSITIVE HABITAT PROTECTION

The purposes of this chapter are to minimize the disturbance of biotic communities which are rare or especially valuable because of their special nature or role in an ecosystem, and which could be easily disturbed or degraded by human activity; to protect and preserve these biotic resources for their genetic, scientific, and educational values.

16.50.095 AGRICULTURAL LAND PRESERVATION AND PROTECTION

The purpose of this chapter is to preserve and protect this land for exclusive agricultural use and to enhance and encourage agricultural operations within the County.

As described in 16.50.095, a 200-foot setback is required between agricultural lands and all development of habitable uses, which includes recreational structures. The purpose of this buffer is to “prevent or minimize potential conflicts between either existing or future commercial agricultural and habitable land uses (i.e., residential, recreational, institutional, commercial or industrial). This buffer is designed to provide a physical barrier to noise, dust, odor, and other effects which may be a result of normal commercial agricultural operations such as: plowing, discing, harvesting, spraying or the application of agricultural chemicals and animal rearing.”

Where a trail is proposed through land that is zoned agriculture, it may require an agricultural designation amendment as per Section 16.50.050. This would require environmental review and a hearing and recommendation by the Agricultural Policy Advisory Commission, and pursuant to Chapter 18.10, Level VII, a public hearing and recommendation by the Planning Commission and a public hearing and final decision by the Board of Supervisors.

Permitting requirements for any trail on Santa Cruz County land will be dependent on many variables including land ownership, easement agreements, trail type and location, and environmental conditions, etc. As such, they will be addressed on a case-by-case basis in close coordination with Santa Cruz County staff and other relevant agencies, as required. In some cases, this may require working with the County of Santa Cruz to obtain an agricultural buffer and/or riparian exception where necessary and to minimize impacts to agricultural operations and land.

WATSONVILLE SLOUGHS WATERSHED CONSERVATION & ENHANCEMENT PLAN

The Watsonville Sloughs Watershed Conservation and Enhancement Plan (WSCEP) (2003) is designed to provide a future vision and a guide for many agencies, organizations and individual landowners to further the goals of conserving and restoring the diverse natural

resources of the Watsonville Sloughs Watershed in concert with improving the existing economic, social and recreational activities for the community. The WSCEP supports and respects the rights of property owners, and projects will only occur with the support of willing landowners and other partners.

The WSCEP determined that present and historic land use has had a significant impact on natural resources in the watershed. In general, the impacts are conversion of land once habitat and open space to agricultural or urban uses; water quality degraded by constrictions to water circulation, contamination from non-point source pollutants (sediments, excessive nutrients, residual DDT and other pesticides in soil from historic use and urban runoff). Vegetation resources have been degraded through land conversion, clearing practices and invasion by exotic species. The degradation of wildlife resources is related to the effects of toxic runoff, depletion of dissolved oxygen in the water column, fragmented habitat, structural barriers to wildlife movement and the presence of aggressive non-native species.

The WSCEP recommends a diverse set of projects consisting of the following five components:

- Habitat enhancement projects, such as hydrologic improvements, replacement of exotic invasive vegetation and water quality improvements;
- Land acquisition strategies, to allow for the management of areas of open space dedicated to ecosystem process and wildlife habitat;
- Coordination and improvement of regulatory process and compliance, to provide the means for landowners to have site specific requirements of sensitive resources built into the design of reliable drainage systems;
- Support and coordination with other ongoing conservation programs within the watershed to ensure communication among stewardship organizations and resource agencies, thereby fostering implementation of enhancement projects; and
- Public access and education to foster further awareness of the important natural resources of the Watsonville Sloughs system.

The WSCEP contains extensive analysis of the environmental resources and conditions (i.e. stressors) for all of the Watsonville Slough watersheds. The WSCEP also contains an extensive set of management recommendations designed to protect and enhance these environmental resources.

It should be noted that all future proposed trails developed in areas associated physically and/or hydrologically within the Watsonville Sloughs system will be designed to be compatible with the findings and management recommendations described in the WSCEP, and will support the WSCEP's efforts to improve the environmental conditions of the Sloughs through various techniques. These include but are not limited to; the installation of urban runoff treatment measures, the removal of exotic vegetation from hill slopes, and re-vegetation with native plants.

WATSONVILLE WETLANDS TRAIL SYSTEM VEGETATION MANAGEMENT AND MAINTENANCE MANUAL

The Watsonville Wetlands Trail Vegetation Management and Maintenance Manual identifies the location and treatment methods to be used by the City's maintenance personnel, contractors, and/or volunteer groups to remove and/or control the growth of weeds and invasive, non-native plant species within the existing trail system around Struve and Watsonville Sloughs. The manual also outlines strategies to encourage native plant growth that will reduce the need for long-term weed control.

FUTURE PAJARO RIVER LEVEE FLOOD CONTROL PROJECT

The City of Watsonville and town of Pajaro, as well as the surrounding agricultural areas in the floodplain of the Pajaro River, have been subjected to flooding for many years. Despite construction of levees in 1949 by the US Army Corps of Engineers, major floods have breached the levees in 1955, 1958, 1986, 1995, 1997, and 1998. This flooding has caused extensive damage to private and public property, resulting in significant economic losses in the forms of damaged agricultural crop lands and inundated urban areas.

Since 1966, the US Army Corps of Engineers, in coordination with the Santa Cruz County Flood Control and Water Conservation District, the City of Watsonville, and the Monterey County Water Resources Agency, have been studying a combination of alternative solutions designed to reduce the risk of flooding along the Pajaro River and its tributaries, Salsipuedes Creek and Corralitos Creek.

Taking into consideration a series of physical, economic, and environmental objectives and constraints, a final array of levee construction design alternatives for both the Pajaro main stem and the Pajaro tributaries (Corralitos and Salsipuedes Creeks) was formulated and described in the General Re-evaluation Report, Pajaro River (US Army Corps, Working Draft 2011). These levee reconstruction alternatives evaluated the trade-offs between project costs, levels of protection, distances and locations of setback levees, and the locations of critical habitat in the project area.

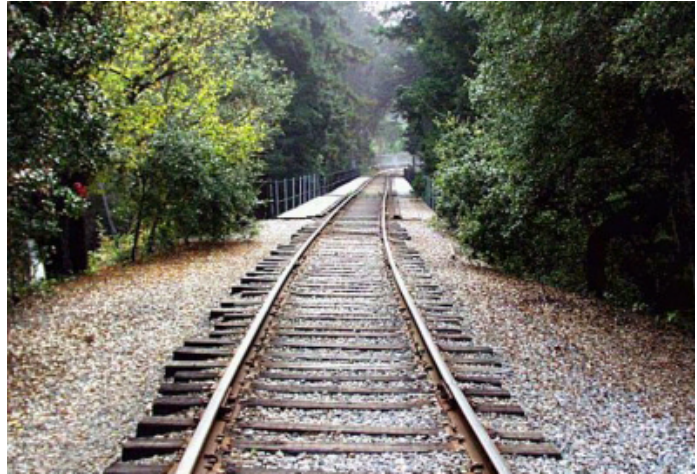
. . . For any alternative, significant real estate acquisitions will be required and management of the riparian habitat areas along the Pajaro River and its tributaries will be an ongoing expense.

It should be noted that at present, none of these alternatives include the provision for trails and/or public access. However, a number of non-governmental organizations have expressed concern that the project not be solely for flood management, but also include environmental and recreation features as well.

SANTA CRUZ BRANCH RAIL RIGHT-OF-WAY

On October 12, 2012, the Santa Cruz County Regional Transportation Commission (RTC) completed purchase of the Santa Cruz Branch Rail Line for freight and passenger rail service, preservation and future transportation uses.

The 136-year old transportation corridor parallels Highway 1 extending almost 32 miles from the town of Pajaro in Monterey County, to Davenport in Santa Cruz County. The right-of-way is generally 50 to 60 feet wide with 37 bridges and trestles, including a crossing of the Pajaro River.



Adjacent land uses include residential, commercial, industrial, agricultural and park land/open space. The corridor links major tourism and activity centers as it traverses downtown Watsonville, Aptos Village, Capitola Village and the Santa Cruz Beach area near downtown Santa Cruz. Also adjacent to the corridor are many parks and recreational facilities. The rail line provides access to the Monterey Bay National Marine Sanctuary at several key locations.

MONTEREY BAY SANCTUARY SCENIC TRAIL



The Monterey Bay Sanctuary Scenic Trail (MBSST) is a broad vision for a bicycle/pedestrian Trail Network project that will span the coast of the Monterey Bay National Marine Sanctuary from the San Mateo/Santa Cruz County line to Pacific Grove, in Monterey County. The RTCRTC is leading the planning effort for project development in Santa Cruz County and the Transportation Agency for Monterey County (TAMC) is responsible for Monterey County projects. This approach will ensure that the planned bicycle/pedestrian network will provide connectivity throughout the county and into the Monterey Bay region, as well as improve a portion of the larger California Coastal Trail and Pacific Coast Bicycle Trails.

The MBSST Trail Network will be separated from motor vehicle traffic, where possible, and utilize the on-street network to provide greater community connectivity and cohesion. The Trail Network will serve transportation, recreation, health, eco-tourism, coastal access, economic vitality, and educational and interpretive purposes.



In Santa Cruz County, the “spine” or primary alignment of the MBSST Trail Network will be built parallel to (not in place of) the operational Santa Cruz Branch Rail Line wherever feasible, within the rail right-of-way, so that freight service can continue and future passenger rail service may be provided. Spur trails will connect the primary alignment to a multitude of desirable destinations throughout Santa Cruz County. The rail line southern terminus at the Watsonville Junction (in the town of Pajaro) in Monterey County provides an opportunity for new bicycle and pedestrian facilities, where right-of-way and other considerations allow.

The RTC is preparing a comprehensive master plan that includes an assessment of potential trail alignments, solicitation of stakeholder and community input; a prioritized list of short and long range trail segment projects; trail design options; identification of appropriate implementation agencies and construction cost estimates; and preparation of an Environmental Impact Report (EIR) for environmental clearance of the master plan. A draft was released in October 2012, with final adoption anticipated in Fall of 2013.

TAMC completed a master plan for the MBSST Trail Network within Monterey County in January 2008. The plan identifies various trail segments as a recommended future trail alignment. Segment 17 is the final northerly segment that ends at the Pajaro River. The plan identifies two optional segments for Segment 17. 17A utilizes Trafton Road and McGowan Road while 17B follows the Pajaro River levee north. Both options would cross the Pajaro River via the McGowan-Thurwachter Bridge and extend north on Thurwachter Road. The Santa Cruz County MBSST Network Master Plan addresses connectivity between the two counties at that location.

PACIFIC COAST BIKE ROUTE

The Pacific Coast Bike Route was formerly known as the Pacific Coast Bicentennial Bike Route commemorating the 200th anniversary of the signing of the Declaration of Independence in 1776. The bike route was developed in 1975 by the joint efforts of the California Department of Transportation (Caltrans) and the American Revolution Bicentennial Commission of California.



The northern end of the bike route begins on Highway 101 at the California/Oregon State Line, running basically on Highway 1 along the entire California Coast, with exceptions where it is detoured around the freeway sections of Highway 1 where bicycles are not allowed or where better alternatives exist.

Within the project area, the route extends south on San Andreas Road to West Beach Street. At Thurwachter Road, the route splits either right over the McGowan-Thurwachter Bridge or straight on West Beach Street and into the City of Watsonville.

CALIFORNIA COASTAL TRAIL

In 1972, Californians passed Proposition 20 that recommended a trail system be established along or near the coast. Subsequently, the Coastal Act of 1976 required local jurisdictions to identify an alignment for the California Coastal Trail (CCT) in their Local Coastal Programs. In 1999, the CCT was designated California's Millennium Legacy Trail by the Governor and the White House Millennium Trail Council. This was followed in 2000 by an official assembly declaration (AACR20) of the CCT as an official State trail. In early 2001, the California State Legislature passed SB 908, which directed the State Coastal Conservancy (SCC) to determine what was needed to complete the CCT and resulted in the 2003 report, *Completing the California Coastal Trail*.



Since the culminating report in 2003, the SCC and partners have been working with the State's 15 coastal counties to develop plans for completing the vision of the contiguous trail along the 1,200 miles of California coast.

The CCT extends from the Oregon to Mexico borders of California and spans 15 counties. Within the vicinity of Watsonville, the CCT extends from Palm Beach State Park along Beach Road and crosses the Pajaro River into Monterey County along Thurwachter/McGowan Roads.

Portions of the Watsonville trail system and significant portions of the MBSST Trail Network may also be identified as the California Coastal Trail through Santa Cruz County.

3 | PROPOSED TRAIL & BICYCLE NETWORK

In this Chapter:

- Introduction
- Trail Types
- Proposed Trail Network
- Individual Trail Segments
- Bikeways Plan

INTRODUCTION

This chapter provides written and visual descriptions of the existing and proposed trail network. The network was developed through extensive field work, research into related planning efforts, an analysis of aerial imagery and GIS maps, and input from city staff and the Trail & Bicycle Master Plan Advisory Committee.

TRAIL TYPES

The proposed trail network is made up of several different types of trails as defined in [Table 3-1: Trail Types](#). Chapter 4 includes a description and cross-sections of each of these trail types.



Table 3-1: Trail Types

Type	User Groups	Width	Composition
Trails			
Greenway Trail	Multi-use (non-vehicular); ADA Accessible	8-12 ft.	Decomposed granite or similar pervious material
Nature Path	Pedestrian only	1.5-5 ft.	Natural surface (e.g. earth) or similar pervious material
Street-based Trail ¹	Pedestrian sidewalk(s) / bike lanes	Variable (per city & state standards)	Concrete and asphalt (per city standard)
Shared Road	Pedestrian / bike / motor vehicle	Variable (typ. 20-25 ft.)	Asphalt
Levee Trail	Multi-use	8-12 ft.	Asphalt
Rail Trail	Multi-use	8 ft. minimum with 2 ft. buffers on each side	Paved: asphalt / concrete
Bikeways			
Bike Path (Class I)	Bicycle	8 ft. minimum with 2 ft. buffers on each side	Asphalt/concrete
Bike Lane (Class II)	Bicycle	4-8 ft. depending on parking	Asphalt/concrete
Bike Route (Class III)	Bicycle	n/a	Asphalt/concrete
Sharrows (Class III)	Bicycle	Variable	Asphalt/concrete

(1) Street-based trails are existing/proposed sidewalks and bikeways that serve as designated trail linkages between other trail segments.

PROPOSED TRAIL NETWORK

The proposed trail network is based on a circular loop on the outer edge with inner trails providing access to the sloughs and wetlands as well as connections to “hub” destinations such as parks, schools, commercial centers, etc. The network will also provide important access to regional trails in both Santa Cruz and Monterey counties.

The overall trail network is shown in [Figure 3-1: Greater Watsonville Trail Master Plan](#). Given the large size of the project area, 11 sub-areas have been identified. Proposed trail segments in each of these sub-areas are discussed in detail throughout this chapter.

The trail numbering system corresponds to the sub-area as shown on the respective sub-area maps. For example, trail segment 3.1 is shown on the Sub-area #3 map.

While there are numerous existing/proposed trail access points throughout the network, the location of only major entrances are shown.

TRAIL SUBAREAS

The Trails & Bicycle Master Plan has been divided into 11 subareas to better visualize and describe the types of trails, their features, issues and opportunities, and the identification of supporting facilities. The segments for each subarea are mapped and described on the subsequent pages.

SUB-AREA 1 – PAJARO RIVER

Figure 3-2: Sub-area 1 – Pajaro River North Trail Network



Source: City of Watsonville and RBF Consulting, 2012.

Figure 3-3: Sub-area 1A – Pajaro River North Trail Network



Source: City of Watsonville and RBF Consulting, 2012.

Name	North Pajaro River Levee Trail	Segment #	1.1
Start	Pajaro Dunes / Pacific Ocean	Distance	4.2 miles
Finish	Riverside Drive	Trail Type	Levee

ROUTE DESCRIPTION

From near the Pajaro Dunes residential community adjacent to the Pacific Ocean, this levee trail is located in Santa Cruz County and the City of Watsonville. It extends northeast along the north side of the Pajaro River to the Riverside Drive Bridge at the confluence of Salsipuedes Creek. Portions of this levee trail are officially designated as publically accessible trails, namely, from Thurwachter Road north past the Watsonville Water Resources Center and within the city limits (near downtown). The remaining portions of this levee trail exist as an access road for maintenance of the levee by Santa Cruz County and are not officially designated as accessible by the public.

A portion of the proposed North Pajaro River Levee Trail is located adjacent to the Santa Cruz RC Bees Model Airplane Club, a private recreation facility that is used for flying model airplanes. This facility is a good example of private recreational use co-existing on a parcel with agricultural use outside the levee, and recreational use inside the levee. Both uses successfully operation simultaneously on the same parcel, with the land owner's willing assent and cooperation.

A new parking lot is recommended on a portion of a city-owned parcel south and adjacent to River Park. Improvements will need to include an ADA accessible pathway to the North Pajaro River Levee Trail.

Several streets north of River Park end at the levee. Formal entrances (stairways and/or paths) are proposed at the southerly street ends of Marchant Street, Lincoln Street, Coolidge Avenue and Loughhead Avenue.

Any proposed improvements would be designed to be consistent with the proposed improvements associated with the ultimate design of the future Pajaro River Levee Flood Control Project, as discussed earlier.

NEARBY DESTINATIONS

- Santa Cruz County RC Bees Model Airplane Club (private)
- Watsonville Water Resources Center (with parking and restroom facilities)
- A canoe & kayak launch area (just east of the Water Resources Center)
- Muzzio Park and Community Center
- River Park
- Downtown Watsonville
- Linscott Charter School and Watsonville High School
- Pacific Ocean and Palm Beach State Park

CONNECTING TRAILS

- Shell Road Trail (11.1)

- Rail Trail Spine of the Monterey Bay Sanctuary Scenic Trail Network (11.2)
- South Pajaro River Levee Trail (1.2)

Name	South Pajaro River Levee Trail	Segment #	1.2
Start	Pacific Ocean	Distance	6.0 miles
Finish	Confluence of the Pajaro River and Salsipuedes Creek	Trail Type	Levee

ROUTE DESCRIPTION

This trail segment is located in Monterey County and parallels the south side of the Pajaro River. It extends from the Pacific Ocean north and east to the convergence of the Pajaro River and Salsipuedes Creek. Access to the North Pajaro River Levee Trail is provided via the McGowan-Thurwachter Bridge and the Main Street-Porter Drive Bridge.

A future Pajaro Neighborhood Park is proposed at the south end of San Joan Road and adjacent to the levee. Planned facilities include a combined soccer and baseball sports field, basketball court, two small playgrounds, picnic area, small restroom, parking and other accessory facilities. This park would provide ideal access to the South Pajaro River Levee Trail for residents of the community of Pajaro.

Currently, a maintenance road exists along the top of the south levee. There is no official public access allowed on this proposed trail segment and so any potential trail access would require a prescriptive easement (or other type of easement) from Monterey County to allow public access.

Any proposed improvements would be designed to be consistent with the proposed improvements associated with the ultimate design of the future Pajaro River Levee Flood Control Project, as discussed earlier.

NEARBY DESTINATIONS

- Downtown Watsonville
- Pajaro Community / Pajaro Neighborhood Park
- Pacific Ocean
- Palm Beach State Park
- Pajaro Train Station

CONNECTING TRAILS

- North Pajaro River Levee Trail (1.1)
- Monterey Bay Sanctuary Scenic Trail
- Shell Road Trail (11.1)

SUB-AREA 2 – SALSIPUEDES CREEK

Figure 3-4: Sub-area 2 – Salsipuedes Creek Trail Network



Source: City of Watsonville and RBF Consulting, 2012.

