

Beach Cities Multi-Purpose Trail
TRAIL FEASIBILITY STUDY



*Linking the beach communities of Grover Beach,
Pismo Beach, Arroyo Grande, & Oceano*

March, 2010



Beach Cities Multi-Purpose Trail

TRAIL FEASIBILITY STUDY



Beach Cities Multi-Purpose Trail Feasibility Study

Prepared For:

City of Grover Beach



In Association With:

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Beach Cities Multi-Purpose Trail

TRAIL FEASIBILITY STUDY



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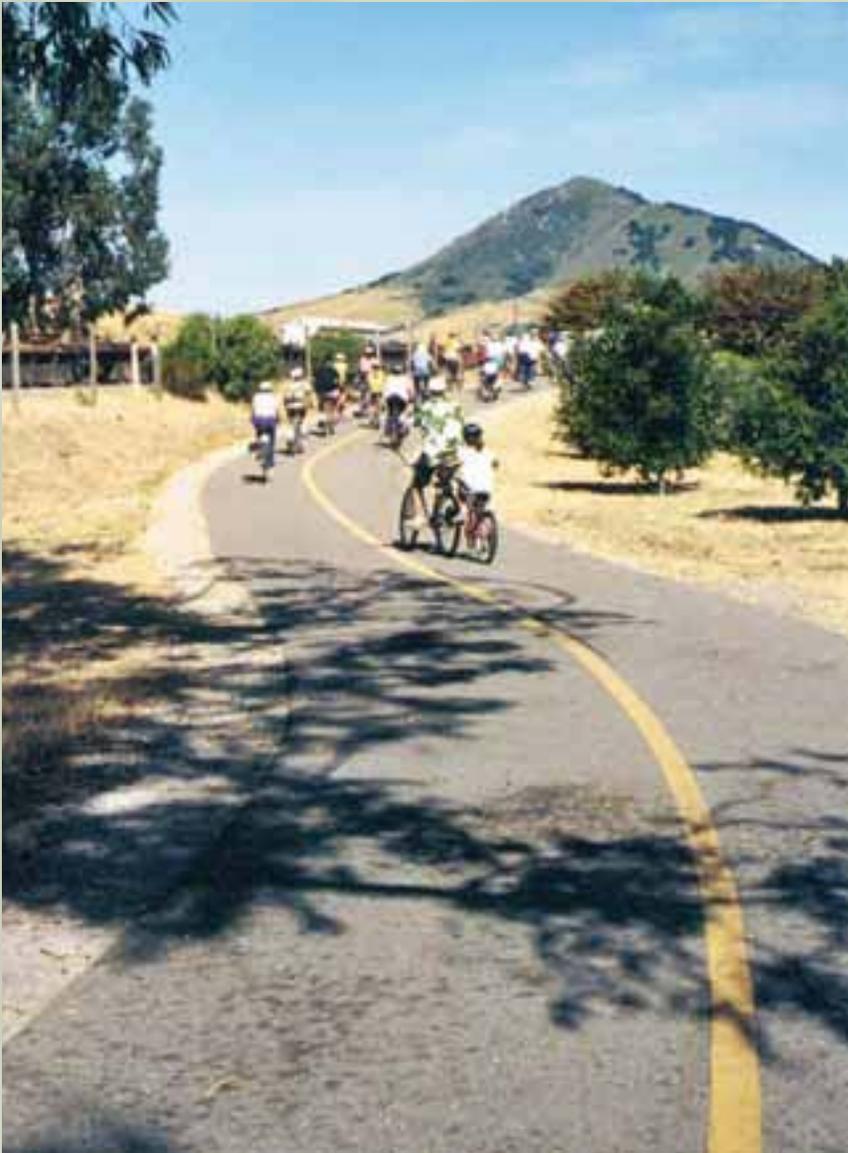
A central graphic featuring a square frame with a dark brown border. Inside the frame, the text "Executive Summary" is written in a brown, cursive font. The background within the frame is a light beige color with a large, faint, light brown spiral graphic centered behind the text.

*Executive
Summary*



Beach Cities Multi-Purpose Trail

TRAIL FEASIBILITY STUDY



The multi-use trail is intended to promote alternative forms of transportation and provide new recreational opportunities with connections to neighborhoods, schools, parks, employment centers and regional trail facilities

Executive Summary

The Beach Cities Trail establishes the most feasible route of a multi-use pedestrian and bicycle trail linking the City of Grover Beach with the cities of Pismo Beach and Arroyo Grande, and the community of Oceano. The multi-use trail is intended to promote alternative forms of transportation and provide new recreational opportunities consistent with the goals set forth in the City of Grover Beach's General Plan Circulation Element, County of San Luis Obispo's Parks and Recreation Element, and City of Pismo Beach's Pismo Creek Recreational Path Project Study Report.

The trail corridor is located within the jurisdictional boundaries of the cities of Grover Beach, Arroyo Grande and County of San Luis Obispo. Other agencies with jurisdiction in the project study area include the California State Parks, Caltrans, and Union Pacific Railroad. The planning effort for this Feasibility Study has included key stakeholder interviews, field investigation, jurisdictional agency coordination, environmental surveys, and applicable planning document research and review. The resulting routes in the Beach Cities Trail Feasibility Study largely reflect the input and advice provided through the planning process.

The proposed trail traverses almost six miles and consists of a combination of Class I and Class II facilities with connections to neighborhoods, schools, parks, downtown Grover Beach, employment centers and planned regional trail facilities.

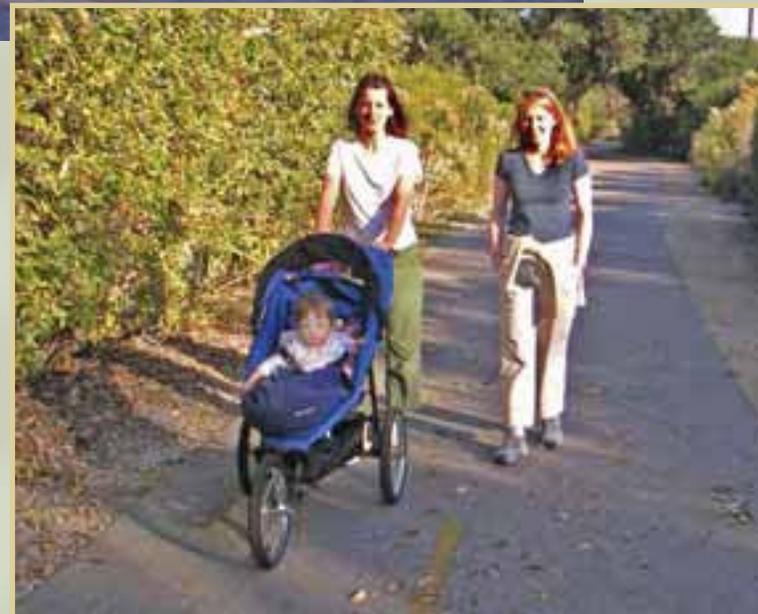
On a regional scale, the Beach Cities Trail is part of a vital trail corridor within the regional system of planned and constructed trails envisioned to eventually connect San Luis Obispo County's cities and communities to each other, major destinations, and neighboring regional trail networks. An assortment of trail sections make up this ultimate regional trail system including:

- Pismo Creek Recreational Path
- Pismo Promenade 3
- Arroyo Grande Creek Trail
- California Coastal Trail
- Juan Bautista de Anza National Historic Trail

Ultimately, connections to the Beach Cities Trail would provide the ability to reach Mexico and Canada via the State Coastal Trail.

This Feasibility Study provides support for a Beach Cities Trail concept and its ability to be developed along a continuous route and constructed within a normal cost range. The City Council and other regulating authorities should utilize this foundation document to prepare a definitive trail alignment study for adoption. Looking forward toward providing project funding for the trail's development and documentation of public support along with business partnerships will be essential.

The development of an economic strategy utilizing an enterprise group for public, private and government grants for the capital improvements should be given a priority. The development of project funding is a one to two year commitment for initial resources to become available. The primary funding source will be through transportation funding opportunities. Transportation funding is essentially provided for bicycle commuting purposes. All future planning and documentation should make an emphasis on bicycle commuting rather than recreational uses.



The Beach Cities Trail is part of a vital trail corridor within the regional system of planned and constructed trails envisioned to connect San Luis Obispo County's communities to each other

The following actions are recommended to move toward development of the Beach Cities Trail over time:

1. City Council should authorize development of Bicycle Transportation Plan (BTP) to cover Class I, II & III alternative transportation bikeways and multi-use trail opportunities. The BTP is the base documentation requested and usually is required when applying for transportation funding.
2. City Council should authorize preparation of updates to Circulation and Park & Recreation Elements to the City General Plan. This will provide consistency in the planning process and give an opportunity for public participation. Timing for the General Plan update should be reviewed with the City's Planning Department staff.
3. City Council should authorize concurrent development of a Preliminary Alignment Plan and Mitigated Negative Declaration (MND) under CEQA based on the preferred trail route presented in the Feasibility Study. The City of Grover Beach, as the lead agency, would need concurrence for development of an MND from the adjacent responsible agencies (City of Pismo Beach, County of San Luis Obispo, California State Parks and SLOCOG) if the scope of the project is broadened to include any trail portions beyond the Grover Beach city limits. With completion of the Preliminary Alignment Plan and MND, the City would be positioned to complete final design and implementation of trail segments as funding becomes available.
4. Prepare a Public Participation Plan as part of the Preliminary Alignment Plan development to include all stakeholders of Beach Cities Trail. Establish meeting dates and locations for public notice. This is to develop a consensus support group with common interests, benefits and objectives. Through the public participation process a concentration on the development of state legislative support will be instrumental in future funding resources.
5. Concurrent with the Preliminary Alignment Plan development, prepare a detailed project cost estimate for each trail segment or phase and match with candidate funding sources. City staff should consider requesting City Council to establish a budget line item for matching funds for grant opportunities. A cash commitment and in kind services of staff and consultants will make the project competitive.
6. Planning for the longer term the City of Grover Beach should consider developing an Enterprise Team. This group will identify and utilize a combination of revenue centers with the emphasis of public/private, joint ventures, partnerships or concession agreements to provide both for additional capital improvements and the operation and maintenance of the trail. The early establishment of this group would allow it to also be involved in the grant development program for phasing the Beach Cities Trail construction.



Beach Cities Multi-Purpose Trail

TRAIL FEASIBILITY STUDY



Section 1.0

Introduction



Beach Cities Multi-Purpose Trail

TRAIL FEASIBILITY STUDY

1.0 Introduction

The Beach Cities Trail, in combination with the city's existing and planned on-street bicycle network, offers an attractive transportation alternative for many commuters, helping to reduce traffic congestion and improve regional air quality. In addition to these substantial transportation benefits, the trail also presents new healthy-lifestyle opportunities such as walking, strolling, jogging, and roller blading.

Depending on how aggressively the Beach Cities Trail is marketed, it has the potential to attract visitors and vacationers looking for a variety of outdoor activities. As more tourists take advantage of the Beach Cities Trail network over time, the economic benefits received from bike and equipment rentals and purchases, lodging, meals and shopping could be substantial. Locals and visitors alike can enjoy the educational potential associated with the Beach Cities Trail through development of natural, historical and cultural interpretive stations and programs, and strategic placement of trail-side wildlife viewing areas.

On a regional scale, the Beach Cities Trail is part of a vital trail corridor within the regional system of planned and constructed trails envisioned to eventually connect San Luis Obispo County's cities and communities to each other, major destinations, and neighboring regional trail networks. Ultimately, connections to the Beach Cities Trail would provide the ability to reach Mexico and Canada via the State Coastal Trail.

An assortment of trail sections make up this ultimate regional trail system including:

- Pismo Creek Recreational Path
- Pismo Promenade 3
- Arroyo Grande Creek Trail
- California Coastal Trail
- Juan Bautista de Anza National Historic Trail

This following section describes the Beach Cities Trail Feasibility Study's purpose, provides an overview of the entire Project Study Area, identifies the three trail segments, outlines the Study's goals and objectives, and discusses how the Feasibility Study relates to existing documents.

A. PURPOSE OF THE FEASIBILITY STUDY

The purpose of this Feasibility Study is to determine route alternatives, and suggest the most feasible Class I multi-purpose pedestrian and bicycle trail route(s) for the Beach Cities Trail. The proposed trail is intended to serve commuter and recreational needs while reducing traffic congestion, improving air quality, and providing non-motorized forms of transportation.

The Beach Cities Multi-Purpose Trail Feasibility Study establishes the most feasible route of a multi-purpose pedestrian and bicycle trail throughout the City of Grover Beach and linking to the adjacent cities of Pismo Beach and Arroyo Grande. The multi-purpose trail is intended to promote alternative forms of transportation and provide new recreational opportunities, and the resulting routes largely reflect the input and advice provided field investigation, jurisdictional agency coordination, environmental surveys, and applicable planning document research through the planning process.

B. PROJECT STUDY AREA

The Project Study Area extends north from Oceano to the City of Pismo Beach, and west to the City of Arroyo Grande. For the purpose of this Feasibility Study, the proposed Beach Cities Trail study area has been divided into three segments:

- Segment 1 – Southerly segment extending from Oceano at the intersection of South 4th Street and Pacific Boulevard/ Highway 1 to West Grand Avenue in the City of Grover Beach on the north, and extending west from the Pacific Ocean to the east side of South 4th Street.
- Segment 2 – Northwest segment located between West Grand Avenue in the City of Grover Beach on the south, to Addie Street and Five Cities Drive in the City of Pismo Beach on the north. Extends west from the Pacific Ocean to the east side of North 4th Street south of Atlantic City Avenue to the east side of the railroad corridor north of Atlantic City Avenue.

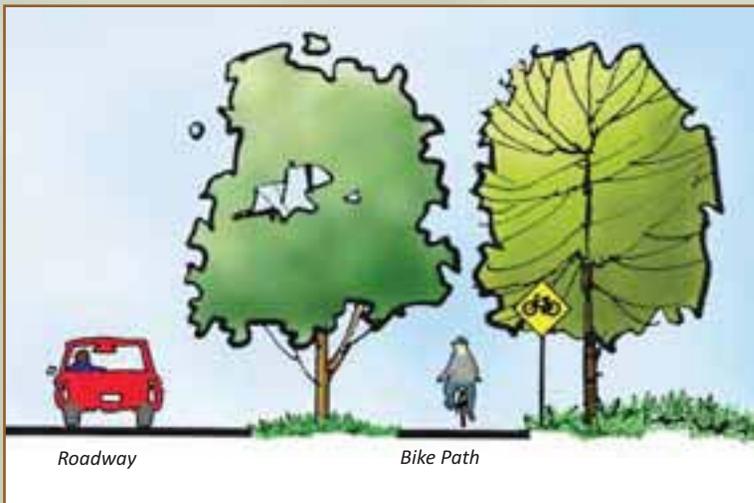
- Segment 3 – Northeast segment located between the north side of Atlantic City Avenue and south sides of North 6th Avenue/ Margarita Avenue to Five Cities Drive/ El Camino Real on the north, and extends west from the east side of the railroad corridor to Oak Park Boulevard.



Project Study Area Map

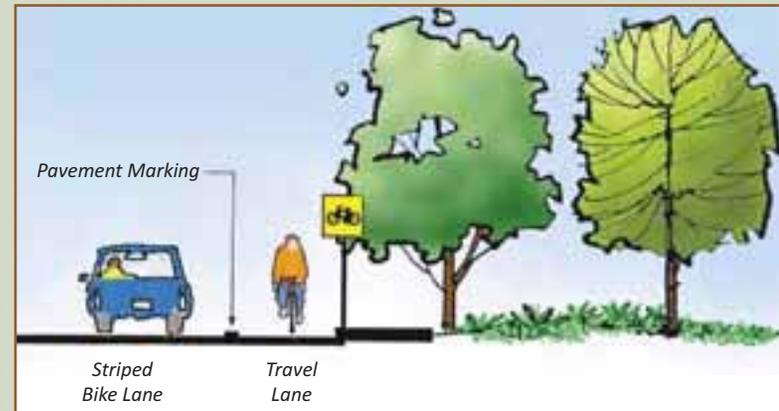
The focus of this study is on developing a Class I multi-purpose trail system. Where environmental/ regulatory, jurisdictional, physical and/or fiscal constraints make the provision of a Class I trail infeasible, alternative route(s) and/or an on-street bicycle class II or III system has been provided. Consistent with Section 1000 of the Caltrans Highway Design Manual, this Feasibility Study defines Class I, Class II, and Class III bikeways as described below:

- Class I Bikeway (Bike Path) – Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with cross-flow minimized. Bike paths are typically located along uninterrupted corridors such as creeks, flood control channels, railroad right-of-ways, and utility corridors.



Class I Bikeway

- Class II Bikeway (Bike Lane) – Provides a striped lane for one-way bike travel on a street or highway. Bike lanes are typically located along collector and arterial roadways that provide direct connections through the city street system.



Class II Bikeway

- Class III Bikeway (Bike Route) – Provides for non-striped shared use route with pedestrian or motor vehicle traffic, signs may be provided to share the road. Bike routes are typically located along high demand corridors.



Class III Bikeway

C. TRAIL ROUTE GOALS

For the purpose of this Feasibility Study, the following overall goals have been established:

- Develop interconnectivity between the City of Grover Beach and the adjacent cities of Pismo Beach, Arroyo Grande, and town of Oceano.
- Provide connections to the adjacent planned and existing regional bike trail systems.
- Highlight and enhance the potential links to existing recreational areas and amenities within and adjacent to the project Study Area such as the Pismo State Beach, Monarch Butterfly Preserve, and Pismo Lakes Ecological Reserve.
- Where feasible, link the trail system to existing schools and parks.

Furthermore, when evaluating the potential trail options, the goals for the ultimate trail alignment route include:

- Avoiding and/or minimizing environmental and cultural impacts and the need for environmental permit requirements to the greatest extent possible.
- Maximizing consistency with existing plans, documents and current planning efforts to the greatest extent possible.
- Minimizing impacts to adjacent private property.
- Minimizing railroad corridor constraints and the need for agency coordination.
- Providing links to existing or proposed Class I or II bikeways and hiking trails.
- Providing the most direct and consistent route and maximizing commuter value to the greatest extent possible.
- Providing the most accessible trail with logical and safe roadway access points for all trail users to the greatest extent feasible.
- Maximizing recreational value and utilizing spaces for rest areas and overlooks with interpretive signage to the greatest extent possible.
- Providing staging areas to the greatest extent feasible.
- Minimizing construction and maintenance costs to the greatest extent possible.
- Providing trails with the maximum potential to access available funding sources.
- Developing the trail with the greatest potential for near-term construction.

D. TRAIL ROUTE OBJECTIVES

To achieve the goals listed in Section C, the following objectives have been established:

- Evaluate the Project Study Area, identify potential opportunities and constraints, and identify all potential trail route options.
- Establish route evaluation criteria for evaluating and ranking most feasible trail options in the Route Selection Matrix.
- Set forth the most feasible Beach Cities Trail route for possible future construction.

E. RELATIONSHIP TO OTHER DOCUMENTS

This Feasibility Study must ensure any proposed route is compatible with other relevant planning efforts. The documents and planning efforts listed below have been reviewed and consulted during the preparation of this Feasibility Study:

- **City of Grover Beach Circulation Element**– The Circulation Element contains goals and policies that encourage the development of the expansion of transportation and circulation facilities within the City of Grover Beach. At the time the Circulation Element was last updated, there were no existing or proposed Class I bike trails within the City. However, the Circulation Element states that Class I bike paths are suggested on Highway 1 and the Union Pacific railroad corridor to maximize potential funding from the San Luis Obispo Council of Governments (SLOGOG). The Circulation Element states that the potential for Class II bike lanes is immense, and that the City should prioritize routes with the most heavily traveled routes being improved first. This Feasibility Study shows existing Class II bike lanes, proposed Class II bike lanes from the Circulation Element, and additional Class II bike lanes recommended as potential links to the Beach Cities Trail.

- **County of San Luis Obispo Parks and Recreation Element**– The Parks and Recreation Element contains goals and policies that encourage the establishment of a Countywide network of trails and promote the use of open space and parks. A Project List is provided in Chapter 8 contains the County’s official list of park and recreation proposals, and existing and proposed trails. The alternative route(s) presented in this Feasibility Study support and are consistent with the Parks and Recreation Element.
- **Pismo Creek Recreational Path Project Study Report**- The Study Report evaluates potential routes for a recreational trail extending from the mouth of Pismo Creek to the City’s Sphere of Influence Boundary, about 1.5 miles to the west. The Study Report states that the City of Pismo Beach and the County of San Luis Obispo have identified a long-range goal of establishing a recreational trail through Price Canyon along the De Anza Trail which links Pismo Beach to State Route 227 in Edna. The identified potential route for the Pismo Creek Recreational Path is along the north side of Pismo Creek running east to Highway 101, where it transfers to an on-street segment along Price Street and then to Price Canyon Road. On the east side of Highway 101, the trail continues as a Class I system along an existing 15’ City owned easement and then links into additional City owned property north of Chumash Park where it crosses over the railroad corridor on an existing bridge, and then travels along the south side of Pismo Creek. The alternative route(s) presented in this Feasibility Study support and are consistent with the Study Report, but also analyzed additional options for linking into the Pismo Creek Recreational Path.

F. RELATIONSHIPS TO FUTURE PROJECTS

There are several large projects proposed within the project study area that could be developed in conjunction with the Beach Cities Multi-Purpose Trail.

- **The Hilton Garden Inn Project** – Hilton hotel facility on property located on El Camino Real, between North 4th and North 12th Street. This project will have excellent visibility from Highway 101, and help to promote Grover Beach as a tourist destination. The alternative route(s) presented in this Feasibility Study coincide with project’s goals of preserving the adjacent open space and oak woodland areas, and integrating a pedestrian and bicycle trail route. Little progress beyond the initial planning stages has occurred due to the current economic conditions.
- **Grover Beach Lodge Project**- A hotel and conference center within Pismo State Beach at the end of West Grand Avenue. This project will establish a destination lodging facility in the City of Grover Beach and likely be a catalyst for more visitor-serving projects near the waterfront.
- **Grover Beach Train Depot Parking Lot Expansion Project**- The Amtrak station has daily rail service from San Luis Obispo to San Diego, and the City of Grover Beach is proposing a reconstruction of the existing parking lot area. The proposed plans are to expand the parking south to provide additional parking spaces.
- **South 4th Street Widening Improvement Project** – As shown in the City of Grover Beach Circulation Element, South 4th Street is proposed to be widened and improved include dedicated bicycle lanes, as well as additional parking and travel lanes. The southern portion of South 4th Street will be aligned to join with The Pike and South 4th Street and the Pike will become a main arterial roadway through the two communities.



Section 2.0

Route Identification and Criteria



Beach Cities Multi-Purpose Trail

TRAIL FEASIBILITY STUDY

2.0 Route Identification & Criteria

This section describes the route identification process and subsequent evaluation process for each of the potential alternative trail routes identified within the Project Study Area. The evaluation criteria used in the Route Selection Matrix is described in detail, and this matrix was used to rank the feasibility of each trail option.

A. ROUTE IDENTIFICATION

This Feasibility Study presents several trail routing alternatives, or options, within each of the three trail corridor segments. Each potential trail option was identified through field tours, aerial map resources, and document research. These trail options were then numbered and mapped, graphically illustrating their location within the Project Study Area to serve as the basis for the route evaluation process. The trail options were assigned numbers arbitrarily which did not reflect their ranking or prioritization.

Because of a sensitive environmental setting, challenging topography, and/ or dense vegetation for some trails within the study area, this Feasibility Study separately analyzed Class I multi-use and pedestrian only trails to determine the most feasible trail type. This occurred in Segment 1 on Option D (Class I Multi-Purpose Trail) and Option D1 (Pedestrian Only Trail); and in Segment 3 on Option A (Class I Multi-Purpose Trail) and Option A1 (Pedestrian Only Trail), Option B (Class I Multi-Purpose Trail) and Option B1 (Pedestrian Only Trail), and Option C (Class I Multi-Purpose Trail) and Option C1 (Pedestrian Only Trail).

The map on the following page graphically represents all of the trail options analyzed for this Feasibility Study. There is a detailed description of each trail option in Appendix A of this document. The final most feasible trail alignment is discussed in Section 3.0.





B. ROUTE EVALUATION CRITERIA

One of the first steps in assessing the feasibility of potential trail route alternatives is to carefully establish trail route criteria against which all potential trail routes can be evaluated. The evaluation criteria are based on the spatial requirements of the trail corridor, an understanding of potential funding sources, research of relevant planning documents and permitting requirements, and a biological assessment of the environmental and cultural setting.

The route evaluation criteria have been divided in to four overarching categories: Environmental/ Regulatory, Jurisdictional, Physical and Fiscal. The evaluation criteria is described in the following section, and is applied to each of the trail segments and rated in the Route Selection Matrix in order to make a determination as to which trail routes are the most feasible trail alignments.

Environmental/ Regulatory Criteria:

(1) Potential to Minimize or Avoid Environmental & Cultural Impacts

- The trail should avoid and/ or protect cultural resources, and have a low impact on fragile environmental areas.
- Minimize impacts to biological resources, including existing vegetation and slopes, sensitive plant and animal species, aquatic habitats, water quality, jurisdictional wetlands, and riparian habitat areas.

NOTE: Appendices B and C contains a detailed report of the Biological Resources.

(2) Potential to Minimize Number of Permits Required

- Minimize the need for obtaining environmental permits and regulatory approvals from governmental agencies such as the U.S. Fish & Wildlife Service (USFWS), Department of Fish & Game (DFG), Army Corps of Engineers (ACOE) and Regional Water Quality Control Board (RWQCB).

(3) Potential to Minimize Footprint through Construction

- Protect the natural vegetative cover and land and water resources, and use existing openings in vegetation and existing paths for trail placement whenever feasible. The trail should bypass fragile areas which are particularly susceptible to damage.
- The trail should blend with the terrain by taking full advantage of the natural topography. The trail should curve with the land rather than cutting across it, and have gently undulating grades as opposed to long uniform grades.

(4) Potential to Maximize Consistency with Existing Plans

- The trail should be consistent with the City of Grover Beach General Plan, City of Grover Beach Circulation Element, and the County of San Luis Obispo Parks and Recreation Element, as well as any proposed projects in the immediate vicinity of the trail.

Jurisdictional Criteria:

(1) Potential to Minimize Impacts to Private Property

- Minimize the need for private property coordination, easements and/or property acquisition. Where the trail passes adjacent to commercial developments or residential areas, it should be located to minimize adverse impacts and avoid potential use conflicts.
- When possible, the trail should be placed within existing maintenance/access roads, utility and access easements, creek corridors, railroad right-of-ways, and/or utility corridors.

(2) Potential to Avoid Railroad Corridor Constraints

- The railroad corridor runs throughout the middle of the entire project area, and is currently being crossed at multiple locations as people from the residential areas to the east cross to the beach on the west. The trail should make the railroad corridor a safer place for trail users and the residents of Grover Beach.
- Although coordination with United Pacific Railroad is possible, it can be time consuming and difficult, and it is best to avoid impacts to the railroad corridor whenever feasible.

Physical Criteria:

(1) Potential to Connect to Existing or Proposed Class I or II Bikeway

- Whenever possible, the trail should connect with existing and/or proposed Class I or II bikeways to expand the trail system and provide alternative routes.

(2) Potential for a Direct & Consistent Route

- Provide continuous and direct routes which link trail users to places of employment, recreational areas and centers of activity as efficiently as possible.
- The trail proximity should meet the intent of this Feasibility Study, and smoothly connect together areas within the Project Area.

(3) Potential to Maximize Commuter Value

- The trail should maximize commuter value by linking the neighborhoods in the project area to existing or proposed regional bikeways which connect to places of employment, schools, parks and/or regional transportation opportunities.
- The trail should be integrated into a regional system of alternative transportation connectivity, and have the maximum number of destinations with minimum delay.

(4) Potential to Maintain an Accessible Trail Route

- The trail should be designed to maintain ADA accessibility without significant grading, ramps and retaining walls.
- The trail should be designed for use by multiple types of travel from walking, jogging, rollerblading and biking, and provide optional routes for varying levels of abilities.

(5) Potential to Provide Logical Roadway Access Points

- Provide safe crossings on roads which can be safely crossed on grade with adequate visibility and include traffic calming enhancements as necessary.
- Utilize existing roadway crossings and crosswalks where practical, and minimize mid-block crossings to the extent feasible.

(6) Potential to Connect to Existing or Proposed Hiking Trails

- The trail should connect with existing and/or proposed hiking trails to expand the regional trail system, and link open space, parks and recreational facilities whenever possible.
- The trails should provide alternative routes and access points at varying distances so that users can choose different trips of varying lengths.



(7) Potential to Maximize Recreational Value

- The trail should maximize the possible recreational potential by integrating existing aesthetic attributes and linking to natural areas and adjacent parks whenever feasible.
- Avoid areas with noise and odor sources, and avoid proximity to roads, power lines, commercial and industrial developments, and other features that may be incompatible with the safety and enjoyment of the trail.

(8) Potential for Rest Areas & Overlooks with Interpretive Signage

- The trail should take full advantage of the surrounding natural beauty and expanse of panoramic views by locating rest areas/ overlooks at key vista points and large open areas, and use natural vegetation and topography to screen objectionable features from the view of the trail user.
- The trail should offer the potential for strategically placed interpretive signs to provide educational opportunities on a variety of subjects to identify the trail as a unique place, and to foster a deeper sense of connection with the surrounding environment and the history of the community.

(9) Potential to Provide a Staging Area

- County Park and Recreation Element suggests providing staging areas accommodate roughly 5 vehicles for existing and proposed trail corridors, and that they should be fenced and signed.
- The trail should be situated as close as possible to existing or proposed staging areas, and take advantage of existing parking and public amenities such as restrooms whenever possible.

- Staging areas provide safe ingress and egress and be very visible from the public streets to highlight the trail system to encourage use by those who live further away from trail.
- Staging areas should be large enough to allow for trail users to park their car and use the trail, and provide signage kiosks to direct and orient trail users. Trailhead/Parking areas should also facilitate convenient drop-off and pick up areas, and provide a location for groups to meet before embarking.

Fiscal Criteria:

(1) Potential to Minimize Construction & Maintenance Costs

- The trail alignment should minimize the total cost of providing and operating the trail to the greatest extent feasible, and present opportunities for quality construction and easy maintenance.

(2) Potential to Access Maximum Funding Sources

- Whenever possible, develop trail alignments that might qualify for grants and governmental funding assistance.
- Seek to develop the trail in conjunction with capital improvement projects, future road improvement projects, development projects and/or redevelopment projects.

(3) Potential for Near-Term Construction

- To the greatest extent feasible, design trail alignments to facilitate trail construction without interagency and private property negotiations and lengthy coordination.

C. SELECTION EVALUATION MATRIX

The Project Study Area evaluation criteria identified in Section B were applied to the route options shown on the Route Identification Map to better determine the most feasible route option for each segment. The results of this analysis are presented within the Route Selection Matrix.

The rating values are:

0= Low/ Poor

1= Moderate

2= High/ Good

The total for the matrix is to the right, and the highest ranking for each segment has been highlighted. *

The highest ranking options are discussed in the most feasible trail route in Section 3.0, and all other trail options are discussed in Appendix A.

Selection Evaluation Matrix

Trail Segment & Route Option	Environmental/ Regulatory				Jurisdictional		Potential to Connect to Existing or Proposed Class I or 2 Bikeway
	Potential to Minimize/Avoid Environmental & Cultural Impacts	Potential to Minimize Number of Permits Required	Potential to Minimize Footprint through Construction	Potential to Maximize Consistency with Existing Plans	Potential to Minimize Impacts to Private Property	Potential to Avoid Railroad Corridor Constraints	
SEGMENT 1							
Option A - Class 1	1	2	2	1	1	0	2
Option B - Class 1	1	2	1	1	2	1	2
Option C - Class 1	1	2	1	1	2	1	2
Option D - Class 1	0	0	0	2	2	2	2
Option D1 - Ped Only	1	2	1	2	2	2	2
Option E - Class 1	1	1	1	2	2	2	2
Option F - Class 1	1	2	1	1	1	1	2
SEGMENT 2							
Option A - Class 1	1	2	1	1	2	1	2
Option B - Class 1	2	1	2	2	2	2	2
Option C - Class 1	0	0	1	1	1	0	2
Option D - Class 1	0	0	1	2	2	2	2
Option E - Class 1	1	2	2	1	2	1	1
Option F - Class 1	1	2	1	1	0	0	1
SEGMENT 3							
Option A - Class 1	0	0	0	2	1	2	2
Option A1 - Ped Only	1	0	1	1	1	2	2
Option B - Class 1	1	1	1	0	1	2	0
Option B1 - Ped Only	1	1	2	1	1	2	0
Option C - Class 1	0	0	0	0	2	2	1
Option C1 - Ped Only	0	0	0	1	2	2	1
Option D - Class 1	0	0	0	0	1	2	1
Option D1 - Ped Only	0	0	0	1	1	2	1

Physical								Fiscal			TOTAL
Potential for a Direct & Consistent Route	Potential to Maximize Commuter Value	Potential to Maintain an Accessible Trail Route	Potential to Provide Logical Roadway Access Points	Potential to Connect to Existing or Proposed Hiking Trails	Potential to Maximize Recreational Value	Potential for Rest Areas & Overlooks with Interpretive Signage	Potential to Provide a Staging Area	Potential to Minimize Construction & Maintenance Costs	Potential to Access Maximum Funding Sources	Potential for Near-Term Construction	
1	1	2	1	1	0	0	1	1	1	1	19
2	2	2	1	1	0	0	2	2	2	1	25
2	2	2	1	1	0	0	1	1	1	1	22
2	2	2	1	2	2	2	2	0	2	1	26
2	0	2	1	2	2	2	2	2	1	1	29
2	2	2	1	2	1	1	2	1	2	1	28
1	2	2	1	1	0	0	0	2	1	1	20

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1	1	2	2	2	0	0	1	1	2	1	23
2	1	2	1	2	0	0	1	1	0	2	25
2	2	2	1	1	0	0	1	2	2	0	18
1	1	2	1	2	2	2	2	1	2	1	26
1	1	2	1	1	0	0	0	2	1	1	20
1	1	2	1	1	0	0	0	2	0	1	15

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2	2	1	0	2	2	2	1	0	2	1	22
2	2	2	1	2	2	2	2	1	2	1	27
0	0	1	1	1	2	2	2	2	0	2	19
0	0	1	2	1	2	2	2	2	0	2	22
1	0	1	1	1	1	1	1	2	1	1	16
1	0	1	1	1	1	1	1	2	1	2	18
1	0	1	1	1	2	2	1	2	1	1	17
1	0	1	1	1	2	2	1	2	1	1	18

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Section 3.0

*Route Summary &
Recommendations*



Beach Cities Multi-Purpose Trail

TRAIL FEASIBILITY STUDY

3.0 Route Summary & Recommendations

This section describes the most feasible trail route based on the results of the Route Selection Matrix, and recommends actions the City of Grover Beach should undertake to identify specific trail projects and potential funding strategies.

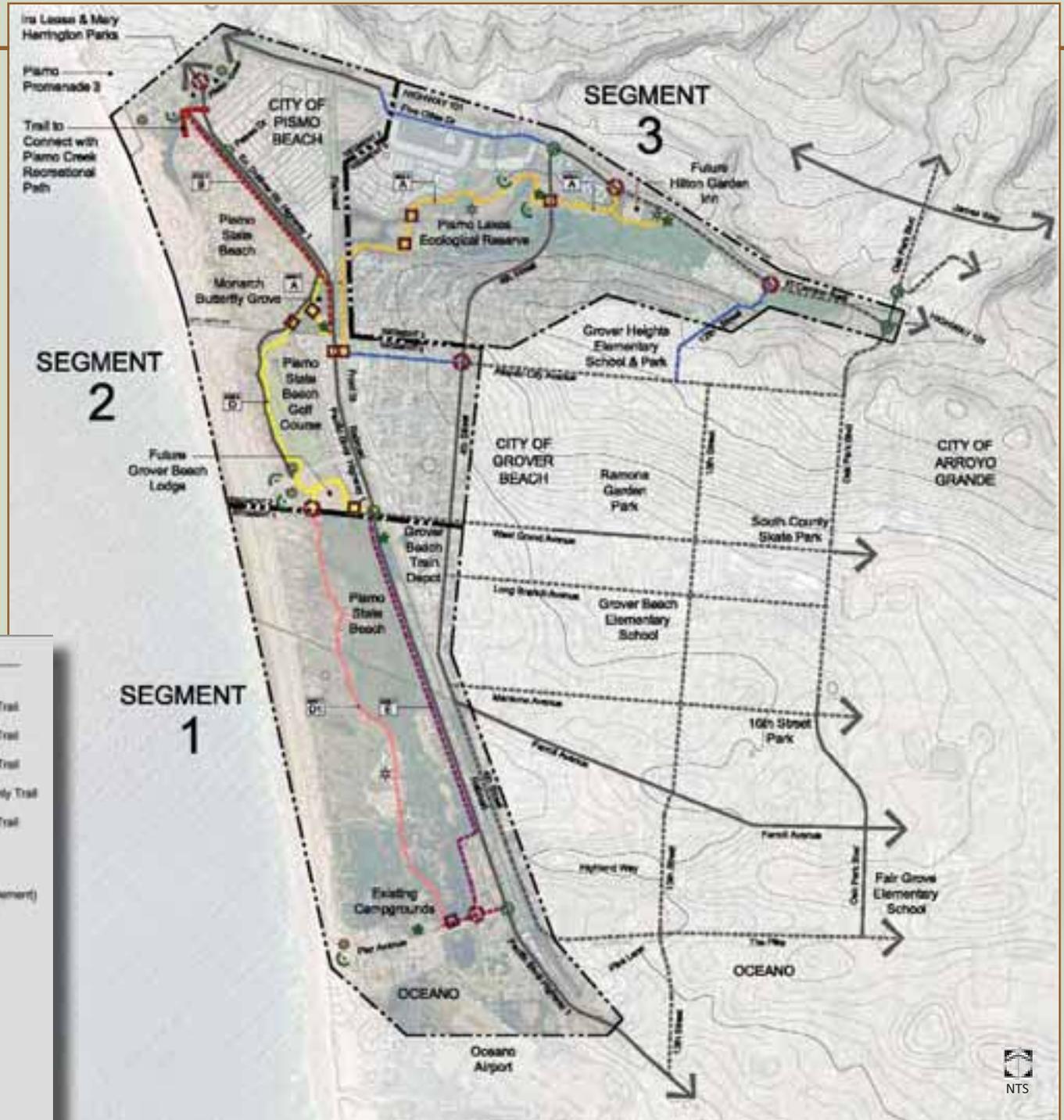
It should be anticipated that these routes will be developed as funding becomes available and that they may change or be adjusted as conditions change or better information becomes available through additional fieldwork, further environmental analysis, or more detailed planning. It is anticipated that implementation of the trail system will occur through the project design of public projects, design review of private projects, dedication through the subdivision approval process, and public purchases. Ownership and development patterns, as well as zoning conflicts, may present obstacles in the implementation of the trail. Development of a final implementation plan and the future construction of the Beach Cities Trail will be contingent upon the City's selection of a final trail route.

A. MOST FEASIBLE TRAIL ROUTE

The Selected Route Map illustrates the most feasible Class I routes as well as critical Class II links necessary to complete the multi-use trail network. The selected route effectively links the communities of Pismo Beach, Grover Beach, Arroyo Grande and Oceano and connects to the City’s schools and parks via an improved Class II network.

LEGEND

- Existing or Planned Trail/ Boardwalk
- Option A - Most Feasible Multi-Purpose Trail
- Option B - Most Feasible Multi-Purpose Trail
- Option D - Most Feasible Multi-Purpose Trail
- Option D1 - Most Feasible Pedestrian Only Trail
- Option E - Most Feasible Multi-Purpose Trail
- Existing Class 2 Bike Lane
- Planned Class 2 Bike Lane (from City of Grover Beach Circulation Element)
- Recommended Class 2 Bike Lane
- Existing Traffic Signal
- Potential Controlled At Grade Crossing
- Existing Staging Area
- Potential Staging Area
- Proposed Pedestrian/ Bicycle Bridge
- Existing Scenic Overlook
- Proposed Rest Area/ Overlook



B. SEGMENT 1

Segment 1 is located on the south side of West Grand Avenue to Oceano between the Pacific Ocean and South 4th Street. Segment 1 contains Pismo State Beach and the Grover Beach Train Depot. The routes studied were looked at to determine the best way to get from Oceano to West Grand Avenue. The Trail Depot and South 4th Street have plans for future redevelopment and improvements which includes bike facilities.



Segment Map

The trail types studied within this segment are Class I and pedestrian trails (Multi-Purpose) and Pedestrian Only Trails. There is an existing equestrian trail through the dunes, the Grand Dunes Trail, (Segment 1, Option D and D1) which was analyzed to see if the trail could accommodate a Class I multi-use path or whether it should be a pedestrian only boardwalk similar to what has been developed north of West Grand Avenue. Option D and D1 studied a Class I Multi-Purpose Trail and/ or Pedestrian Only trail individually to determine the most feasible trail type in this sensitive area.

The following alternative route options were identified for Segment 1, and they are explained in detail in Appendix A:

- Option A – Multi-Purpose Trail
- Option B - Multi-Purpose Trail
- Option C - Multi-Purpose Trail
- Options D & D1 - Multi-Purpose Trail & Pedestrian Only Trail
- Option E - Multi-Purpose Trail
- Option F - Multi-Purpose Trail

Using the Route Selection Matrix, Option D1 – a pedestrian only boardwalk trail was determined to be the most feasible option. The second highest rating on the Route Selection Matrix was Option E, a multi-purpose Class I trail primarily located along the west side of Pacific Boulevard/ Highway 1.

The City of Grover Beach expressed interest in utilizing the railroad corridor as a multi-purpose trail route, but the railroad corridor options did not rate as feasible as the coastal routes primarily due to the lower rankings in jurisdictional and physical criteria. The fact that South 4th Street is directly adjacent to the rail corridor and it is proposed to become a widened Class II facility is a wonderful opportunity to expand the commuting opportunities within the City. Many of the trail options ranking as most feasible link into the existing traffic signal at West Grand Avenue, where the trails can merge with the on-street bike lanes and safely incorporate the Train Station Depot as a staging area for the regional trail system.

LEGEND

- Existing or Planned Trail/ Boardwalk
- Option A - Most Feasible Multi-Purpose Trail
- Option B - Most Feasible Multi-Purpose Trail
- Option D - Most Feasible Multi-Purpose Trail
- Option D1 - Most Feasible Pedestrian Only Trail
- Option E - Most Feasible Multi-Purpose Trail
- Existing Class 2 Bike Lane
- Planned Class 2 Bike Lane (from City of Grover Beach Circulation Element)
- Recommended Class 2 Bike Lane
- Existing Traffic Signal
- Potential Controlled At Grade Crossing
- Existing Staging Area
- Potential Staging Area
- Proposed Pedestrian/ Bicycle Bridge
- Existing Scenic Overlook
- Proposed Rest Area/ Overlook



NTS



SEGMENT 1- OPTION D1

Option D1 links West Grand Avenue to the north and Pier Avenue to the south. This option would primarily parallel the alignment of the existing equestrian trail to the north, and then follow the existing Guiton Trail which runs adjacent to the Oceano Lagoon to the south. The existing equestrian uses would continue and should be separated by a fence on the boardwalk. This option is proposed to be an extension of the existing boardwalk to the north and would be a wonderful addition to Pismo State Beach and great link through the dunes, and could provide additional recreational amenities for families with strollers and those requiring an ADA accessible trail. However, the boardwalk would be an expensive endeavor through a sensitive resource area and given the suggested list of multiple other trails in this Feasibility Study, and the fact that it would be for pedestrians only and there is already an existing pedestrian trail in this area, this trail could be considered a low priority. Option D is described in detail in Appendix A.

Length:

6,640 linear feet (1.26 miles) Total Trail Option

4,752 linear feet (0.90 miles) Proposed Boardwalk

Jurisdiction:

City of Grover Beach

Oceano

State Parks

D1



Environmental/ Regulatory Criteria:

- (1) Potential to Minimize or Avoid Environmental & Cultural Impacts
 - Option D1 contains a portion of coastal dune scrub habitat, which is a special status plant community, and there is suitable habitat for special status plants known to occur in the coastal dune scrub habitat, as well as the potential for wetlands and other special status plant communities to occur.
 - Because Option D1 will be constructed using the boardwalk it will be able to avoid sensitive plants and have less of an impact on the environment.
 - Option D1 is located in an area that has not been disturbed, and there is a greater chance of discovering and impacting cultural resources. Option D1 would have less of an impact due to the boardwalk construction.
- (2) Potential to Minimize Number of Permits Required
 - Option D1 is not expected to require agency permits.
- (3) Potential to Minimize Footprint through Construction
 - Option D1 will be constructed using a boardwalk technique and it will allow it to minimize the trail footprint, environmental impacts and vegetation removal.
- (4) Potential to Maximize Consistency with Existing Plans
 - Option D1 links into the Class II bike lanes on Highway 1 via West Grand Avenue and Pier Avenue, which is consistent with SLOCOG's regional transportation plans and the City of Grover Beach's Circulation Element.

Jurisdictional Criteria:

(1) Potential to Minimize Impacts to Private Property

- Option D1 does not impact private property.

(2) Potential to Avoid Railroad Corridor Constraints

- Option D1 does not have any railroad corridor constraints.

Physical Criteria:

(1) Potential to Connect to Existing or Proposed Class I or II Bikeway

- Option D1 has the potential to connect with proposed Class I trails, and can safely link with Class II bike lanes.

(2) Potential for a Direct & Consistent Route

- Option D1 provides a continuous and direct route.

(3) Potential to Maximize Commuter Value

- Option D1 would be a pedestrian only trail and would not maximize commuter value.

(4) Potential to Maintain an Accessible Trail Route

- The terrain for Option D1 is rolling, but an ADA accessible trail could be achieved with the boardwalk construction.

(5) Potential to Provide Logical Roadway Access Points

- Option D1 has northern and southern terminuses at mid-block locations. The trail use is not proposed to cross Pier Avenue but instead travel east to connect with Segment 1, Option E, or west to the trailhead at the campground or ocean. However, commuter traffic from the surrounding neighborhoods and parks south of the trail might try to cross Pier Avenue. Trail crossing on West Grand Avenue occurs close to the proposed parking lot entrance, and most cars are already slowing down. Crossing alternatives should be studied for both streets if this option is implemented.

(6) Potential to Connect to Existing or Proposed Hiking Trails

- Option D1 has good potential to connect with the existing boardwalk and Monarch Butterfly Grove to the north and Guiton Trail to the south, and could become part of an extended trail system within Pismo State Beach.

(7) Potential to Maximize Recreational Value

- Option D1 is located within Pismo State Beach and is very scenic and has very high recreational value. The boardwalk should be constructed to allow points of access to the beach areas whenever feasible.
- The boardwalk would be a benefit for the campground and increase the recreational amenities available for the campground.

(8) Potential for Rest Areas & Overlooks with Interpretive Signage

- Option D1 has good potential to provide overlooks and rest areas with interpretive exhibits.
- Option D1 interpretive exhibits could tie into the interpretive program already existing within the campground within the southern section of the trail.

(9) Potential to Provide a Staging Area

- Option D1 has two existing staging areas and restrooms within the parking lots for Pismo State Beach on the north and south sides of the trail, and a proposed staging area envisioned off Pier Avenue in the vacant land west of the campground entrance.

Fiscal Criteria:

(1) Potential to Minimize Construction & Maintenance Costs

- Option D1 requires a boardwalk to reduce environmental impacts.
- Option D1 could potentially use a portion of the existing Guiton Trail to reduce trail costs, or it could use signs to direct trail users down the campground roadway to Pier Avenue. Both ways a significant portion of the trail will not require improvements, and this has been factored into the Opinion of Preliminary Cost.

(2) Potential to Access Maximum Funding Sources

- State Parks might be able to assist with funding for Option D1.

(3) Potential for Near-Term Construction

- Option D1 construction timing will depend on funding and both options require coordination with State Parks and Oceano, and they are not likely to be completed near-term.



Option D1 could utilize the existing Grand Dunes Trail, and make it accessible for wheelchairs and families with strollers



Option D1 could potentially link into the existing Guiton Trail that is adjacent to the Oceano Lagoon which contains many existing trail amenities, interpretive elements and native plantings

SEGMENT 1- OPTION E

Option E follows the west side of Pacific Boulevard/ Highway 1 between West Grand Avenue to the north and Pier Avenue to the south. This option would be a multi-purpose Class I trail located within the Pismo Beach State open space and links to Segment 2, Options D to the north and Segment 1, Option D1 to the south. This portion of Pacific Boulevard/ Highway 1 is quite scenic, there is only one driveway existing on the west side of the roadway, and there is a potential for the southern portion of the trail follow the existing Guiton Trail which runs adjacent to the Oceano Lagoon. The trail option is envisioned to be constructed similar to what is proposed in Pismo Beach along Highway 1/ South Dolliver (Segment 2, Option B), and the trail would be a safer and more family friendly alternative to the existing Class II bike lanes along the highway and could become a nice entry into the communities of Grover Beach and Oceano.

Length:

6,400 linear feet (1.21 miles)

Jurisdiction:

- City of Grover Beach
- Oceano
- State Parks
- Cal Trans



Environmental/ Regulatory Criteria:

(1) Potential to Minimize or Avoid Environmental & Cultural Impacts

- Option E is not expected to cause immitigable environmental or cultural impacts.
- There is a possibility that the roadside ditches might support wetland habitat, and if they are discovered, they should be avoided whenever feasible.
- Meadow Creek should be avoided whenever possible because it contains both wetland and riparian habitat, and is suitable habitat for the California red-legged frog and south-central California coast steelhead DPS. Special status plants also have the potential to occur in the Meadow Creek area, including areas of native habitat directly adjacent to the trail alignment.
- Trail alignment should be confined to the existing road shoulders and disturbed areas as much as possible, and Meadow Creek should be avoided, to minimize environmental impacts.

(2) Potential to Minimize Number of Permits Required

- Option E has a bridge crossing proposed along Pier Avenue and may require agency permits from the Army Corps of Engineers, Department of Fish & Game, U.S. Fish & Wildlife Service, and Regional Water Quality Control Board.
- The bridge could be clear span and if permits were deemed too difficult, a short on-street segment should be considered for part of this option.
- Option E may require an Encroachment Permit from Caltrans, but the procedure should be reduced since it is similar to an existing facility north on Highway 1 in Pismo Beach.

(3) Potential to Minimize Footprint through Construction

- It will be difficult to minimize the trail footprint for Option E because it will require removal of some trees and shrubs; however, they are on the fringe of the habitat area, and they are adjacent to a highway which is an existing man-made facility and a heavily used area.

- Option E could be constructed using a boardwalk technique to minimize the trail footprint in sensitive areas, but this cost is not factored into the Opinion of Preliminary Cost.

(4) Potential to Maximize Consistency with Existing Plans

- Option E links into the Class II bike lanes on Highway 1 via West Grand Avenue and Pier Avenue, which is consistent with SLOCOG's regional transportation plans and the City of Grover Beach's Circulation Element.

Jurisdictional Criteria:

(1) Potential to Minimize Impacts to Private Property

- Option E does not impact private property.

(2) Potential to Avoid Railroad Corridor Constraints

- Option E does not have any railroad corridor constraints.

Physical Criteria:

(1) Potential to Connect to Existing or Proposed Class I or II Bikeway

- Option E has the potential to connect with proposed Class I trails, and can safely link with Class II bike lanes.

(2) Potential for a Direct & Consistent Route

- Option E provides a continuous and direct off-street route.

(3) Potential to Maximize Commuter Value

- Option E links the residential areas south of Pier Avenue with a choice of Class I or II bike lanes, and would likely maximize commuter value.

(4) Potential to Maintain an Accessible Trail Route

- The terrain for Option E is flat and an ADA accessible trail can be achieved.

(5) Potential to Provide Logical Roadway Access Points

- Option E has a northern terminus at an existing traffic signal on West Grand Avenue, and a southern terminus at an unsignalized intersection at Norswing Drive which would link with a short on-street Class III connection on Pier Avenue to a signalized intersection at Pacific Boulevard/ Highway 1. The unsignalized intersection at Norswing Drive is serving a small neighborhood and has very low volumes of traffic.

- Trail use is not proposed to cross Pier Avenue but to travel west to connect with Segment 1, Option D1, and/or the trailheads. However, commuter traffic from the surrounding neighborhoods and parks south of the trail might try to cross Pier Avenue. Crossing alternatives should be studied for Pier Avenue at Norswing Drive and Class II bike lanes should be considered along Pier Avenue if feasible.

(6) Potential to Connect to Existing or Proposed Hiking Trails

- Option E has good potential to connect with the existing and/or proposed boardwalk and lagoon trail system within Pismo State Beach.

(7) Potential to Maximize Recreational Value

- Option E is located directly adjacent Pacific Boulevard/ Highway 1, and although the open space areas of Pismo State Beach to the west are picturesque, there is little recreational value.

- For the purposes of this study, the trail is assumed to be located on the shoulders of the roadway; however, if it was possible to locate the trail slightly inside the open space areas and provide buffering and screening from the highway, it would greatly increase the recreational value of the trail.

- (8) Potential for Rest Areas & Overlooks with Interpretive Signage
 - Option E does not have the potential to provide rest areas, but could have pull outs with interpretive exhibits.
- (9) Potential to Provide a Staging Area
 - Option E has two existing staging areas and restrooms within the parking lots for Pismo State Beach on the north and south sides of the trail, and a proposed staging area envisioned off Pier Avenue in the vacant land west of the campground entrance.