Name	West Salsipuedes Creek Trail	Segment #	2.1
Start	Riverside Road	Distance	1.4 miles
Finish	East Lake Avenue	Trail Type	Levee

ROUTE DESCRIPTION

The West Salsipuedes Creek Trail extends from Riverside Road in a northerly direction along the west side of Salsipuedes Creek. The first mile is located within the City of Watsonville and is designated as an existing trail. The remaining portion is located along an existing maintenance road in Santa Cruz County and is not officially designated as a publicly accessible trail. Therefore, any future public trail access would require an easement (or other type of acquisition) from Santa Cruz County and/or the respective land owners.

The trail segment, including the undesignated portion, is the most heavily used trail in the project area. It is popular with nearby residents as it provides a relatively long trail without traffic or other conflicts and provides scenic views of the entire Pajaro Valley.

Existing trail entrances are located at Riverside Drive and the intersection of Hushbeck Avenue and Atri Court. One entrance is proposed at the south end of Bronte Avenue along an existing city sewer easement that provides access to a pump station located adjacent to the levee.

To provide access to the north end of the future segment, a parking facility with other possible amenities is proposed at the southeast parcel adjacent to East Lake Avenue and the bridge at Salsipuedes Creek. This property is currently privately owned.

Any proposed improvements would be designed to be consistent with the proposed improvements associated with the ultimate design of the future Pajaro River Levee Flood Control Project, as discussed earlier.

NEARBY DESTINATIONS

- Residential neighborhoods east of East Lake Avenue
- Atri Park
- Watsonville High School
- Lake Avenue Middle School
- St. Francis High School

CONNECTING TRAILS

- East Salsipuedes Creek Trail (2.2)
- Corralitos Creek Trail (3.1)
- East Lake Avenue Street-based Trail (10.3)

Name	East Salsipuedes Creek Trail	Segment #	2.2
Start	Riverside Road	Distance	1.5 miles
Finish	South of Crestwood Drive	Trail Type	Levee

ROUTE DESCRIPTION

This levee trail would extend on the east side of Salsipuedes Creek along an existing levee maintenance road. About two-thirds of the existing maintenance road / future trail parallels Lakeview Road. The entire trail is located in Santa Cruz County. There is no official public access on this proposed trail segment and potential trail access would require an easement (or other type of acquisition) from Santa Cruz County and/or the respective land owners.

Any proposed improvements would be designed to be consistent with the proposed improvements associated with the ultimate design of the future Pajaro River Levee Flood Control Project, as discussed earlier.

NEARBY DESTINATIONS

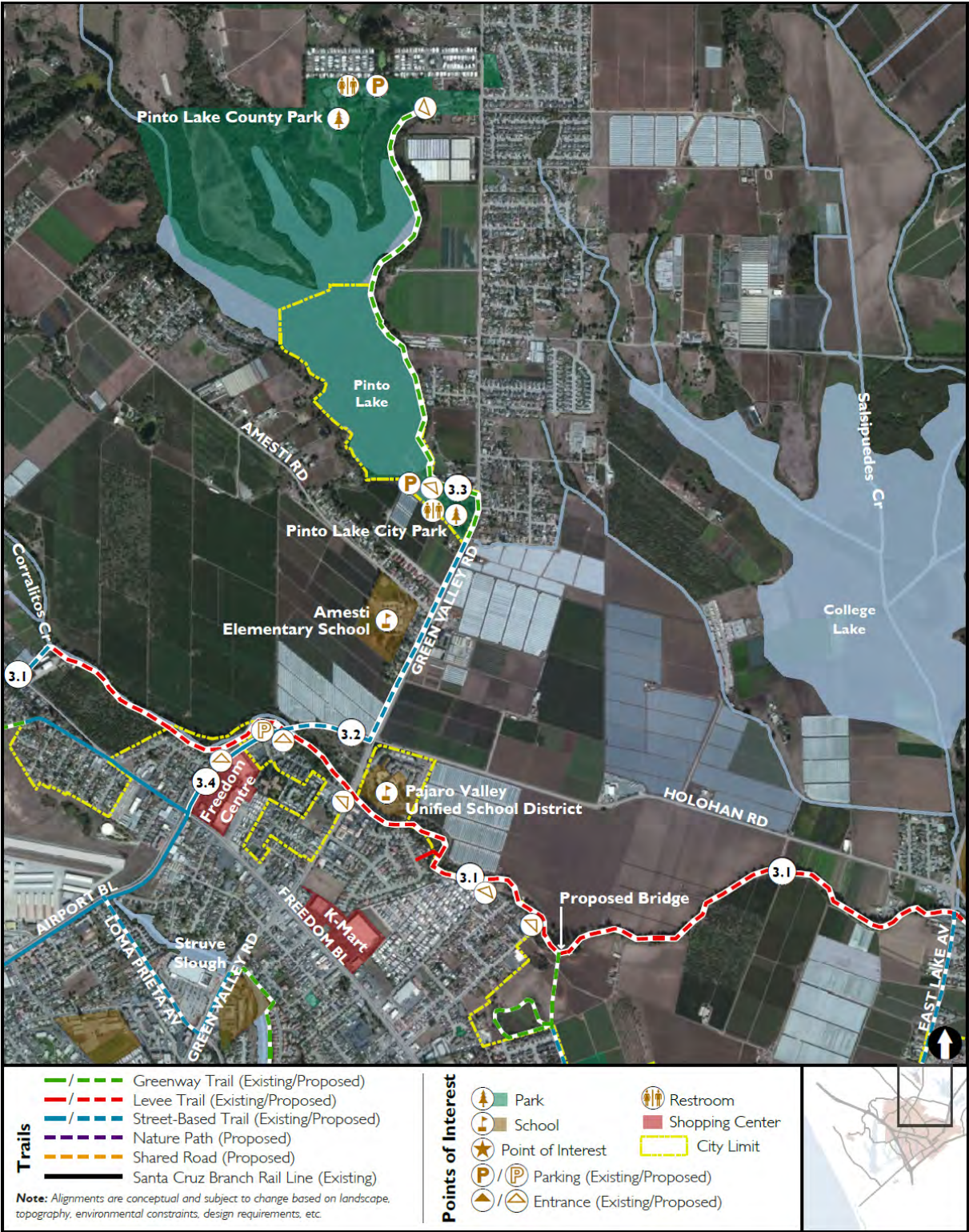
- Residential neighborhoods east of East Lake Avenue
- Tynan Lake

CONNECTING TRAILS

- West Salsipuedes Creek Trail (2.1)

SUB-AREA 3 – CORRALITOS CREEK

Figure 3-5: Sub-area 3 – Corralitos Creek Trail Network



Source: City of Watsonville and RBF Consulting, 2012.

Name	Corralitos Creek Trail	Segment #	3.1
Start	East Lake Avenue	Distance	2.8 miles
Finish	Freedom Boulevard via Pista Lane	Trail Type	Levee

ROUTE DESCRIPTION

This trail segment starts at the confluence of Salsipuedes and Corralitos Creeks (at East Lake Avenue) and extends west past Airport Boulevard to the terminus of the future Pajaro River Levee Flood Control Project. The trail could be located on either side of Corralitos Creek, however, given the fact that users from existing neighborhoods are on the south side, it is likely that the trail would be located on the south side, thereby minimizing the need to construct bridges.

There are no existing levee maintenance roads or other formal trails along this segment and all of the property is privately owned. Some property would need to be acquired by the US Army Corps of Engineers/Santa Cruz County as part of the future Pajaro River Levee Flood Control Project, should it be constructed.

Near Airport Boulevard, a parking facility is proposed. A number of entrances along the south side are proposed as well.

Any proposed improvements would be designed to be consistent with the proposed improvements associated with the ultimate design of the future Pajaro River Levee Flood Control Project, as discussed earlier.

NEARBY DESTINATIONS

- Existing residential neighborhoods north of Freedom Boulevard;
- Various commercial shopping centers along Freedom Boulevard; and
- Pajaro Valley School District (headquarter offices).
- Watsonville Airport

CONNECTING TRAILS

- Green Valley Road Street-based Trail (3.2)
- North Airport Boulevard Street-based Trail (3.4)
- Martinelli Street / East Lake Avenue Street-based Trail (10.1)
- Brewington Avenue / Atkinson Trail (10.2)

Name	Green Valley Road Street-based Trail	Segment #	3.2
Start	Airport Boulevard at Corralitos Creek	Distance	0.8 mile
Finish	Pinto Lake (City) Park	Trail Type	Street-based

ROUTE DESCRIPTION

This trail segment is a proposed street-based trail that would extend from Corralitos Creek southwest on Airport Boulevard and then north on Green Valley Road, ending at Pinto Lake (City) Park. Development of this segment would require construction of a sidewalk on one or both sides of the street for pedestrian access. Green Valley Road north to Amesti Road is an existing Class II Bike Lane.

Acquisition of land and/or an easement on private property adjacent to Airport Boulevard and Green Valley Road may be required for portions of this trail segment.

NEARBY DESTINATIONS

- Pinto Lake Park
- Amesti Elementary School

CONNECTING TRAILS

- Pinto Lake Trail (3.3)
- Corralitos Creek Trail (3.1)
- North Airport Boulevard Street-based Trail (3.4)

Name	Pinto Lake Trail	Segment #	3.3
Start	Pinto Lake Park / Green Valley Road	Distance	1.3 miles
Finish	Pinto Lake County Park	Trail Type	Greenway

ROUTE DESCRIPTION

This proposed greenway trail would extend up the east side of Pinto Lake on land that is owned partly by the City of Watsonville (about two-thirds of the length) and partly by Santa Cruz County.

This trail could be located along the shoreline and provide excellent views of Pinto Lake. Improvements could include viewing platforms and interpretive signage.

With the exception of one private parcel, it may be possible to locate this trail entirely on city and county property without the need to acquire any additional property.

NEARBY DESTINATIONS

- Pinto Lake County Park
- Pinto Lake City Park

CONNECTING TRAILS

- Green Valley Road Street-based Trail (3.2)

Name	North Airport Boulevard Street-based Trail	Segment #	3.4
Start	Freedom Boulevard	Distance	0.3 miles
Finish	Corralitos Creek	Trail Type	Street-based

ROUTE DESCRIPTION

This short trail segment extends along the north side of Airport Boulevard adjacent to the Freedom Shopping Center. A continuous sidewalk exists along the south side of the road. On the north side, a sidewalk exists from Freedom Boulevard up to the terminus of Compton Place and Corralitos Creek. The entire segment has existing Class II Bike Lanes.

A parking facility is proposed on the north side of Airport Boulevard near the terminus of Compton Place.

All of the trail segments would be located within the existing right-of-way and no additional land would be required. The proposed parking facility, however, is located on parcel of land and would require the acquisition of land and/or an easement.

NEARBY DESTINATIONS

- Freedom Shopping Center

CONNECTING TRAILS

- Corralitos Creek Trail (3.1)
- Green Valley Road Street-based Trail (3.2)
- Airport Boulevard Street-based Trail (4.5)

SUB-AREA 4 – BUENA VISTA/WATSONVILLE AIRPORT

Figure 3-6: Sub-area 4 – Buena Vista/Watsonville Airport Trail Network



Name	Freedom Blvd. / Buena Vista Dr. Trail	Segment #	4.1
Start	Airport Boulevard	Distance	0.6 miles
Finish	Buena Vista Drive (600 block)	Trail Type	Greenway / Street-based

ROUTE DESCRIPTION

This trail segment would extend west from Airport Boulevard on Freedom Boulevard to Buena Vista Drive. This portion has a Class II Bike Lane and only intermittent sidewalks. The route then extends west on Buena Vista Drive paralleling the Watsonville Airport property boundary. Because the airport fence is set in on the property, a dedicated greenway path could be located on city-owned land and county right-of-way between the fence and the existing roadway as it parallels the airport property.

At the end of the airport property, the trail along Buena Vista Drive (which has a 50-foot right-of-way) would be either a street-based trail or a greenway trail.

NEARBY DESTINATIONS

- Calabasas Elementary School

CONNECTING TRAILS

- North Airport Boulevard Street-based Trail (3.4)
- Airport Boulevard Street-based Trail (4.5)
- Buena Vista Park Trail (4.2)

Name	Buena Vista Park Trail	Segment #	4.2
Start	Buena Vista Drive	Distance	0.6 mile
Finish	Larkin Valley Road	Trail Type	Greenway

ROUTE DESCRIPTION

This trail segment extends south from Buena Vista Drive through city-owned property that is planned as a future park and open space. The area has some steep slopes and provides drainage for upland areas on the north side of Buena Vista Drive. The final alignment and types of amenities associated with this trail may be determined as part of the preparation of the Buena Vista Specific Plan.

NEARBY DESTINATIONS

- Calabasas Elementary School

CONNECTING TRAILS

- Freedom Blvd. / Buena Vista Dr. Trail (4.1)
- Larkin Valley Road Trail (4.3)

Name	Larkin Valley Road Trail	Segment #	4.3
Start	Buena Vista Park (Future)	Distance	0.7 miles
Finish	Airport Boulevard	Trail Type	Greenway / Street-based

ROUTE DESCRIPTION

The segment starts as a greenway trail at Larkin Valley Road and extends south along Harkins Slough to the convergence of Harkins Slough and Larkin Valley Road. At this point, the segment would become a street-based trail along Larkin Valley Road to connect to the Airport Boulevard Street-based Trail (4.5).

Acquisition of land and/or an easement on private property would be required for portions of this trail segment.

NEARBY DESTINATIONS

- Buena Vista Park (future)

CONNECTING TRAILS

- Buena Vista Park Trail (4.2)
- West Watsonville Municipal Airport Trail (4.4)
- Airport Boulevard Street-based Trail (4.5)

Name	West Watsonville Municipal Airport Trail	Segment #	4.4
Start	Buena Vista Drive	Distance	1.1 miles
Finish	Larkin Valley Road	Trail Type	Greenway

ROUTE DESCRIPTION

The trail segment extends south from Buena Vista Drive along an unused road that is privately owned. It appears that this road was meant to provide secondary/emergency access from the industrial business site (Jennings Industrial Park) which is accessed from Manfre Road.

The trail would traverse the industrial site and then head south on city-owned land and within the boundary of the Watsonville Municipal Airport.

Special safety features would need to be designed for those portions of the trail that pass near the City of Watsonville Police Department's open-air pistol range. The trail alignment would also need to be located so as to avoid potential impacts to Santa Cruz Tarplant, which is known to exist on airport grounds and is listed as a special status plant species. To maintain airport security, portions of the perimeter fence would need to be relocated.

Acquisition of land and/or an easement on private property would be required for the northerly portions of this trail segment.

NEARBY DESTINATIONS

- Buena Vista Park (future)
- Watsonville Municipal Airport

CONNECTING TRAILS

- Freedom Blvd. / Buena Vista Dr. Trail (4.1)
- Larkin Valley Road Trail (4.3)

Name	Airport Boulevard Street-based Trail	Segment #	4.5
Start	Freedom Boulevard	Distance	0.7 miles
Finish	Highway 1	Trail Type	Street-based

ROUTE DESCRIPTION

This trail segment extends south on Airport Boulevard along a major arterial road in the City of Watsonville. The first two-thirds of this street-based trail is existing with sidewalks on both sides of the street. However, south of Aviation Way, sidewalks are intermittent on the south side of Airport Boulevard. On the north side, there are no sidewalks, however, this land is part of the Watsonville Municipal Airport, outside of the security fence, and is owned by the City of Watsonville.

A Class II bike path extends along the entire length of this trail segment on both sides of the road.

Completion of this street-based trail segment would require the acquisition of private property to complete the sidewalks on the south side of Airport Boulevard.

NEARBY DESTINATIONS

- Watsonville Municipal Airport
- Watsonville Community Hospital

CONNECTING TRAILS

- North Airport Boulevard Street-based Trail (3.4)
- Freedom Blvd. / Buena Vista Dr. Trail (4.1)
- Larkin Valley Road Trail (4.3)
- Upper West Branch Spur Trail (4.6)

Name	Upper West Branch Spur Trail	Segment #	4.6
Start	Airport Boulevard	Distance	0.3 miles
Finish	Technology Drive	Trail Type	Greenway

ROUTE DESCRIPTION

This is an existing trail segment that extends through the Watsonville Community Hospital over an existing storm-drainage easement. About 90% of the trail is paved access as it is used by maintenance vehicles for access. Minor improvements, including signage would be required for this trail segment.

NEARBY DESTINATIONS

- Watsonville Municipal Airport
- Watsonville Community Hospital

CONNECTING TRAILS

- Airport Boulevard Street-based Trail (4.5)

SUB-AREA 5 – PAJARO VALLEY HIGH SCHOOL

Figure 3-7: Sub-area 5 – Pajaro Valley High School Trail Network



Name	Pajaro Valley High School Connector Trail	Segment #	5.1
Start	Airport Boulevard / Highway 1	Distance	1.1 miles
Finish	Harkins Slough Road	Trail Type	Greenway

ROUTE DESCRIPTION

This proposed trail segment would provide important secondary, non-vehicular access, to Pajaro Valley High School from Airport Boulevard. The trail would extend south and west parallel to Highway 1 either directly adjacent to Highway 1 and within Caltrans right-of-way, or further south and away from the Highway 1 on private property.

Where the proposed trail bends and heads directly south, the land is owned by the California State Coastal Conservancy, which would require an easement for access.

Where the proposed alignment bends and heads west and then south again, the property is owned by either the Pajaro Valley High School or the City of Watsonville all the way to Harkins Slough Road.

Acquisition of land and/or an easement on private and public property would be required for portions of this trail segment.

NEARBY DESTINATIONS

- Pajaro Valley High School
- Fitz Wetlands Educational Resource Center

CONNECTING TRAILS

- Airport Boulevard Street-based Trail (4.5)
- Pajaro Valley High School Loop Trail (5.2)
- Harkins Slough Road Connector Trail (5.3)

Name	Pajaro Valley High School Loop Trail	Segment #	5.2
Start	Pajaro Valley High School	Distance	0.5 miles
Finish	Pajaro Valley High School	Trail Type	Pedestrian Path

ROUTE DESCRIPTION

This proposed short loop trail would be designed as a pedestrian path providing access for Pajaro Valley High School students for use as a nature/interpretive teaching associated with the Fitz Wetlands Educational Resource Center. The ultimate alignment of this trail will be determined based on site conditions.

This property is owned by the City of Watsonville and the Pajaro Valley School District so no acquisition or easement of private property would be required.

NEARBY DESTINATIONS

- Pajaro Valley High School
- Fitz Wetlands Educational Resource Center

CONNECTING TRAILS

- Pajaro Valley High School Connector Trail (5.1)
- Harkins Slough Road Connector Trail (5.3)

Name	Harkins Slough Road Connector Trail	Segment #	5.3
Start	Harkins Slough Road / Pajaro Valley High School	Distance	0.3 miles
Finish	Lee Road	Trail Type	Street-based

ROUTE DESCRIPTION

This short street-based trail segment would provide a connection between the Pajaro Valley High School Connector Trail (5.2) and the Lee Road Trail (7.1). Given the narrow roadway, additional right-of-way and/or easements on private property would be required for this segment.