Fiscal Criteria:

- (1) Potential to Minimize Construction & Maintenance Costs
 - Fencing will likely be required on the Pismo State Beach side of the trail to limit access through the habitat areas, and also along the highway if 5' clearance cannot be achieved.
 - Option E could potentially use a portion of the existing Guiton Trail but it would require widening and Class I trail improvements, and this has been not factored into the Opinion of Preliminary Cost.
- (2) Potential to Access Maximum Funding Sources
 - Option E might qualify for regional transportation grants and government funding assistance.
 - State Parks might be able to assist with funding for Option E.
- (3) Potential for Near-Term Construction
 - Option E construction timing will depend on funding and requires coordination with State Parks, Cal Trans and Oceano and it is not likely to be completed near-term.



Option E would be located along the left side of roadway in this photo



A portion of Option D1 could potentially be located on the existing Guiton Trail which is located adjacent to the Oceano Lagoon

C. SEGMENT 2

The easterly boundary of Segment 2 is the east side of the railroad tracks and the west side of the Prime Outlets of Pismo Beach. The northern boundary is from the south side of Highway 101 and Oceanview Avenue in the City of Pismo Beach. The southern boundary is along the south side of West Grand Avenue in Grover Beach, and the western boundary is the Pacific Ocean.



Segment Map

Segment 2 contains the Pismo State Beach, Monarch Butterfly Reserve, Pismo State Beach Golf Course, and the future Grover Beach Lodge Project. There is an existing boardwalk pedestrian trail along the west side of South Dolliver Avenue which links Pismo State Beach to an existing bridge over Pismo Creek, and from this connection there is an excellent linkage to Promenade 3 Pier, Mary Herrington Park, and Ira Lease Park in the City of Pismo Beach. There is also an existing pedestrian boardwalk within Pismo State Beach which has beautiful scenic vistas, and there is ample room to the east for an adjacent bike path which could provide an off-street trail connection for both commuting and recreational uses.

All options in this segment looked at new Class I multi-purpose trails which would have both pedestrian and bicycle trail use. Options B and D have established pedestrian boardwalks that are very good condition, therefore Option B would be a widened trail to accommodate a Class I multi-purpose trails; and the boardwalk alongside of Option D would continue to serve pedestrians only, but the new trail would be multi-purpose. The following alternative route options have been identified in Segment 2, and detailed descriptions of each are in Appendix A:

- Option A- Multi-Purpose Trail
- Option B- Multi-Purpose Trail
- Option C- Multi-Purpose Trail
- Option D- Multi-Purpose Trail
- Option E- Multi-Purpose Trail
- Option F- Multi-Purpose Trail

Using the Route Selection Matrix, Option B – Multi-Purpose Trail, was the most feasible trail option. Since this option will leave a gap between Segment 1 and 2, the next feasible alignment was used to link the trails together, Option D – Multi-Purpose Trail. Another gap closure was used in Segment 2 to link with Segment 3, and Option A was the next feasible alignment was used to join the trails together. The most feasible routes shown all work together as one cohesive trail, and although they can be developed in phases, they should ultimately all be constructed to achieve a Class I trail system linking the beach communities. Option D could be constructed without A, but the Class I link over to Segment 3 would not exist; and Option B could be developed without A or D, but there would be no Class I link to Segments 1 and 3.

Although the majority of the focus of this Feasibility Study is on multi-purpose trails, there is a recommendation for a Class II bike lane in this segment that could significantly make the trail system easier to access. The City of Grover Beach Circulation Element proposes Class II bike lanes on Atlantic City Avenue from Oak Park Boulevard west to North 4th Street, but this study suggests that it is extended further to Front Street to connect to the proposed bridge and trail in Segment 2, Option A. West Grand Avenue is a vital link from the beach to the downtown areas, and is the primary signalized intersection where several trails converge. The City should consider enhancing the intersection at West Grand Avenue and Highway 1 with traffic calming and aesthetic treatments, and possible grade separated crossings for trails if feasible.



SEGMENT 2- OPTION A

Option A is a potential multi-purpose trail linking to the proposed trail system within the Pismo Lakes Ecological Reserve and Pismo State Beach. It is assumed that this trail option would primarily be located within the existing road right-of-way along Front Street if some parking was removed, and that some portions of the trail will be located within the railroad corridor. Class II bike lanes are proposed on Atlantic City Avenue to connect into this trail system, and this option has a great opportunity to link into the adjacent neighborhoods and Grover Height Elementary School and Park, and this option has great connectivity potential.

Length:

1,230 linear feet (0.23 mile)

Jurisdiction:

City of Grover Beach
City of Pismo Beach
State Parks
Union Pacific Railroad
Cal Trans



Environmental/ Regulatory Criteria:

(1) Potential to Minimize or Avoid Environmental & Cultural Impacts

- Option A is not expected to cause environmental impacts. Eucalyptus trees are vital for the Monarch butterflies and the trees should not be removed
- Known cultural resource sites exist in this area, and the impacts will depend on the placement of the trail and the amount of grading required.
- The trail is located in areas that have already previously been disturbed, and will likely require minimal grading.
- Footings for the proposed bridge will require archeological surveys and monitoring.

(2) Potential to Minimize Number of Permits Required

- Option A is not expected to require agency permits.

(3) Potential to Minimize Footprint through Construction

- Option A places the trail on land already cleared by the railroad and roadway whenever feasible, but may need to widen the trail corridor in some locations. Some Eucalyptus trees may need to be removed to accommodate a bike trail.

(4) Potential to Maximize Consistency with Existing Plans

- Option A is consistent with SLOCOG and City of Grover Beach's desire to connect with the Train Depot and to utilize the railroad corridor as a regional bike trail which could one day connect with the City of San Luis Obispo, and link with Class II bike lanes.
- Options A is not consistent with the City of Pismo Beach's trail planning, and they do not support a trail along the railroad corridor because they feel the lack of visibility could create a crime and unsafe area.



Example of local resident crossing the tracks with his bike

Jurisdictional Criteria:

(1) Potential to Minimize Impacts to Private Property

- Other than Union Pacific Railroad, Option A does not impact private property.

(2) Potential to Avoid Railroad Corridor Constraints

- Option A is located within the railroad corridor and will require negotiation and coordination with Union Pacific Railroad. This area of the railroad is heavily used by local residents crossing over to the ocean, and the trail and fencing along the tracks could provide a safer environment along the rail corridor.
- A bridge is proposed to safely cross over the tracks and Highway 1 and, since it is located close to the city limits, it could become a wonderful entry gateway for the Cities of Pismo Beach and Grover Beach.
- Consider minimizing railroad impacts by removing the existing parking along the west side of Front Street from Atlantic Avenue to Oceanview Avenue, and replacing it with fencing, landscaping and the Class I multi-purpose trail.

Physical Criteria:

(1) Potential to Connect to Existing or Proposed Class I or II Bikeway

- Option A has the potential to connect with existing and proposed Class I trails.

(2) Potential for a Direct & Consistent Route

- Option A provides a continuous off-street route which links surrounding residential areas, but it is not very direct and requires a bridge.

(3) Potential to Maximize Commuter Value

- Option A has the potential to link the surrounding neighborhoods with Class II bike lanes but cannot maximize commuter value because not very direct and requires a bridge.

(4) Potential to Maintain an Accessible Trail Route

- The terrain for Option A is relatively flat and an ADA accessible trail could be achieved. An elevator would be required at the bridge.

(5) Potential to Provide Logical Roadway Access Points

- Option A has a roadway access point at Atlantic City Avenue. Although it is a mid-block location on Highway 1/ Pacific Boulevard, the bridge and elevator will allow bicyclists to safely cross the roadway and/or railroad to access trails or bike lanes.
- A bridge across Highway 1 will significantly reduce the amount of trail users using the highway as an access point, and the bridge could be designed as a gateway focal point into the City.

(6) Potential to Connect to Existing or Proposed Hiking Trails

- Option A has the potential to connect with existing boardwalks within the Pismo State Beach and along South Dolliver Street, and could become part of an extension of these trail systems.

(7) Potential to Maximize Recreational Value

- Option A is located along the railroad corridor and is not scenic and does not have recreational value.

(8) Potential for Rest Areas & Overlooks with Interpretive Signage

- Option A does not have the potential to provide overlooks and rest areas or interpretive exhibits.

(9) Potential to Provide a Staging Area

- There is no staging area associated with this option, but there is one adjacent to it in Segment 2, Option D.

Fiscal Criteria:

(1) Potential to Minimize Construction & Maintenance Costs

- Requires a bridge crossing construction across Highway 1 and the railroad tracks, and although the bridge will be costly, the segment is otherwise very short and fairly inexpensive.
- Fencing will be required to limit and control public access in the railroad corridor.

(2) Potential to Access Maximum Funding Sources

- This trail option might qualify for regional transportation grants and government funding assistance.
- The bridge could become a gateway element for the Cities of Grover Beach and Pismo Beach and might qualify for funding from both communities.
- Improving safety with the bridge along the railroad might qualify for additional grants and funding opportunities.

(3) Potential for Near-Term Construction

- Requires coordination with Union Pacific Railroad, City of Pismo Beach, and Cal Trans and is not likely to be completed near-term.



The proposed bridge at Highway 1 could become a gateway element for the cities of Grover Beach and Pismo Beach similar to this newly constructed bridge in Dana Point

SEGMENT 2- OPTION B

Option B is an extension of the existing boardwalk along South Dolliver Street, and it is located from the existing bridge at Pismo Creek on the north to the city limits line by the Monarch Butterfly Grove on the south. This option takes advantage of the existing pedestrian facilities and adds the bicycle component to further enhance the trail experience. The concept for this option is that the trail would be extended on the west side of the boardwalk, and raised over the drainage at the same elevation as the existing boardwalk, and the pedestrian boardwalk would remain.

The City of Pismo Beach is exploring the possibility of a multi-use path on the east side of South Dolliver to extend to the Pismo Creek Recreational Path and the northerly City limits. There could be some issues associated with the development of a Class 1 trail on the east side that would require additional evaluation by the City of Pismo Beach. The City would need to consider the cost of acquiring additional right of way and the possibility that South Dolliver may need to be realigned. The alternative to expand the existing trail on the west side would most likely be less expensive and easier to implement. Ultimately the City of Pismo Beach will determine the location of the trail in this segment.

Length:

3,800 linear feet (0.72 mile)

Jurisdiction:

City of Pismo Beach
Cal Trans



B

Environmental/ Regulatory Criteria:

- (1) Potential to Minimize or Avoid Environmental & Cultural Impacts
 - Option B is not expected to cause environmental or cultural impacts.
 - There are several road-side ditches in Option B that might fall under state or federal jurisdictions as wetland habitat.

- (2) Potential to Minimize Number of Permits Required
 - Option B is not expected to require agency permits, unless wetlands are determined.
 - Option B may require an Encroachment Permit from Caltrans, but the procedure should be reduced since it is adding onto an existing facility.

- (3) Potential to Minimize Footprint through Construction
 - Option B places the trail on land already impacted by a manmade drainage, and is not expected to have environmental impacts.

- (4) Potential to Maximize Consistency with Existing Plans
 - Option B is consistent with SLOCOG’s plans to have a regional bike trail along Highway 1, and works with the existing circulation pattern already developed by the City of Pismo Beach.

Jurisdictional Criteria:

(1) Potential to Minimize Impacts to Private Property

- Option B does not impact private property.

(2) Potential to Avoid Railroad Corridor Constraints

- Option B does not impact the railroad corridor.

Physical Criteria:

(1) Potential to Connect to Existing or Proposed Class I or II Bikeway

- Option B has the potential to connect with existing and proposed Class I trails at the Monarch Butterfly Grove and Promenade 3, and link with Class II bike lanes at an existing signal at Paseo Drive.
- Access to Ira Lease Park and the Pismo Creek Recreational Path involves crossing South Dolliver Street at an unsignalized crossing, and it is recommended that traffic calming and/ or controlled at grade crossing improvements occur to allow for a safer linkage between the trails.

(2) Potential for a Direct & Consistent Route

- Option B provides a continuous and direct off-street route which links surrounding residential areas.

(3) Potential to Maximize Commuter Value

- Option B could be used as a commuter route as it links surrounding neighborhoods with Class II bike lanes and connects with other Class I trails.
- Bicyclists commuting to the north would likely need to transfer to the Class II bike system at the existing signal at Paseo Drive because Addie Street is unsignalized at South Dolliver and very difficult to cross.

(4) Potential to Maintain an Accessible Trail Route

- The terrain for Option B is very flat and an ADA accessible trail would be easily achieved.

(5) Potential to Provide Logical Roadway Access Points

- The southern entry point for Option B is a mid-block location along Highway 1, and the entry point is only accessible to bicyclists traveling southbound. Bicyclists traveling northbound along Highway 1 will not be able to safely cross the street for approximately another ½ mile at the signalized intersection at Paseo Drive.
- The northern entry point at Addie Street is a very low volume of traffic and the existing bridge crossing Pismo Creek at Cypress Street is one way for vehicles traveling northbound only. As trail use increases, the bridge may need to be widened or consider a separated bicycle bridge.
- South Dolliver/ Highway 1 is a major arterial and if the crossing at Addie Street is a trail route to the Pismo Creek Recreational Path, consider traffic calming methods for the unsignalized intersection.

(6) Potential to Connect to Existing or Proposed Hiking Trails

- Option B has the potential to connect Pismo State Beach trails, Pismo Creek Recreational Path, and the Pismo Promenade 3.

(7) Potential to Maximize Recreational Value

- Option B is directly located along a very busy roadway and although it is adjacent the Pismo State Beach it is not very scenic and it does not have much recreational value.

(8) Potential for Rest Areas & Overlooks with Interpretive Signage

- Option B does not have the potential to provide overlooks and rest areas or interpretive exhibits.

(9) Potential to Provide a Staging Area

- There are potential staging areas within the northern area of Option B at the existing parking lots for Pismo Pier and Ira Lease Park.

Fiscal Criteria:

(1) Potential to Minimize Construction & Maintenance Costs

- Option B requires a low retaining wall to get the trail up above the drainage and up to the level of the existing boardwalk, but otherwise it is a very affordable option.
- May require a future free standing bike bridge west of existing bridge on Cypress Street, but this is not included in the Opinion of Preliminary Cost.

(2) Potential to Access Maximum Funding Sources

- This trail option most likely would not qualify for funding assistance.

(3) Potential for Near-Term Construction

- Requires coordination with City of Pismo Beach and Cal Trans but because it is behind an existing facility it is likely to be completed near-term.



Option B is proposed on the west side of the existing boardwalk along South Dolliver/ Highway 1



Option B would provide bicycles with an efficient off-street connection between Grover Beach and Pismo Beach

SEGMENT 2- OPTION D

Option D is a potential Class I trail located on an existing trail east of the existing pedestrian boardwalk within Pismo State Beach. It is a great opportunity to utilize the existing circulation system within Pismo State Beach and link it to adjacent neighborhoods and the regional Class II bike lanes.

Tourism to the Monarch Grove can be high and this trail alignment needs careful alignment to facilitate bicycle use along with the heavy pedestrian flow. Also the Eucalyptus groves are vital for the Monarch butterflies and the trees shall not be removed for this project.

Environmental/ Regulatory Criteria:

(1) Potential to Minimize or Avoid Environmental & Cultural Impacts

- Option D will primarily be located on an existing sand trail between the boardwalk and golf course and is not expected to cause environmental or cultural impacts, but some vegetation may need to be removed for the trail construction.
- Option D is proposed to go around the Monarch Butterfly Grove, and will require carefully trail placement and coordination with State Parks. It should be noted that no Eucalyptus trees will be permitted to be removed for the trail construction as they are necessary for butterfly roosting.
- Portions of Option D are surrounded by coastal dune scrub habitat which is a special status plant community, and it is dominated by a number of native species that constitute a special status plant community.
- Crossings for Option D at Meadow Creek have willow riparian vegetation which has the potential for jurisdictional wetlands.
- Option D will be constructed in a culturally sensitive area that has not undergone previous ground disturbance, and therefore has a greater potential for discovery of and impacts to cultural resources.

Length:

5,500 linear feet (1.04 miles)

Jurisdiction:

City of Grover Beach
City of Pismo Beach
State Parks
Cal Trans



(2) Potential to Minimize Number of Permits Required

- Option D is proposed to replace existing bridges and will require agency permits from the Army Corps of Engineers, Department of Fish & Game, U.S. Fish & Wildlife Service, and Regional Water Quality Control Board.

(3) Potential to Minimize Footprint through Construction

- Option D will primarily be located on an existing sand trail between the boardwalk and golf course and it will not be difficult to minimize the trail footprint on the natural environment, but some vegetation may need to be removed for the trail construction.

(4) Potential to Maximize Consistency with Existing Plans

- Option D would link into the Class II bike lanes on Highway 1, which is consistent with SLOCOG's regional transportation plans and the City of Grover Beach's Circulation Element.
- Option D would link into the Class II bike lanes on West Grand Avenue which is consistent with the City of Grover Beach's Circulation Element.

Jurisdictional Criteria:

(1) Potential to Minimize Impacts to Private Property

- Option D does not impact private property.

(2) Potential to Avoid Railroad Corridor Constraints

- Option D does not have any railroad corridor constraints.

Physical Criteria:

(1) Potential to Connect to Existing or Proposed Class I or II Bikeway

- Option D has the potential to connect with multiple proposed Class I trails, and it can safely link with Class II bike lanes at West Grand Avenue.
- There is a Class II connection at the proposed bridge for Segment 2, Option A (southeast of the Monarch Butterfly Grove), but it is a mid-block location and is only accessible from those traveling south.

(2) Potential for a Direct & Consistent Route

- Option D is not a continuous and direct off-street route linking surrounding residential areas, but would most likely be used as a recreational route.

(3) Potential to Maximize Commuter Value

- Although Option D has the potential to link with Class II bike lanes at West Grand Avenue, it does not have another safe Class II connection that is multi-directional along Highway 1, and it is not a direct route. It might be used by those not in a hurry, but it does not maximize commuter value.

(4) Potential to Maintain an Accessible Trail Route

- The terrain for Option D is very flat and an ADA accessible trail would be easily achieved.

(5) Potential to Provide Logical Roadway Access Points

- The southern terminus of Option D has safe roadway access at a signalized crossing at South Dolliver and West Grand Avenue, but there are mid-block crossing concerns on the northern section, where the entry point is only accessible to bicyclists traveling southbound along Highway 1 (similar to Segment 2, Option B).

(6) Potential to Connect to Existing or Proposed Hiking Trails

- Option D has good potential to connect with the existing boardwalk and Monarch Butterfly Grove within Pismo State Beach, and could become part of an extended trail system linking to the Pismo Creek Trail, Pismo Lakes Ecological Reserve Trail and southern trail through the dunes (Segment 1, Option D1).

(7) Potential to Maximize Recreational Value

- Option D is located within Pismo State Beach and is very scenic and has very high recreational value. The trail should be constructed to allow points of access to the beach areas whenever feasible.

(8) Potential for Rest Areas & Overlooks with Interpretive Signage

- Option D has good potential to provide overlooks and rest areas with interpretive exhibits.

(9) Potential to Provide a Staging Area

- There is an existing staging area and restrooms within the two parking lots for Pismo State Beach, and State Parks has removed three camping spots adjacent to the Butterfly Grove to accommodate park visitors. State Parks currently uses the existing campgrounds as parking for buses and tour groups.
- There is an additional potential staging area associated with this option southeast of the Monarch Butterfly Grove in a large vacant lot along Highway 1, and would provide parking for both park visitors and trail users.
 - Due to the mid-block location, the proposed staging area will only have an entrance from the south and an exit to the south. The staging area will be very visible from the highway and will highlight the trail system and the Monarch Butterfly Grove, as well as create a gateway into the Cities of Grover Beach and Pismo Beach.
 - This area is owned and operated by State Parks and is located within the City of Pismo Beach and may be within Cal Trans right-of-way.



Fiscal Criteria:

- (1) Potential to Minimize Construction & Maintenance Costs
 - Requires replacing existing bridges west of the Butterfly Park and a new bridge along West Grand Avenue parallel to the existing bridge to provide a Class I trail crossing construction across Highway 1 and the railroad tracks, and although the bridges will be costly, the segment is otherwise very short and fairly inexpensive.
 - Fencing is likely to be required to limit and control public access in the Monarch Butterfly Park.

- (2) Potential to Access Maximum Funding Sources
 - State Parks might be able to assist with funding,
 - Construction could be coordinated with the future Grover Beach Lodge, and the project might be conditioned to assist with funding and/or off-site mitigation.

- (3) Potential for Near-Term Construction
 - Requires coordination with City of Pismo Beach, State Parks, and Cal Trans and is not likely to be completed near-term.



Option D is located on a well worn sandy path between the existing boardwalk and the golf course



Photograph of one of the existing bridges to potentially be replaced



Segment Map

D. SEGMENT 3

The eastern boundary of Segment 3 is the east side of the railroad tracks and west side of the Prime Outlets of Pismo Beach. The western boundary is the east side of Oak Park Boulevard, North 12th Street, and North 6th Street. The northern boundary is the south side of Highway 101; and the southern boundary is the south side of El Camino Real, Margarita Avenue, and Parkview Avenue.

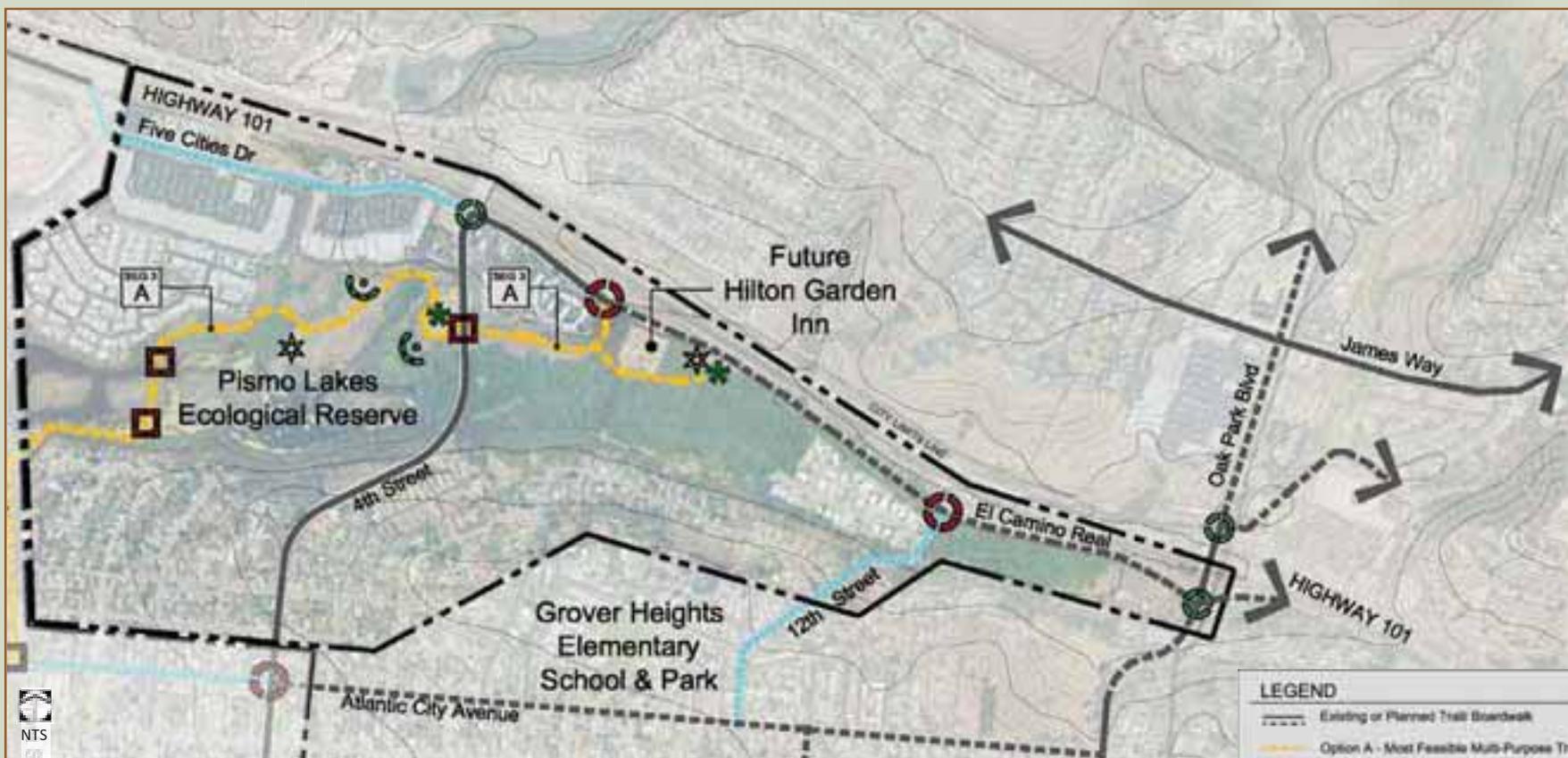
Segment 3 contains the Pismo Outlet Stores, Pismo Lakes Ecological Reserve and the Future Hilton Garden Inn. The Pismo Lakes Ecological Reserve and the area around the Future Hilton Garden Inn are very scenic and offer excellent potential for off-street trail connections for both commuting and recreational uses.

Two potential trail types were studied within this segment: Class I Multi-Purpose and Pedestrian Only trails, and they were analyzed to determine the most feasible trail type in this area. The following alternative route options have been identified in Segment 3, and they are described in detail in Appendix A:

- Options A & A1 - Multi-Purpose & Pedestrian Only Trail
- Options B & B1 - Multi-Purpose & Pedestrian Only Trail
- Options C & C1 - Multi-Purpose & Pedestrian Only Trail
- Options D & D1 - Multi-Purpose & Pedestrian Only Trail

Using the Route Selection Matrix, Option A ranked as the highest Class I multi-purpose trail route and Option A1 rated as the most feasible trail option for this segment. Because both A and A1 ranked high, this study has combined them into one multi-purpose trail route and refers to it as Option A in this section.

Although the majority of the focus of this Feasibility Study is on multi-purpose trails, there are two recommendations for Class II bike lanes in this segment that could significantly make the trail system easier to access. The City of Grover Beach Circulation Element proposes Class II bike lanes on Atlantic City Avenue, North 13th Street and El Camino Real, but this study suggests that they should also be included on North 12th Street between Atlantic City Avenue and El Camino Real. Additionally, this study suggests that Class II bike lanes be provided along Five Cities Drive, from North 4th Street west to the existing bicycle bridge adjacent to Highway 101.