NEARBY DESTINATIONS

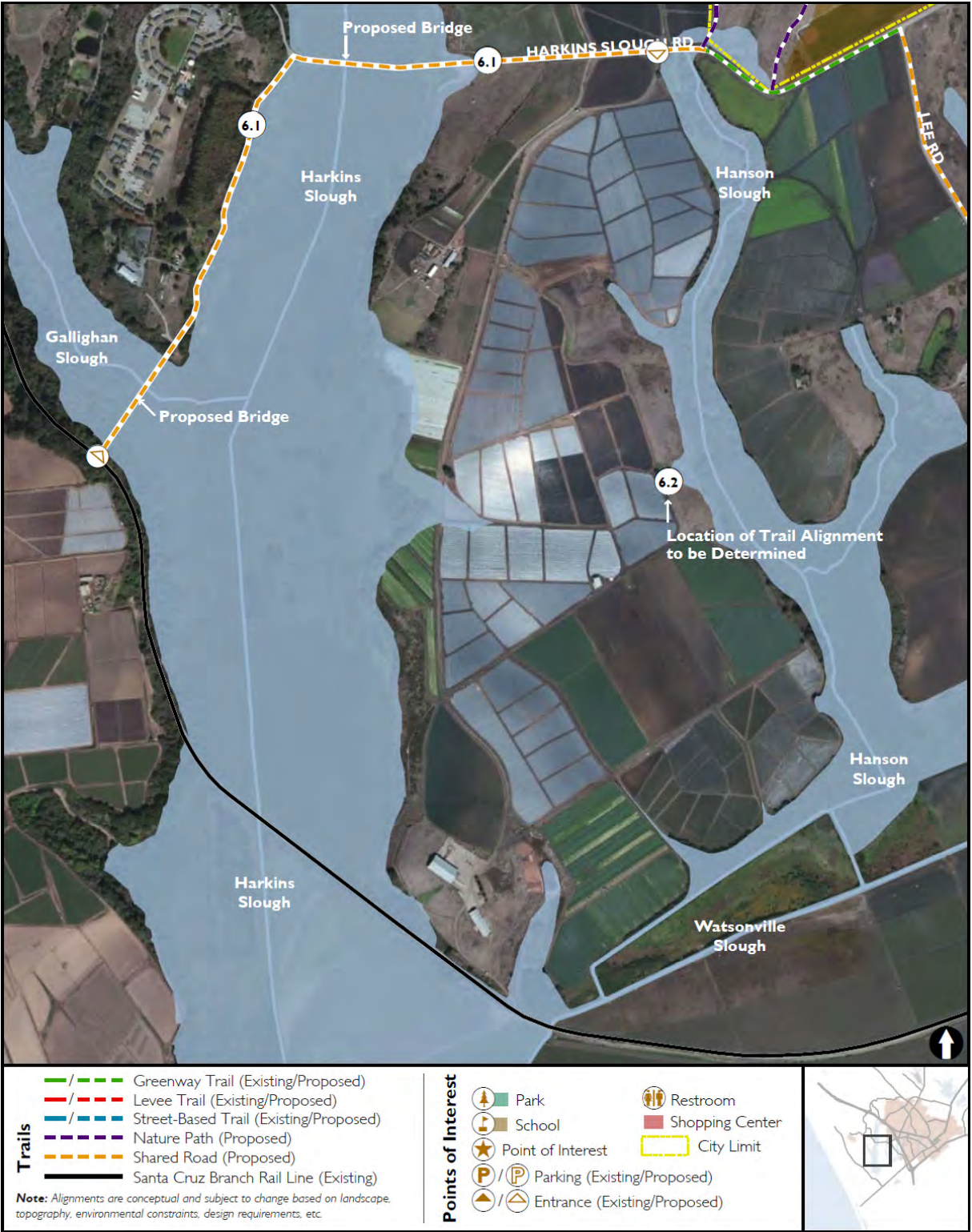
- Pajaro Valley High School

CONNECTING TRAILS

- Pajaro Valley High School Connector Trail (5.1)
- Pajaro Valley High School Loop Trail (5.2)

SUB-AREA 6 – HARKINS SLOUGH

Figure 3-8: Sub-area 6 – Harkins Slough Trail Network



Source: City of Watsonville and RBF Consulting, 2012.

Name	West Harkins Slough Trail	Segment #	6.1
Start	Harkins Slough Road @ Hanson Slough	Distance	0.9 miles
Finish	Santa Cruz Branch Rail Line	Trail Type	Shared Road / Greenway

ROUTE DESCRIPTION

This proposed segment would provide a northwesterly connection between the greater Watsonville trail network and the regional trail network via the Santa Cruz Branch Rail Line.

The trail would extend west along Harkins Slough Road and then turn south on Rountree Road. Given the fact that there is very little traffic on these roads, users (pedestrians and bikers) would utilize the existing roadway (i.e., a shared road trail). At the end of Rountree Road, a greenway trail would be constructed across Gallighan Slough and join with the Rail Trail Spine of the Monterey Bay Sanctuary Scenic Trail Network (11.2) when constructed.

For this segment, two bridges would need to be constructed; one to cross Harkins Slough and one across Gallighan Slough. The ultimate length and type of bridge would be determined concurrent with a more detailed trail alignment and design study.

Acquisition of land and/or an easement on private property would be required for portions of this trail segment

NEARBY DESTINATIONS

- Pajaro Valley High School

CONNECTING TRAILS

- East Harkins Slough Trail (6.2)
- Harkins Slough Road Connector Trail (5.3)
- Rail Trail Spine of the Monterey Bay Sanctuary Scenic Trail Network (11.2)

Name	East Harkins Slough Trail	Segment #	6.2
Start	Harkins Slough Road	Distance	~ 1.3 miles
Finish	Santa Cruz Branch Rail Line	Trail Type	Greenway

ROUTE DESCRIPTION

All of the land within this proposed segment is located on the Watsonville Sloughs Farms, which is owned by the Land Trust of Santa Cruz County (LTSCC). It may be feasible to align portions of this trail through the Watsonville Slough Farms property, however, it would need to be offset from farming operations through fences and/or hedgerows to address food security and food safety issues. As agricultural blocks are retired and

buffers are established, this alignment may make more sense and provide greater opportunities for nature observation and environmental interpretation.

Therefore, given the uncertainty associated with an ultimate alignment, no specific alignment is shown on Figure 3-8.

NEARBY DESTINATIONS

- Pajaro Valley High School

CONNECTING TRAILS

- West Harkins Slough Trail (6.1)
- Rail Trail Spine of the Monterey Bay Sanctuary Scenic Trail Network (11.2)

SUB-AREA 7 – LEE ROAD

Figure 3-9: Sub-area 7 – Lee Road Trail Network



Source: City of Watsonville and RBF Consulting, 2012.

Name	Lee Road Trail	Segment #	7.1
Start	Harkins Slough Road	Distance	3.0 miles
Finish	West Riverside Drive	Trail Type	Shared Road / Street-based Trail

ROUTE DESCRIPTION

This proposed trail segment extends south from Harkins Slough Road along Lee Road, across Struve Slough and south along Lee Road to West Riverside Drive. From there the trail would extend down a farm road and join with the North Pajaro River Lee Trail adjacent to Highway 1.

Between Lee Road and Highway 1, the CA Department of Fish & Game manages the Watsonville Sloughs Ecological Reserve, which could provide trail access and/or be used as an interpretive observation point.

A possible trail alignment would generally follow Lee Road south from Harkins Slough Road to the confluence with Watsonville Slough. It may be feasible to align portions of this trail along the eastern edge of the Watsonville Slough Farms property. It would need to be offset from farming operations through fences and/or hedgerows to address food security and food safety issues. As agricultural blocks are retired and buffers are established, this alignment may make more sense and provide greater opportunities for nature observation and environmental interpretation. As such, the current alignment shown on Figure 3-9 of trail segment 7.1 extending along the right-of-way of Lee Road may vary as future opportunities arise.

Crossing Struve Slough will require construction of a bridge approximately 600 feet in length. Construction of the bridge will require careful coordination with Santa Cruz County, the CA Department of Fish & Game, and other relevant agencies to ensure that any potential environmental impacts are minimized, particularly as it relates to the hydrodynamics of the slough.

South of Struve Slough, the trail would need to be a Street-based trail as it extends through the industrial and farmland uses to West Riverside Drive. Additional right-of-way may need to be acquired as there are no sidewalks or bike lanes in this area and Lee Road is fairly narrow and frequently used by large trucks.

South of West Riverside Drive, the proposed greenway trail would extend down an existing farm road. Easements and/or a land purchase would be required for this segment.

NEARBY DESTINATIONS

- CA Department of Fish & Game Reserve
- Watsonville Slough Farm (Land Trust of Santa Cruz County)

CONNECTING TRAILS

- Harkins Slough Road Connector Trail (5.3)
- Watsonville Slough Connector Trail (7.2)
- Rail Trail Spine of the Monterey Bay Sanctuary Scenic Trail Network (11.2)

- North Pajaro River Levee Trail (1.1)

Name	Watsonville Slough Connector Trail	Segment #	7.2
Start	Lee Road	Distance	0.1 miles
Finish	Paso Drive	Trail Type	Greenway

ROUTE DESCRIPTION

This short trail segment would connect Lee Road with the existing Lower Watsonville Slough Loop Trail (8.2) located east of Highway 1. The trail would extend along the underpass of Highway 1, adjacent to the north end of Couch Distributors and adjacent to the Watsonville Slough. An existing privately-owned dirt roadway exists that parallels Watsonville Slough.

NEARBY DESTINATIONS

- Connections to the Ohlone Parkway residential area
- Manabe-Ow Business Park

CONNECTING TRAILS

- Lee Road (7.1)
- Lower Watsonville Slough Loop Trail (8.2)

SUB-AREA 8 – LOWER CITY SLOUGHS

Figure 3-10: Sub-area 8 – Lower City Sloughs Trail Network



Source: City of Watsonville and RBF Consulting, 2012.

Note: There are numerous existing trails in Sub-area, as shown in Figure 3-10: Sub-area 8 – Lower City Sloughs Trail Network. Descriptions of only those trail segments that are proposed are discussed below.

Name	Lower Watsonville Slough Loop Trail	Segment #	8.2
Start	Ohlone Parkway	Distance	1.1 miles
Finish	Highway 1	Trail Type	Greenway

ROUTE DESCRIPTION

This greenway trail is a loop trail that extends along the perimeter of the Watsonville Slough from Highway 1 north to Main Street. Significant portions of this trail have been constructed. Three new segments are proposed to create a connected loop.

The first proposed segment is along the eastern edge of Watsonville Slough west of Ford Street in a light industrial area of Watsonville. It would extend from the intersection of Ford and Kearney Streets, north under the Harkins Slough Road Bridge to Main Street.

The second proposed segment is located on the western side of Watsonville Slough north of the Las Brisas neighborhood and around the northern boundary of the existing auto demolition yard. As part of this segment, a bridge is proposed over the Watsonville Slough.

The third proposed segment would extend along Watsonville Slough from the southwest corner of the Seaview neighborhood (Paseo Drive) west to Highway 1.

The first two proposed segments would require either property acquisition or an easement from the respective property owners. The third segment already has an existing agreement whereby the land owner has agreed to convey the property to the City of Watsonville commensurate with construction of the planned Manabe-Ow Business Park.

NEARBY DESTINATIONS

- Ramsey Park and the Wetlands of Watsonville Nature Center
- Seaview Park
- Las Brisas Park

CONNECTING TRAILS

- Ramsay Park Trail (8.3)
- Ford Street Street-based Trail (8.4)
- Las Brisas Neighborhood Connector Trail (8.5)
- Seaview Neighborhood Connector Trail (8.6)
- Manabe-Ow Connector Trail (8.7)
- Ohlone Parkway Trail (8.8)

Name	Fort Street Street-based Trail	Segment #	8.4
Start	Ford Street @ Kearney Street	Distance	0.8 miles
Finish	Main Street	Trail Type	Street-based

ROUTE DESCRIPTION

This proposed trail segment is considered an alternate trail should it be found that the proposed segment of the Lower Watsonville Slough Loop Trail (8.2) to the northwest cannot be built. It would extend north on Ford Street, west on Rodriguez Way, and north on Rodriguez Street to Main Street. A second segment would also extend west on Walker Street over the Harkins Slough Road bridge.

Portions of this street-based trail already contain sidewalks. Walker Street and Rodriguez Way and Street are currently designated Class II Bike Lanes.

NEARBY DESTINATIONS

- Ramsey Park and the Wetlands of Watsonville Nature Center

CONNECTING TRAILS

- Lower Watsonville Wetland Slough Loop Trail (8.2)

Name	Las Brisas Connector Trail	Segment #	8.5
Start	Pasadena Court @ Lower Watsonville Slough Loop Trail (8.2)	Distance	0.3 miles
Finish	Lower Watsonville Slough Loop Trail (8.2)	Trail Type	Street-based

ROUTE DESCRIPTION

This proposed trail segment is a street-based connector trail that would extend west on Pasadena Court and then north through private property, roughly on the alignment of an existing private dirt roadway. It would surround a parcel that is currently vacant but entitled for residential development, as identified in the Manabe-Ow Specific Plan (approved 2010).

Acquisition of land and/or an easement on private property may be required for portions of this trail segment.

NEARBY DESTINATIONS

- Las Brisas Park

CONNECTING TRAILS

- Lower Watsonville Wetland Slough Loop Trail (8.2)

Name	Manabe-Ow Connector Trail	Segment #	8.7
Start	Watsonville Slough	Distance	0.7 miles
Finish	Struve Slough /Westridge Business Park	Trail Type	Street-based / Greenway

ROUTE DESCRIPTION

This proposed segment would extend through the planned Manabe-Ow Business Park. The first portion would extend along a proposed roadway through the North Business Park Planning Area as identified in the Manabe-Ow Specific Plan. At the terminus of the road, a greenway trail would extend east to the existing Lower Struve Slough Loop Trail (8.1) and to the west via a bridge over Struve Slough to the other end of the Lower Struve Slough Loop Trail (8.1).

NEARBY DESTINATIONS

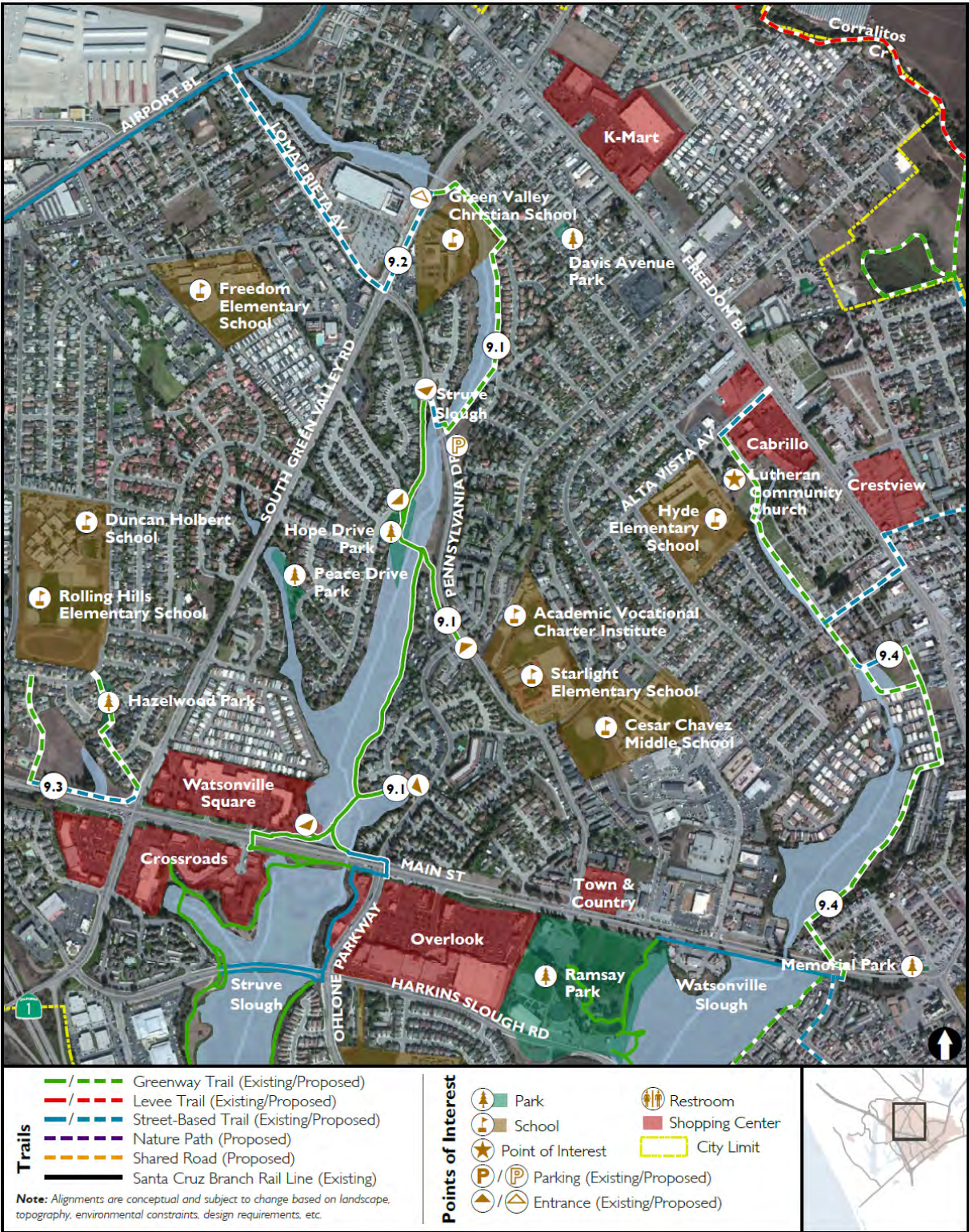
- Seaview Park
- Manabe-Ow Business Park

CONNECTING TRAILS

- Lower Watsonville Slough Loop Trail (8.2)
- Lower Struve Slough Loop Trail (8.7)

SUB-AREA 9 – UPPER CITY SLOUGHS

Figure 3-11: Sub-area 9 – Upper City Sloughs Trail Network



Source: City of Watsonville and RBF Consulting, 2012.

Note: There are numerous existing trails in Sub-area, as shown in Figure 3-11: Sub-area 9 – Upper City Sloughs Trail Network. Descriptions of only those trail segments that are proposed are discussed below.

Name	Upper Struve Slough Trail	Segment #	9.1
Start	Pennsylvania Drive	Distance	0.6 miles
Finish	South Green Valley Drive	Trail Type	Greenway

ROUTE DESCRIPTION

This proposed segment would extend the existing Upper Struve Slough Trail north along the easterly upper reach of Struve Slough.

Adjacent to Pennsylvania Avenue, there is an existing triangular parcel of privately-owned land, part of which could be for a future parking area and potential associated trail/recreation facilities.

Going north, an informal trail already exists on city-owned property along the backyards of several residential units. North from the intersection of Allston Way and Crescent Drive, the land is owned by the City of Watsonville and there is an existing sewer line and paved maintenance road that extends behind a row of houses along Crissara Drive.

The proposed trail would then extend north behind a number of apartment buildings and adjacent to the Green Valley Christian School, and terminate at South Green Valley Road. This property is owned by the Green Valley Christian Center of Watsonville.

NEARBY DESTINATIONS

- Green Valley Christian School
- Davis Avenue Park

CONNECTING TRAILS

- Loma Prieta Avenue Street-based Trail (9.2)

Name	Loma Prieta Ave. Street-based Trail	Segment #	9.2
Start	South Green Valley Road	Distance	0.6 miles
Finish	Airport Boulevard	Trail Type	Street-based

ROUTE DESCRIPTION

This proposed segment would serve as a connector trail between the Upper Struve Slough Trail (9.1) and the Airport Boulevard Street-based Trail (4.5).

The trail would extend south on South Green Valley Road and west on Loma Prieta Avenue. These roadways currently have sidewalks on both sides of the street and both are designated as Class II Bike Lanes.

No property acquisitions or easements would be required for this trail segment.

NEARBY DESTINATIONS

- Green Valley Christian School
- Watsonville Municipal Airport
- Freedom Elementary School

CONNECTING TRAILS

- Upper Struve Slough Trail (9.1)
- Airport Boulevard Street-based Trail (4.5)

Name	Rolling Hills Connector Trail	Segment #	9.3
Start	Herman Avenue	Distance	0.6 miles
Finish	Herman Avenue	Trail Type	Greenway / Street-based

ROUTE DESCRIPTION

This route would connect Rolling Hills Elementary School to Main Street via two routes. The first would be along a city-owned parcel with a storm drain and existing paved maintenance road from Herman Avenue between Vista and Inez Streets, and then through private property and a public roadway (Melwood Court) to Main Street. The trail would then extend east on Main Street before extending north through privately owned land to Eileen Street and then to Herman Avenue. Development of the north side of this trail would likely be as a condition of future development of the property.