LEGEND	
	Existing or Planned Trail Boardwalk
	Option A - Most Feasible Multi-Purpose Trail
	Option B - Most Feasible Multi-Purpose Trail
	Option D - Most Feasible Multi-Purpose Trail
	Option D1 - Most Feasible Pedestrian Only Trail
	Option E - Most Feasible Multi-Purpose Trail
	Existing Class 2 Bike Lane
	Planned Class 2 Bike Lane (from City of Grover Beach Circulation Element)
	Recommended Class 2 Bike Lane
	Existing Traffic Signal
	Potential Controlled At Grade Crossing
	Existing Staging Area
	Potential Staging Area
	Proposed Pedestrian/ Bicycle Bridge
	Existing Scenic Overlook
	Proposed Rest Area/ Overlook

Selected Route Map for Segment 3



SEGMENT 3- OPTION A

Option A is a potential link between the east side of the railroad corridor and El Camino Real, and provides a connection with the Future Hilton Garden Inn and the Pismo Lakes Ecological Reserve. Option A is will need to be creatively designed and a large portion of the trail is likely to be constructed as a boardwalk or pier construction to minimize environmental impacts. There may be locations where the pedestrian portion may need to be separated from the bicycle trail to minimize impacts such as where there is a steep grade or dense vegetation.

Length:
6,186 linear feet (1.17 miles)

Jurisdiction:
City of Grover Beach
City of Pismo Beach
State Parks
Private



Environmental/ Regulatory Criteria:

(1) Potential to Minimize or Avoid Environmental & Cultural Impacts

- Option A is located within the Pismo Lakes Ecological Reserve, and this area contains riparian/ wetland vegetation and many sensitive areas and species. Although the trail would be carefully placed to minimize impacts, there are likely to be some unavoidable impacts to environmental resources.
- Option A contains potential habitat to support the California red-legged frog and south-central California coast steelhead DPS, and there are potential for two federally-listed endangered plants.
- This area has not undergone previous ground disturbance so there is a greater potential for discovery of, and impact to, cultural resources.

(2) Potential to Minimize Number of Permits Required

- Option A requires two bridge crossings within the Ecological Reserve, and both are likely to require agency permits from the Army Corps of Engineers, Department of Fish & Game, U.S. Fish & Wildlife Service, and Regional Water Quality Control Board.
- Option A requires potential coordination with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) should any special status species be located within the disturbance area for implementation of the trail.
- The willow riparian and freshwater emergent wetland communities are considered special status plant communities, and any future development within these areas would require future studies to determine if they fall under the jurisdiction of the CDFG, the U.S. Army Corps of Engineers (USACE) and the Central Coast Regional Water Quality Control Board (RWQCB). Prior to project implementation, a jurisdictional delineation of waters of the U.S. and State of California would be required to determine the nature and extent of USACE, RWQCB, and CDFG jurisdiction on-site.

(3) Potential to Minimize Footprint through Construction

- Option A utilizes existing trails whenever feasible, but they are narrow and will need to be widened to accommodate a bike trail.
- This trail alignment is located through some dense trees and vegetation, and it will be difficult to minimize the trail footprint on the environment.

(4) Potential to Maximize Consistency with Existing Plans

- Option A is consistent with the City of Grover Beach Circulation Element and SLOCOG's future regional trail concepts, and connects with Class II bike lanes on Five Cities Drive, North 4th Street, and Oak Park Boulevard.

- Option A is consistent with future trail and public access improvement plans for the Pismo Lakes Ecological Reserve area by State Parks.

Jurisdictional Criteria:

(1) Potential to Minimize Impacts to Private Property

- Option A requires coordination and easement acquisition with City of Pismo Beach, State Parks and two private property owners (staging area on El Camino Real and the Hilton Garden Inn).
- Option A avoids private property, and they are placed away from private property to minimize impacts to adjacent lots.

(2) Potential to Avoid Railroad Corridor Constraints

- Although Option A links with a potential trail located along the railroad corridor area (Segment 2, Options A) this alignment does not directly impact the railroad area.

Physical Criteria:

(1) Potential to Connect to Existing or Proposed Class I or II Bikeway

- Option A has the potential to connect with existing and proposed links with Class I or II Bikeways on the railroad corridor, El Camino Real, North 4th Street, and Oak Park Boulevard.

(2) Potential for a Direct & Consistent Route

- Option A efficiently provides a continuous and direct off-street route which links surrounding residential areas to Class II bike lanes on North 4th Street and El Camino Real.

(3) Potential to Maximize Commuter Value

- Option A has the potential to maximize commuter value because they could link the surrounding neighborhoods with Class II bike lanes.

(4) Potential to Maintain an Accessible Trail Route

- The terrain for Option A contains some steep hillsides and slopes, and it could be difficult to maintain an ADA accessible trail without grading, ramps and retaining walls. It may be necessary in some locations to separate the trail to allow for ADA pedestrian use.

(5) Potential to Provide Logical Roadway Access Points

- The east side of both Option A has a roadway access point at an unsignalized crossing along El Camino Real, and although it has the potential to support traffic calming enhancements it is likely to remain unsignalized. This unsignalized mid-block crossing would most likely be used by bicyclists traveling along El Camino Real and be most impactful to Option A, but most pedestrians would be on the south side already due to the fact that the existing development is on this side of the street.
- The trail will not have access to North 4th Street since the only roadway access point would be from the west side, and east side travel would need to be directed approximately 400 feet north to the existing signalized crossing at El Camino Real and bicycles are more likely to attempt to cross North 4th Street to avoid traveling up to the traffic signal.
- A bridge across North 4th Street will significantly reduce the amount of trail users using the North 4th Street roadway access point, and the bridge could be designed as a gateway focal point into the City.
- The City should consider installing a widened sidewalk along North 4th Street from Five Cities Drive to the link into the trail system.



(6) Potential to Connect to Existing or Proposed Hiking Trails

- Option A has the potential to connect with existing and proposed hiking trails (Segment 2, Option A, B, and D).

(7) Potential to Maximize Recreational Value

- Option A integrates the existing aesthetic attributes of the Ecological Reserve and the land south of the future Hilton Garden Inn and avoids roads, commercial and industrial developments.
- The Ecological Reserve is a beautiful area within the heart of Grover Beach, and providing controlled access to the public will greatly expand the amount of usable parks and open space within the City.

(8) Potential for Rest Areas & Overlooks with Interpretive Signage

- Option A could provide multiple scenic overlooks and rest areas in varying locations along the trail.
- There is good potential for interpretive signage and the trail could be used for outdoor classrooms and nature observation.



View from the proposed staging area off North 4th Street looking towards the Ocean



View of an existing road within the Ecological Reserve that should be used for the trail

(9) Potential to Provide a Staging Area

- The proposed staging area along North 4th Street is currently owned by the City of Pismo Beach and it is a large vacant lot with excellent views of the Ecological Reserve and might be able to facilitate a restroom. Future circulation evaluation of this Pismo Beach owned site would be a City of Pismo Beach effort.
- The proposed staging area along El Camino Real is currently a privately owned vacant lot, and will require negotiations for procuring staging uses. The El Camino Real staging area is a large flat parcel that could park cars and allow for a nice entry into the trail system. Vehicular access is not expected to be restricted.



View from North 4th Street looking north at the area for the proposed bridge and the area for the proposed staging area to the right

Fiscal Criteria:

(1) Potential to Minimize Construction & Maintenance Costs

- Requires bridge crossing construction across North 4th Street and within the Ecological Reserve, and the east approach to the bridge at North 4h Street will require a pier supported trail to achieve the necessary grade.
- Option A could require retaining walls and boardwalks within the Ecological Reserve area.
- Fencing is likely to be required to limit and control public access in the sensitive environmental areas within the Ecological Reserve area.

(2) Potential to Access Maximum Funding Sources

- Construction could be coordinated with the future Hilton Garden Inn development, and the project might be conditioned to assist with funding.
- State Parks might be able to assist with funding in areas around the Ecological Reserve.
- Trail provides the potential for regional transportation linkages, and might qualify for grants and government funding assistance.

(3) Potential for Near-Term Construction

- Requires coordination with the future Hilton Garden Inn, City of Pismo Beach, State Parks and private property acquisition.

E. NEXT-STEP RECOMMENDATIONS

This Feasibility Study provides support for a Beach Cities Trail concept and its ability to be developed along a continuous route and constructed within a normal cost range. The City Council and other regulating authorities should utilize this foundation document to prepare a definitive trail alignment study for adoption. Looking forward toward providing project funding for the trails development and documentation of public support along with business partnerships will be essential.

The development of an economic strategy utilizing an enterprise group for public, private and government grants for the capital improvements should be given a priority. The development of project funding is a one to two year commitment for initial resources to become available. The primary funding source will be through transportation funding opportunities. Transportation funding is essentially provided for bicycle commuting purposes. All future planning and documentation should make an emphasis on bicycle commuting rather than recreational uses.

The following actions are recommended to move toward build-out of the Beach Cities Trail over time:

Action Items:

1. City Council should authorize development of Bicycle Transportation Plan (BTP) to cover Class I, II & III alternative transportation bikeways and multi use trail opportunities. The BTP is the base documentation requested and usually is required when applying for transportation funding.
2. City Council should authorize preparation of updates to Circulation and Park & Recreation Elements to the City General Plan. This will provide consistency in the planning process and give an opportunity for public participation. Timing for the General Plan update should be reviewed with the City's Planning Department staff.
3. City Council should authorize concurrent development of a Preliminary Alignment Plan and Mitigated Negative Declaration (MND) under CEQA based on the preferred trail route presented in the Feasibility Study. The City of Grover Beach, as the lead agency, would need concurrence for development of an MND from the adjacent responsible agencies (City of Pismo Beach, County of San Luis Obispo, California State Parks and SLOCOG) if the scope of the project is broadened to include any trail portions beyond the Grover Beach City limits. With completion of the Preliminary Alignment Plan and MND, The City would be positioned to complete final design and implementation of trail segments as funding becomes available.
4. Prepare a Public Participation Plan as part of the Preliminary Alignment Plan development to include all stakeholders of Beach Cities Trail. Establish meeting dates and locations for public notice. This is to develop a consensus support group with common interests, benefits and objectives. Through the public participation process a concentration on the development of state legislative support will be instrumental in future funding resources.
5. Concurrent with the Preliminary Alignment Plan development, prepare a detailed project cost estimate for each trail segment or phase and match with candidate funding sources. City staff should consider requesting City Council to establish a budget line item for matching funds for grant opportunities. A cash commitment and in kind services of staff and consultants will make the project competitive.
6. Planning for the longer term the City of Grover Beach should consider developing an Enterprise Team. This group will identify and utilize a combination of revenue centers with the emphasis of public/private, joint ventures, partnerships or concession agreements to provide both for additional capital improvements and the operation and maintenance of the trail. The early establishment of this group would allow it to also be involved in the grant development program for phasing the Beach Cities Trail construction.



Section 4.0

Preliminary Cost Analysis



Beach Cities Multi-Purpose Trail

TRAIL FEASIBILITY STUDY

4.0 Preliminary Cost Analysis

This section outlines the preliminary construction and design costs for the proposed Beach Cities Trail as shown in the most feasible trail routes set forth in Section 4.0. A complete Opinion of Preliminary Cost with a more detailed breakdown of costs for each trail route option identified for this Feasibility Study in Section 2.0 is provided in Appendix D. These costs are preliminary only and a more detailed Opinion of Construction Cost should be prepared as more detailed designs are developed for each trail route section.

A. COST ASSUMPTIONS

All costs are planning-level opinions of probable cost for constructing the Beach Cities Trail. These costs are based upon the trail description contained in this Feasibility Study. Costs are provided for specific design and construction related components of four types of trail improvements: design, trail construction, crossing construction, and trail amenities.

Design

Design costs include final plans, specifications, and estimates (PS&E), environmental and legal processing, surveying and plan check/inspection fees. The cost of these services is estimated based upon a percentage of the cost of the trail construction, crossing construction, trail amenities, environmental permitting and construction contingency. The total estimated design cost is provided in the Opinion of Preliminary Cost.

Trail Construction

Trail construction costs include grading the trail area at an average width of 16' and construction of a 12' wide asphalt base and paved trail to accommodate bicycle, pedestrian, and maintenance vehicles. Costs for pavement markings, striping to divide the trail lanes, and location signage are included in the cost. The total trail construction cost is provided in the Opinion of Preliminary Cost.

- All Class I facilities would require new construction of 12-foot path with two 2-foot shoulders.
- All bridge over-crossings include bridge abutments and footings, and are for bicycles and pedestrian use only (vehicle use will be prohibited).
- Cost includes demolition, landscaping and trail amenities.
- No streetlight, traffic signal or power pole relocation costs are included in any of the facility cost numbers.
- No utility relocation costs are included in any of the facility cost numbers.
- No right-of-way values or cost are included in any of the facility cost numbers.
- No environmental permitting or mitigation costs are included in any of the facility cost numbers.

Cost assumptions for the Class II facility are as follows:

- 4" AC on 12" AB section
- No existing curb & gutter, no dry utilities, no storm drains.
- No relocation of any dry utilities, above ground cabinets, or streetlights.
- No power poles or traffic signal relocation.
- No guardrail removal/replacement.
- No environmental permitting or mitigation costs are included in any of the facility cost numbers.

Crossing Construction

Typical conceptual designs have been developed for locations where the trail crosses the existing roads or rail corridor. The costs for design and construction of these crossings includes all structural elements, and items not considered in construction of the typical trail sections (paving, striping, signage, etc.). The total cost of all crossings is provided in the Opinion of Preliminary Cost.

Trail Amenities

The trail amenities cost includes comfort and safety features for the trail user. This includes directional signage located at ½ mile intervals. Landscaping (ground cover and trees) would be provided in the urban areas, with trees only provided in the rural areas of the trail. The trail amenities costs also include staging areas at locations identified in the plan for trail users to park their vehicles, unload their bikes or prepare for walking different sections of the trail. Bike racks would be provided only at the staging area locations and at trail access points with other trails, as identified in the trail plan segment descriptions. The cost for trail amenities is provided for each trail segment. The total cost of all trail amenities is provided in the Opinion of Preliminary Cost.



B. MOST FEASIBLE ROUTES
OPINION OF PRELIMINARY
COST

The following Opinion of Preliminary Cost summarizes the costs associated with construction of the most feasible trail alignment for the Beach Cities Multi-Purpose Trail.

SEGMENT & OPTION	TRAIL LENGTH (MILES)	COST PER MILE	TOTAL COST
SEGMENT 1			
Segment 1, Option D1	1.26	\$291,008	\$365,965
Segment 1, Option E	1.21	\$979,399	\$1,187,150
SEGMENT 1 TOTAL			\$1,553,115
SEGMENT 2			
Segment 2, Option A	0.23	\$13,559,212	\$3,158,680
Segment 2, Option B	0.72	\$1,056,556	\$760,400
Segment 2, Option D	1.04	\$589,728	\$614,300
SEGMENT 2 TOTAL			\$4,533,380
SEGMENT 3			
Segment 3, Option A	1.17	\$2,047,290	\$2,398,586
SEGMENT 3 TOTAL			\$2,398,586

TOTAL TRAIL LENGTH (MILES)	5.64	MOST FEASIBLE TRAIL ALIGNMENT TOTAL	\$8,485,081
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SEGMENT 3

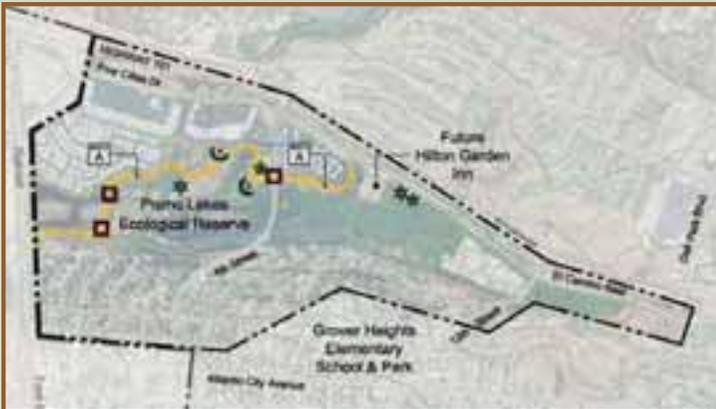
Option A - Multi-Purpose (Segment 3)				
	QUANTITY	UNIT	UNIT COST	TOTAL COST
TRAIL CONSTRUCTION (6,186 LF)				
CLEAR, GRUBB, & GRADING FOR NEW TRAIL	98,976	SF	3.50	\$346,416.00
12FT WIDE AC PAVING- 4" OVER 4" BASE	74,232	SF	3.50	\$259,812.00
2' DG SHOULDERS EACH SIDE	24,744	SF	0.50	\$12,372.00
PAINT STRIPING - CENTER LINE	6,186	LF	1.00	\$6,186.00
PAINT STRIPING - ARROWS	22	EA	25.00	\$550.00
TRAIL FENCING (ECOLOGICAL RESERVE AREA)	3,000	LF	25.00	\$75,000.00
BOARDWALK TRAIL (ECOLOGICAL RESERVE ISLANDS)	3,600	SF	10.00	\$36,000.00
RETAINING WALL - 6' HIGH (WEST OF 4TH ST TRAILHEAD)	500	LF	250.00	\$125,000.00
REMOVABLE BOLLARDS	4	EA	500.00	\$2,000.00
DIRECTIONAL & SAFETY SIGNS	11	EA	750.00	\$8,250.00
SUBTOTAL				\$871,586.00

BRIDGE CONSTRUCTION (3)				
BRIDGE, ABUTMENTS & INSTALLATION- 175 LF (PONDS)	2	EA	280,000.00	\$560,000.00
BRIDGE, ABUTMENTS & INSTALLATION- 225 LF (4TH STREET)	1	EA	300,000.00	\$300,000.00
PIER SUPPORTED BRIDGE APPROACH EAST OF 4TH ST (350 LF)	4,200	SF	100.00	\$420,000.00
SUBTOTAL				\$1,280,000.00

REST AREA/ OVERLOOKS (2)				
DECOMPOSED GRANITE PAVING	34,000	SF	3.00	\$102,000.00
TRAIL FENCE	500	LF	25.00	\$12,500.00
BENCHES - METAL - 72" LENGTH	8	EA	2,000.00	\$16,000.00
PICNIC TABLES - WOOD & CONCRETE	4	EA	1,570.00	\$6,280.00
TRASH & RECYCLING RECEPTACLES - METAL	4	EA	820.00	\$3,280.00
BIKE RACKS - 6 SLOT	4	EA	835.00	\$3,340.00
INTERPRETIVE SIGN & BASE	4	EA	3,500.00	\$14,000.00
SUBTOTAL				\$157,400.00

SCENIC OVERLOOKS (2)				
DECOMPOSED GRANITE PAVING	2,000	SF	3.00	\$6,000.00
TRAIL FENCE	300	LF	25.00	\$7,500.00
BENCHES - METAL - 72" LENGTH	4	EA	2,000.00	\$8,000.00
SUBTOTAL				\$21,500.00

Continued on next page...





Segment 3, Option A (Continued)

	QUANTITY	UNIT	UNIT COST	TOTAL COST
STAGING AREA (2)				
DECOMPOSED GRANITE PAVING	6,400	SF	3.00	\$19,200.00
INFORMATION TRAILHEAD KIOSK	2	EA	3,500.00	\$7,000.00
PARKING ENTRY SIGN	2	EA	1,000.00	\$2,000.00

SUBTOTAL \$28,200.00

AT GRADE CROSSING - UNSIGNALIZED (1)				
DECORATIVE CROSSWALK (DERMATHERM) 50' X 12'	600	SF	15.00	\$9,000.00
CURB RAMPS & CURB-CUTS	1	EA	500.00	\$500.00
RUMBLE STRIPS OR DOTS (50' X 10')	500	SF	1.00	\$500.00
STREET PAINTING (XING AHEAD)	2	EA	100.00	\$200.00
ROADWAY APPROACH SIGN	2	EA	750.00	\$1,500.00

SUBTOTAL \$11,700.00

STAGING AREA (2)				
DECOMPOSED GRANITE PAVING	6,400	SF	3.00	\$19,200.00
INFORMATION TRAILHEAD KIOSK	2	EA	3,500.00	\$7,000.00
PARKING ENTRY SIGN	2	EA	1,000.00	\$2,000.00

SUBTOTAL \$28,200.00

TOTAL OPTION A (SEGMENT 3) \$2,398,586
COST PER MILE \$2,047,290

C. POTENTIAL FUNDING OPPORTUNITIES

Funding for the proposed trail is anticipated from two primary sources:

- Exactions placed on private development
- Through public funding programs

Exactions on private development for the construction of trails and obtaining trail easements can be applied through design review of private projects and dedication through the subdivision approval process. A standard condition can be applied to new projects containing the potential route, requiring an irrevocable offer of dedication for a trail easement. The trail route would be reviewed as part of the overall project, helping to produce a well-integrated design. Environmental review and any outside permitting for the trail, such as wildlife agency permits, would be obtained as part of the overall project. The project developer would bear the cost of constructing the trail.

Where completion of the trail necessitates construction of trail segments across some publicly owned properties and privately owned open space parcels, the City may need to bear the cost of construction of the trail, as well as the environmental analysis and any necessary permitting. There are a variety of potential public funding sources available to the City including local, state, regional, federal, foundation and corporate funding programs.

Appendix E contains a Funding Sources Matrix which provides a summary of the primary federal, state and local/regional funding sources that may be available to this project. The matrix includes a description of the available funding and project eligibility requirements as well as contact information. The matrix outlines additional program funding sources and identifies key bicycle-related contacts to help obtain federal, state, local and private monies.

In addition to the matrix in Appendix E, this study has included additional existing funding sources currently used by the County to fund the Parks programs (from the Parks and Recreation Element, Parks and Recreation Project List Adopted December 19, 2006).

- General Fund - used for all aspects of Parks financing including maintenance, staffing, acquisition and project costs.
- Grants - available from local, state and federal agencies as well as from foundations and corporations. Matching funds for grants can be provided by additional grant funding, volunteer hours, donations, in-kind services and/or other revenue sources. Grants are usually limited to capital projects and major maintenance construction; they typically may not be used for ongoing maintenance.
- Financial support derived from the generosity of individuals and groups in the community. Donations from the community support recreation programs, improve facilities, and provide resources, including park sites.
- Certain park facilities are partially or fully self-supported by user fees. The County charges user fees for facility and services where those fees can be cost-effectively collected. User fees are charged for services such as use of regional parks, camping, reservation of ball fields and tennis courts, golf, boating access, swimming, and facility rental for special events.
- A concession is a lease or agreement to operate or provide a service within a County park. Concessions provide income and desirable visitor services. Examples include bicycle rentals, and coffee shops or juice clubs that cater to bicyclists.
- Enterprise funds are established to finance and account for the operation and maintenance of facilities and services which are self-supporting by user charges with the use of tax revenues. Lopez Lake is operated as an Enterprise Fund.

While not currently used to fund trails and parks, the following is a partial list of funding sources used by other local jurisdictions to fund parks, recreation and natural areas and should be considered to potentially fund the Beach Cities Trail.

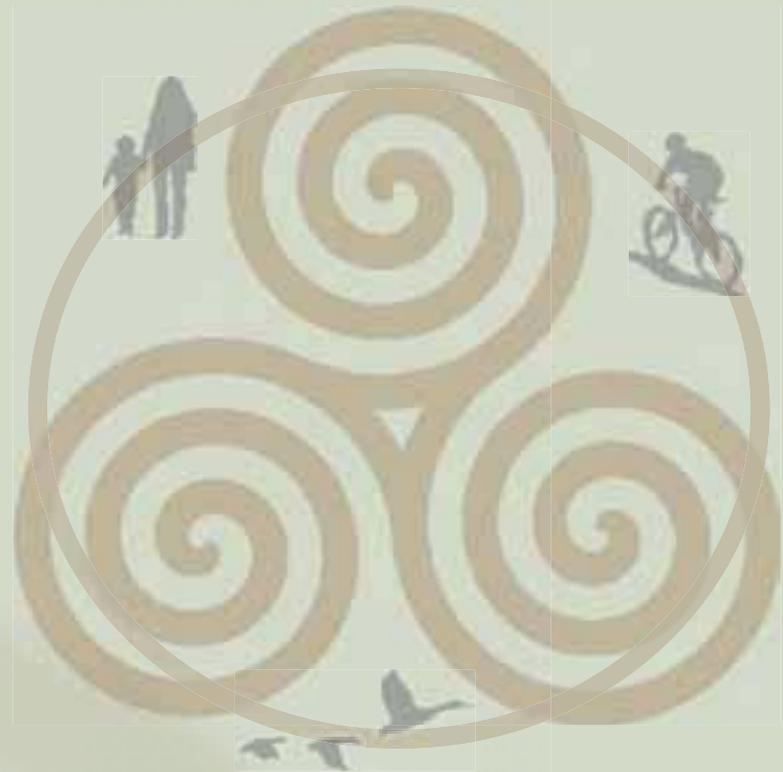
- Public Facility Fees for new community-serving recreation facilities. These fees could be expanded to include funds for the purchase and development of regional parks and trails by working cooperatively with the County's cities and special districts.
- Quimby Fees for the construction and rehabilitation of community-serving recreation. The Quimby Act specifies rules and regulations governing the use of these fees.
- Public/Private Partnerships and collaborative agreements which allow the effective and creative expansion park and recreation services to address a wide range of community needs. Such agreements allow project capital and maintenance costs to be shared by the partners. Working partnerships have been developed over the years between the County and local school districts, cities, and special districts. Effective partnerships can make more effective use of tax dollars.
- Transient Occupancy Tax (Bed Tax - TOT) for individuals occupying any hotel or motel room or any rental (of less than 30 days). The majority of the county's transient occupants are tourists visiting the area many of which use the County's parks and recreation facilities. An increase or reallocation of the TOT could generate funds to maintain, develop and/or improve park and recreational opportunities.
- Formation of an Assessment District - voters could create one or more special districts to finance park acquisition, development, and maintenance. The guidelines for creating assessment districts are subject to change. One such option is the creation of a San Luis Obispo County Parks, Recreation and Open Space District.
- General Obligation Bonds - voters could approve a general obligation bond to finance needed park improvements. This option could be considered as a means to pay for a major share of land acquisition, capital improvements and rehabilitation of the park system outlined in this Study.
- An increase in the sales tax could allow funding to be directed toward the acquisition and/or maintenance of park properties.



Beach Cities Multi-Purpose Trail

TRAIL FEASIBILITY STUDY

Beach Cities Multi-Purpose Trail
TRAIL FEASIBILITY STUDY



Appendices

March, 2010



Beach Cities Multi-Purpose Trail

TRAIL FEASIBILITY STUDY



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Beach Cities Multi-Purpose Trail

TRAIL FEASIBILITY STUDY



Appendix A

Route Option Evaluation



Beach Cities Multi-Purpose Trail

TRAIL FEASIBILITY STUDY



A. ROUTE OPTION EVALUATION

The following section provides an in-depth evaluation of each alternative trail option against the established Route Selection Matrix criteria. The evaluation presents a key map, brief trail option description, and detailed listing of trail option attributes relative to the evaluation criteria shown on the Route Selection Matrix in Section C.

A. SEGMENT 1

Segment 1 is located on the south side of West Grand Avenue to Oceano between the Pacific Ocean and South 4th Street. Segment 1 contains Pismo State Beach and the Grover Beach Train Depot. The routes studied were looked at to determine the best way to get from Oceano to West Grand Avenue. The Trail Depot and South 4th Street have plans for future redevelopment and improvements which includes bike facilities.

The trail types studied within this segment are Class I and pedestrian trails (Multi-Purpose) and Pedestrian Only Trails. There is an existing equestrian trail through the dunes, the Grand Dunes Trail, (Segment 1, Option D and D1) which was analyzed to see if the trail could accommodate a Class 1 multi-use path or whether it should be a pedestrian only boardwalk similar to what has been developed north of West Grand Avenue. Option D and D1 studied a Class I Multi-Purpose Trail and/ or Pedestrian Only trail individually to determine the most feasible trail type in this sensitive area.

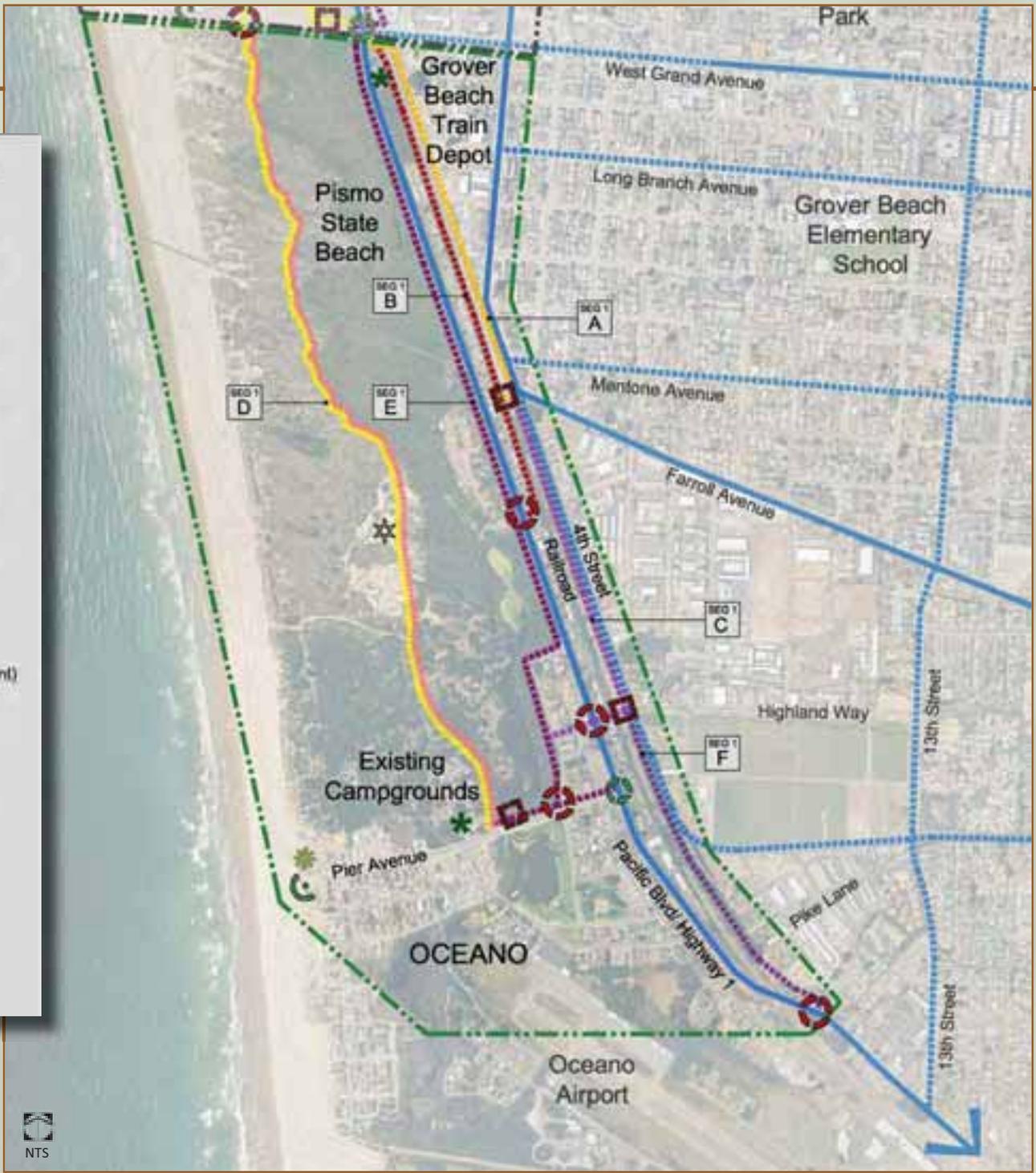


Segment Map

- Option A – Multi-Purpose Trail
- Option B - Multi-Purpose Trail
- Option C - Multi-Purpose Trail
- Options D & D1 - Multi-Purpose Trail & Pedestrian Only Trail
- Option E - Multi-Purpose Trail
- Option F - Multi-Purpose Trail

LEGEND

- Existing or Planned Trail/ Boardwalk
- Option A - Potential Multi-Purpose Trail
- Option A1 - Potential Pedestrian Only Trail
- Option B - Potential Multi-Purpose Trail
- Option B1 - Potential Pedestrian Only Trail
- Option C - Potential Multi-Purpose Trail
- Option C1 - Potential Pedestrian Only Trail
- Option D - Potential Multi-Purpose Trail
- Option D1 - Potential Pedestrian Only Trail
- Option E - Potential Multi-Purpose Trail
- Option F - Potential Multi-Purpose Trail
- Existing Class 2 Bike Lane
- Planned Class 2 Bike Lane (from City of Grover Beach Circulation Element)
- Recommended Class 2 Bike Lane
- Existing Traffic Signal
- Potential Controlled At Grade Crossing
- Existing Staging Area
- Potential Staging Area
- Proposed Pedestrian/ Bicycle Bridge
- Existing Scenic Overlook
- Proposed Rest Area/ Overlook



NTS

SEGMENT 1- OPTION A

Option A is a multi-purpose trail located along the east side of the railroad tracks between West Grand Avenue on the north to Farroll Avenue on the south. The railroad is much lower than the roadway grade at Farroll Avenue, and a bridge crossing is proposed over the tracks in this location to link with Segment 1, Option B.

This option has several constraints that makes trail placement less feasible. Option A requires crossing the railroad tracks at West Grand Avenue to access the existing signalized crossing at West Grand and Highway 1, and the northern portion of the railroad corridor at the Train Depot is very constrained and therefore the trail will be located close to the tracks and the trail width will be narrow.

Length:

2,915 linear feet (0.55 miles)

Jurisdiction:

City of Grover Beach
Union Pacific Railroad
Oceano



Environmental/ Regulatory Criteria:

(1) Potential to Minimize or Avoid Environmental & Cultural Impacts

- Option A not expected to cause environmental impacts.
- Known cultural resource sites exist in this area, and the impacts will depend on the placement of the trail and the amount of grading required.

(2) Potential to Minimize Number of Permits Required

- Option A is not expected to require agency permits.

(3) Potential to Minimize Footprint through Construction

- Option A places the trail on land already cleared by the railroad, and although some shrubs and grasses may need to be removed, it will not be difficult mitigate and to minimize the trail footprint on the natural environment.

(4) Potential to Maximize Consistency with Existing Plans

- Option A is consistent with SLOCOG and City of Grover Beach's desire to connect with the Train Depot and to utilize the railroad corridor as a regional bike trail which could one day connect with the City of San Luis Obispo, and link with Class II bike lanes.
- Options A is not consistent with the City of Pismo Beach's trail planning, and they do not support a trail along the railroad corridor because they feel the lack of visibility could create a crime and unsafe area.

Jurisdictional Criteria:

- (1) Potential to Minimize Impacts to Private Property
 - Other than Union Pacific Railroad, Option A does not directly impact private property; however it does locate the trail adjacent to private property on the northeast portion of the trail this significantly constrains the width of the trail in this area.
- (2) Potential to Avoid Railroad Corridor Constraints
 - Option A is located within the railroad corridor and will require negotiation and coordination with Union Pacific Railroad. The area for the trail will be placed as far away from the railroad tracks as possible and fencing will be provided; however since the area proposed for the trail is so narrow in the north it will be difficult to maintain an appropriate setback.

Physical Criteria:

- (1) Potential to Connect to Existing or Proposed Class I or II Bikeway
 - Option A has the potential to connect with multiple Class I and Class II bike routes.
- (2) Potential for a Direct & Consistent Route
 - Although Option A provides a direct route, it is not continuous. It involves a signalized crossing and/or bridge to connect to other trails and surrounding residential areas.
- (3) Potential to Maximize Commuter Value
 - Although Option A has the potential to link the surrounding neighborhoods with Class II bike lanes on West Grand Avenue and Highway 1, the option involves using a bridge and signalized crossing to access the routes.

- (4) Potential to Maintain an Accessible Trail Route
 - The terrain for Option A is relatively flat and an ADA accessible trail can be achieved. An elevator would be required at the bridge.
- (5) Potential to Provide Logical Roadway Access Points
 - Option A connects with an existing signalized intersection at West Grand Avenue and an existing stop sign at Farroll that will accommodate safe crossings. There is an area where the trail will be located directly adjacent South 4th Street beginning north of Mentone Avenue and running to Farroll Avenue, and will not be safely accessed by northbound bicyclists so this area is recommended be fenced to control and limit entry.
- (6) Potential to Connect to Existing or Proposed Hiking Trails
 - Option A has the potential to connect to existing and proposed hiking trails, but they are not in the immediate vicinity.
- (7) Potential to Maximize Recreational Value
 - Option A is located along the railroad corridor and it is not scenic and does not have recreational value.
- (8) Potential for Rest Areas & Overlooks with Interpretive Signage
 - Option A does not have the potential to provide overlooks, rest areas or interpretive exhibits.
- (9) Potential to Provide a Staging Area
 - There is a staging area proposed within the Train Depot expansion project, which locates parking further south and provides additional bike facilities; however, this staging area is on the opposite side of the tracks as this option and while usable for this trail it is not convenient for this route.



Fiscal Criteria:

- (1) Potential to Minimize Construction & Maintenance Costs
 - Requires a bridge crossing at Farroll Avenue.
 - Fencing is required to limit and control public access in the railroad corridor and along a portion of South 4th Street.
- (2) Potential to Access Maximum Funding Sources
 - This trail option might qualify for regional transportation grants and government funding assistance.
- (3) Potential for Near-Term Construction
 - Requires coordination with Union Pacific Railroad, and is not likely to be completed near-term.



View of railroad corridor looking south from the Depot, Option A would be on the left side of this photo



View of railroad corridor looking north towards the Depot, Option A would be on the right side of this photo

SEGMENT 1- OPTION B

Option B is a multi-purpose trail located on the west side of the railroad tracks. This option is proposed to link on the north with the existing signalized crossing at West Grand Avenue, and aligns with an existing driveway along Pacific Boulevard/ Highway 1 on the south. This option would be developed along with the Trail Depot expansion project, and should be designed along with the proposed Train Depot circulation plans. This option avoids crossing the tracks at West Grand Avenue, and alleviates the need for the bridge at Farroll Avenue and the narrowing of the trail corridor due to property constraints that occur in Segment 1, Option A, but would require removal of existing trees and vegetation.

Length:

3,570 linear feet (0.68 miles)

Jurisdiction:

City of Grover Beach
County of San Luis Obispo
Union Pacific Railroad
Oceano



Environmental/ Regulatory Criteria:

(1) Potential to Minimize or Avoid Environmental & Cultural Impacts

- Option B is not expected to cause immitigable environmental impacts.
- Known cultural resource sites exist in this area, and the impacts will depend on the placement of the trail and the amount of grading required.

(2) Potential to Minimize Number of Permits Required

- Option B is not expected to require agency permits.

(3) Potential to Minimize Footprint through Construction

- The northern portion of Option B is located on land that is already cleared by the railroad project, but the southern portion of the trail will likely require removal of trees and shrubs. These trees and shrubs are on the fringe of the habitat area, and they are adjacent to an existing man-made facility and heavily used area.

(4) Potential to Maximize Consistency with Existing Plans

- Option B is consistent with SLOCOG and City of Grover Beach's desire to connect with the Train Depot and to utilize the railroad corridor as a regional bike trail which could one day connect with the City of San Luis Obispo, and link with Class II bike lanes.
- Options B is not consistent with the City of Pismo Beach's trail planning, and they do not support a trail along the railroad corridor because they feel the lack of visibility could create a crime and unsafe area.



Jurisdictional Criteria:

- (1) Potential to Minimize Impacts to Private Property
 - Other than Union Pacific Railroad, Option B does not impact private property.
- (2) Potential to Avoid Railroad Corridor Constraints
 - Option B is located within the railroad corridor and will require negotiation and coordination with Union Pacific Railroad. The area for the trail will be placed as far away from the railroad tracks as possible and fencing will be provided.

Physical Criteria:

- (1) Potential to Connect to Existing or Proposed Class I or II Bikeway
 - Option B has the potential to connect with multiple Class I and Class II bike routes
- (2) Potential for a Direct & Consistent Route
 - Option B provides a direct and continuous route.
- (3) Potential to Maximize Commuter Value
 - Although Option B does not link directly into surrounding neighborhoods, it does connect with Class II bike lanes with an off-street Class I option for commuting.
 - The trail links with the Train Depot which has a potential to allow people to ride to the station, and then take the train to work or rideshare, and greatly maximizes commuter value.
- (4) Potential to Maintain an Accessible Trail Route
 - The terrain for Option B is relatively flat and an ADA accessible trail should be able to be achieved.

- (5) Potential to Provide Logical Roadway Access Points
 - Option B has the potential to connect at an existing signal at West Grand Avenue to the north, but there is a mid-block connection proposed to the south at Winterhaven Way and Pacific Boulevard/ Highway 1. Bicyclists traveling south along Highway 1 would not be able to safely access the trail until the traffic signal at Pier Avenue, approximately ½ mile away. If this option is implemented, it is suggested that controlled at grade crossings are studied in this location to accommodate the trail crossing.
- (6) Potential to Connect to Existing or Proposed Hiking Trails
 - Option B has the potential to connect to existing and proposed hiking trails, but they are not in the immediate vicinity.
- (7) Potential to Maximize Recreational Value
 - Option B is located along the railroad corridor and is not scenic and does not have recreational value.
- (8) Potential for Rest Areas & Overlooks with Interpretive Signage
 - Option B does not have the potential to provide overlooks, rest areas or interpretive exhibits.
- (9) Potential to Provide a Staging Area
 - There is a staging area proposed within the Train Depot expansion project, which locates parking further south and provides additional trails and bike facilities. Parking for trail use should be located as close to the trail entry as possible and provide signs to guide trail users to trail entrance.



Fiscal Criteria:

- (1) Potential to Minimize Construction & Maintenance Costs
 - Fencing is required to limit and control public access in the railroad corridor and along Highway 1.
- (2) Potential to Access Maximum Funding Sources
 - Trail provides the potential for regional transportation linkages, and might qualify for grants and government funding assistance.
- (3) Potential for Near-Term Construction
 - Requires coordination with Union Pacific Railroad, County of San Luis Obispo and Cal Trans, and is not likely to be completed near-term.



View of a potential area for the trail between the railroad corridor and the habitat area



Corner of West Grand Avenue and Highway 1 offers a potential location for the multiple trail options to meet at an existing signalized crossing, Option B could weave through and enhance this landscaped corner.

SEGMENT 1- OPTION C

Option C is a multi-purpose trail located between the east side of the railroad tracks and South 4th Street from Farroll Avenue on the north to Highland Way on the south, where there is an area that the railroad is much lower than the roadway grade and a bridge crossing is proposed over the tracks to link with Pacific Boulevard/ Highway 1.

Option C starts as a Class II bike lanes on Farroll Avenue and South 4th Street, where it links to the Class I trail, and the trail continues to Highland Way. At Highland Way the Class I trail crosses on a bridge to Pacific Boulevard/ Highway 1 and transverses approximately 360' on a Class III street to link with Segment 1, Option E.

Length:

2,600 linear feet (0.49 mile)

Jurisdiction:

Union Pacific Railroad
County of San Luis Obispo
Oceano



Environmental/ Regulatory Criteria:

- (1) Potential to Minimize or Avoid Environmental & Cultural Impacts
 - Option C is not expected to cause environmental impacts.
 - Known cultural resource sites exist in this area, and the impacts will depend on the placement of the trail and the amount of grading required.
- (2) Potential to Minimize Number of Permits Required
 - Option C is not expected to require agency permits.
- (3) Potential to Minimize Footprint through Construction
 - Option C places the trail on land already cleared by the railroad and roadway, and although some shrubs and grasses may need to be removed, it will not be difficult mitigate and to minimize the trail footprint on the natural environment.
- (4) Potential to Maximize Consistency with Existing Plans
 - Option C is consistent with SLOCOG and City of Grover Beach's desire to connect with the Train Depot and to utilize the railroad corridor as a regional bike trail which could one day connect with the City of San Luis Obispo, and link with Class II bike lanes.
 - Options C is not consistent with the City of Pismo Beach's trail planning, and they do not support a trail along the railroad corridor because they feel the lack of visibility could create a crime and unsafe area.

Jurisdictional Criteria:

- (1) Potential to Minimize Impacts to Private Property
 - Other than Union Pacific Railroad, Option C does not directly impact private property.
- (2) Potential to Avoid Railroad Corridor Constraints
 - Option C is located within the railroad corridor and will require negotiation and coordination with Union Pacific Railroad. The area for the trail will be placed as far away from the railroad tracks as possible and fencing will be provided.

Physical Criteria:

- (1) Potential to Connect to Existing or Proposed Class I or II Bikeway
 - Option C has the potential to connect with multiple Class I and Class II bike routes.
- (2) Potential for a Direct & Consistent Route
 - Option C provides a direct and continuous route.
- (3) Potential to Maximize Commuter Value
 - Option C links to surrounding neighborhoods with Class II bike lanes, and provides a connection to the Train Depot.
- (4) Potential to Maintain an Accessible Trail Route
 - The terrain for Option C is relatively flat and an ADA accessible trail can be achieved. An elevator would be required at the bridge.

(5) Potential to Provide Logical Roadway Access Points

- Option C connects with existing stop signs at Farroll Avenue and Highland Way, and both can accommodate safe crossings. The trail will likely be located directly adjacent South 4th Street, and will not be safely accessed by northbound bicyclists, so this area is recommended be fenced to control and limit entry.
- There is a mid-block connection at an unsignalized intersection at Harding Drive and Pacific Boulevard/ Highway 1, and bicyclists traveling along Highway 1 would not be able to safely access the trail until the traffic signal at Pier Avenue, approximately 500' away. Trail use could be diverted to Pier Avenue but the existing development makes sidewalk widening difficult, and the quiet street and quiet preserve of Pismo State Beach is a nice alternative to the heavily traveled Pier Avenue. It is suggested that alternatives for crossing Highway 1 be studied if this option is implemented.

(6) Potential to Connect to Existing or Proposed Hiking Trails

- Option C has the potential to connect to existing and proposed hiking trails, but they are not in the immediate vicinity.

(7) Potential to Maximize Recreational Value

- Option C is located along the railroad corridor and is not scenic and does not have recreational value.

(8) Potential for Rest Areas & Overlooks with Interpretive Signage

- Option C does not have the potential to provide overlooks and rest areas or interpretive exhibits.

(9) Potential to Provide a Staging Area

- There are staging areas proposed within the Train Depot expansion project and adjacent to the Pismo State Beach campground parking lot; however, neither of these is in the immediate vicinity.



Fiscal Criteria:

- (1) Potential to Minimize Construction & Maintenance Costs
 - Requires a bridge crossing at Farroll Avenue.
 - Fencing is required to limit and control public access in the railroad corridor and South 4th Street.
- (2) Potential to Access Maximum Funding Sources
 - This trail option might qualify for regional transportation grants and government funding assistance.
- (3) Potential for Near-Term Construction
 - Requires coordination with Union Pacific Railroad, County of San Luis Obispo and Cal Trans, and is not likely to be completed near-term.



View of railroad corridor looking north from Highland Way at the approximate location for the proposed bridge which would utilize the existing grade change to cross over the railroad tracks



View of railroad corridor looking south from Highland Way and South 4th Street, Option C would be located between South 4th Street and the railroad corridor in this photo

SEGMENT 1- OPTION D

Option D is a link between West Grand Avenue to the north and Pier Avenue to the south. This option would parallel the alignment of the existing equestrian trail, and the existing equestrian uses would continue and should be separated from the multi-purpose trail by a fence. Option D looked at adding a Class I multi-purpose path, and Option D1 studied a boardwalk similar to the existing pedestrian boardwalk north of West Grand Avenue.

Option D1 ranked the highest using the Route Selection Matrix and it is described in Section 3.0 of this Feasibility Study.

Length:

6,640 linear feet (1.26 miles)

Jurisdiction:

City of Grover Beach
Oceano
State Parks



Environmental/ Regulatory Criteria:

- (1) Potential to Minimize or Avoid Environmental & Cultural Impacts
 - Option D contains a portion of coastal dune scrub habitat, which is a special status plant community, and there is suitable habitat for special status plants known to occur in the coastal dune scrub habitat, as well as the potential for wetlands and other special status plant communities to occur.
 - Option D will require widening of the existing sand trail and may cause environmental impacts and vegetation removal for the trail construction.
 - Option D is located in an area that has not been disturbed, and there is a greater chance of discovering and impacting cultural resources.
- (2) Potential to Minimize Number of Permits Required
 - Option D is likely to require agency permits from the Army Corps of Engineers, Department of Fish & Game, U.S. Fish & Wildlife Service, and Regional Water Quality Control Board.
- (3) Potential to Minimize Footprint through Construction
 - It will be difficult to minimize the trail footprint for Option D because it will require widening of the existing sand trail and may cause environmental impacts and vegetation removal.
- (4) Potential to Maximize Consistency with Existing Plans
 - Option D links into the Class II bike lanes on Highway 1 via West Grand Avenue and Pier Avenue, which is consistent with SLOCOG's regional transportation plans and the City of Grover Beach's Circulation Element.



Jurisdictional Criteria:

(1) Potential to Minimize Impacts to Private Property

- Option D does not impact private property.

(2) Potential to Avoid Railroad Corridor Constraints

- Option D does not have any railroad corridor constraints.

Physical Criteria:

(1) Potential to Connect to Existing or Proposed Class I or II Bikeway

- Option D has the potential to connect with proposed Class I trails, and can safely link with Class II bike lanes.

(2) Potential for a Direct & Consistent Route

- Option D can provide a continuous and direct off-street route.

(3) Potential to Maximize Commuter Value

- Option D links the residential areas south of Pier Avenue with a choice of Class I or II bike lanes, and would likely maximize commuter value.

(4) Potential to Maintain an Accessible Trail Route

- The terrain for Options D is rolling but an ADA accessible trail can be achieved.

(5) Potential to Provide Logical Roadway Access Points

- Option D has northern and southern terminuses at mid-block locations. The trail use is not proposed to cross Pier Avenue but instead travel east to connect with Segment 1, Option E, or west to the trailhead at the campground or ocean. However, commuter traffic from the surrounding neighborhoods and parks south of the trail might try to cross Pier Avenue. Trail crossing on West Grand Avenue occurs close to the proposed parking lot entrance, and cars are already slowing down. Crossing alternatives should be studied for both streets if this option is implemented.

(6) Potential to Connect to Existing or Proposed Hiking Trails

- Options D has good potential to connect with the existing boardwalk and Monarch Butterfly Grove in Segment 2, Option D, and could become part of an extended trail system within Pismo State Beach.

(7) Potential to Maximize Recreational Value

- Option D is located within Pismo State Beach and is very scenic and has very high recreational value.
- The multi-use trail would be a benefit for the campground and increase the recreational amenities available for the campground.

(8) Potential for Rest Areas & Overlooks with Interpretive Signage

- Option D has good potential to provide overlooks and rest areas with interpretive exhibits.
- Option D interpretive exhibits could tie into the interpretive program already existing within the campground within the southern section of the trail.

(9) Potential to Provide a Staging Area

- Options D has two existing staging area and restrooms within the parking lots for Pismo State Beach on the north and south sides of the trail, and a proposed staging area envisioned off Pier Avenue in the vacant land west of the campground entrance.

Fiscal Criteria:

(1) Potential to Minimize Construction & Maintenance Costs

- Option D requires fencing on both sides of the trail to limit access through the dunes and to separate equestrian and multi-purpose trail use.
- Option D could potentially use a portion of the existing Guiton Trail to reduce trail costs, or it could use signs to direct trail users down the campground roadway to Pier Avenue, but this has not been factored into the Opinion of Preliminary Cost.

(2) Potential to Access Maximum Funding Sources

- Option D might qualify for regional transportation grants and government funding assistance.

(3) Potential for Near-Term Construction

- Option D construction timing will depend on funding and both options require coordination with State Parks and Oceano and they are not likely to be completed near-term.



Looking west at the vacant land west of the campground entrance which could be a new staging area off Pier Avenue



Looking north at the point where the campground roadway veers away from the Grand Dunes Trail, and there is a sand maintenance road leading to the beach and trail

SEGMENT 1- OPTION E

Segment 1, Option E was rated as one of the most feasible trail alignments; refer to Section 3.0 for description.

SEGMENT 1- OPTION F

Option F is a multi-purpose trail located between the east side of the railroad tracks and South 4th Street from Highland Way on the north to the intersection of South 4th Street and Pacific Boulevard/ Highway 1 on the south. There are improvement plans for widening South 4th Street which include a dedicated bike lane and additional parking and travel lanes, and South 4th Street is proposed to join with The Pike to become a more heavily traveled roadway.

Length:

2,615 linear feet (0.50 mile)

Jurisdiction:

Union Pacific Railroad

Oceano



Environmental/ Regulatory Criteria:

- (1) Potential to Minimize or Avoid Environmental & Cultural Impacts

- Option F is not expected to cause immitigable environmental or cultural impacts.

- (2) Potential to Minimize Number of Permits Required

- Option F is not expected to require agency permits.

- (3) Potential to Minimize Footprint through Construction

- Option F places the trail on land already cleared by the railroad and roadway, and although some large Eucalyptus trees may need to be removed, it will not be difficult mitigate and to minimize the trail footprint on the natural environment.

- (4) Potential to Maximize Consistency with Existing Plans

- Option F is consistent with SLOCOG and City of Grover Beach's desire to utilize the railroad corridor as a regional bike trail which could one day connect with the City of San Luis Obispo, and link with Class II bike lanes.
- Options F is not consistent with the City of Pismo Beach's trail planning, and they do not support a trail along the railroad corridor because they feel the lack of visibility could create a crime and unsafe area.

Jurisdictional Criteria:

- (1) Potential to Minimize Impacts to Private Property
 - There is an existing residence on the southern portion of the trail, between the railroad and South 4th Street that would force the trail to be located on street. Other than Union Pacific Railroad, Option F does not directly impact any other private property.
- (2) Potential to Avoid Railroad Corridor Constraints
 - Option F is located within the railroad corridor and will require negotiation and coordination with Union Pacific Railroad. The area for the trail will be placed as far away from the railroad tracks as possible and fencing will be provided.