NEARBY DESTINATIONS

- Rolling Hills Elementary School

CONNECTING TRAILS

- None

Name	Upper Watsonville Slough Trail	Segment #	9.4
Start	Main Street	Distance	1.2 miles
Finish	Freedom Boulevard	Trail Type	Greenway

ROUTE DESCRIPTION

This trail segment would provide a valuable alternate route for bicyclists traveling north and west through Watsonville and avoiding portions of Freedom Boulevard which is subject to heavy vehicular traffic conditions.

This proposed trail would extend along the northeasterly side of the upper Watsonville Slough north of Main Street. From Main Street, the trail would be street-based extending

northwest through a public alley street, cross Ninth Street and extend along an existing city-owned easement behind a row of single-family residential houses. From there, the trail would extend on privately-owned land through riparian woodlands along the eastern edge of the Watsonville Slough and behind the Valley Heights Retirement Community.

The trail would then "jog" east and then north on a private roadway on the east and north side of the Portola Heights mobile home park. At the northwest end of the mobile home park, the trail would either extend west and downhill along the edge of the mobile home park and back to the Watsonville Slough, and/or north along a private roadway behind a series of commercial buildings that front Freedom Boulevard.

The trail would then extend west along a drainage channel crossing Miles Lane and Marin Street on privately owned residential land. The trail would then continue along the drainage channel on the south side of Pioneer Cemetery, through the Lutheran Community Church property, and then east on Alt Vista Avenue to Freedom Boulevard. Additionally, a "spur" sidewalk trail would extend up Marin Street to Freedom Boulevard.

NEARBY DESTINATIONS

- Lutheran Community Church
- Hyde Elementary School
- Pioneer Cemetery
- Cabrillo and Crestview shopping centers
- Memorial Park

CONNECTING TRAILS

- Martinelli Street / East Lake Avenue Street-based Trail (10.1)
- Lower Watsonville Slough Loop Trail (8.2)

SUB-AREA 10 – NORTHEAST WATSONVILLE

Figure 3-12: Sub-area 10 – Northeast Watsonville Trail Network



Source: City of Watsonville and RBF Consulting, 2012.

Name	Martinelli Street / East Lake Avenue Street-based Trail	Segment #	10.1
Start	Freedom Boulevard	Distance	1.8 miles
Finish	East Lake Avenue	Trail Type	Street-based

ROUTE DESCRIPTION

This street-based trail would provide a connection between the proposed Upper Watsonville Slough Trail (9.4) and the Corralitos Creek Trail (3.1). The trail would extend along Martinelli Street which has sidewalks on both sides of the street. To accommodate this trail, the roadway would need to be designated as a Class III Bike Route.

The trail would then turn north on Eastlake Avenue and terminate at Corralitos Creek. East Lake Avenue currently has a sidewalk on the east side of the street as far north as Coleman Avenue. There are no designated bikeways on East Lake Avenue.

NEARBY DESTINATIONS

- TS Macquiddy Elementary School
- Ann Soldo Elementary School
- Lakeview Middle School
- Franich Park
- Crestview and East Lake Village shopping Centers

CONNECTING TRAILS

- Upper Watsonville Slough Trail (9.4)
- Brewington Avenue / Atkinson Trail (10.2)
- Corralitos Creek Trail (3.1)
- Salsipuedes Creek Trail (2.1)

Name	Brewington Avenue / Atkinson Trail	Segment #	10.2
Start	Martinelli Street	Distance	0.8 miles
Finish	Corralitos Creek Trail	Trail Type	Street-based / Greenway

ROUTE DESCRIPTION

This proposed trail would link the Martinelli Street / East Lake Avenue Street-based Trail with Corralitos Creek via Brewington Avenue and then through the proposed Atkinson Lane Specific Plan (SP) area. Within the Atkinson Lane SP area, the greenway trail would loop around an existing pond.

Brewington Avenue has a continuous sidewalk on the west side and a sidewalk on the east side as far as Crestview Park.

NEARBY DESTINATIONS

- Crestview Park

CONNECTING TRAILS

- Martinelli Street / East Lake Avenue Street-based Trail (10.1)
- Corralitos Creek Trail (3.1)

SUB-AREA 11 – REGIONAL TRAILS

Figure 3-13: Sub-area 11 – Regional Trails



Source: City of Watsonville and RBF Consulting, 2012.

Name	Shell Road Trail	Segment #	11.1
Start	Thurwachter Road	Distance	6.0 miles
Finish	San Andreas Road	Trail Type	Variable

ROUTE DESCRIPTION

This coastal-based regional trail would start at the Pajaro River at the McGowan-Thurwachter bridge and extend west on the North Pajaro River Levee Trail (1.1) to the Pacific Ocean and Pajaro Dunes residential neighborhood. It would then turn north along or adjacent to Rio Boca Road or along an unimproved levee on the east side of the last mile of Watsonville Slough to West Beach Street. The street-based trail would then turn north on Shell Road and onto Sunset Beach Road where it would join and extend further north on San Andreas Road. Shell Road and Sunset Beach Road are located within Sunset State Beach on land that is owned by the State of California.

Depending on environmental conditions and easement/right-of-way requirements, some portions of this trail would be designed as a Greenway Trail and other portions would be designed as a Street-based Trail. For that segment that extends along the Pajaro River, it would be designed as a Levee Trail.

Depending on the final adopted trail alignment by RTC, this trail alignment may, at some future point, be part of the Monterey Bay Sanctuary Scenic Trail as well as part of the alignment of the California Coastal Trail.

Acquisition of land and/or easements on private/State property may be required for portions of this trail segment.

NEARBY DESTINATIONS

- Sunset State Beach
- Palm Beach State Park
- Pajaro Dunes Residential Neighborhood (private)

CONNECTING TRAILS

- North Pajaro River Levee Trail (1.1)
- South Pajaro River Levee Trail (1.2)
- Rail Trail Spine of the Monterey Bay Sanctuary Scenic Trail Network (11.2)

Name	Rail Trail Spine of the Monterey Bay Sanctuary Scenic Trail Network	Segment #	11.2
Start	Davenport	Distance	32 miles
Finish	The Community of Pajaro	Trail Type	Rail Trail

ROUTE DESCRIPTION

The Santa Cruz County Regional Transportation Commission (RTC) completed purchase the Santa Cruz Branch Rail Line in October 2012 for recreational rail, preservation and future transportation uses. Future transportation uses could include passenger rail service, transit, bicycle and pedestrian facilities, and freight rail service. The 136-year old transportation corridor parallels Highway 1 extending almost 32 miles from the town of Pajaro in Monterey County, to Davenport in Santa Cruz County. The right-of-way is generally 50 to 60 feet wide with 37 bridges and trestles, including a crossing of the Pajaro River. Adjacent land uses include residential, commercial, industrial, agricultural and park land/open space. The corridor links major tourism and activity centers as it traverses downtown Watsonville, Aptos Village, Capitola Village and the Santa Cruz Beach area near downtown Santa Cruz. Also adjacent to the corridor are many parks and recreational facilities.

Within the greater Watsonville area, the rail line extends along the western edge of Harkins Slough and then easterly and south of Watsonville Slough. Within the city limits, the rail line extends north and parallel to West Beach Road. Heading south on Walker Street, the line passes by the former Watsonville Train Station and continues across the Pajaro River. A trail may be considered within these areas.

Similar to the Shell Road alignment (11.1), depending on the final adopted trail alignment by RTC, this trail alignment may, at some future point, be part of the Monterey Bay Sanctuary Scenic Trail as well as part of the alignment of the California Coastal Trail.

NEARBY DESTINATIONS

- Downtown Watsonville
- Pajaro Community / Pajaro Neighborhood Park
- Pajaro Middle School

CONNECTING TRAILS

- Multiple (see Figure 3-13: Sub-area 11 -- Regional Trails)

BIKEWAYS PLAN

BACKGROUND

The mild climate and topography make the City of Watsonville a great place to travel by bike. Bicycling is an ideal mode of transportation because it is enjoyable, healthy, and environmentally sound. Bicycling provides an affordable, low-cost, easy, convenient and efficient mode of transportation. People who ride bicycles are also improving their health and well-being through cardiovascular exercise.

In addition, there are many other benefits associated with bicycle transportation, both for the individual and for society. Bicycle riders help us all by:

- Reducing air pollution
- Reducing traffic congestion
- Reducing wear and tear on our roads
- Reducing consumption of petroleum resources
- Reducing the need for additional roadway capacity and parking

TYPES OF BICYCLE TRAVEL

The increased interest in bicycling has led to the development of various types of equipment. Today, all types of specialized bicycles and accessories are available: touring, racing, mountain and commuter bikes. Bicycling currently falls into four general use categories: commuting/utility, recreational, touring, and racing. Commuting/utility riders are those who regularly travel to and from a specific destination, usually as quickly and directly as possible, for very practical purposes, such as to purchase or transport goods and services or to travel to and from work, school, or events. Many people commute by bicycle for environmental reasons and for the pleasure of riding.

Recreational cyclists include those who take day long local excursions and are generally riding for pleasure or fitness. Off-road mountain bicycling is a very popular recreational activity. Touring, on the other hand, extends over longer periods of time. Touring requires more planning since the destination and routes are important factors. Racing is a specialized sport and race courses may use public roadways with appropriate public agency approval and permits.

To accommodate all cycling types, route systems should be accessible and frequent enough to be within a few blocks of all residents. They should be understandable and have adequate signs and graphics to make clear where routes are, and where they are going. Route systems should also be safe, visible, and have adequate lane width. In addition, it's important to keep in mind that excessive motor vehicle traffic and speed make bicycling less safe and less fun. There is a need to design transportation systems that provide more balance between modes, a more efficient use of energy in the movement of people, and a more harmonious interaction between transportation and the environment.

COMMUTER BICYCLE USE

According to the U.S. Census Bureau - American Community Survey (ACS)(2009), the City of Watsonville has a total of approximately 19,518 commuters of which 0.9% (139) are bicycle commuters. In comparison, the City of Santa Cruz has a much higher bicycle use as shown on Table 3-2: Commuter Bicycle Use.

Table 3-2: Commuter Bicycle Use

Area	Total Commuters	Total Bicyclists	Bicycle % of Commuting
Santa Cruz County	121,533	3,496	3.1%
Santa Cruz	28,250	2,469	8.5%
Capitola	4,886	119	1.6%
Scotts Valley	5,152	43	0.4%
Watsonville	19,518	139	0.9%

Source: US Census Bureau – American Community Survey, 2009

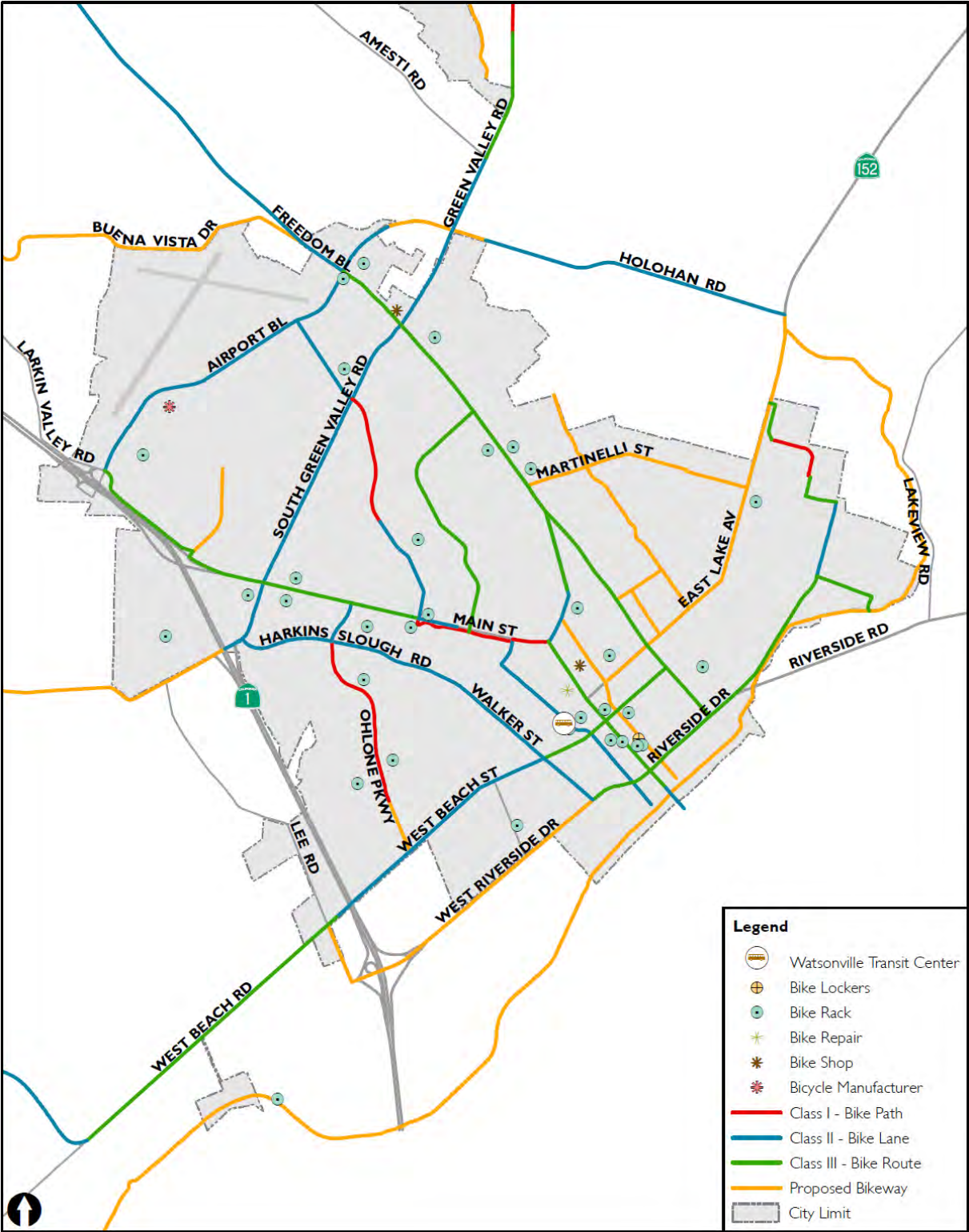
Previous planning efforts, including those undertaken by both the City of Watsonville and the Santa Cruz County Regional Transportation Commission, have sought to increase the bicycling component of commuter traffic to 20%. A key objective of the 2010 Santa Cruz County Regional Transportation Plan is to increase bicycle use to 20% of all work trips and to increase general bicycle trips to 5% of all trips by the year 2035. A similar increase in bicycle commuting is also a goal of this Master Plan

EXISTING AND PROPOSED BICYCLE NETWORK

Many of the City's major collector and arterial roadways have, over the years, been established as Class II bikeways (bike lanes) with a focus on development in high density urban areas and urban corridors. Figure 3-14: Existing & Proposed Bicycle Network and Transit Facilities, the City of Watsonville illustrates the network of Class I, II, and III bikeways throughout the City. Significant Class I Bike Paths extend along portions of Pennsylvania Drive, Ohlone Parkway, and Main Street. Significant Class II Bike Lanes extend along Airport Boulevard, Holohan Road, South Green Valley Road, Walker Street and West Beach Road.

These City designated bikeways are connected to a regional network of county bikeways. Significant bikeway connections to Watsonville are a Class II Bike Lane along Freedom Boulevard, a multi-class (I,II, and III) on Green Valley Road, and a Class II Bike Lane on West Beach Road. The RTC publishes the Santa Cruz County bikeway map which provides a detailed map of existing bike lanes and paths throughout the County, informational items on bicycling tips and laws, and local bicycle resources. The map is available from the RTC web site (www.sccrtc.org).

Figure 3-14: Existing & Proposed Bicycle Network & Transit Facilities



Source: City of Watsonville and RBF Consulting, 2012.

EXISTING AND PROPOSED BICYCLE PARKING AND SUPPORT FACILITIES

There are several additional components to a successful bicycle network besides bike lanes. As shown in Figure 3-14: Existing & Proposed Bicycle Network and Transit Facilities, facilities and amenities that support and encourage bicycling include secure and convenient bicycle parking facilities, employee shower and changing facilities, bike sensitive signals at intersections to allow cyclists the ability to trigger the signal, and intermodal connections allowing bicyclists to transfer between modes of travel. The City of Watsonville's zoning codes establish bicycle parking requirements for new development. Rates vary according to the type of use. Although current regulations do not mandate that a certain number of bicycle spaces be secure lockers for employees, the City encourages enclosed bicycle parking at shopping centers, civic centers and businesses.

The Santa Cruz County Regional Transportation Commission also administers a program to help fund the installation of secure bicycle racks and lockers in high use commercial and public facility areas. Since 1993, the "Bike Secure" program has funded 52 local agencies and businesses and provide over 2,000 new bicycle parking spaces. Locations of new bicycle racks are constantly being added to provide bicycle parking facilities.

BIKE PARKING AND OTHER AMENITIES

Currently, there are few public places for changing and storing bicycle clothes and equipment. To encourage commuter bicycling use, some jurisdictions have adopted ordinances which require new employment-generating uses to provide onsite bicycle parking, lockers, and facilities for showering and changing clothes. These types of requirements for new or expanded development provide incentives for employees to use bicycling as a commuting alternative. Site design requirements for worksites have not been adopted in the City nor County. If considered in the future, ordinances should include requirements for bike storage, showers, and clothes lockers to further encourage bicycle commuting.

PARK-AND-RIDE LOTS

Currently, there are no park-and-ride lots within the City of Watsonville. However, five park-and-ride lots exist in all of Santa Cruz County, including locations at the Scotts Valley Transit Center, Pasatiempo in Santa Cruz, Quaker Meetinghouse in Santa Cruz, Soquel Drive/Paul Sweet Road in Santa Cruz, and Resurrection Church in Aptos.

EXISTING AND PROPOSED BICYCLE INTERMODAL FACILITIES

Connections between the various transportation modes allow people to use a combination of transportation modes for daily trips. People can combine bicycling with bus (i.e. via the Watsonville Transit Center), automobiles, carpooling, vanpooling, train travel, and walking for their commuter and recreational trips. Facilities that can help cyclists combine transportation modes include: bike racks on buses, vanpools, and bike racks and lockers at transit stops and park and ride lots, train stations, and parking structures.

BICYCLE SAFETY AND EDUCATION PROGRAMS

The City of Watsonville is serviced by many safety and education programs, as well as advocacy groups. Bicyclists need to know the vehicle laws and they also need to develop good cycling skills, so that they can coexist safely with motorists. Motorists need to know that cyclists have a legal right to the roadways and they need to learn coexistence strategies, as well. Education programs can provide motorists with valuable information they need and bicyclists with on bike training. The safety benefits of helmets and other protective measures also need to be stressed. Some of the more active local non-profit organizations are listed below:

Santa Cruz County Regional Transportation Commission - Plans for, funds, and supports numerous bicycle projects. A RTC Transportation Planner serves as a Bicycle Coordinator and staff person for the Bicycle Advisory Committee; handles bicycle hazard reporting (of potential or existing hazards on roadways or bikeways), applications for Bikes Secure, providing bicycle parking at private lots, vanpools and other locations (<http://www.sccrtc.org/>). The RTC also produces the Santa Cruz County Bikeways Map which is distributed free to the public.

Commute Solutions - A RTC rideshare program that provides callers with commute information, such as carpool and vanpool matching, transit schedules, bicycle commuter brochures, bikeway maps, and route suggestions, amongst other resources (<http://www.commutesolutions.org/>).

Bicycle Advisory Committee— advises the Santa Cruz County Regional Transportation Commission (RTC) on bicycle planning and policy related issues. The Committee provides technical review of proposed bicycle projects and funding applications as well as theft prevention, bicycle parking programs, education and safety, and other bicycling related issues (<http://www.sccrtc.org/ros-bike.html>).