Physical Criteria:

- (1) Potential to Connect to Existing or Proposed Class I or II Bikeway
 - Option F has the potential to connect with multiple Class I and Class II bike routes.
- (2) Potential for a Direct & Consistent Route
 - Option F provides a direct and route, but it is not consistent because it is an on- street system on South 4th Street until past the residential lot on the southern portion of the trail, and then it is Class I.
- (3) Potential to Maximize Commuter Value
 - Option F links the surrounding neighborhoods with Class II bike lanes, and provides a connection to the Train Depot.

- (4) Potential to Maintain an Accessible Trail Route
 - The terrain for Option F is relatively flat and an ADA accessible trail can be achieved.
- (5) Potential to Provide Logical Roadway Access Points
 - Option F connects with Highland Way and at an existing stop sign, but the trail will be accessed at an unsignalized mid-block location on South 4th Street at the residential lot on the southern portion of the trail. There is a stop sign at the intersection of South 4th Street and Pacific Boulevard/ Highway 1, but it is not a 4-way stop, and it is dangerous for bikes attempting to cross over Highway 1. It is suggested that alternatives for crossing Highway 1 and the unsignalized mid-block location on South 4th Street be studied if this option is implemented.
 - The entire trail will likely be located directly adjacent South 4th Street, and will not be safely accessed by northbound bicyclists, so it is recommended that this area be fenced to control and limit entry points.
- (6) Potential to Connect to Existing or Proposed Hiking Trails
 - Option F has the potential to connect to existing and proposed hiking trails, but they are not in the immediate vicinity.
- (7) Potential to Maximize Recreational Value
 - Option F is located along the railroad corridor and it is not scenic and does not have recreational value.
- (8) Potential for Rest Areas & Overlooks with Interpretive Signage
 - Option F does not have the potential to provide overlooks, rest areas or interpretive exhibits.



(9) Potential to Provide a Staging Area

- There are staging areas proposed within the Train Depot expansion project and adjacent to the Pismo State Beach campground parking lot; however, neither of these are in the immediate vicinity.



View of railroad corridor looking north from approximately where South 4th Street is proposed to join with The Pike, Option F is proposed on the right side of this photo

Fiscal Criteria:

(1) Potential to Minimize Construction & Maintenance Costs

- Fencing is required to limit and control public access in the railroad corridor and South 4th Street.

(2) Potential to Access Maximum Funding Sources

- This trail option might qualify for regional transportation grants and government funding assistance.

(3) Potential for Near-Term Construction

- Requires coordination with Union Pacific Railroad and Oceano, and is not likely to be completed near-term.



View of railroad corridor looking south from approximately where South 4th Street is proposed to join with The Pike and the residential lot restricts the southern portion of option to an on-street route, Option F is proposed on the left side of this photo

B. SEGMENT 2

The easterly boundary of Segment 2 is the east side of the railroad tracks and the west side of the Prime Outlets of Pismo Beach. The northern boundary is from the south side of Highway 101 and Oceanview Avenue in the City of Pismo Beach. The southern boundary is along the south side of West Grand Avenue in Grover Beach, and the western boundary is the Pacific Ocean. West Grand Avenue is a vital link from the beach to the downtown areas, and is the primary signalized intersection where several trails converge. The City should consider enhancing the intersection at West Grand and Highway 1 with traffic calming and aesthetic treatments, and possible grade separated crossings for trails if feasible.

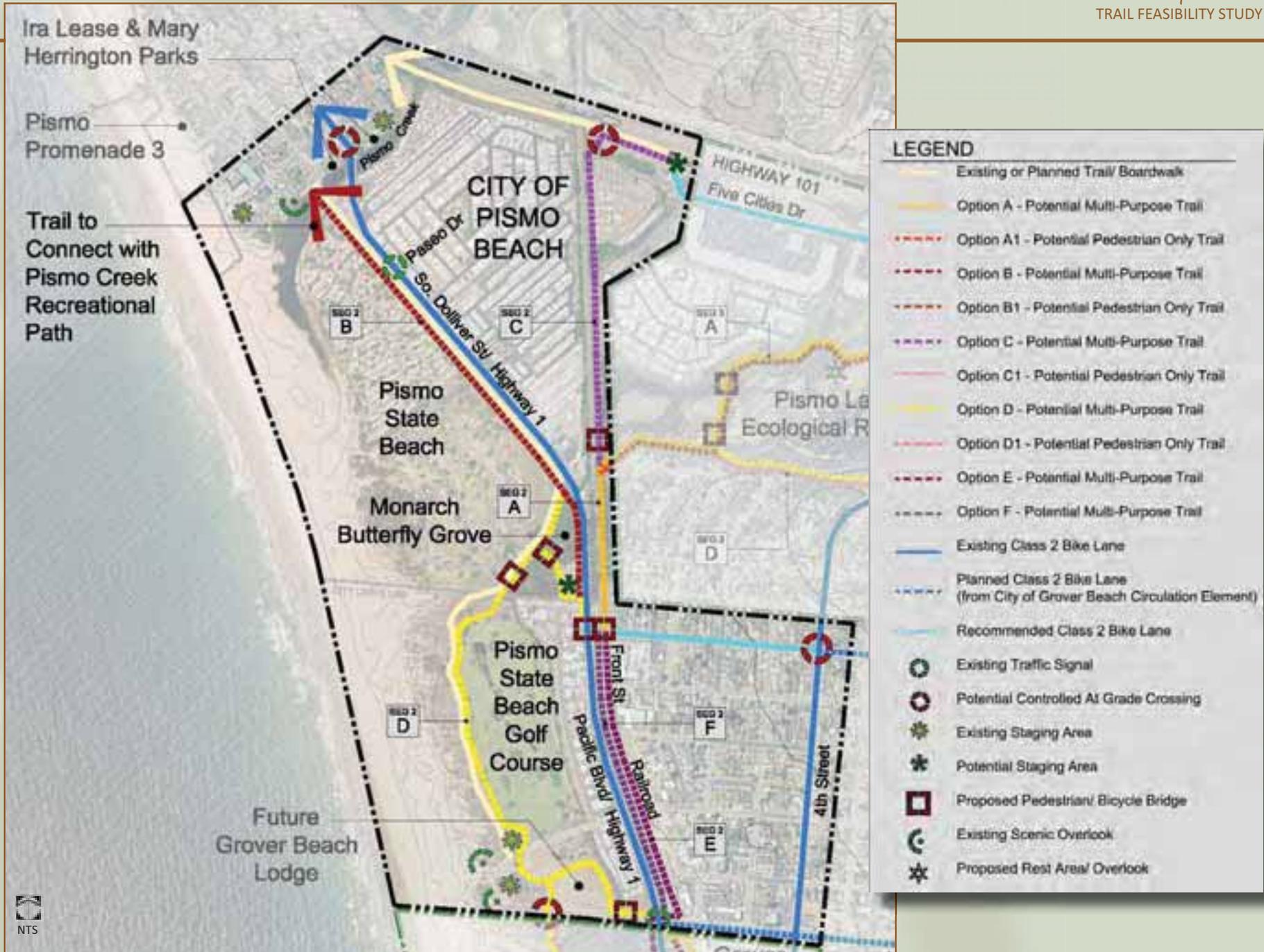
Segment 2 contains the Pismo State Beach, Monarch Butterfly Reserve, Pismo State Beach Golf Course, and the future Grover Beach Lodge Project. There is an existing boardwalk pedestrian trail along the west side of South Dolliver Avenue which links Pismo State Beach to an existing bridge over Pismo Creek, and from this connection there is an excellent linkage to Promenade 3 Pier, Mary Herrington Park, and Ira Lease Park in the City of Pismo Beach. There is also an existing pedestrian boardwalk within Pismo State Beach which has beautiful scenic vistas, and there is ample room to the east for an adjacent bike path which could provide an off-street trail connection for both commuting and recreational uses.

All options in this segment looked at new Class I multi-purpose trails which would have both pedestrian and bicycle trail use. Options B and D have established pedestrian boardwalks that are very good condition, therefore Option B would be a widened trail to accommodate a Class I multi-purpose trails; and the boardwalk alongside of Option D would continue to serve pedestrians only, but the new trail would be multi-purpose. The following alternative route options have been identified in Segment 2, and detailed descriptions of each are in Appendix A:

- Option A- Multi-Purpose Trail
- Option B- Multi-Purpose Trail
- Option C- Multi-Purpose Trail
- Option D- Multi-Purpose Trail
- Option E- Multi-Purpose Trail
- Option F- Multi-Purpose Trail



Segment Map



ROUTE OPTION EVALUATION

Route Identification Map
for Segment 2

SEGMENT 2- OPTION A

Segment 2, Option A was rated as one of the most feasible trail alignments; refer to Section 3.0 for description.

SEGMENT 2- OPTION B

Segment 2, Option B was rated as one of the most feasible trail alignments; refer to Section 3.0 for description.

SEGMENT 2- OPTION C

Option C is a potential multi-purpose trail linking to the proposed trail system within the Pismo Lakes Ecological Reserve. Option C is located along the railroad corridor and could link into the existing bike bridge adjacent to Highway 101 and Five Cities Drive, just east of the railroad, and tie into the Pismo Creek Recreational Path and the Ira Lease Park.

Length:

3,125 linear feet (0.59 miles)

Jurisdiction:

City of Pismo Beach
Union Pacific
Cal Trans

C



Environmental/ Regulatory Criteria:

- (1) Potential to Minimize or Avoid Environmental & Cultural Impacts
 - Due to the steep embankment along the railroad corridor, Option C will likely be constructed as a boardwalk within some of the Reserve area. This boardwalk would be constructed on the fringe of the Reserve in an area already developed by the railroad, and it is not likely to impact sensitive species.
 - Portions of Option C contain riparian and wetland vegetation as well as suitable habitat for the California red-legged frog. Future studies should be conducted to determine the extent of potentially jurisdictional wetlands and presence/absence of special status species. Should future trail construction impact willow riparian or other regulated habitat types or special status species, mitigation and potentially permitting would be required.
 - Known cultural resource sites exist in this area, and the impacts will depend on the placement of the trail and the amount of grading required.
- (2) Potential to Minimize Number of Permits Required
 - Option C will require a bridge crossing at the existing culvert and may require agency permits from the Army Corps of Engineers, Department of Fish & Game, U.S. Fish & Wildlife Service, and Regional Water Quality Control Board..
- (3) Potential to Minimize Footprint through Construction
 - Option C places the trail on land already cleared by the railroad whenever feasible, but may need to be constructed as a boardwalk within the Reserve area in some locations.

(4) Potential to Maximize Consistency with Existing Plans

- Option C is consistent with SLOCOG and City of Grover Beach’s desire to connect with the Train Depot and to utilize the railroad corridor as a regional bike trail which could one day connect with the City of San Luis Obispo, and link with Class II bike lanes.
- Options C is not consistent with the City of Pismo Beach’s trail planning, and they do not support a trail along the railroad corridor because they feel the lack of visibility could create a crime and unsafe area.

Jurisdictional Criteria:

(1) Potential to Minimize Impacts to Private Property

- Other than Union Pacific Railroad, Option C does not impact private property.

(2) Potential to Avoid Railroad Corridor Constraints

- Option C is located within the railroad corridor and will require negotiation and coordination with Union Pacific Railroad.

Physical Criteria:

(1) Potential to Connect to Existing or Proposed Class I or II Bikeway

- Option C has the potential to connect with existing and proposed Class I trails, Pismo Creek Recreational Path and the Pismo Lakes Reserve, and Class II bike lanes along Five Cities Drive.

(2) Potential for a Direct & Consistent Route

- Option C provides a continuous and direct off-street route which links surrounding residential areas.

(3) Potential to Maximize Commuter Value

- Option C has the potential to link the surrounding neighborhoods with Class II bike lanes on Five Cities Drive.

(4) Potential to Maintain an Accessible Trail Route

- The terrain for Option C is very flat and an ADA accessible trail would be easily achieved.

(5) Potential to Provide Logical Roadway Access Points

- Although Option C has an unsignalized mid-block crossing on Five Cities Drive, it is a low volume of traffic and traffic calming enhancements could allow for safe crossings.

(6) Potential to Connect to Existing or Proposed Hiking Trails

- Option C has the potential to connect with Pismo Lakes Reserve trails.

(7) Potential to Maximize Recreational Value

- Option C is located along the railroad corridor and is not scenic and does not have recreational value.

(8) Potential for Rest Areas & Overlooks with Interpretive Signage

- Option C does not have the potential to provide overlooks, rest areas or interpretive exhibits.

(9) Potential to Provide a Staging Area

- There is a staging area proposed south of Highway 101, just east of the existing bicycle bridge. It is a small dirt vacant lot which could facilitate a few cars, but due to the remote location it would not highlight the trail.



Fiscal Criteria:

(1) Potential to Minimize Construction & Maintenance Costs

- Due to the steep embankment adjacent the Ecological Reserve a boardwalk will be required; otherwise this trail option is very short and fairly inexpensive.
- This option makes use of an existing bicycle bridge, and thus saves money in comparison to other trail alternatives in this segment.
- Fencing is likely to be required to limit and control public access in the railroad corridor.

(2) Potential to Access Maximum Funding Sources

- This trail option might qualify for regional transportation grants and government funding assistance.

(3) Potential for Near-Term Construction

- Requires coordination with Union Pacific Railroad, City of Pismo Beach, and Cal Trans and is not likely to be completed near-term.



View of the railroad corridor looking north, Option C is proposed along the right side of this photo



Photograph of the existing bicycle bridge connecting Five Cities Drive to Price Street, the bridge could be used by Option C and link into the Beach Cities Multi-Purpose Trail

SEGMENT 2- OPTION D

Segment 2, Option D was rated as one of the most feasible trail alignments; refer to Section 3.0 for description.

SEGMENT 2- OPTION E

Option E is a multi-purpose trail located between railroad tracks and Front Street. This option is proposed to link on the south with the existing signalized crossing at West Grand Avenue, and on the north with Segment 2, Option A and the proposed Class II bike plan on Atlantic City Avenue on the south. This option has good potential to connect the trail to the adjacent surrounding neighborhoods while making the railroad corridor a safer environment.

Length:

2,430 linear feet (0.46 mile)

Jurisdiction:

City of Grover Beach
Union Pacific Railroad



Environmental/ Regulatory Criteria:

- (1) Potential to Minimize or Avoid Environmental & Cultural Impacts
 - Option E is not expected to cause environmental impacts.
 - Known cultural resource sites exist in this area, and the impacts will depend on the placement of the trail and the amount of grading required
- (2) Potential to Minimize Number of Permits Required
 - Option E is not expected to require agency permits.
- (3) Potential to Minimize Footprint through Construction
 - Option E places the trail on land already cleared by the railroad or roadway, and although some shrubs and grasses may need to be removed, it will not be difficult mitigate and to minimize the trail footprint on the natural environment.
 - Existing power poles may need to be relocated or undergrounded to accommodate the trail
- (4) Potential to Maximize Consistency with Existing Plans
 - Option E is consistent with SLOCOG and City of Grover Beach's desire to connect with the Train Depot and to utilize the railroad corridor as a regional bike trail which could one day connect with the City of San Luis Obispo, and link with Class II bike lanes.
 - Options E is not consistent with the City of Pismo Beach's trail planning, and they do not support a trail along the railroad corridor because they feel the lack of visibility could create a crime and unsafe area.

Jurisdictional Criteria:

- (1) Potential to Minimize Impacts to Private Property
 - Other than Union Pacific Railroad, Option E does not directly impact private property; however it does locate the trail close to property on the southeast portion of the trail and significantly constrains the width of the trail in this area.
- (2) Potential to Avoid Railroad Corridor Constraints
 - Option E is located within the railroad corridor and will require negotiation and coordination with Union Pacific Railroad. The area for the trail will be placed as far away from the railroad tracks as possible and fencing will be provided; however since the area proposed for the trail will need to be narrowed in the south due to the double tracking in this area it will be difficult to maintain an appropriate setback.
 - Trail users would be directed to the proposed bridge in Segment 2, Option A, or to the existing signalized crossing at West Grand Avenue to cross the tracks. Trail users would have to cross the tracks at West Grand Avenue to access the signal.
 - This area of the railroad is heavily used by local residents crossing over to the ocean, and the trail and fencing along the tracks could provide a safer environment along the rail corridor than what is currently existing.

Physical Criteria:

- (1) Potential to Connect to Existing or Proposed Class I or II Bikeway
 - Option E has the potential to connect with multiple Class I and Class II bike routes.

- (2) Potential for a Direct & Consistent Route
 - Option E provides continuous route, but the trail users would need to use a bridge to cross the tracks.
- (3) Potential to Maximize Commuter Value
 - Option E has the potential to link surrounding neighborhoods with Class II bike lanes on West Grand Avenue, Highway 1, Atlantic City Avenue, and North 4th Street.
- (4) Potential to Maintain an Accessible Trail Route
 - The terrain for Option E is very flat and an ADA accessible trail would be easily achieved. An elevator would be required at the bridge.
- (5) Potential to Provide Logical Roadway Access Points
 - Option E has the potential to safely connect with Atlantic City Avenue and the existing signal at West Grand Avenue.
- (6) Potential to Connect to Existing or Proposed Hiking Trails
 - Option E has the potential to existing and proposed hiking trails, but they are not in the immediate vicinity.
- (7) Potential to Maximize Recreational Value
 - Option E is located along the railroad corridor and is not scenic and does not have recreational value.
- (8) Potential for Rest Areas & Overlooks with Interpretive Signage
 - Option E does not have the potential to provide overlooks and rest areas or interpretive exhibits.



(9) Potential to Provide a Staging Area

- There is no staging area associated with this option, but there is one adjacent to it in Segment 1, Option A.

Fiscal Criteria:

(1) Potential to Minimize Construction & Maintenance Costs

- Fencing is required to limit and control public access in the railroad corridor.

(2) Potential to Access Maximum Funding Sources

- This trail option might qualify for regional transportation grants and government funding assistance.

(3) Potential for Near-Term Construction

- Requires coordination with Union Pacific Railroad, and is not likely to be completed near-term.



View of the railroad corridor looking south, Option E is proposed along the left side of this photo



The railroad tracks become double in this section and this minimizes the buffer distance available for this trail option

SEGMENT 2- OPTION F

Option F is a multi-purpose trail located on a wide vacant open space between Pacific Boulevard/Highway 1 and the railroad tracks. This option is proposed to link on the south with the existing signalized crossing at West Grand Avenue and join on the north with the proposed bridge in Segment 2, Option A. This option avoids the narrowing of the trail corridor due to property constraints that occur in Segment 2, Option E, and alleviates the need for trail to cross the tracks without a bridge.

Length:

2,275 linear feet (0.50 mile)

Jurisdiction:

City of Grover Beach

Union Pacific Railroad

Cal Trans

**Environmental/ Regulatory Criteria:**

- (1) Potential to Minimize or Avoid Environmental & Cultural Impacts
 - Option F is not expected to cause environmental impacts.
 - Known cultural resource sites exist in this area, and the impacts will depend on the placement of the trail and the amount of grading required.
- (2) Potential to Minimize Number of Permits Required
 - Option F is not expected to require agency permits.
- (3) Potential to Minimize Footprint through Construction
 - Option F places the trail on land already cleared by the railroad or roadway, and it will not be difficult to minimize the trail footprint on the natural environment.
- (4) Potential to Maximize Consistency with Existing Plans
 - Option F is consistent with SLOCOG and City of Grover Beach's desire to connect with the Train Depot and to utilize the railroad corridor as a regional bike trail which could one day connect with the City of San Luis Obispo, and link with Class II bike lanes.
 - Options F is not consistent with the City of Pismo Beach's trail planning, and they do not support a trail along the railroad corridor because they feel the lack of visibility could create a crime and unsafe area.



Jurisdictional Criteria:

- (1) Potential to Minimize Impacts to Private Property
 - Other than Union Pacific Railroad, Option F does not impact private property.
- (2) Potential to Avoid Railroad Corridor Constraints
 - Option F is located within the railroad corridor and will require negotiation and coordination with Union Pacific Railroad. The area for the trail will be placed as far away from the railroad tracks as possible and fencing will be provided. Trail users would be directed to the proposed bridge in Segment 2, Option A, or to the existing signalized crossing at West Grand Avenue to cross the tracks.
 - This area of the railroad is heavily used by local residents crossing over to the ocean, and the trail and fencing along the tracks could provide a safer environment along the rail corridor than what is currently existing.

Physical Criteria:

- (1) Potential to Connect to Existing or Proposed Class I or II Bikeway
 - Option F has the potential to connect with multiple Class I and Class II bike routes
- (2) Potential for a Direct & Consistent Route
 - Although Option F provides a direct route, it is not continuous. It involves a signalized crossing and/or bridge to connect to other trails and surrounding residential areas.
- (3) Potential to Maximize Commuter Value
 - Although Option F has the potential to link the surrounding neighborhoods with Class II bike lanes on West Grand Avenue and Highway 1, the option involves using a bridge and signalized crossing to access the routes.

- (4) Potential to Maintain an Accessible Trail Route
 - The terrain for Option F is very flat and an ADA accessible trail would be easily achieved. An elevator would be required at the bridge.
- (5) Potential to Provide Logical Roadway Access Points
 - Option F has the potential to safely connect with Class I trails via the proposed bridge to the north and existing signal to the south at West Grand Avenue.
 - Fencing should be provided along Pacific Boulevard/Highway 1 to ensure that trail users are channeled to an appropriate crossing location at West Grand Avenue.
- (6) Potential to Connect to Existing or Proposed Hiking Trails
 - Option F has the potential to existing and proposed hiking trails, but they are not in the immediate vicinity.
- (7) Potential to Maximize Recreational Value
 - Option F is located along the railroad corridor and is not scenic and does not have recreational value.
- (8) Potential for Rest Areas & Overlooks with Interpretive Signage
 - Option F does not have the potential to provide overlooks and rest areas or interpretive exhibits.
- (9) Potential to Provide a Staging Area
 - There is no staging area associated with this option, but there is one adjacent to it in Segment 1, Option A.



Fiscal Criteria:

- (1) Potential to Minimize Construction & Maintenance Costs
 - Fencing is required to limit and control public access in the railroad corridor and along Highway 1.
- (2) Potential to Access Maximum Funding Sources
 - This trail option most likely would not qualify for funding assistance.
- (3) Potential for Near-Term Construction
 - Requires coordination with Union Pacific Railroad and Cal Trans, and is not likely to be completed near-term.



View of the railroad corridor looking south, Option F is proposed along the right side of this photo



Photo of a resident crossing the railroad tracks with his bicycle



This photograph shows the location for the proposed bridge at Highway 1, as the crossing sign points out there are many people illegally crossing the road and railroad in this location



Segment Map

C. SEGMENT 3

The eastern boundary of Segment 3 is the east side of the railroad tracks and west side of the Prime Outlets of Pismo Beach. The western boundary is the east side of Oak Park Boulevard, North 12th Street, and North 6th Street. The northern boundary is the south side of Highway 101; and the southern boundary is the south side of El Camino Real, Margarita Avenue, and Parkview Avenue.

Segment 3 contains the Pismo Outlet Stores, Pismo Lakes Ecological Reserve and the Future Hilton Garden Inn. The Pismo Lakes Ecological Reserve and the area around the Future Hilton Garden Inn are very scenic and offer excellent potential for off-street trail connections for both commuting and recreational uses.

Two potential trail types were studied within this segment: Class I Multi-Purpose and Pedestrian Only trails, and they were analyzed to determine the most feasible trail type in this area. The following alternative route options have been identified in Segment 3, and they are described in detail in Appendix A:

- Options A & A1 - Multi-Purpose & Pedestrian Only Trail
- Options B & B1 - Multi-Purpose & Pedestrian Only Trail
- Options C & C1 - Multi-Purpose & Pedestrian Only Trail
- Options D & D1 - Multi-Purpose & Pedestrian Only Trail



Route Identification Map for Segment 3

LEGEND	
	Existing or Planned Trail/ Boardwalk
	Option A - Potential Class 1 Multi-Purpose Trail
	Option A1 - Potential Hiking Trail
	Option B - Potential Class 1 Multi-Purpose Trail
	Option B1 - Potential Hiking Trail
	Option C - Potential Class 1 Multi-Purpose Trail
	Option C1 - Potential Hiking Trail
	Option D - Potential Class 1 Multi-Purpose Trail
	Option D1 - Potential Hiking Trail
	Option E - Potential Class 1 Multi-Purpose Trail
	Option F - Potential Class 1 Multi-Purpose Trail
	Existing Class 2 Bike Lane
	Planned Class 2 Bike Lane (from City of Grover Beach Circulation Element)
	Recommended Class 2 Bike Lane
	Existing Traffic Signal
	Potential Controlled At Grade Crossing
	Existing Staging Area
	Potential Staging Area
	Proposed Pedestrian/ Bicycle Bridge
	Existing Scenic Overlook
	Proposed Rest Area/ Overlook



SEGMENT 3- OPTIONS A & A1

Segment 3, Options A and A1 were rated as some of the most feasible trail alignments; refer to Section 3.0 for descriptions.

SEGMENT 3- OPTIONS B AND B1

Options B and B1 are a potential link between the west side of Nacimiento Avenue and Margarita Avenue at North 6th Street. This area already has an existing dirt trail which is heavily used by the surrounding neighborhood. The existing trail is wider on the east side by Nacimiento Avenue, and becomes narrower as it approaches Margarita Avenue due to steep grades and dense vegetation. Options B and B1 provide an enhanced trail with additional amenities and the potential to link to Options C and C1, and Option A and A1.

Option B1 ranked very high in the Selection Evaluation Matrix, and although the trail does not link into the most feasible trail identified in Section 3.0, it has the potential to be a very nice neighborhood hiking trail. The City of Grover Beach should consider the addition of rest areas, overlooks and interpretive signage to make the route and more formal and useable trail option.

Environmental/ Regulatory Criteria:

(1) Potential to Minimize or Avoid Environmental & Cultural Impacts

- The majority of Options B and B1 should be able to avoid environmental wetland areas and protect cultural resources, but as the existing trail narrows near Margarita Avenue Option B will have an unavoidable impact on the existing coast live oak woodland. Option B1 could maintain the existing vegetation and would not impact existing vegetation.
- Option B will affect existing slopes near Margarita Avenue, and may require retaining walls to minimize impacts, but Option B1 could maintain the existing grades.
- Impacts to cultural resources are considered low to moderate since this area has been graded/ disturbed previously.

(2) Potential to Minimize Number of Permits Required

- Options B and B1 do not appear to require permits, but focused studies should be conducted to define the extent of any adjacent federal and state jurisdictional wetlands to determine the presence/absence of special status species.

(3) Potential to Minimize Footprint through Construction

- Option B1 will be located on an existing trail and has a good potential to minimize the footprint through construction.
- Option B will also be located on an existing trail but will require widening in some locations, and in the western section of the trail it has a moderate potential to minimize the footprint through construction due to the steeper slopes and existing oak trees.