Ecology Action – a non-profit environmental consultancy that offers bicycle education and safety programs, technical support, and incentive programs to encourage active transportation. Ecology Action works closely with local jurisdictions, schools and businesses, and is an active presence in the community (<http://www.ecoact.org/Programs/Transportation/index.htm>).

Bike to Work/School Program - Offers two County-wide Bike to Work/School Day events per year as well as the Spring Bike Week. These events are fun, inclusive, and educational, and encourage, support, and promote more people to bicycle for transportation.

Bike Smart – A Safe Routes to School program run by the Transportation Division of Ecology Action, a local non-profit organization. Bicycle safety training is done in the classroom and outside where youth of all ages participate in "Bicycle Rodeo" obstacle courses.

Community Traffic Safety Coalition - a public safety organization representing over 30 community and government organizations, as well as the South County Bike/Pedestrian Workgroup that is funded by a grant from the State Office of Traffic Safety. Some of its activities include: "Share the Road" with bicyclist signs, low-cost helmet distribution,

outreach and education of enforcement agencies, Latino Community outreach, night-riding education (<http://www.sctrafficsafety.org/>).

Ride n' Stride Bicycle and Pedestrian Safety Program – Teaches elementary school children to safely ride their bicycles and walk. The program covers traffic and safety laws including helmet use and proper street crossing.

Bicycle Traffic School – A program aimed to hold bicyclists who receive traffic violations responsible for illegal behavior and educate them so the behavior is not repeated. Bicycle traffic safety classes are offered to individuals who receive traffic violation tickets in lieu of paying the fine.

People Power - a grass-roots advocacy group that monitors and advocates for positive bicycle associated issues (<http://peoplepowersc.org/>).

BICYCLE PLAN CONSISTENCY WITH OTHER REGIONAL PLANS

WATSONVILLEVISTA 2030 GENERAL PLAN

The WatsonvilleVista 2030 General Plan Transportation and Circulation Element includes objectives, policies and implementation measures to develop a safe and efficient bikeway system. The preparation and implementation of a Bikeway Plan facilitates achieving these objectives by developing an action plan that can be used as part of the County, regional and statewide funding and grant programs. The Bicycle Plan is in support of the following WatsonvilleVISTA 2030 Transportation and Circulation Element goals and policies:

- Plan for and provide a safe, convenient network of bicycle facilities that serves both local and regional travel. (Goal 6.5.0)
- The City shall plan for, and implement a comprehensive network of bicycle facilities in order to promote the bicycle as an alternative to the private automobile. (Policy 6.5.1)
- The City shall encourage bicycle facilities in new developments, as an incentive for bicycling as a commute alternative. (Policy 6.5.3)

SANTA CRUZ COUNTY REGIONAL TRANSPORTATION PLAN

The 2010 Regional Transportation Plan (RTP) also seeks to increase bicycle travel, reduce conflicts between bicycles and other modes of travel and increase the potential of combining bicycle travel with other modes of transportation. The RTP seeks to develop bikeway systems, including bike lanes, which provide for safe bicycle travel. This Plan is consistent with RTP bicycle planning policies that seek to update bikeway plans and implement projects to close gaps in the bikeway network and provide safe bicycling facilities. The RTC is currently updating the RTP and is scheduled for public release in 2014.

MONTEREY BAY UNIFIED AIR POLLUTION CONTROL DISTRICT 2008 AIR QUALITY MANAGEMENT PLAN

The 2008 Air Quality Management Plan also seeks to increase bicycle travel as this mode of transportation is the single most efficient form in terms of energy and resulting air pollution. Projects that consist of any new or improved bicycle facility constructed,

increases the opportunity for more commuters to choose the bicycle as their mode of transportation instead of motorized transportation. The improvement projects as outlined in this bicycle plan achieve these goals.

4 | DESIGN GUIDELINES

In this Chapter:

- Introduction
- ADA Requirements
- Wayfinding & Signage
- Trail Details and Standards
- Ancillary Trail Facilities & Amenities

INTRODUCTION

This chapter provides design guidelines for future development of the greater Watsonville trail network. These guidelines are based on best practices in use throughout the United States, as well as accepted national trail and bikeway facilities.

The guidelines should be used with the understanding that each trail is unique and that design adjustments will be necessary in certain situations to achieve the best results. Each proposed segment should be evaluated on a case-by-case basis, in consultation with Santa Cruz County and Monterey County (where relevant), the respective land owners, the appropriate stakeholders, a qualified engineer, and, where appropriate, a landscape architect.

Trail design is a broad topic that covers many issues. This section provides guidelines for typical facilities and is not a substitute for more thorough design and engineering work. For more in-depth information and design development standards, the following publications should be consulted:

Greenways: A Guide to Planning, Design and Development

Published by Island Press, 1993

Authors: Charles A. Flink and Robert Searns

Trails for the Twenty-First Century

Published by Island Press, 2nd ed. 2001

Authors: Charles A. Flink, Robert Searns, Kristine Olka

Guide to the Development of Bicycle Facilities

Updated in 2012 by the American Association of State Highway Transportation Officials (AASHTO)

Manual on Uniform Traffic Control Devices (MUTCD)

Updated in 2012. Published by the U. S. Department of Transportation, Washington, DC

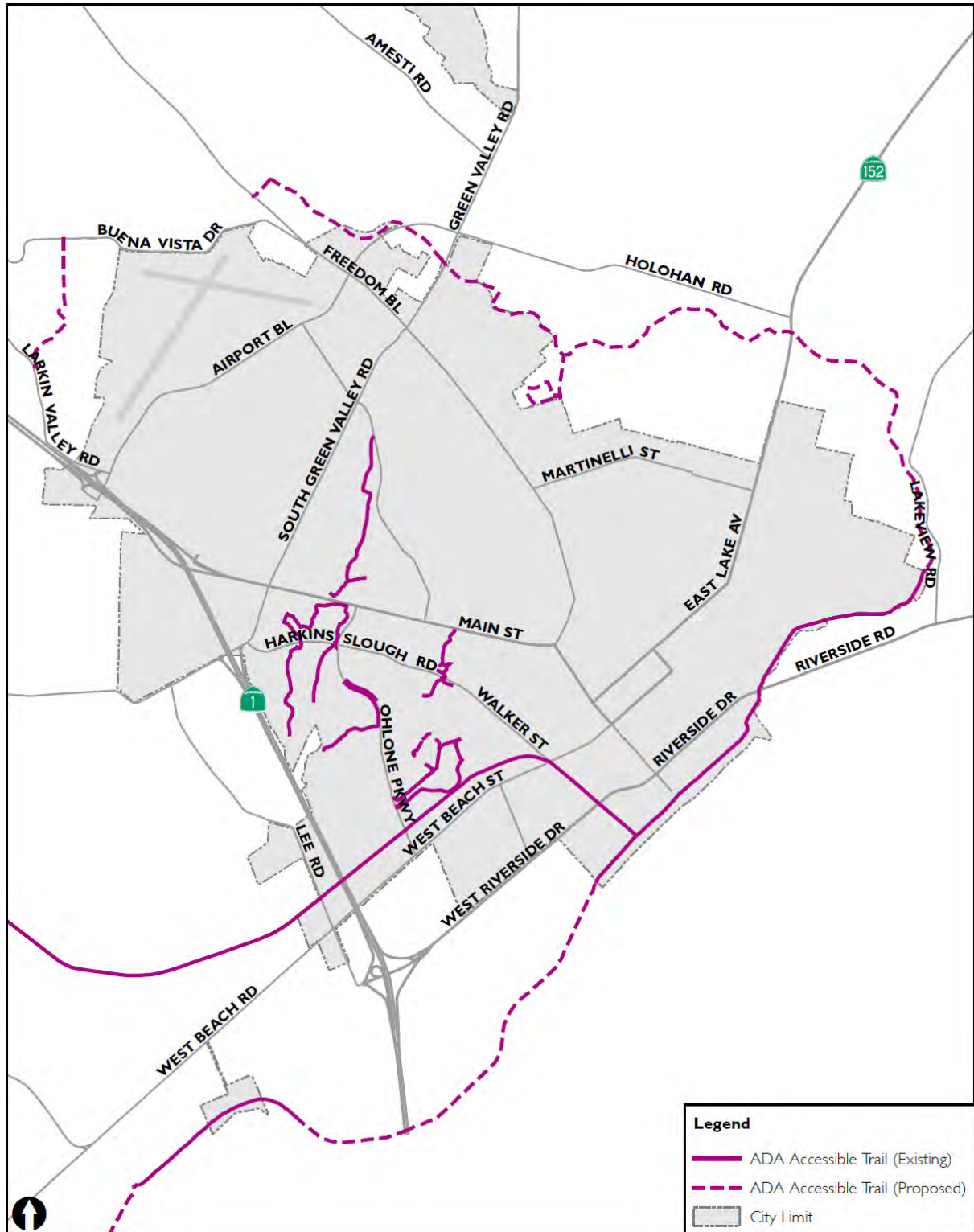
Universal Access to Outdoor Recreation: A Design Guide

Published by PLAE, Inc., Berkeley, CA, 1993

ADA REQUIREMENTS

The Americans with Disabilities Act requires that portions of the Watsonville trail network be accessible to persons with varying motor skills and abilities. Perhaps the best way to comprehend the importance of ADA is to understand that most of us, at some time in our life, will experience a temporary disability which will affect the way in which we make use of outdoor resources. ADA benefits all Americans by making the outdoor environment more accessible. A map showing the existing and proposed greenway and levee trails that are ADA accessible is shown in [Figure 4-1: ADA Accessible Greenway and Levee Trails](#).

Figure 4-1: ADA Accessible Greenway and Levee Trails









WAYFINDING & SIGNAGE



A comprehensive system of signage is required throughout the project to ensure information is provided to trail users regarding the safe and appropriate use of all facilities, both on-road & off-road. It is essential that the future trail network be designed seamlessly with other alternative transportation routes, such as designated bicycle routes, and wherever possible, bus routes.

Signage includes post- or pole-mounted signs and pavement striping. Signage is further divided into information signs, directional signs, regulatory signs and warning signs. Trail signage should be developed to conform to the (2012) Manual on Uniform Traffic Control Devices and the American Association of State Highway Transportation Official Guide for the Development of Bicycle Facilities.

The city has an existing set of trail signs that will continue to be used as part of the development of future trails. These types of signs and where and how they should be used are described in Table 4-1: *Wayfinding and Signage Recommendations*.

Table 4-1: Wayfinding and Signage Recommendations

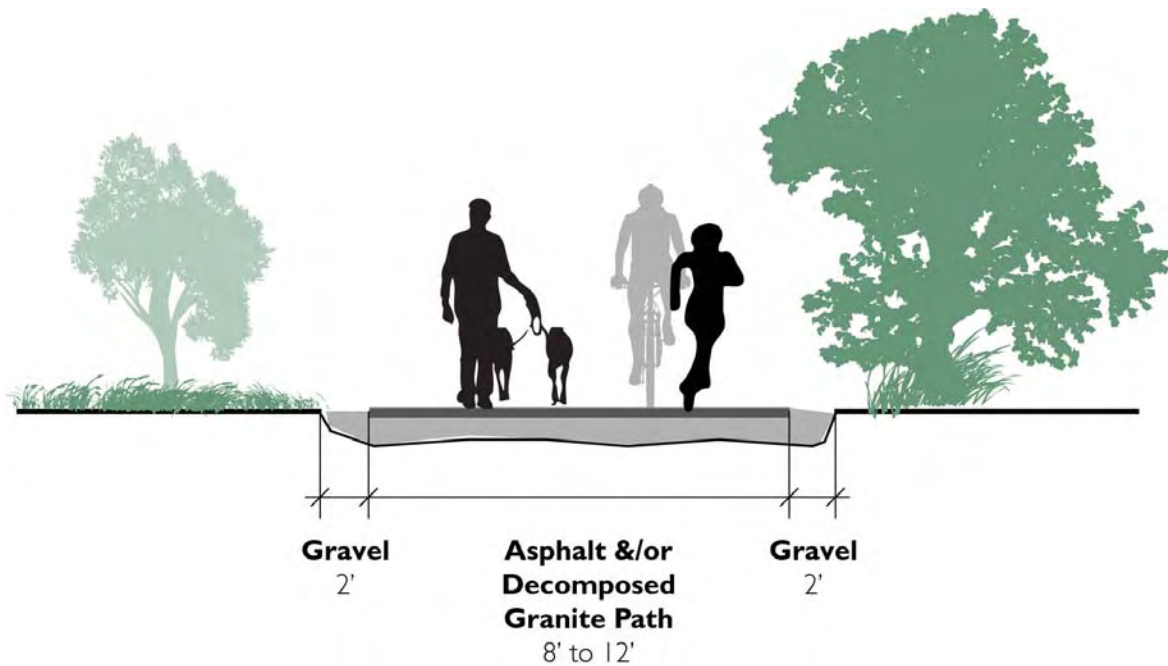
		Description	Recommendations
Trail Identity	  	The Watsonville trail network logo should be used to aid in reinforcing the trail's identity. Additionally, local trail logos, such as the Monterey Bay Sanctuary Trail should complement all Watsonville trail network signage.	Logos should be used as a consistent element throughout the trail network. They should be placed at all trail entrances and along the trails as appropriate. Signage should be simple, direct, and easy to identify.
Directional Signage	 	The Watsonville trail network map should be located at each trail entry. It should be post-mounted and viewable by adults, children, and people in wheelchairs. It should identify your location ("You are here"), other trail entrances, and associated trail facilities such as parking and restrooms.	Directional signs should be written in both English and Spanish. They should be resistant to graffiti and constructed with durable materials.
Educational Signage		Educational/interpretive signage should be placed at trail entrances and environmentally significant areas. These signs should include information about the trail, history of the surroundings, and/or other information that is easy to read for a variety of ages.	Educational signs should be written in both English and Spanish. They should be durable and resistant to graffiti. Additional site-specific signage should be considered, particularly at locations that have unique cultural and/or environmental resources.

		Description	Recommendations
Location Signage		<p>Location signage should be placed along trail routes. These can be used to let users know how far they have traveled and/or how much farther until they reach their destination. They can also be used to let emergency services know where a trail user is in case of an emergency.</p>	<p>Location signage used should be constructed of high quality, durable materials and may include trail logos and/or trail names. They should be spaced consistently along trails to most accurately inform users. Consider online maps with signage locations that would allow users to go on self-guided tours.</p>
Shared Use Guidelines		<p>Shared use signage should be used to clearly indicate permitted users and rules of conduct. This includes user types (pedestrian, bicyclists, equestrian, etc.) as well as speed control, cleaning up after your pet, "Don't litter, etc. They should also be used to indicate changing trail conditions such as grade, cross-slope surface conditions, etc.</p>	<p>Signage should be grouped with other signage as appropriate. Signs should be provided in an easy to understand format with limited text and graphics that are understood by all users</p>

TRAIL DETAILS AND STANDARDS

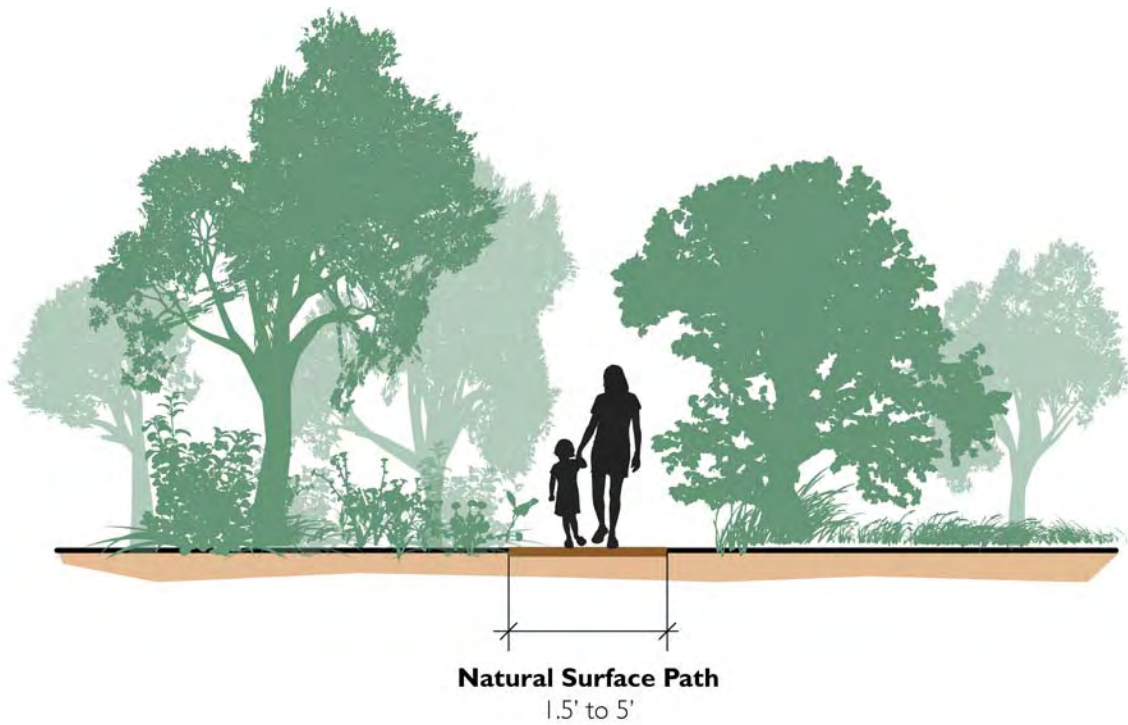
GREENWAY TRAIL

A greenway trail is an off-street trail designed for multiple users, including pedestrians, bicyclists, and other non-motorized users. A greenway trail is an eight to twelve-foot wide multi-use trail, typically located in a natural, or green setting (e.g. through open space) but may also be located in more urban areas such as residential neighborhoods. These trails should be comprised of a permeable material such as decomposed granite or other similar materials, wherever feasible. This type of trail is recommended for areas expecting frequent and heavy use.



NATURE PATH

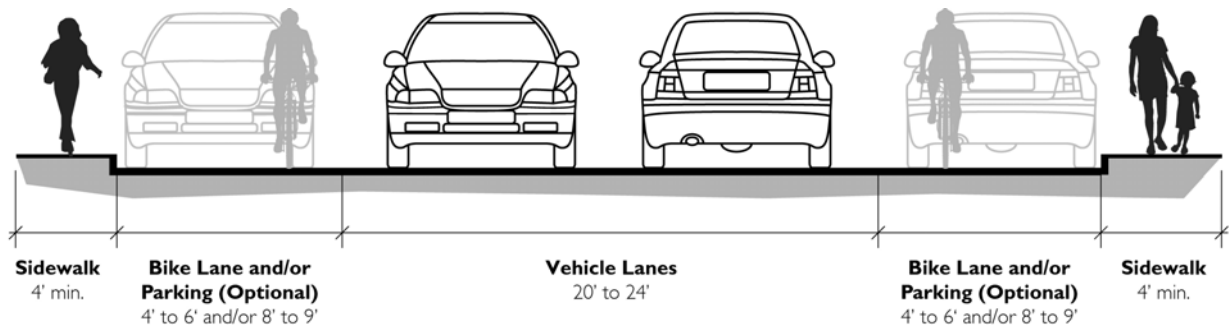
A nature path is a pedestrian only walking/jogging path comprised of a permeable material such as decomposed granite, earth or polymer stabilized earth, or similar material. Nature paths are relatively narrow (1.5' to 5') and recommended in low-density natural areas and open space and should be designed to minimize erosion potential.



STREET-BASED TRAIL

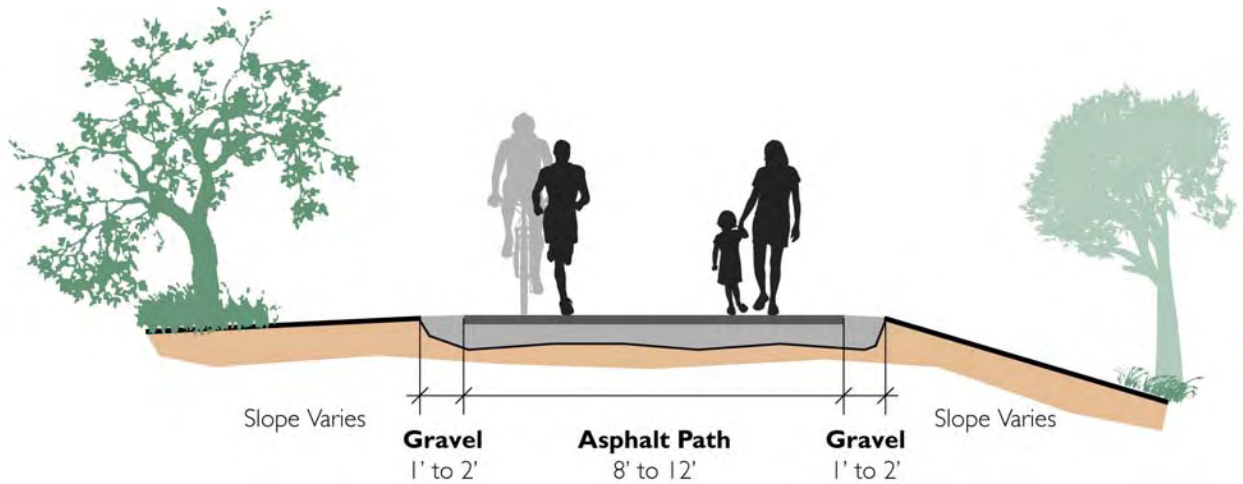
Some sidewalks and bicycle-friendly roadways are recommended as routes in order to preserve overall network connectivity, where off-road trails are not feasible. These portions of trail are referred to as street-based trails or on-road routes, providing trail users and local residents with safe routes to connect to and from off-road trail segments. Street-based trails typically feature sidewalks (with a 4' minimum width) and where necessary and feasible, bike lanes.

If a street-based trail has adequate right-of-way and infrequent cross streets and driveways, a sidepath can be used. Sidepaths have similar characteristics to paved trails, only they are located along roadways rather than natural corridors.



LEVEE TRAIL

Levee trails are designated along existing and proposed levees along the Pajaro River and Salsipuedes and Corralitos creeks. They are designed as multi-use trails comprised of asphalt, and in limited areas, concrete. Given their setting, levee trails are anticipated to be high-use trails.



RAIL TRAIL

A rail trail is envisioned to be a regionally-serving trail that extends within the right-of-way of the existing Santa Cruz Branch rail line. The rail property is now owned by the RTC but specific plans for future uses have not been finalized. However, future transportation uses could include passenger rail service, transit, bicycle and pedestrian facilities, and freight rail service. It is envisioned that this trail will be the spine of MBSST trail network alignment.



MONTEREY BAY SANCTUARY SCENIC TRAIL

Part of the rail trail will likely be integrated with the broader, regionally-based Monterey Bay Sanctuary Scenic Trail. This multi-use trail is envisioned to span the coast of the Monterey Bay National Marine Sanctuary from the San Mateo/Santa Cruz County line to Pacific Grove, in Monterey County.

Trail types will vary in size and type, depending on conditions, right-of-way, etc. However, all trails will be designed as multi-use facilities capable of supporting both pedestrian and bicyclists, as well as other non-vehicular forms of transportation.

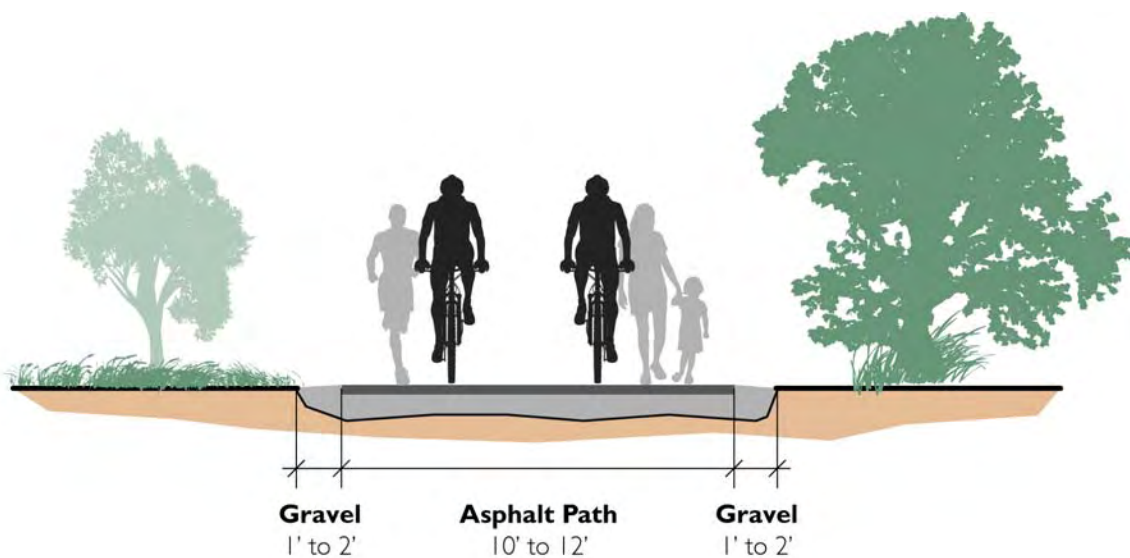


Monterey Bay Sanctuary Scenic Trail Project Corridor – Santa Cruz County Segment (Source: RTC, 2012)

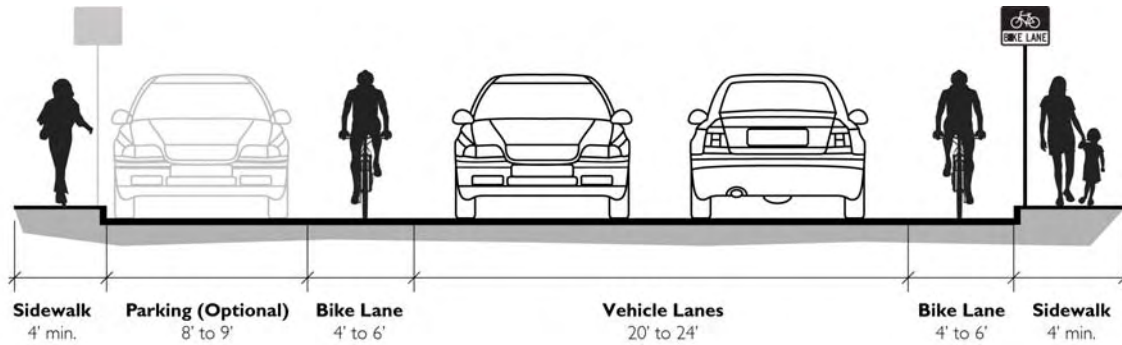
BIKEWAYS

Bikeway is a general term used to refer to facilities that provide mobility access primarily for bicycle travel. The Caltrans Bikeway Planning and Design section (Chapter 1000 of the State of California Highway Design Manual) categorizes bikeways into three types:

Class I Bikeways are generally referred to as **Bike Paths** and provide a completely separated right-of-way for the exclusive use of bicycle and pedestrian traffic with cross-flow minimized. An example of a Class I bike path is the pedestrian/bike path on the west side of the Ohlone Parkway.



Class II Bikeways are referred to as **Bike Lanes** and provide a striped lane for one-way bike travel on a street or highway, and typically includes signs placed along the street segment. Examples include Airport Boulevard, South Green Valley Road, and Walker Street.

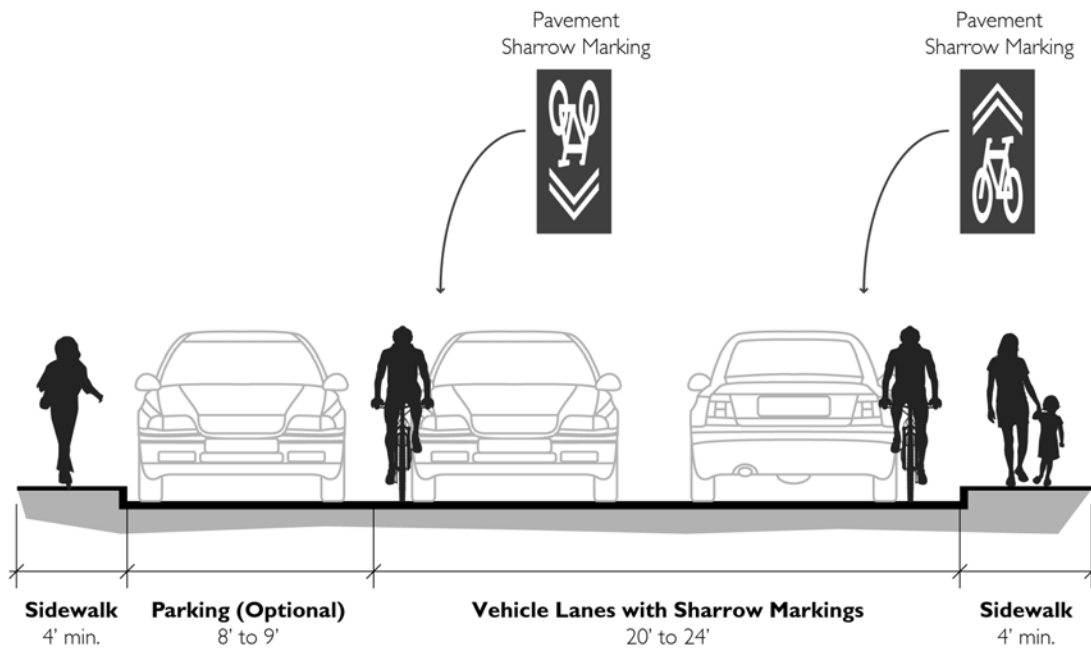
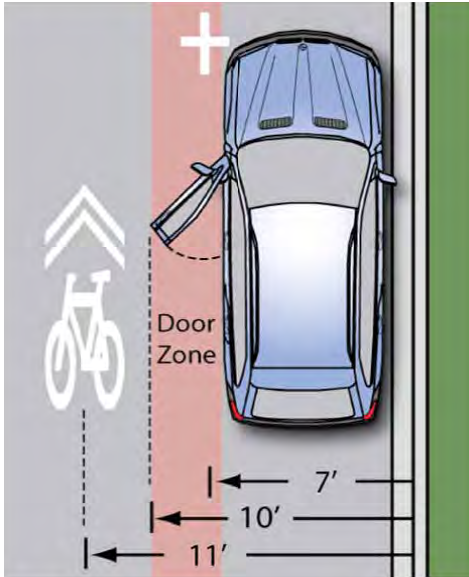


Class III Bikeways are referred to as **Bike Routes** and provide a shared use with pedestrian or motor vehicle traffic. Typically these facilities are city streets with signage designating the segment for Bike Route without additional striping or facilities.



SHARED LANE PAVEMENT MARKING (SHARROWS)

A sharrow is a Class III street marking that is placed in the center of a travel lane to indicate that a bicyclist may use the full lane. Sharrows assist bicyclists with lateral positioning in lanes that are too narrow for a motor vehicle and a bicycle to travel side by side within the same traffic lane. They also alert motorists of the location bicyclists are likely to occupy within the traveled way and encourage safe passing of bicyclists by motorists.

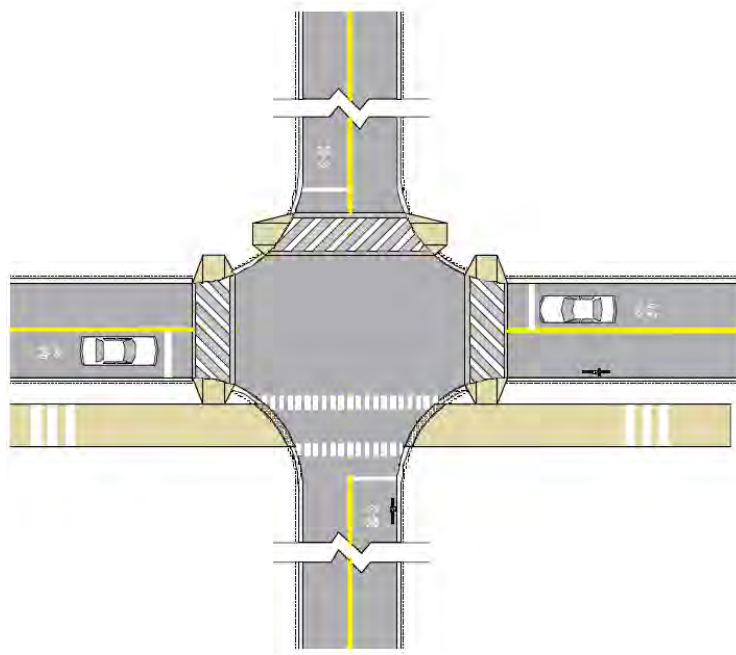


ANCILLARY TRAIL FACILITIES & AMENITIES

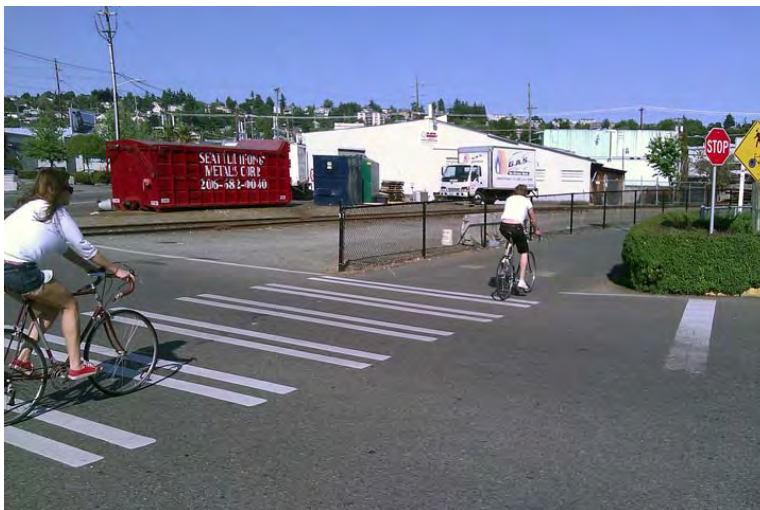
Ancillary trail facilities and amenities are described below and in Table 4-2.

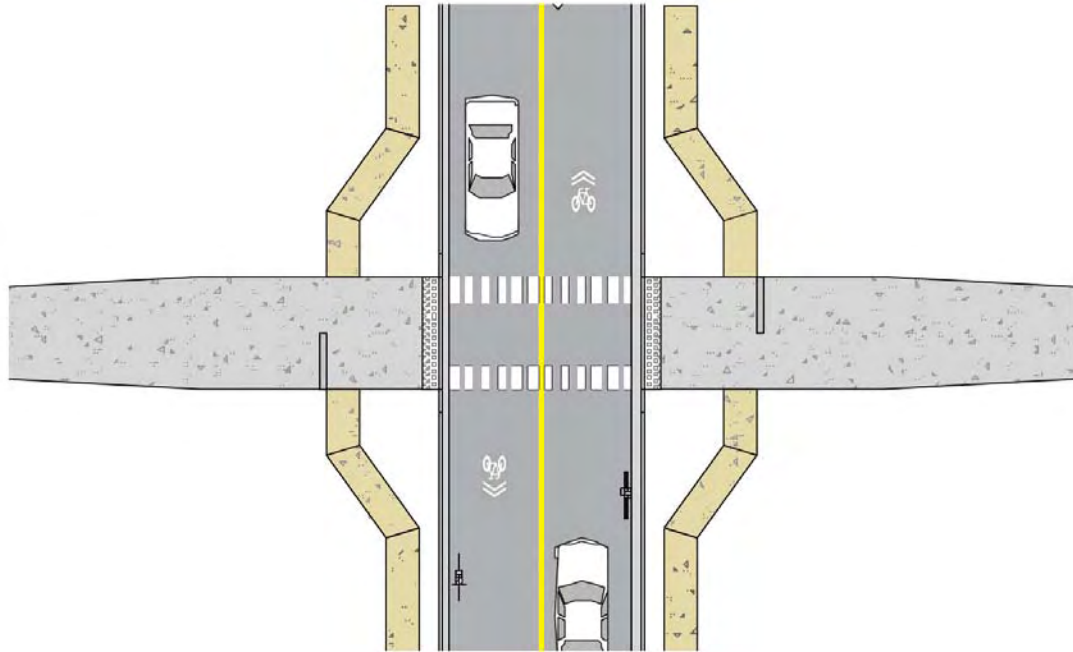
TRAIL INTERSECTIONS

Trail intersections are important in making the trail system continuous. The following illustrations give examples of different intersection scenarios.



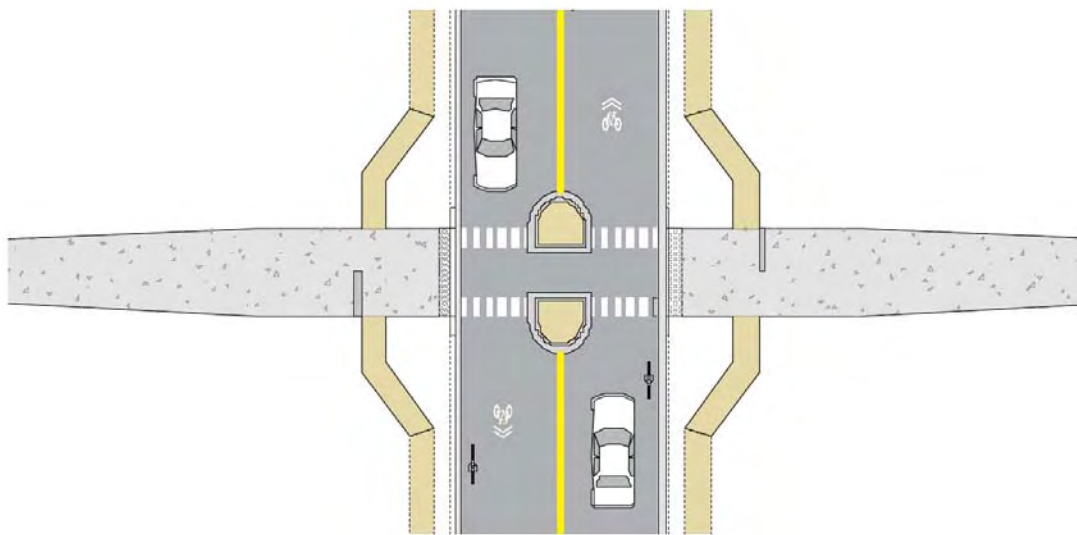
Trail Intersection at a 4-way Stop
Shared Use Path





Mid-Block Intersection
Share Use Path with Sidewalks





Median Refuge
Shared Use Path with Sidewalks

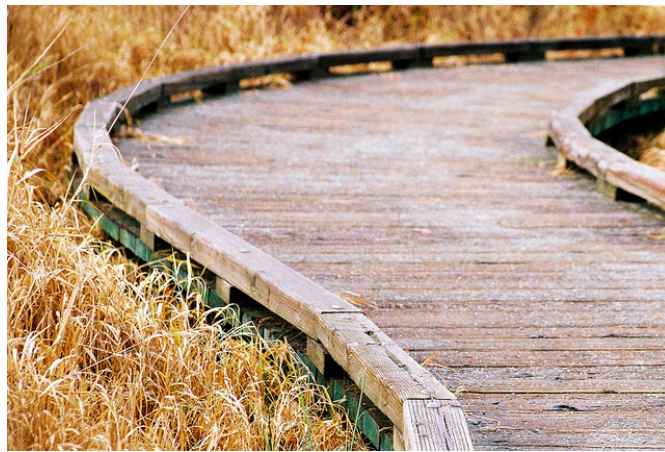
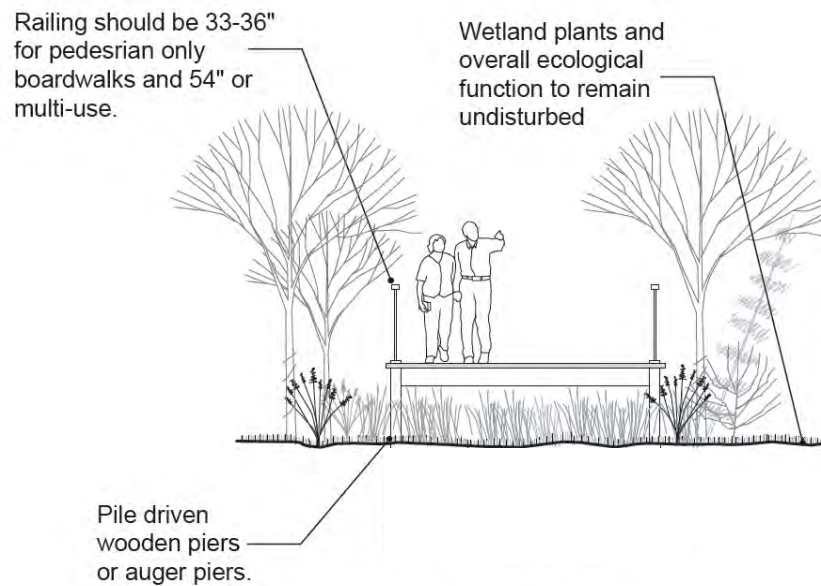


TRAIL STRUCTURES

Throughout the trail network, a number of structures will be required, particularly when crossing over water and/or unstable soil conditions.