Length:

1,920 linear feet (0.36 mile)

Jurisdiction:

City of Grover Beach
State Parks

B



(4) Potential to Maximize Consistency with Existing Plans

- Option B is not consistent with the City of Grover Beach Circulation Element or SLOCOG's future regional trail concepts, as it does not directly connect with Class II bike lanes on Five Cities Drive, North 4th Street, or Oak Park Boulevard.
- Option B1 is consistent with future trail and public access improvement plans for the by State Parks and the City of Grover Beach.

Jurisdictional Criteria:

(1) Potential to Minimize Impacts to Private Property

- Options B and B1 are visible to some backyards; however, this is already an existing condition and can be mitigated with landscape screening.

(2) Potential to Avoid Railroad Corridor Constraints

- Options B and B1 do not impact the Railroad corridor.

Physical Criteria:

(1) Potential to Connect to Existing or Proposed Class I or II Bikeway

- Options B and B1 do not directly connect to existing and/or proposed Class I or 2 bikeways.

(2) Potential for a Direct & Consistent Route

- Options B and B1 do not provide continuous and direct routes.

(3) Potential to Maximize Commuter Value

- Options B and B1 do not maximize commuter value.

(4) Potential to Maintain an Accessible Trail Route

- Options B and B1 should be able to be designed to maintain ADA accessibility but may require grading, ramps and retaining walls on the western section near Margarita Avenue.

(5) Potential to Provide Logical Roadway Access Points

- Option B has safe access points at the terminus points of low volume roadways, but because it is a bike route, the roadways beyond the trail must be considered. The unsignalized intersection at Nacimiento and North 12th Street is very busy, and at the base of a steep hill, and trail users traveling north might be tempted to cross the road at Nacimiento rather than traveling the additional 250 feet to El Camino Real, turning around and coming back on the other side of the street to access the trail.
- Option B1 provides safe access points at the terminus points of low volume roadways.

(6) Potential to Connect to Existing or Proposed Hiking Trails

- Options B and B1 could connect with existing and proposed hiking trails on the west side, but not on the east, with the linkage through Option C and C1.



(7) Potential to Maximize Recreational Value

- Options B and B1 can maximize the recreational potential by integrating existing aesthetic attributes and linking to natural areas.

(8) Potential for Rest Areas & Overlooks with Interpretive Signage

- Options B and B1 can take full advantage of the surrounding natural beauty by locating rest areas/ overlooks at key vista points and large open areas.

(9) Potential to Provide a Staging Area

- Options B and B1 can provide a staging area at Margarita Avenue.



There are some very good locations for rest areas/ overlooks along Option B



Proposed trail staging area at Margarita Avenue looking north



Fiscal Criteria:

- (1) Potential to Minimize Construction & Maintenance Costs
 - Options B and B1 will be located on existing trails and have a good potential to minimize construction costs.

- (2) Potential to Access Maximum Funding Sources
 - This trail option most likely would not qualify for government funding; however, there might be local contributions available.

- (3) Potential for Near-Term Construction
 - Due to neighborhood support for this trail and potential local funding, the potential for near-term completion is good.



View of the wide trail at the easterly entrance of Option B



SEGMENT 3- OPTION C AND C1

Options C and C1 are a potential link between Options B and B1 beginning at Margarita Avenue at North 6th Street, and Options A and A1 at North 4th Street. This area already has an existing dirt trail which is very narrow, with steep slopes and dense vegetation.

Length:

965 linear feet (0.18 mile)

Jurisdiction:

City of Grover Beach
State Parks

C



Environmental/ Regulatory Criteria:

(1) Potential to Minimize or Avoid Environmental & Cultural Impacts

- Option C1 follows an existing trail and should be able to maintain the existing vegetation in the southern section around Margarita Avenue, but it is very dense around North 4th Street and it will be difficult to minimize environmental impacts.
- Option C follows an existing trail, but would need to be widened for a bike path. Due to the dense trees in the area, there will likely be significant impacts to the vegetation along the trail.
- Option C will likely affect existing slopes near Margarita Avenue and may require retaining walls to minimize impacts, but Option C1 could better maintain the existing grades because it doesn't need to maintain a constant grade for ADA accessibility.
- Impacts to cultural resources are considered low to moderate since this area has been graded/ disturbed previously.

(2) Potential to Minimize Number of Permits Required

- Options C and C1 will require a bridge to link with Options A and A1 and may require agency permits from the Army Corps of Engineers, Department of Fish & Game, U.S. Fish & Wildlife Service, and Regional Water Quality Control Board.

(3) Potential to Minimize Footprint through Construction

- Option C1 will be located on an existing trail and has a good potential to minimize the footprint through construction in the southern section around Margarita Avenue, but it is very difficult around the western section (by North 4th Street).
- Option C will also be located on an existing trail but it will require widening in most locations, and in the western section of the trail it has a low potential to minimize the footprint through construction due to the steeper slopes and existing riparian vegetation and trees.

(4) Potential to Maximize Consistency with Existing Plans

- Option C is not consistent with the City of Grover Beach Circulation Element or SLOCOG's future regional trail concepts, as it does not directly connect with Class II bike lanes on Five Cities Drive, North 4th Street, or Oak Park Boulevard.
- Option C1 is consistent with future trail and public access improvement plans for the by State Parks and the City of Grover Beach.

Jurisdictional Criteria:

(1) Potential to Minimize Impacts to Private Property

- Options C and C1 do not impact private property.

(2) Potential to Avoid Railroad Corridor Constraints

- Options C and C1 do not impact the Railroad corridor.

Physical Criteria:

(1) Potential to Connect to Existing or Proposed Class I or II Bikeway

- Options C and C1 do not directly connect to existing and/or proposed Class I or II bikeways.

(2) Potential for a Direct & Consistent Route

- Options C and C1 do not provide continuous and direct routes.

(3) Potential to Maximize Commuter Value

- Options C and C1 do not maximize commuter value.

(4) Potential to Maintain an Accessible Trail Route

- Although Options C and C1 could be designed to maintain ADA accessibility, but it would require extensive grading, ramps and retaining walls.

(5) Potential to Provide Logical Roadway Access Points

- Options C and C1 have safe access points at Margarita Avenue, but the terminus at North 4th Street is at a mid-block location that would require fencing to direct trail users to the existing traffic signal at El Camino Real.

(6) Potential to Connect to Existing or Proposed Hiking Trails

- Options C and C1 could connect with existing and proposed hiking trails, but they are limited in the east in how far they can travel.



(7) Potential to Maximize Recreational Value

- Options C and C1 can maximize the recreational potential by integrating existing aesthetic attributes and linking to natural areas.

(8) Potential for Rest Areas & Overlooks with Interpretive Signage

- Options C and C1 can take full advantage of the surrounding natural beauty with interpretive signs, but there are not large open areas for locating rest areas/ overlooks.

(9) Potential to Provide a Staging Area

- Options C and C1 can provide a staging area at Margarita Avenue, but this is associated with Options B and B1.



Option C can take advantage of the surrounding natural beauty with interpretive signs and maximize the recreational potential by integrating existing aesthetic attributes and linking to surrounding natural areas



Fiscal Criteria:

- (1) Potential to Minimize Construction & Maintenance Costs
 - Options C and C1 will be located on existing trails and have a good potential to minimize construction costs.
- (2) Potential to Access Maximum Funding Sources
 - This trail option most likely would not qualify for government funding; however, State Parks might be able to assist with funding with the trail on their property.
- (3) Potential for Near-Term Construction
 - Option C is not likely to be developed in the near-term due to the environmental constraints, but C1 has a good potential due to neighborhood support for this trail.



Option C is located in an area with dense trees and steep grades, and will require careful trail placement



SEGMENT 3- OPTION D AND D1

Options D and D1 are a potential link between Option A and A1, and offer a potential loop trail around the Pismo Lakes Ecological Reserve. The west side of the trail is links with Options A and A1 north of North 1st Street, and the east side of the trail would terminate at the proposed staging area on North 4th Street. This area does not have any developed trails and has steep slopes and dense vegetation.

Length:

2,650 linear feet (0.50 mile)

Jurisdiction:

City of Grover Beach
City of Pismo Beach
State Parks

D



Environmental/ Regulatory Criteria:

- (1) Potential to Minimize or Avoid Environmental & Cultural Impacts
 - There is not an existing pathway through the dense trees and steep slope, and a trail will significantly impact riparian and wetland habitat areas and require the removal of vegetation.
 - This area has not undergone previous ground disturbance so there is a greater potential for discovery of, and impact to, cultural resources.
- (2) Potential to Minimize Number of Permits Required
 - Options D and D1 are likely to require agency permits from the Army Corps of Engineers, Department of Fish & Game, U.S. Fish & Wildlife Service, and Regional Water Quality Control Board.
- (3) Potential to Minimize Footprint through Construction
 - Options D and D1 are located in an area without any existing trails, and it would not be possible to minimize the footprint through contraction.

(4) Potential to Maximize Consistency with Existing Plans

- Option D is not consistent with the City of Grover Beach Circulation Element or SLOCOG's future regional trail concepts, as it does not directly connect with Class II bike lanes on North 4th Street at a safe signalized intersection.
- Option D1 is consistent with future trail and public access improvement plans for the by State.

Jurisdictional Criteria:

(1) Potential to Minimize Impacts to Private Property

- Options D and D1 would be located behind many residential lots and would likely affect some neighbor's views of the Ecological Reserve.

(2) Potential to Avoid Railroad Corridor Constraints

- Options D and D1 does not impact the railroad corridor.

Physical Criteria:

(1) Potential to Connect to Existing or Proposed Class I or II Bikeway

- Options D and D1 is proposed to link with other proposed Class I trails, but does not directly link into an existing and/or proposed Class I or II bikeway.

(2) Potential for a Direct & Consistent Route

- Options D and D1 could provide a continuous route, but it is more recreational than direct and efficient.

(3) Potential to Maximize Commuter Value

- Options D and D1 does not maximize commuter value.

(4) Potential to Maintain an Accessible Trail Route

- Options D and D1 could maintain ADA accessibility, but would likely require significant grading, ramps and retaining walls.

(5) Potential to Provide Logical Roadway Access Points

- The north side of Options D and D1 has a roadway access point at an unsignalized mid-block crossing at North 4th Street, and it would require fencing to direct trail users to the signal at Five Cities Drive.
- The City should consider installing a widened sidewalk along North 4th Street from Five Cities Drive to the link into the trail system.



(6) Potential to Connect to Existing or Proposed Hiking Trails

- Options D and D1 connects with existing and/or proposed hiking trails, but this trail option would not greatly increase the trail options available.

(7) Potential to Maximize Recreational Value

- Options D and D1 has the potential to maximize the possible recreational potential.

(8) Potential for Rest Areas & Overlooks with Interpretive Signage

- Options D and D1 has the potential for overlooks and interpretive signage.

(9) Potential to Provide a Staging Area

- There is a staging area proposed at North 4th Street, but it is associated with Option A and A1.



Option D has the potential to provide beautiful overlooks with an interpretive program about the Ecological Reserve



Fiscal Criteria:

- (1) Potential to Minimize Construction & Maintenance Costs
 - Options D and D1 have the potential to minimize construction costs.
- (2) Potential to Access Maximum Funding Sources
 - State Parks might be able to assist with funding.
- (3) Potential for Near-Term Construction
 - Due to the environmental constraints, the trail is not likely to be constructed in the near-term.



Option D is located in an area with dense trees and steep grades, and does not have any existing major pathways



Appendix B

Preliminary Environmental Constraints



Beach Cities Multi-Purpose Trail

TRAIL FEASIBILITY STUDY



Rincon Consultants, Inc.
1530 Monterey Street, Suite D
San Luis Obispo, California 93401
805 547 0900
FAX 547 0901
info@rinconconsultants.com
www.rinconconsultants.com

December 4, 2009

Mr. Mike Sherrod
RRM Design Group
3765 South Higuera Street, Ste. 102
San Luis Obispo, CA

Subject: Preliminary Environmental Constraints Information for Beach Cities Multi-Purpose Trail Feasibility Study (Project # 09-66470)

Dear Mike:

Transmitted herein is the first deliverable for the Beach Cities Multi-Purpose Trail Feasibility Study. As specified in our scope of work, the following items for Task A.02 are enclosed:

- *One (1) electronic copy of the California Natural Diversity Database (CNDDDB) technical memo, and supporting datasheets; and*
- *One (1) electronic copy of the cultural resources records search summary memo*

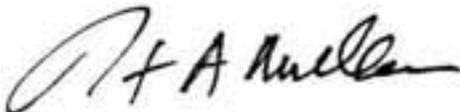
The cultural resources technical memo is comprised of the Central Coast Information Center (CCIC) summary letter and the recorded cultural resources site map. Please note that the map is confidential and not for public distribution. Please also note that because the entirety of the project area has not been surveyed, and because of the existence of known cultural resource sites along the project corridor, the CCIC recommends that an additional cultural resource survey (Phase I or Extended Phase I, at a minimum) be prepared prior to implementation of the project.

With respect to the nine noted sites on the confidential map, our archaeological consultant has provided the following brief synopsis of each site.

- SLO-394 is a large campsite recorded in 1958 and consists of chipped chert, mano fragments, hammerstones, mortars, pestles and beads. The find was reported during railroad construction.
- SLO-396 is a large campsite recorded in 1958 and consists of heavy concentrations of shellfish, hammerstones, mano, and chipped chert.
- SLO-439 is a small campsite recorded in 1958 that contains shellfish, a scraper and chipped chert. It is noted that 4th Street cuts through the site.
- SBA-772 is a habitation site recorded 1971 and updated in 1976 and consists of chert flakes, fire affected rock, shellfish, hammerstones, cores and retouch flakes.
- SLO-825 is a habitation site recorded in 1977 and contains bird bone, mammal bone, and clam shell fragments.
- SLO-840 is a habitation site recorded in 1978 and consists of shellfish, mortar, stone tools, flakes, and fire-affected rock.
- SLO-987-H/P40-000987 is a historic dump recorded in 1980 within the boundaries of SLO-825 and consists of historic china, whole bottles fish vertebrae and large mammal bone.
- SLO-988 is a prehistoric campsite recorded in 1980 and contains predominantly shellfish.
- 40-040781 is a historic property.

If you have any questions regarding this submittal, please let me know. We look forward to continuing our work with you on this important project.

Sincerely,
RINCON CONSULTANTS, INC.



Robert A. Mullane
Project Manager

Rincon Consultants, Inc. conducted a search of the California Department of Fish and Game's California Natural Diversity Database (CNDDDB; 2009) to identify the potential for sensitive species that could be affected by the project. The search area included the following United States Geological Survey 7.5-minute quadrangle maps: Pismo Beach, Arroyo Grande NE, Tar Springs Ridge, Oceano, Nipomo, Point Sal, Guadalupe, and Santa Maria. A list of special status species and habitats identified by the CNDDDB is attached (Attachment A). In addition, a preliminary assessment of special status biological resource occurrences within the proposed alignment options was prepared by documenting habitat types in the project area using aerial photographs and field reconnaissance. Based on general habitat characteristics observed, the project site can be divided into two distinct portions separated by the Union Pacific Railroad tracks: east of the tracks and west of the tracks.

The east of side of the tracks includes Segment 1 of the trail. This portion of the proposed alignment consists of a trail system within and surrounding Meadow Creek and Pismo Lake. The lower topographic portions of these two areas, where water availability is high, are dominated by willow riparian and freshwater emergent wetland vegetation communities. Upslope in the drier portions of the alignment, coast live oak woodland, annual grassland and disturbed (or ruderal) areas are present.

The west side of the tracks includes the majority of Segments 2 and 3. The most common vegetation community in this area is coastal dune scrub associated with the dune sands along the Pacific Ocean. Other habitats include eucalyptus woodland, mixed woodland, freshwater emergent wetland and riparian woodland. Wetland and riparian habitats are present surrounding the Oceano lagoon, in hind dune swales, and along other natural and manmade drainage features. Ruderal areas identified in the project area include existing roads and associated road and railroad shoulders, foot trails and boardwalks.

The CNDDDB search identified 72 special status species and five special status habitats within the eight quadrangle search. Based on our knowledge of the area, review of the CNDDDB information, habitat requirements of the special status species known to occur in the region, and habitat types observed on the project site, the following species are anticipated to be of highest concern for the proposed project because they are listed as threatened or endangered by the state or federal governments (i.e., would require resource agency consultation and potential permitting), and suitable habitat exists within the proposed alternatives. Other species of concern and CNPS-listed plants could still be present, and additional analysis for these will be provided in the constraints analysis.

Plants

Marsh sandwort (*Arenaria paludicola*); federally Endangered and state Endangered
Pismo clarkia (*Clarkia speciosa* ssp. *immaculata*); federally Endangered and state Rare
Gambel's water cress (*Rorripa gambelii*); federally Endangered and state Threatened

Animals

Western snowy plover (*Charadrius alexandrinus nivosus*); federally Threatened
Tidewater goby (*Eucyclogobius newberryi*); federally Endangered
California black rail (*Laterallus jamaicensis coturniculus*); state Threatened
Steelhead - south/central California coast Evolutionarily Significant Units (ESU)
(*Oncorhynchus mykiss irideus*); federally Threatened
California red-legged frog (*Rana draytonii*); federally Threatened
California least tern (*Sternula antillarum browni*); federally Endangered and state Endangered

If the proposed project would adversely affect a state or federally Threatened or Endangered species, permitting and coordination with the California Department of Fish and Game and/or the United States Fish and Wildlife Service may be required. Furthermore, other state and federal species of special concern as well as California Native Plant Society listed species could also potentially occur within the proposed trail alignments, but represent a lower constraint since they are not formally listed by the state or federal governments as threatened or endangered.

Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1 <i>Ablautus schlingeri</i> Oso Flaco robber fly	IIDIP42010			G1	S1	
2 <i>Accipiter striatus</i> sharp-shinned hawk	ABNKC12020			G5	S3	
3 <i>Actinemys marmorata pallida</i> southwestern pond turtle	ARAAD02032			G3G4T2T3 Q	S2	SC
4 <i>Agrostis hooveri</i> Hoover's bent grass	PMPOA040M0			G2	S2.2	1B.2
5 <i>Ambystoma californiense</i> California tiger salamander	AAAAA01180	Threatened	unknown code...	G2G3	S2S3	SC
6 <i>Anniella pulchra pulchra</i> silvery legless lizard	ARACC01012			G3G4T3T4 Q	S3	SC
7 <i>Aphanisma blitoides</i> aphanisma	PDCHE02010			G2	S1.1	1B.2
8 <i>Arctostaphylos luciana</i> Santa Lucia manzanita	PDERI040N0			G2	S2.2	1B.2
9 <i>Arctostaphylos morroensis</i> Morro manzanita	PDERI040S0	Threatened		G2	S2.2	1B.1
10 <i>Arctostaphylos pechoensis</i> Pecho manzanita	PDERI04140			G2	S2.2	1B.2
11 <i>Arctostaphylos pilosula</i> Santa Margarita manzanita	PDERI04160			G2	S2.2	1B.2
12 <i>Arctostaphylos rudis</i> sand mesa manzanita	PDERI041E0			G2	S2.2	1B.2
13 <i>Arctostaphylos wellsii</i> Wells' manzanita	PDERI042B0			G1G2	S1S2	1B.1
14 <i>Arenaria paludicola</i> marsh sandwort	PDCAR040L0	Endangered	Endangered	G1	S1.1	1B.1
15 <i>Areniscythis brachypteris</i> Oso Flaco flightless moth	IILEG49010			G1	S1	
16 <i>Astragalus didymocarpus var. milesianus</i> Miles' milk-vetch	PDFAB0F2X3			G5T2	S2.2	1B.2
17 <i>Athene cunicularia</i> burrowing owl	ABNSB10010			G4	S2	SC
18 <i>Atriplex serenana var. davidsonii</i> Davidson's saltscale	PDCHE041T1			G5T2?	S2?	1B.2
19 <i>Branchinecta lynchi</i> vernal pool fairy shrimp	ICBRA03030	Threatened		G3	S2S3	
20 <i>Calochortus obispoensis</i> La Panza mariposa-lily	PMLIL0D110			G2	S2.1	1B.2
21 <i>Calochortus simulans</i> San Luis Obispo mariposa-lily	PMLIL0D170			G2	S2.3	1B.3
22 <i>Calystegia subacaulis ssp. episcopalis</i> Cambria morning-glory	PDCON040J1			G3T1	S1.2	1B.2
23 <i>Castilleja densiflora ssp. obispoensis</i> San Luis Obispo owl's-clover	PDSCR0D453			G5T2	S2.2	1B.2

Selected Elements by Scientific Name - Portrait
CDFG Natural Diversity Database
8 Quadrangle Search- Center Quad: Oceano

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Biogeographic Data Branch

Report Printed on Thursday, October 01, 2009
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Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
24 <i>Central Dune Scrub</i>	CTT21320CA			G2	S2.2	
25 <i>Central Foredunes</i>	CTT21220CA			G1	S1.2	
26 <i>Central Maritime Chaparral</i>	CTT37C20CA			G2	S2.2	
27 <i>Centromadia parryi ssp. congdonii</i> Congdon's tarplant	PDAST4R0P1			G4T3	S3.2	1B.2
28 <i>Charadrius alexandrinus nivosus</i> western snowy plover	ABNNB03031	Threatened		G4T3	S2	SC
29 <i>Chlosyne leanira elegans</i> Oso Flaco patch butterfly	IILEPJA051			G4G5T1T2	S1S2	
30 <i>Chorizanthe breweri</i> Brewer's spineflower	PDPGN04050			G2	S2.2	1B.3
31 <i>Chorizanthe rectispina</i> straight-awned spineflower	PDPGN040N0			G1	S1.2	1B.3
32 <i>Cicindela hirticollis grvida</i> sandy beach tiger beetle	IICOL02101			G5T2	S1	
33 <i>Cirsium fontinale var. obispoense</i> Chorro Creek bog thistle	PDAST2E162	Endangered	Endangered	G2T1	S1.2	1B.2
34 <i>Cirsium loncholepis</i> La Graciosa thistle	PDAST2E1N0	Endangered	Threatened	G2	S2.2	1B.1
35 <i>Cirsium rhotophilum</i> surf thistle	PDAST2E2J0		Threatened	G2	S2.2	1B.2
36 <i>Cladium californicum</i> California saw-grass	PMCYP04010			G4	S2.2	2.2
37 <i>Clarkia speciosa ssp. immaculata</i> Pismo clarkia	PDONA05111	Endangered	Rare	G4T1	S1.1	1B.1
38 <i>Coastal and Valley Freshwater Marsh</i>	CTT52410CA			G3	S2.1	
39 <i>Danaus plexippus</i> monarch butterfly	IILEPP2010			G5	S3	
40 <i>Deinandra increscens ssp. foliosa</i> leafy tarplant	PDAST4R0U4			G4G5T2	S2.2	1B.2
41 <i>Deinandra increscens ssp. villosa</i> Gaviota tarplant	PDAST4R0U3	Endangered	Endangered	G4G5T1	S1.1	1B.1
42 <i>Delphinium parryi ssp. blochmaniae</i> dune larkspur	PDRAN0B1B1			G4T2	S2.2	1B.2
43 <i>Delphinium umbraculorum</i> umbrella larkspur	PDRAN0B1W0			G2G3	S2S3.3	1B.3
44 <i>Dithyrea maritima</i> beach spectaclepod	PDBRA10020		Threatened	G2	S2.1	1B.1
45 <i>Dudleya abramsii ssp. murina</i> mouse-gray dudleya	PDCRA04012			G3T2	S2.3	1B.3
46 <i>Dudleya blochmaniae ssp. blochmaniae</i> Blochman's dudleya	PDCRA04051			G2T2	S2.1	1B.1
47 <i>Erigeron blochmaniae</i> Blochman's leafy daisy	PDAST3M5J0			G2	S2.2	1B.2
48 <i>Eriodictyon altissimum</i> Indian Knob mountainbalm	PDHYD04010	Endangered	Endangered	G2Q	S2.2	1B.1

Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
49 <i>Eryngium aristulatum</i> var. <i>hooveri</i> Hoover's button-celery	PDAPI0Z043			G5T2	S2.1	1B.1
50 <i>Eucyclogobius newberryi</i> tidewater goby	AFCQN04010	Endangered		G3	S2S3	SC
51 <i>Falco mexicanus</i> prairie falcon	ABNKD06090			G5	S3	
52 <i>Gila orcuttii</i> arroyo chub	AFCJB13120			G2	S2	SC
53 <i>Gymnogyps californianus</i> California condor	ABNKA03010	Endangered	Endangered	G1	S1	
54 <i>Horkelia cuneata</i> ssp. <i>puberula</i> mesa horkelia	PDR0S0W045			G4T2	S2.1	1B.1
55 <i>Horkelia cuneata</i> ssp. <i>sericea</i> Kellogg's horkelia	PDR0S0W043			G4T1	S1.1	1B.1
56 <i>Laterallus jamaicensis coturniculus</i> California black rail	ABNME03041		Threatened	G4T1	S1	
57 <i>Layia jonesii</i> Jones' layia	PDAST5N090			G1	S1.1	1B.2
58 <i>Lichnanthe albipilosa</i> white sand bear scarab beetle	IICOL67010			G1	S1	
59 <i>Lupinus ludovicianus</i> San Luis Obispo County lupine	PDFAB2B2G0			G2	S2.2	1B.2
60 <i>Lupinus nipomensis</i> Nipomo Mesa lupine	PDFAB2B550	Endangered	Endangered	G1	S1.1	1B.1
61 <i>Monardella crispera</i> crisp monardella	PDLAM18070			G2	S2.2	1B.2
62 <i>Monardella frutescens</i> San Luis Obispo monardella	PDLAM180X0			G2	S2.2	1B.2
63 <i>Nasturtium gambelii</i> Gambel's water cress	PDBRA270V0	Endangered	Threatened	G1	S1.1	1B.1
64 <i>Oncorhynchus mykiss irideus</i> steelhead - south/central California coast ESU	AFCHA0209H	Threatened		G5T2Q	S2	SC
65 <i>Orobanche parishii</i> ssp. <i>brachyloba</i> short-lobed broomrape	PDORO040A2			G4?T3	S3.2	4.2
66 <i>Phrynosoma coronatum</i> (frontale population) coast (California) horned lizard	ARACF12022			G4G5	S3S4	SC
67 <i>Plebejus icarioides moroensis</i> Morro Bay blue butterfly	IILEPG801B			G5T1T3	S1S3	
68 <i>Rana draytonii</i> California red-legged frog	AAABH01022	Threatened		G4T2T3	S2S3	SC
69 <i>Scrophularia atrata</i> black-flowered figwort	PDSCR1S010			G2	S2.2	1B.2
70 <i>Spea hammondi</i> western spadefoot	AAABF02020			G3	S3	SC
71 <i>Sternula antillarum browni</i> California least tern	ABNNM08103	Endangered	Endangered	G4T2T3Q	S2S3	

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Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
72 <i>Symphotrichum defoliatum</i> San Bernardino aster	PDASTE80C0			G3	S3.2	1B.2
73 <i>Taricha torosa torosa</i> Coast Range newt	AAAAF02032			G5T4	S4	SC
74 <i>Taxidea taxus</i> American badger	AMAJF04010			G5	S4	SC
75 <i>Thamnophis hammondi</i> two-striped garter snake	ARADB36160			G3	S2	SC
76 <i>Tryonia imitator</i> mimic tryonia (=California brackishwater snail)	IMGASJ7040			G2G3	S2S3	
77 <i>Valley Needlegrass Grassland</i>	CTT42110CA			G1	S3.1	

CENTRAL COAST INFORMATION CENTER

California
Archaeological
Inventory



SAN LUIS OBISPO AND
SANTA BARBARA COUNTIES

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Email: centralcoastinfo@gmail.com

11/18/2009

Rob Wlodarski
H.E.A.R.T.
8701 Lava Place
West Hills, CA 91304

Dear Mr. Wlodarski,

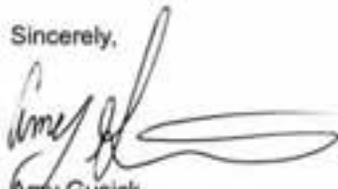
Enclosed are the results of the record search you requested for the Grover Beach Trails Project. Our records were searched for all known archaeological sites, historic resources, and previous cultural resource surveys within a 100 foot radius of the project area.