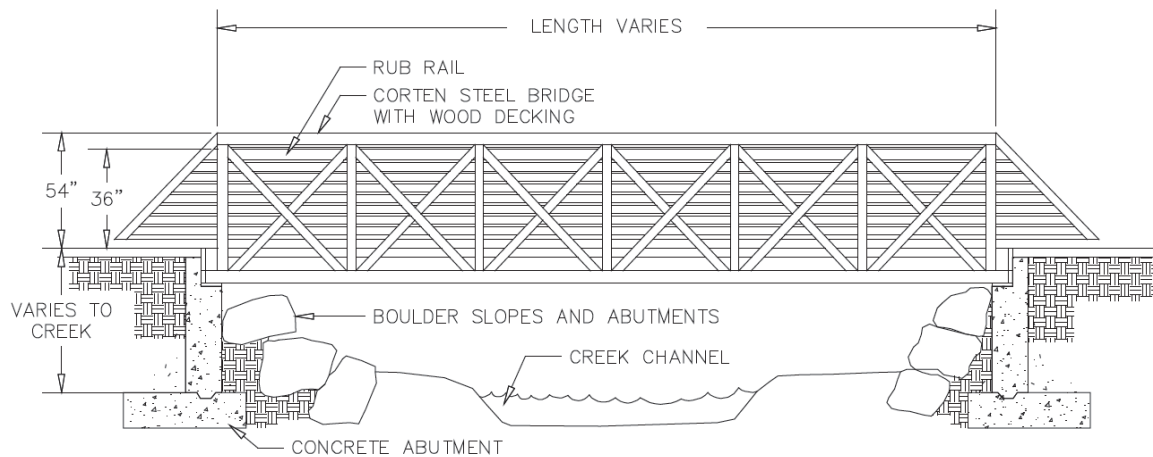
BOARDWALKS

Boardwalks are used in environmentally sensitive areas where they function as “mini-bridges”. When the height of a boardwalk exceeds 30”, railings should be installed. The thickness of the decking should be a minimum of 2”. Decking should be either non-toxic treated wood or recycled plastic. The foundation normally consists of wooden posts or auger piers (screw anchors). Screw anchors provide greater support and last longer. Opportunities exist to build seating and signage into boardwalks. In general, building in wetlands should be avoided.



PEDESTRIAN / BICYCLE BRIDGES

The function of a bridge in an off-road, multi-use trail situation is to provide access to the user over certain natural (i.e. wetlands, sloughs, creeks) or man-made (i.e. roadways) features. In general, a trail bridge should be able to support a minimum of 6.25 tons. Bridges should be constructed using high-quality and durable materials such as steel iron and/or wood. There are many options in terms of high quality, prefabricated pedestrian and bicycle bridges available.



OBSERVATION DECKS

Observation decks provide an opportunity for trail users to stop and rest. They also provide opportunities for looking out over scenic vistas and observing wildlife. Observation decks should be incorporated into future trails where feasible. They should be located at the water's edge (i.e., along sloughs or creeks) and at high points that provide a scenic vista. Interpretative signage should be incorporated.

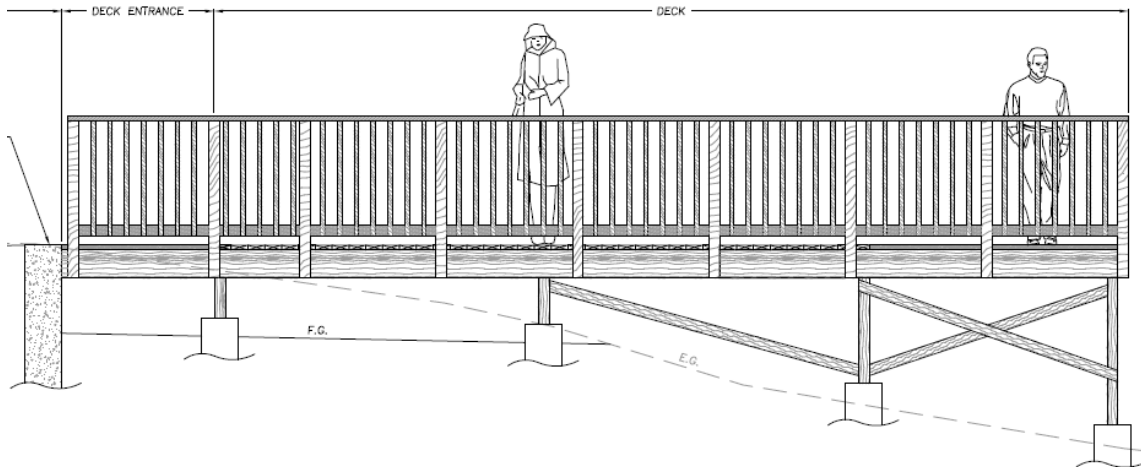


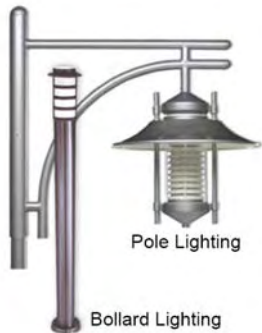






Table 4-2: Ancillary Trail Facilities and Amenities Recommendations

		Description	Recommendations
Benches		A wide variety of benches exist for use along trails. Style and material selection should be based on desired design and cost, or standard set by the City of Watsonville or other authority.	In general, benches should have back rests and arm rests on both sides (with optional arm rests in the middle). Benches should generally be 16" to 20" above the ground, 18" to 20" in depth, and 60" to 90" in width. Benches should be placed along trail routes and near trail entrances.
Other Seating		Additional seating opportunities exist for trails and associated rest areas, vistas, parks, and parking areas. Seating arrangements such as picnic tables and chairs invite users to relax and recreate.	Seating should reflect the intended use and design of other associated facilities and amenities. Picnic tables and chairs should be located in areas where users may congregate and unique seating furniture should be used in areas for dramatic effect.
Lighting		Two basic types of lighting are generally appropriate for trails: pole lighting and bollard lighting. Pole lighting is used in high use areas and where the trail interfaces with as parking areas, street intersections, etc. Bollard lighting is used along the trail to illuminate the ground for safety but not detract from the night sky.	Lighting should generally be focused at trail entrances, junctions, activity areas, and where obstacles are present. Lighting is generally not necessary or desired where there is little or no development adjacent to the trail. Solar-powered lighting may be appropriate. Lighting should be made of durable materials.

		Description	Recommendations
Waste Receptacles		Waste receptacles for trash and recyclables help reduce litter.	In general, trail entrances and activity areas should have waste receptacles. The location of receptacles should be easily accessible by service vehicles.
Bicycle Racks		Bicycle racks should be located in trail-associated parking facilities and at selected trail heads that are located at parks or other significant recreation facilities.	Bicycle racks should be placed near activity areas. They should be constructed using durable materials and resistant to vandalism. Pole lighting should be provided in bicycle parking areas.
Fencing		Fencing may be used to ensure that users stay on the path, particularly when approaching roadways or other potential safety hazards. They should also be used to discourage user access to private property.	Fencing material should be made of natural materials whenever possible to maintain a natural look. They should be durable and generally resistant to vandalism.

		Description	Recommendations
Restrooms		Restrooms should be provided in high-use areas such as at trail heads located adjacent to a parking lot.	Restrooms should be constructed of durable materials such as steel and/or wood. Pre-fabricated facilities should be considered to help minimize design and construction costs. Drinking fountains and trash receptacles should be included.

5 | IMPLEMENTATION

In this Chapter:

- Introduction
- Implementation Measures
- Phasing of Trail Projects
- Operations & Maintenance
- Trail & Greenway Acquisition Strategies

INTRODUCTION

This chapter addresses issues associated with implementation of the proposed trail network. Trails can be implemented in a variety of ways besides fee-simple acquisition of land and use of open space dollars for construction and maintenance. Partnering with other agencies, including federal, state and non-governmental organizations (NGOs), as well as private developers, can stretch limited funds. In addition, the City of Watsonville has been very successful in using grants to plan and construct new trails.

IMPLEMENTATION MEASURES

A number of actions are recommended as part of the implementation of this Master Plan. These include the following:

1. Develop a prioritization plan for trails in the city utilizing the new trail construction priorities outlined in this Master Plan.
2. Develop a trail promotion program which includes developing new/additional trail brochures, providing information on the city's web page and providing information at activity centers such as the city's community centers and parks, on the location of trails within the city and connections to regional trails surrounding the city.
3. Create a program to identify and acquire public ownership or easement of trail corridors and access points needed to develop an effective trail network.
4. Maintain the City's GIS-based trail map with parcel information so that the city can track existing and required easements.
5. Incorporate off-street trail rights-of-way/easement acquisition and trail development into the city's Capital Improvement Program.
6. Apply for grants and alternative funding sources for trails for various state and federal sources, particularly via local transportation organizations such as the RTC.
7. Establish an "Adopt a Trail" program for ongoing trail construction, maintenance and patrol activities.
8. Coordinate the city's trail system planning, implementation and management efforts with those of regional jurisdictions and public agencies.
9. Identify partnership opportunities with neighborhood groups, private individuals and local businesses as a means to acquire various trail amenities.
10. Ensure that trails and bike lanes are included in plans for new transportation projects such as bridges and overpasses.
11. Identify potential tax-related incentives and seek funding for other inducements for private property owners to allow and support public trails.

PHASING OF TRAIL PROJECTS

The entire integrated trail system is described in Chapter 3. New proposed trail segments will be developed incrementally, based on a prioritized hierarchy as easements and/or property acquisition occurs, as part of other projects, and as grant funds become available.

Proposed trail segments were prioritized according to a number of factors. These include the facility segment's ability to provide connectivity, if it provides access to underserved areas, property ownership (particularly if already city-owned land), constructability, aesthetic and recreational value, environmental constraints (or lack thereof), etc. Routes suggested in previous planning efforts, and recommendations from the public, stakeholders, and the Trails & Bicycle Master Plan Advisory Committee were also given a high priority.

Table 5-1: Prioritization of Proposed New Trail Segments identifies each of the trail segments and ranks them according to their priority, acquisition effort, design and development costs, and number of permits that will be required.

The priority ranking of "high", "Medium", and "Low" will help to determine those segments that are considered the most important and most likely to be constructed in the next 5-10 years. Engineering-level detailed design plans for some of these high priority segments will be prepared in the near future so that as grant funds or other financial resources become available, they are ready for construction. It is hoped that development efforts will occur within the next 3 years for these trails. These projects are specific improvements that will facilitate an immediate increase in connectivity, access, safety, and promotion of the network.

Table 5-1: Prioritization of Proposed New Trail Segments

Segment #	Segment Name	Length (miles)	Connections & Significant Destinations	Priority Ranking	Acquisition Effort ⁽¹⁾	Cost ⁽²⁾	Permits Required ⁽³⁾
1.1	North Pajaro River Levee Trail	4.2	7	H	H	H	L
1.2	South Pajaro River Levee Trail	6.0	5	M	L	H	L
2.1	West Salsipuedes Creek Trail	1.4	6	M	L	M	L
2.2	East Salsipuedes Creek Trail	1.5	3	L	L	M	L
3.1	Corralitos Creek Trail	2.8	8	H	H	H	L
3.2	Green Valley Road Street-based Trail	0.8	5	L	M	M	L
3.3	Pinto Lake Trail	1.3	3	L	L	H	L
3.4	North Airport Boulevard Street-based Trail	0.3	4	L	L	L	L
4.1	Freedom Blvd./Buena Vista Dr. Trail	0.6	4	L	H	M	L
4.2	Buena Vista Park Trail	0.6	3	L	L	M	M
4.3	Larkin Valley Road Trail	0.7	4	L	H	M	M
4.4	West Watsonville Municipal Airport Trail	1.1	4	L	M	H	L
4.5	Airport Boulevard Street-based Trail	0.7	6	L	L	M	L
4.6	Upper West Branch Spur Trail	0.3	3	L	L	M	L
5.1	Pajaro Valley High School Connector Trail	1.1	5	H	L	H	M
5.2	Pajaro Valley High School Loop Trail	0.5	4	M	L	M	L
5.3	Harkins Slough Road Connector Trail	0.3	3	M	L	M	L
6.1	West Harkins Slough Trail	0.9	4	M	M	H	H

Segment #	Segment Name	Length (miles)	Connections & Significant Destinations	Priority Ranking	Acquisition Effort ⁽¹⁾	Cost ⁽²⁾	Permits Required ⁽³⁾
6.2	East Harkins Slough Trail	1.3	3	L	L	M	M
7.1	Lee Road Trail	3.0	6	M	L	H	H
7.2	Watsonville Slough Connector Trail	0.1	3	L	L	L	L
8.2	Lower Watsonville Slough Loop Trail	1.1	9	H	H	M	H
8.4	Fort Street Street-based Trail	0.8	2	L	L	L	L
8.5	Las Brisas Connector Trail	0.3	2	M	L	L	L
8.7	Manabe-Ow Connector Trail	0.7	4	M	L	L	L
9.1	Upper Struve Slough Trail	0.6	3	M	M	M	M
9.2	Loma Prieta Ave. Street-based Trail	0.6	5	L	L	L	L
9.3	Rolling Hills Connector Trail	0.6	1	L	H	M	L
9.4	Upper Watsonville Slough Trail	1.2	7	H	H	H	M
10.1	Martinelli Street / East Lake Avenue Street-based Trail	1.8	9	L	L	M	L
10.2	Brewington Avenue / Atkinson Trail	0.8	3	L	M	M	M
11.1	Shell Road Trail	6.0	6	H	H	M	M
11.2	Rail Trail Spine of the Monterey Bay Sanctuary Scenic Trail Network	32	10 +	H	L	H	L

Notes:

- (1) Acquisition Effort: Low = 0-5 easements; Medium = 5-10 easements; High = 10 or more easements. Other variables may apply.
- (2) Cost: Low = \$0 - \$200K; Medium = \$200K - \$1M; High = \$1M +. Costs do not include purchase of land or easements, engineering or design services, or permitting fees. Fencing is included for all trails that abut residential areas and abut agricultural land at-grade level. Levee trails include demolition and re-paving even if there is existing AC. Trails that do not have existing AC did not include demo.
- (3) Permits Required: Low = 0-2 permits; Medium = 3-5 permits; High = 5 or more permits and/or permits will likely be difficult to obtain.

OPERATIONS & MAINTENANCE

OVERVIEW

Successful operation will rely on a continued and regular program of maintenance of the trail and associated support facilities. Proper maintenance will not only ensure a quality recreational or travel experience for the trail user but is also an essential ingredient of risk-avoidance for the city and will extend the life of the trail. Sufficient manpower and resources must be devoted to a regular maintenance schedule in order to meet these goals.

The maintenance guidelines that follow are meant as a general framework and should be re-evaluated over time as conditions warrant. The maintenance implications of trail improvements should be reviewed carefully when considering capital improvements. One particular area of concern, given the existing landscape conditions, is the problem of drainage and flooding that can quickly undermine pavement structures. Money saved during the trail development process may be spent many times over if inadequate design and development creates a greater than normal maintenance burden. Trail maintenance is an important aspect of the City of Watsonville's overall responsibilities in that it is related to overall trail safety, attractiveness, and image. The city risks liability for accidents or if maintenance is ignored or negligently executed.

ROLES AND RESPONSIBILITIES

In most cases, the agency or group that constructed the trail will have primary responsibility for its operation and maintenance. This may include the City of Watsonville, Santa Cruz County, the RTC, etc. who may cooperate together in maintaining the quality of the overall trail system.

MAINTENANCE TASKS AND OPERATIONS

Important maintenance tasks that must be considered are indicated in the following maintenance tasks as follows:

LAW ENFORCEMENT AND SAFETY

Trail managers should take necessary steps to provide both a safe trail for the users and to protect themselves from liability claims. Where possible, hazardous conditions and attractive nuisances should be identified and removed during the original construction of the trail. Those that cannot be removed should be fenced off and/or have warning signs posted.

If trail segments are opened in phases, as is recommended in this study, clear mention should be made at all trail entrances and in any printed/electronic material (especially trail signage, maps, guidebooks and pamphlets) that portions of the trail are still not yet fully developed nor open to the public and that users must exercise the necessary care when using the trail.

An effective maintenance program is critical for trail safety. The maintenance program should provide for regular inspections of the trail. Proper tree trimming and vegetation management are an important part of the safety program. This includes trimming of

vegetation to maintain adequate sight distance for traffic safety and crime prevention purposes.

In addition to reducing trail hazards, documentation of trail maintenance activities is essential in combating possible liability claims. Through written records of good maintenance practices, trail managers will be able to protect themselves from liability claims. In terms of property ownership and liability, it should be noted that California's recreational use laws largely protect landowners from liability related to recreational use of their properties. As long as no fee is charged and the trail owner uses due diligence to maintain the trail and/or warn recreational users of any safety hazards.

With the ever-increasing use of cell phones by the general public, including trail users, aspects of security have changed in recent years. Users are very well prepared to report and locate questionable activity on or within trail corridors. User surveillance tends to deter potential criminal activity.

TRAIL FACILITIES AND ORIENTATION SYSTEMS/MARKINGS

A trail marking and orientation system benefits both users and trail managers. Signs should be erected at all cross streets identifying the name of the cross street. The trail marking system could also help save lives in the event that emergency services might be required.

RECOMMENDED MAINTENANCE

Different types of trails will differ greatly in their maintenance requirements. All trails, however, will require a variety of maintenance activities at different points in their lives. [Table 5-2: Recommended Trail Maintenance Program](#) outlines some general guidelines for maintenance activities and the frequency at which they should be performed. This table is a guide only, and the trail manager will know best when certain maintenance activities should be performed.

Table 5-2: Recommended Trail Maintenance Program

Frequency	Maintenance	Performed by
As needed	Tree/brush clearing and mowing	Volunteers, trail operator
	Sign replacement	
	Map/signage updates	
	Trash removal/litter clean-up	
	Replace/repair trail support amenities (parking lots, benches, restrooms, etc.)	
	Repair flood damage: silt clean-up, culvert clean-out, etc.	
	Patching/minor regrading/concrete panel replacement	
Seasonal	Planting/pruning/beautification	Volunteers, trail operator
	Culvert clean-out	
	Installation/removal of seasonal signage	
Yearly	Sealcoat asphalt trails	Trail manager
	Surface evaluation to determine need for patching/regarding	
	Evaluate support services to determine need for repair/replacement	
5-year	Repaint or repair trash receptacles, benches, signs, and other trail amenities, if necessary	Volunteers, trail operator
10-year	Resurface/regrade/restripe trail	Hired contractor, trail operator, volunteers
20-year	Replace/reconstruct trail	Hired contractor, trail operator, volunteers

The following is a more detailed description of maintenance requirements:

- Mowing - (3-4 times annually) 4-foot min. wide each side of trail where applicable.
- Pruning - (Annually) Prune woody vegetation 4-feet back from sides of trail – 14-foot vertical clearance – remove invasive plants.
- Removal of Trees/Limbs - (Annually) Evaluation/ removal of unhealthy or dead trees and limbs. Fallen trees may remain as access control and to minimize disturbance.
- Signage - (periodically as required) Maintain directional and informational signs and permanent signs.
- Access Control - (periodically as required) Replace damaged access control devices. Estimated frequency: 10% annually due to vandalism.
- Trail Surface on local roads - (periodically as required) Resurface based on public works programing schedule.
- Trail Surface on gravel road - (periodically as required) Repair surface damage from vehicles, erosion, etc. based on public works programing schedule.
- Trail Surface, boardwalk - (periodically as required) Replace damaged areas.
- Drainage Structures - (Minimum - Annually) Clean inlets, keep swales clear of debris. Complete rehabilitation during construction would dramatically reduce necessity for this type of maintenance after storms.
- Litter Pick Up - (Weekly or as required) Trailside-litter pickup. Access area litter pickup. Encourage continued user "carry-in, carry-out" policy.
- Trash Collection - (Weekly) Removal of trash from receptacles at access areas.
- Bridge Inspection - (Every 2 years) Maintenance of bridge to ensure structural integrity.

TRAIL SURFACE MAINTENANCE GUIDELINES

Asphalt trails can be expected to hold up well under most conditions. Particular care should be taken to fix holes and cracks. Left without repair, holes and cracks in asphalt pavement get larger, eventually causing safety hazards. During the yearly evaluation, preferably in spring, special attention should be given to marking and repairing breaks in the surface.

Granular trails may be severely impacted by runoff. After floods or heavy rains, the trail surface may become rutted. If left alone, subsequent floods or rains will follow the same ruts, making them larger and more hazardous. The surface of granular trails should be periodically raked back into place to maintain a smooth surface for trail users.

Natural surface trails will also be affected by runoff. Such a trail, whether used by hikers, equestrians, bikers, or service vehicles should be properly designed to minimize erosion, but periodic repair will need to be performed. If culverts of any kind are used, they may need to be "re-embedded," since repeated runoff can undermine them. In addition, any

rutting of the trail should be filled in with soil and compacted. For natural surface trails that are used by motorized vehicles, the wheels of the vehicles themselves can cause rutting. As necessary, the trail should be re-leveled with compacted soil to prevent the ruts from becoming too deep.

Concrete trails, though primarily used in urban environments for pedestrian-only (sidewalk) facilities, have periodic maintenance requirements, as well. Concrete is bound to crack in places that were not anticipated. In most cases, these small cracks will not be a serious problem if a quality sub-base was prepared. If cracks become severe, affected areas should be replaced. Concrete walks should be evaluated for cracks (or differences in settlement between panels) that might prove a hazard for children, the elderly, persons in wheelchairs, and other persons with less than average mobility.

MAINTENANCE COSTS

Maintenance costs will vary greatly depending on the type of trail, amount of volunteer labor use, available services, and geographic location of the trail. These costs, however, must be considered during the trail planning process, to ensure that trail owners can pay for the ongoing maintenance of the trails they develop.

Maintenance costs are rarely broken down into specific tasks such as those listed in [Table 5-2: Recommended Trail Maintenance Program](#). Estimated costs, therefore, are broken down by the type of maintenance performed. There are three basic types of maintenance:

1. **Routine Maintenance** includes all the general activities -- such as brush clearing, trash collection, and sweeping — that may take place on a regular basis throughout a season.
2. **Minor Repairs** refer to activities that can be expected every five years or so, such as amenity replacement, trail sealcoating, repainting, or restriping.
3. **Major Reconstruction** refers to significant expenditures involving resurfacing or reconstruction. These activities are the most costly trail maintenance activities and should be planned for in advance.

ROUTINE MAINTENANCE

Most of the routine maintenance of a trail facility will be performed by an existing agency (e.g. the City of Watsonville and/or Santa Cruz County) or a volunteer group). Respective trail owners should include trail maintenance into their parks or public works maintenance budgets and activities. Activities that should be considered as routine maintenance include:

- Yearly facility evaluation to determine the need for minor repairs
- Tree/brush clearing
- Mowing
- Map/signage updates
- Trash removal/litter clean-up

- Repair flood damage: silt clean-up, culvert clean-out, etc.
- Patching, minor regrading, or concrete panel replacement
- Planting, pruning, and general beautification
- Installation and removal of seasonal signage

The yearly cost for routine maintenance depends on the maintenance capabilities already in place by the trail owner and the amount of volunteer labor used. In general, yearly routine maintenance costs can be estimated at \$10,000 per mile. This cost is estimated in year 2012 dollars, and will be affected by inflation.

MINOR REPAIRS

The need for minor repairs should be determined by a yearly facility evaluation. Minor repairs may include the following activities:

- Replacement, repair, or repainting of trail support amenities, such as restrooms, signage, benches, trash receptacles, or hitching posts
- Replacement of a portion of the trail
- Restriping of trails
- Sealcoating of asphalt trails

The cost for replacement, repair, or repainting of trail amenities is based on the initial cost of those amenities. Records should be maintained of the general costs of trail amenities as a means of estimating future repair and replacement costs. If custom elements, such as lighting, decorative railings, or benches, are used in trail design, the trail owner should consider ordering extra elements at the time of construction and storing them for future use, thereby defraying the cost of single-runs later. Replacement of a portion of a trail may be necessary if severe flooding, continual erosion, or weak soils cause periodic difficulties with trail maintenance.

Restriping of trails will cost the same (in year 2012 dollars) as the original striping. Records should be kept of the original bid to determine the price of restriping a trail using contracted labor. In many cases, it is cost effective to perform restriping along with other trail or highway maintenance.

Sealcoating of asphalt trails should take place approximately every five years. This will increase the longevity of the trail and provide a quality riding surface. When performed, sealcoating will cost approximately \$20,000 per mile for a 6-foot pedestrian trail and approximately \$32,000 per mile for a 10-foot multi-use (i.e. Greenway Trail). These costs should be included in the capital improvement program to ensure that adequate funding is available.

MAJOR RECONSTRUCTION

There are essentially two activities that are considered to be major reconstructions:

- Resurfacing of asphalt trails
- Complete replacement, regrading, and resurfacing of all trails

Asphalt trails will need to be resurfaced approximately every 20 years, depending on how well they have been maintained. A resurfacing typically involves placing an asphalt overlay on an existing asphalt surface in order to erase cracks and bumps. It is not a perfect solution, as weak underlying soils or tree root penetration will eventually affect this top layer, but it does offer a lower cost means of extending a trail's life. Asphalt surfacing costs approximately \$2 per square foot for a 2-inch depth. Asphalt overlays should have a depth of 1 to 2 inches.

Complete replacement of a trail involves removing the existing trail, regrading the trail base, and resurfacing the facility. This kind of comprehensive maintenance will be necessary approximately every 40 years, regardless of trail type. Even natural surface trails may need to be fully regraded after 20 years of use. Trail costs for reconstructions are the same as the cost of a new trail plus the cost of demolishing the existing trail.

As with any major trail project, however, a detailed cost estimate should be performed during the project planning stages. The best guide for estimating the replacement cost of a trail is to consider the original construction cost.

A major cost such as trail replacement should be considered well in advance. It may be more difficult to secure large state or federal grants for trail reconstruction. Funding for the eventual replacement of the trail should be budgeted for this significant maintenance activity.

6 | REFERENCES

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APPENDIX

In this Appendix:

Appendix A – Bicycle Plan Proposed Projects

Appendix B – Bicycle Plan Criteria to Meet
State Requirements

APPENDIX A

BICYCLE PLAN PROPOSED PROJECTS

Appendix A
City of Watsonville Bicycle Plan
Proposed Projects

Project	Priority	Existing Traffic & Road Conditions*	Project Benefits		Plans	Cost & Funding	
			Existing Gap in Bikeway System	Destinations		Projected Cost	Potential Funding
BIKEWAYS							
Martinelli St (Class III) from Freedom Blvd to East Lake Avenue	H	2 lane collector street, moderate speeds	Connects E. Lake to Freedom Blvd	Elementary school, connect major commercial areas along E. Lake and Freedom Blvd	[2], [4], [5]	\$35,000	BTA, SR2S, Local
Madison St (Class III) from Lake St to Palm Ave.	L	2 lane local street	Connects schools, neighborhoods	Elementary and middle schools, connects to commercial area on East Lake	[2], [4]	\$2,000	Local, BTA, SR2S
Brewington Avenue (Class III) from East Lake to end	H	2 lane local street/ collector street	Connection to neighborhoods	Elementary and middle schools, connects to commercial area on East Lake	[2], [4], [5]	\$30,000	BTA, SR2S, Local
Palm Avenue (Class III) from Lincoln St to Brewington Ave.	L	2 lane collector street	connects schools, neighborhoods	elementary and middle schools	[2], [4], [5]	\$5,000	BTA, SR2S, Local
Buena Vista Drive (Class II) from Freedom Boulevard to Harkins Slough Road	M	2 lane collector, high speeds	connects Larkin Valley to Freedom Blvd -mostly in County	Neighborhood commercial, high school	[1], [2], [5]	\$2,000,000	BTA, AB2766, Local
Union /Brennan Street (Class III) from Pajaro River to Freedom Blvd	H	2 lane collector street	Parallel route to Main St from Riverside Dr. to Freedom Blvd	Elementary school, Cabrillo College, public services, commercial areas	[2], [4], [5]	\$20,000	BTA, SR2S, AB2766, Local
Riverside Drive (Class Unspecified) from Lee Road to Walker Street	M	State Route 129, high speed/traffic volume, variable shoulder widths		Commercial and industrial areas	[2], [4], [5]	\$40,000	BTA, AB2766
Lee Road (Class III) from Beach St. to Riverside Dr.	M	2 lane collector	Commercial, industrial and agricultural business connections	Industrial and agricultural area		\$8,000	Local, BTA, AB2766
Holm Rd (Class III) from Larkin Valley Road to Anna Street	M	2 lane collector street	Connects from Main St to schools and into neighborhoods	Middle school	[2], [4], [5]	\$12,000	BTA, SR2S, Local
East Lake Avenue (class unspecified) from Holohan Road to Brennan St	H	SR 152, high volume, variable shoulder widths	connects to bicycle facilities	Commercial areas, middle school, bus routes	[2], [4], [5]	\$35,000	BTA, AB2766, Local
Ohlone Parkway Class II Watsonville Slough to Beach	M	2 lane arterial	connects to bicycle facilities	Connects to future industrial park	[2], [4], [5]	\$5,000	BTA, AB2766, Local

Appendix A
City of Watsonville Bicycle Plan
Proposed Projects

Project	Priority	Project Benefits		Plans	Cost & Funding	
		Existing Traffic & Road Conditions*	Existing Gap in Bikeway System		Destinations	Projected Cost
TRAILS AND SHARED PATHS						
Corralitos Creek Trail from East Lake Avenue to west of Airport Boulevard		Levee Trail - Segment 3.1	Connects East Lake Avenue, Green Valley Rd and Airport Blvd	[2], [4], [5]		BTA, AB2766, Local
Pinto Lake Trail from Pinto Lake Park/ Green Valley Road to Pinto Lake County Park		Greenway Trail - Segment 3.3	Connect to Green Valley Rd	[2], [4], [5]		
Freedom Blvd/Buena Vista Drive from Pinto Lake Park (Watsonville) to Pinto Lake County Park		Greenway Trail - Segment 4.1	Connects outlying residential neighborhoods to Freedom Blvd			
Buena Vista Park Trail from Buena Vista Drive to Larkin Valley Road		Greenway Trail- Segment 4.2		Buena Vista Park (future)		
Larkin Valley Road Trail from Buena Vista Park (future) to Airport Boulevard		Greenway Trail/Bikeway - Segment 4.3	Connects to Airport Blvd	[2], [4], [5]		BTA, AB2766, Local
West Watsonville Municipal Airport Trail from Buena Vista Drive to Larkin Valley Road		Greenway Trail - Segment 4.4		Watsonville Municipal Airport	[2], [4], [5]	
Upper West Branch Spur Trail from Airport Boulevard to Technology Drive		Greenway Trail - Segment 4.6	Connects to Airport Blvd	Watsonville Community Hospital, services and business area	[2], [4], [5]	
Pajaro Valley High School Connector Trail from Airport Boulevard/Hwy 1 to Harkins Slough Road	H	Greenway Trail - Segment 5.1	Connects from Airport Blvd to Pajaro Valley High School	Pajaro Valley High School, Fitz Wetlands Educational Resource Center	[2], [4], [5]	SR2S, AB2766, Local
Lee Road Trail from Riverside Drive to So. Pajaro River Levee Trail		Greenway Trail - Segment 7.1	Connects Harkins Slough Rd, Rail Trail, West Beach St, and Pajaro River Levee	Pajaro Valley High School, California Department of Fish and Game Reserve, Pajaro River	[2], [4], [5]	
Watsonville Slough Connector Trail from Lee Road to Passo Drive		Greenway Trail - Segment 7.2		Business Park, Wetlands of Watsonville Slough Trails		
Lower Watsonville Slough Loop Trail from Ohlone Parkway to Highway 1		Greenway Trail - Segment 8.2	Connects to Ohlone Parkway	Seaview Park, Ramsey Park, Wetlands of Watsonville Nature Center		
Ford Street Trail from Kearney Street to Main Street		Bikeway - Segment 8.4	Connects Residential areas to park and Slough Trails			BTA, AB2766, Local
Manabe-On Connector Trail from Watsonville Slough to Struve Slough/Westridge Business Park		Greenway Trail/Bikeway - Segment 8.7		Business Park, Wetlands of Watsonville Slough Trails		
Upper Struve Slough Trail from Pennsylvania Drive to South Green Valley Road		Greenway Trail - Segment 9.1	Connects from Pennsylvania Dr. to Green Valley Road	Green Valley Christian School		

Appendix A
City of Watsonville Bicycle Plan
Proposed Projects

Project	Priority	Project Benefits			Plans	Cost & Funding	
		Existing Traffic & Road Conditions*	Existing Gap in Bikeway System	Destinations		Projected Cost	Potential Funding
Rolling Hills Connector Trail from Herman Avenue looping around		Greenway Trail/ Bikeway - Segment 9.3		Rolling Hills Middle School			
Upper Watsonville Slough Trail from Freedom Blvd to Main St		Greenway Trail - Segment 9.4	Connects Main St to Alta Vista Ave	Shopping Center, Hyde Elementary School			
Monterey Bay Sanctuary Scenic Trail							
Santa Cruz Branch Line Rail Trail							
OTHER BICYCLE PROJECTS							
Bike Storage (racks, cages, and lockers)	H						SCORTC
Bike Loop Detectors						\$40,000	AB2766
Bike Route Signage Program							SCORTC, TDA
COMPLETED PROJECTS							
Walker Street/Harkins Slough Road Class II bike lanes from Riverside Drive to Green Valley Road		• 2-lane arterial • Alternative route to Main St (SR 152)		Connects to Wetlands of Watsonville Trails, Ramsey Park and Nature Center			RSTPX, Local
Main St Bike Path (Class I) from Pennsylvania Dr. to Freedom Blvd.				Ramsay Park			
Rodriguez Street (Class II) from West Beach to Riverside Drive		2 lane arterial, high traffic volume, parallel route to Main Street, connects SR 152 to SR 129	Completed last segment of bike lanes along Rodriguez St. Main St to Front St	Links Ramsay Park and Downtown; Transit Center on Rodriguez at Beach; Civic Plaza at 2nd St			
Freedom Blvd (Class II) from High St to Lincoln St.		High traffic volumes; two lane major arterial with center turn lanes and on street parking. Class II & sharrows		Callaghan Park, residential and commercial areas		\$40,000	RSTPX, Local
Green Valley Road (Class II) from Main St to Freedom Blvd.		4 lane arterial		Bus routes, commercial areas			ARRA, CMAQ
Pennsylvania Dr., Bike Path, Class 1 from Clifford to Green Valley; Class II from Main St to Clifford		Asphalt path		Wetland Trails, Starlight Elementary School, Green Valley Road, bus routes			
Airport Blvd (Class II) Freedom Blvd to Larkin Valley Road		4 lane arterial					STIP
Planning Documents Code: [1] Regional Transportation Plan (RTP) Short Range [2] RTP Long Range [3] Regional Transportation Improvement Plan (RTIP) [4] City of Watsonville Capital Improvement Program [5] City of Watsonville Adopted General Plan [6] City of Watsonville Parks and Recreation master Plan							
Funding Sources: BTA Bike Transportation Account Local Funds STIP State Transportation Improvement Program AB 2766 Air District Vehicle Surcharge Fee TDA Transportation Development Act SR2S Safe Routes to School CMAQ Congestion Mitigation and Air Quality							

APPENDIX B BICYCLE PLAN CRITERIA TO MEET STATE REQUIREMENTS

The Bicycle Transportation Account (BTA) is an annual program providing state funds (via Caltrans) for city and county projects that improve safety and convenience for bicycle commuters. In accordance with the Streets and Highways Code (SHC) Section 890-894.2 - California Bicycle Transportation Act, projects must be designed and developed to achieve the functional commuting needs and physical safety of all bicyclists. Local agencies first establish eligibility by preparing and adopting a Bicycle Transportation Plan (BTP) that complies with SHC Section 891.2. The BTP must be approved by the local agency's Regional Transportation Planning Agency. A BTP prepared by a city or county shall include, but not be limited to, the following elements:

Requirement	Location in Document
a. The estimated number of existing bicycle commuters in the plan and the estimated increase in the number of bike commuters resulting from implementation of the plan.	Page 83; Table 3-2
b. A map and description of existing and proposed land use and settlement patterns which shall include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, and major employment centers.	Page 10; Figure 2-1
c. A map and description of existing and proposed bikeways.	Figure 3-14 and Chapter 3; Appendix A.
d. A map and description of existing and proposed end-of-trip bike parking facilities. (Parking at schools, shopping centers, public buildings, and major employment centers)	Page 85; Figures 3-2 to 3-14
e. A map and description of existing and proposed bike transport and parking facilities for connections with and use of other transportation modes. (Transit stops, rail and transit terminals, park and ride lots, and provisions for transporting bikes on transit or rail)	Page 85, Figures. 3.2 – 3.13 and 3-14
f. A map and description of existing and proposed facilities for changing and storing clothes and equipment. (Lockers, restroom, and shower facilities near bike facilities)	Pages 83-85 and Figure 3-14
g. A description of bicycle safety and education programs conducted in the area included within the plan, efforts by the law enforcement agency of the area, and the resulting effect on accidents involving bicyclists.	Pages 86-87
h. A description of the extent of citizen and community involvement in development of the plan (letters of support)	Page 7
i. A description of how the bike plan has been coordinated and is consistent with other local or regional transportation, air quality, or energy conservation plans.	Pages 87-88
j. A description of the projects proposed in the plan and a listing of their priorities for implementation.	Pages 39-81; Table 5-1; Appendix A.
k. A description of past expenditures for bicycle facilities and future financial needs for projects that improve safety and convenience for bicycle commuters in the plan area.	Appendix A