In this search, eight archaeological site(s) and 49 previous cultural resource survey(s) were found. The survey locations were mapped onto portions of the Pismo Beach, Arroyo Grande, and Oceano quad(s). A bibliography of these surveys is included. A search of the inventories for the State Historic Property Data Files, National Register of Historic Places, National Register of Determined Eligible Properties, California Historical Landmarks, California Points of Historic Interest, California OHP Archaeological Determinations of Eligibility, and the Caltrans State and Local Bridge Surveys yielded one property evaluation(s) within the search radius.

According to our records, the project area has not been surveyed. Therefore a cultural resource survey is recommended.

Please contact me if you have any questions about this search.

Sincerely,



Amy Gusick
Assistant Coordinator



Beach Cities Multi-Purpose Trail

TRAIL FEASIBILITY STUDY



Appendix C

Preliminary Constraints Analysis



Beach Cities Multi-Purpose Trail

TRAIL FEASIBILITY STUDY

Environmental Constraints Analysis

This environmental constraints study has been prepared to assist the City of Grover Beach and adjacent participating jurisdictions in selecting a preferred alignment for a multi-purpose trail to link the beach communities of Oceano, Grover Beach, and Pismo Beach, in the County of San Luis Obispo. The analysis includes a discussion of the primary environmental issues within the study area, and an assessment of the severity of the constraint for each alignment option identified for the three proposed trail segments. For the purpose of this report, constraints are a function of the cost and timing of the measures needed to address a particular issue. For example, if the implementation of a proposed trail segment results in high costs and complicated timing issues, it would represent a high level of constraint. The preferred trail alignment may consist of a combination of different trail segment options, and the constraints analysis is intended to inform the decision-making on the preferred alignment.

Attachment 1 shows various alignment options for each of the three main trail segments for the multi-purpose trail. Attachment 2 is a matrix that summarizes the environmental constraints for each of the alignment options. Attachment 3 is a constraints map that illustrates the areas where either biological or cultural resources pose a significant constraint along a particular trail alignment.

A. Land Use Compatibility:

- 1. Segment 1A-1F:** Segments 1A and 1B follow the UPRR right of way through various land uses, including industrial uses near the train depot, a mix of commercial and residential uses along Fourth Street, and an RV park to the west. The segment behind the industrial district poses compatibility issues for the pedestrians and bicyclists because the users may be exposed to noise or odors generated by these uses, or potential safety impacts if the route was not well lit or patrolled through these areas. Therefore, constraints for these segments would be moderate.

Segment 1C also traverses through an industrial district. However, this segment would be visible and accessible from Fourth Street, which would partially reduce safety concerns. Land use compatibility constraints for this segment would be low to moderate.

Segment 1D traverses through the undeveloped natural dune habitat of the State Beach. This alignment is already traversed by a network of pedestrian and equestrian trails, and the formalization of a multi-purpose trail would not result in compatibility conflicts.

Segment 3E follows Highway 1, along the eastern border of the State Beach. Surrounding land uses include open space/recreation to the west, RV parks across Highway 1 to the east, the State Parks maintenance yard, and a combination of single and multi-family residential uses along Norswing Drive. The residential uses would be separated from the proposed trail by Norswing Drive, which would serve as a buffer between these land uses. The proposed alignment would be compatible with all of the other surrounding land uses, and therefore constraints are considered low.

Segment 1F continues south of the industrial district adjacent to the strawberry fields and a mix of residential and commercial uses along Fourth Street in the community of Oceano. These uses would be separated from the proposed trail by Fourth Street and existing vegetation. Due to these existing buffers, potential land use compatibility constraints would be low.

2. **Segment 2A-2F:** Segments 2A, 2C, 2E, and 2F follow the existing right of way along the Union Pacific Railroad (UPRR) tracks. Constraints associated with utilizing the UPRR corridor are discussed in the Transportation discussion below. The railway, Front Street, and existing vegetation would serve as buffers between the proposed trail and existing residential uses. Therefore, land use compatibility issues related to residential uses are not anticipated.

Segment 2B follows South Dolliver Street and is adjacent to the Pismo State Beach campgrounds for the majority of this segment. This option would be accessed at the vacant lot south of Monarch Grove. The proposed alignment would be compatible with existing recreational uses. Similarly, Segment 2D borders existing recreational areas, including Pismo State Beach, Monarch Grove and the golf course, and would be considered compatible from a land use perspective.

3. **Segment 3A-3D:** Segment 3A of the multi-purpose trail and the western portion of Segment 3D would bring people closer to homes that surround the Pismo Lakes Ecological Reserve and increase pedestrian and bicyclist use of what is currently a more passive open space resource. The proximity of the trail could create potential conflicts for the existing residents, especially with regard to noise and impacts on views. Segment 3B follows an existing well-worn dirt path, and the enhancement of this path would not create the same degree of land use compatibility issues. Segment 3C also follows an existing dirt path as it narrows through the trees, then turns north away from the homes located to the south. The eastern portion of Segment 3D parallels Fourth Street and is not located immediately adjacent to residents. Due to the greater separation between the proposed trail and existing residences, these latter trail alignment options (Segments 3B, 3C, and the eastern portion of 3D) would not result in substantial land use compatibility issues with the nearby residents.

B. Biological Resources:

1. **Segments 1A-1F:** Segments 1A, 1B, 1C, and 1F primarily follow the railroad corridor in a north to south direction from Grand Avenue to the Oceano Railroad Depot. The area on either side of the railroad for much of this segment of the alignment is developed or ruderal habitat with the exception of some eucalyptus trees on the east side of the tracks. It appears that the eucalyptus trees are located outside the trail alignment area and would not be affected by alignment of the multi-purpose trail in this area. Some of the drainage ditches along this segment have the potential to meet the federal and state criteria as a wetland and therefore could require permitting and mitigation should they be impacted. Future studies should be conducted in this area to ensure jurisdictional wetlands, if present, are avoided. Since this portion of the alignment is highly disturbed by development, the potential for special status species and plant communities are low, and overall, there is a low potential for environmental constraints.

Segment 1D runs in a north to south direction through the hind dunes of Pismo State Beach from Grand Avenue to Pier Avenue on an existing sand trail. Similar to Segment 2D described above, the northern portion of this trail segment is within coastal dune scrub habitat, which is a special status plant community. The southern portion of this segment is contained within mixed woodland habitat associated with the Oceano Campground. This segment option has moderate potential for environmental constraints as there is suitable habitat for special status plants known to occur in the coastal dune scrub habitat, as well as the potential for wetlands and other special status plant communities to occur. Focused studies should be conducted to determine the presence or absence of special status plants and plant communities, including jurisdictional wetlands.

Segment 1E is proposed to occur along the Highway 1 right of way from Grand Avenue in the north to Pier Avenue in the south. The southern portion of this trail runs along Norswing Drive and Pier Avenue. While this alignment option is mostly disturbed or ruderal habitat, the alignment is adjacent to wetland and riparian habitat along Meadow Creek, which is suitable habitat for the California red-legged frog and south-central California coast steelhead DPS. Special status plants also have the potential to occur in the Meadow Creek area, including areas of native habitat that directly abut the alignment. As long as the alignment is confined to existing road shoulders and disturbed areas, the environmental constraints would be low. It should be noted that several road-side ditches were observed in this portion of the study area, and should these areas be within the preferred trail alignment, future studies would be required to determine whether or not they could fall under state or federal jurisdictions as wetland habitat. Because of the possible potential for impacts to jurisdictional waters, the overall biological resource constraint for this segment is classified as low to moderate.

- 2. Segments 2A-2F:** Segments 2A-2F of the proposed alignment consist of a trail system that runs along the Union Pacific Railroad, Highway 1 and the western edge of the Pismo State Beach Golf Course and Monarch Butterfly Grove located just west of Highway 1. Many of the segments in this portion of the alignment are within mostly ruderal habitat along the shoulder of the railroad and existing roads and trails; however, some segment options would occur in areas of eucalyptus woodland and coastal dune habitats that could support special status species and habitat types.

Segments 2A, 2C, and 2E run north-south along the east shoulder of the railroad from Highway 101 to Grand Avenue. Segment 2F runs north-south along the west shoulder of the railroad from Atlantic City Avenue to Grand Avenue. The majority of habitat surrounding the railroad is ruderal however there is a section of willow dominated riparian habitat to the west of the Quality Inn, a section of coastal scrub to the west of the homes on Topaz Drive, fresh water emergent wetland at the western edge of the Pismo Lakes Ecological Reserve and eucalyptus woodland to the west of Front Street. The potential for environmental constraints for Segments 2A, 2E, and 2F is low since the majority of the trail alignment in this area occurs within developed or ruderal habitats, with the exception of some small sections of eucalyptus woodland and coastal scrub. Portions of Segment 2C, however, have high potential for environmental constraints based on the presence of riparian and wetland vegetation as well as suitable habitat for the California red-legged frog. Future studies should be conducted to determine the extent of potentially jurisdictional wetlands and presence/absence of special status

species. Should future trail construction impact willow riparian or other regulated habitat types or special status species, mitigation and potentially permitting would be required.

Segment 2B runs along South Dolliver Street from Pismo Creek to the Monarch Butterfly Grove. Since the majority of this segment option is within developed or ruderal habitats, these portions of the segment have a low potential for environmental constraints. It should be noted that several road-side ditches were observed in this portion of the study area, and should these areas be within the preferred trail alignment, future studies would be required to determine whether or not they could fall under state or federal jurisdictions as wetland habitat. Because of the possible potential for impacts to jurisdictional waters, the overall biological resource constraint for this segment is classified as low to moderate.

Segment 2D runs north-south along the western edge of the Pismo State Beach Golf Course and the Monarch Butterfly Grove and also includes a small east-west section along the southern edge of the Monarch Butterfly Grove and another small east-west section just north of Grand Avenue at the Future Hotel site. The proposed alignment along the western edge of the golf course is located on an existing well worn sandy trail which would be considered disturbed, however the area is surrounded by coastal dune scrub habitat (a special status plant community) dominated by a number of native species that constitute a special status plant community. While some of this area is disturbed and dominated by non-native species such as iceplant (*Carpobrotus* spp.) and Veldt grass (*Ehrharta calycina*), any trail construction in this portion of the study area would require focused studies to determine the presence or absence of special status species plants and habitat types. The section of this alignment along the western and southern edges of the Monarch Butterfly Grove is also located on an existing trail within eucalyptus woodland habitat with an annual grassland and ruderal habitat understory. The east-west section north of Grand Avenue is located mostly in ruderal habitat, however willow riparian vegetation is present at the proposed Meadow Creek crossing. This segment has a moderate potential for environmental constraints due to the presence of coastal dune scrub habitat, known monarch butterfly over-wintering habitat, and potential for special status species and jurisdictional wetlands.

- 3. Segments 3A-3D:** Segments 3A-3D of the proposed alignment consist of a trail system within and surrounding the Meadow Creek and Pismo Lakes area. The topographically low areas along these natural drainage features, where water availability is high, are mostly dominated by willow riparian and freshwater emergent wetland vegetation communities. Riparian and wetland communities represent a high constraint, as these areas are important for many wildlife species. The abundance of moisture and associated vegetation provide structure, materials, and food sources for nesting and roosting animals. Many species forage within the understory and use riparian habitat as cover and as a corridor for movement along the edges of open areas. Common inhabitants of riparian woodland habitats include amphibians, reptiles, mammals and a diverse number of resident and migratory bird species. The California red-legged frog (*Rana draytonii*), and south-central California coast steelhead Distinct Population Segment (DPS) (*Oncorhynchus mykiss*), both of which are listed as threatened pursuant to the Federal Endangered Species Act could potentially occur in or adjacent to this portion of the study area. In addition, there is potential for two federally-listed endangered

plants, the marsh sandwort (*Arenaria paludicola*) and Gambel's water cress (*Rorripa gambelii*), to occur within the Meadow Creek and Pismo Lakes portion of the study area. Development in proximity to these habitats would require focused surveys to determine the presence or absence of special status species (both plant and animal), as well as potential coordination with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) should any special status species be located within the disturbance area for implementation of the trail.

The willow riparian and freshwater emergent wetland communities are considered special status plant communities, and any future development within these areas would require future studies to determine if they fall under the jurisdiction of the CDFG, the U.S. Army Corps of Engineers (USACE) and the Central Coast Regional Water Quality Control Board (RWQCB). Prior to project implementation, a jurisdictional delineation of waters of the U.S. and State of California would be required to determine the nature and extent of USACE, RWQCB, and CDFG jurisdiction on-site. For the purposes of this analysis, the presence of wetland habitat is considered to have high environmental constraints based on their potential to support special status species and due to the need for costly and time-intensive regulatory consultation and permitting.

Up-slope in the drier portions of the Segment 3 alignments, coast live oak woodland, coastal scrub, grassland and disturbed (or ruderal) areas were observed. The oak woodland habitat on-site was dominated by coast live oak (*Quercus agrifolia*) trees, with an understory comprised of leaf litter, herbaceous annuals, and occasional shrubs. Oak woodlands provide habitat for a variety of plant and animal species, and provide nesting sites and cover for birds and many mammals. Woody debris and duff in the woodland understory creates foraging areas for small mammals and microclimates suitable for amphibians and reptiles. Acorns are also a valuable food source for many animal species. While coast live oak woodland is a plant community of regional importance and may contain individual trees that are protected under local policies, removal of oak trees can be mitigated through a number of options, including protection of oak woodland and replacement plantings. For the purposes of this analysis, the presence of coast live oak woodland is considered to have a moderate potential for environmental constraints due to the ability to design the trails around specimen trees, thereby avoiding direct removal. Any surface disturbance within the dripline or critical root zone of oaks should be carefully planned to ensure the oak trees are not damaged during construction activities. A tree inventory should be conducted to accurately characterize the size and health of all trees within the proposed trail alignment to avoid impacting healthy trees.

The grassland vegetation community within the project site was dominated by mostly non-native annual grasses. However, in the Five Cities area, native herbs are a common occurrence within this habitat type. Grasslands provide foraging and/or breeding habitat and movement corridors for many wildlife species. Several mammals are known to breed within this habitat type. Numerous invertebrate species (such as insects), many of which provide a food source for larger animals such as lizards, birds and some small mammals, can also be found within grassland communities. Many birds rely on open expanses of grasslands for foraging habitat. Grasslands that are bordered by habitats containing trees are particularly important for raptors because the birds can use the large trees as nesting, roosting, and as observation points to locate potential prey within

nearby grassland habitats. In general, much of the grassland habitat found within the project site has been disturbed thereby reducing the potential for occurrence of native plants and animals. The federally listed as endangered plant, Pismo clarkia (*Clarkia speciosa* ssp. *immaculata*), is known to occur in the vicinity of the project. It commonly occurs in sandy soils in grassland habitats at the margins of oak woodlands. Given the timing and nature of the field reconnaissance, a full floristic inventory was not possible. Seasonally-timed botanical surveys should be completed prior to construction of these trail segments to ensure areas of native grassland and special status species can be avoided. If special status plants such as Pismo clarkia were identified within this potential trail alignment, avoidance and/or compensatory mitigation as well as coordination with the USFWS and the CDFG would be required to minimize impacts to the particular species. In the absence of Pismo clarkia or any other rare plants, annual grassland habitat is considered to have a low potential for environmental constraints. The occurrence of special status species and native grassland would pose a moderate constraint given the need to provide compensatory mitigation pursuant to CEQA. However, should federally or state listed species be identified within the on-site grasslands, this would pose a high constraint, due to the requirement to consult with federal or state agencies and the possible need for prep of a Biological Assessment, Habitat Conservation Plan, and/or Incidental Take Permit(s).

The coastal scrub habitat within the project site was dominated by the common, perennial shrub coyote brush (*Baccharis pilularis*) along with other common shrubs such as California sagebrush (*Artemisia californica*), and sticky monkey flower (*Mimulus aurantiacus*). This habitat within the project site occurred mostly in association with grassland habitat, however was also observed as a component of the oak woodlands onsite. This habitat type is of similar value to wildlife as the grasslands described above, although it can provide substantially more cover. The presence of coastal scrub habitat is considered to have a low potential for environmental constraints since there are typically no permitting requirements associated with impacting this habitat type, and it occurs in abundance throughout the study area. Nonetheless, focused botanical surveys should be conducted throughout the alignment in areas of native habitat to accurately determine the presence or absence of special status species. Should special status species be identified in areas of coastal scrub, appropriate compensatory mitigation should be developed to reduce impacts to a less than significant level. Should federally or state listed species be identified within the on-site coastal scrub habitat, this would pose a high constraint.

The ruderal habitat type within the project site occurs in areas of past or present disturbance, often in close proximity to roads, the railroad or other urban development. This habitat type was observed throughout the alignment, and was dominated by non-native herbs and grasses, as well as contained patches of bare soil. While this habitat type may provide marginal habitat for several animal species it is considered to have a low potential for environmental constraints due to the lack of suitable habitat for special status species and plant communities.

Segment 3A runs along the north side of Meadow Creek and the Pismo Lakes Ecological Reserve. Habitats present along this segment include willow riparian woodland, coastal scrub, grassland and ruderal. The potential for environmental constraints in this segment is high based on the occurrence of riparian/ wetland vegetation and the

potential habitat to support the California red-legged frog and south-central California coast steelhead DPS. It appears unlikely that this segment of the trail could be designed in a way that would completely avoid impacts to riparian/ wetland habitat, and focused studies would be required to determine the extent of regulated wetland habitat as well the presence or absence of special status species.

Segment 3B runs along the south side of Meadow Creek and follows an existing dirt pathway. The dirt path and associated weedy species are considered ruderal habitat, however willow riparian woodland surrounds Meadow Creek to the north and coast live oak woodland is present in patches with varying densities. The proposed trail would run through a small section of eucalyptus woodland at the western end of the segment. The potential for environmental constraints in this segment is moderate due to the fact that it could impact oak woodland habitat; however there appears to be ample room for the future trail to follow the existing dirt trail thereby avoiding impacts to oak trees. Focused studies as recommended above should be conducted to define the extent of any adjacent federal and state jurisdictional wetlands as well as determine the presence/absence of special status species.

Segment 3C also runs east-west along the south side of Meadow Creek and turns northward and parallels 4th Street to connect with Segment 3A. The east-west portion of this proposed segment is located mostly within coast live oak woodland habitat with the exception of a small portion of grassland and ruderal habitats where the segment connects to Margarita Avenue. The north-south portion of this segment along 4th Street is located within willow riparian habitat to the east of the road and proposes a bridge crossing over Meadow Creek. If it is possible for the trail to be confined to the existing road shoulder, some of the impacts to the willow riparian habitat and Meadow Creek would be avoided or reduced. Biological resource impacts along the east-west portion of this segment may be reduced if the trail was designed to avoid impacting oak trees. However, the potential for environmental constraints in this segment is moderate to high based on the uncertainty with regard to the degree to which potential impacts to oak woodland and riparian/ wetland vegetation can be avoided, as well as the potential for impacts to habitat for the California red-legged frog and south-central California coast steelhead DPS. Seasonally-timed botanical surveys should be conducted to accurately determine the presence or absence of special status plants within the alignment.

Segment 3D runs north-south between 4th Street on the east and the Pismo Lakes Ecological Reserve on the west and then turns and runs east-west along the southern edge of the Pismo Lakes Ecological Reserve just north of the homes on Estuary Way and Front Street. Habitats present in this segment include willow riparian woodland, coast live oak woodland, grassland and ruderal. Similar to Segment 3A, the potential for environmental constraints in this portion of the site is high, as future trail construction may impact riparian and wetland habitats as well as special status species habitat including both plants and animals.

It is important to note that the determination of potential environmental constraints for biological resources given in this report was based on a reconnaissance-level survey of the site conducted during the fall, aerial photograph interpretation, and literature review. No protocol-level surveys for special status species or habitats were conducted

to date for this project. Once a preferred alignment has been selected, focused studies of the preferred trail alignment should be completed to determine the extent of impacts to biological resources that could result from construction of the trail. Should special status species be identified within the proposed trail alignment, avoidance of the occurrence should be the preferred approach, followed by reducing the impact to the minimum possible. In general, minimization of impacts to biological resources would be achieved by siting the trail alignment along previously disturbed areas. Once the impact has been minimized, then a detailed mitigation plan should be developed in order to reduce any remaining impact to a less than significant level pursuant to CEQA. Impacts to federal or other state jurisdictional resources may require additional measures to meet conditions of permits that may be required.

C. *Cultural Resources:*

A cultural resources records search was conducted through the Central Coast Information Center for all known archaeological sites within a 100-foot radius of the project area. The search indicated that 49 previous cultural resources surveys had been completed and that eight archaeological sites have been recorded. One historic property evaluation was also recorded within the search limits. The records search also indicated that the entirety of the project area has not been previously surveyed. Therefore, it is recommended that a cultural resources survey (Phase I or Extended Phase I, at a minimum) be prepared prior to implementation of the project. Such a survey may further assist in selecting the preferred trail alignment and would also indicate areas where additional refinement of the trail alignment may be advisable to further avoid or minimize impacts to cultural resources.

- 1. Segment 1A-1F:** Segments 1A, 1B, 1C and 1F are located primarily along the UPRR corridor, in an area that has been previously graded. However, known cultural resources sites have been documented in the project area around each of these segments, so constraints would be considered low to moderate, depending on whether grading was required. A Phase I assessment would be necessary to identify potential impacts and propose mitigation measures. Segment 1D would be constructed in a sensitive area that has not undergone previous ground disturbance, and therefore there is a greater potential for discovery of and impact to cultural resources. Constraints for this segment are considered moderate to high, depending on whether grading was required. A Phase I assessment would be necessary to identify potential impacts to cultural resources and would propose mitigation measures. Segment 1E parallels Pacific Boulevard/Highway 1 and other existing roadways that have undergone grading and ground disturbance activities in the past, and are currently paved. Although it travels through a culturally-sensitive area, constraints for this segment are considered low, assuming that no further grading is required.
- 2. Segment 2A-2F:** Segments 2A, 2C, 2E and 2F are located along the UPRR corridor, which has been previously graded. Segment 2B parallels South Dolliver Street, and would primarily be located in an area that has also undergone grading and ground disturbance activities in the past. However, cultural resources are known to exist in the project area around each of these segments, so constraints would be considered low to moderate, depending on whether grading was required. A Phase I assessment would be necessary to identify potential impacts and propose mitigation measures. Segment 2D



would be constructed in an area that has not undergone previous ground disturbance, and therefore there is a greater potential for discovery of cultural resources during any proposed grading activities. This segment option is considered to be of high cultural sensitivity given the proximity to the shoreline and to Meadow Creek. Cultural resource constraints for Segment 2D are considered moderate to high depending on whether grading would be required. A Phase I assessment would be necessary to more definitively determine the potential for impact to these resources and would include any appropriate mitigation measures.

- 3. Segment 3A-3D:** Segments 3A, 3C, and 3D are located in the Pismo Lakes Ecological Reserve, surrounding the Pismo Lakes, where sensitive cultural resources sites are known to exist. Due to the fact that these trail segments would be constructed in an area that has not undergone previous ground disturbance, there is a greater potential for discovery of, and impact to cultural resources. A Phase I Cultural Resources Assessment would be necessary to determine the actual potential for impact to these resources. Potential constraints for these segments are considered moderate to high, depending on whether grading would be required. Segment 3B follows an existing sewer access road in the Pismo Lakes Reserve, and sensitive cultural resources sites are known to exist in the immediate vicinity. Since this portion has been graded/disturbed in the past, the potential for impacts to cultural resources is considered low to moderate, depending on whether grading would be required.

D. Water Quality/Flooding:

- 1. Segment 1A-1F:** Segment 1A is located at an elevation above the 100-year flood zone, therefore constraints are considered low. The majority of Segment 1B is also outside of the flood zone, however where Meadow Creek flows into Oceano Lagoon, the flood zone encompasses the RV park area between UPRR and Highway 1 where the proposed trail would cross over the highway. This area is not anticipated to flood over depths of one foot under 100-year flood conditions, but nevertheless, would create a moderate constraint for year-round use at this location. In addition, the portion of Segment 1C that enters the Norswing Drive neighborhood is subject to flooding from the Meadow Creek/Oceano Lagoon drainage area during high flow events. Therefore, constraints for Segment 1C are also moderate. As Segment 1D winds through the State beach dunes, it passes in and out of the 100-year flood zone. Segment 1E also passes in and out of the flood zone along Highway 1, and as it enters the Norswing Drive neighborhood. Therefore, constraints for these segments are considered moderate. Segment 1F follows the UPRR tracks and remains outside of the flood zone, therefore constraints are considered low.
- 2. Segment 2A-2F:** Segments 2A, 2E, and 2F of the proposed trail follows the UPRR alignment, which is not considered a flood-hazard area by FEMA. Although the northernmost portion of segment 2A near the Meadow Creek overcrossing could be flooded during a high storm event, overall flood hazards for these segments would be low. Segment 2B begins by crossing Pismo Creek, and travels between the Pismo State Beach recreational area, and existing mobile home parks. This entire area is within the 100-year flood zone, where Meadow Creek and Pismo Creek would flow into the ocean during high storm events. Constraints for segment 2B are therefore considered moderate.

The northern portion of Segment 2C is located outside of the 100-year flood zone. However, during a high-storm event, the crossing at Meadow Creek, at the southern end of this segment option, could be flooded. Segment 2D follows along the perimeter of the golf course, which could also be flooded by Meadow Creek during a high-storm event. Overall, constraints for these segments are considered moderate.

- 3. Segment 3A-3D:** Segment 3 traverses around the Pismo Lakes Ecological Reserve, which is a wetland area fed by two branches of Meadow Creek before it drains to the Pacific Ocean. The majority of the reserve is within a 100-year flood zone, as mapped by the Federal Emergency Management Agency (FEMA). While portions of Segments 3A and 3D are at elevations above base flood levels, other sections of these alignment options are in low-lying areas and at pinch-points between existing residential uses and the lakeshore, which could be severely constrained or impassible during high flow events. Segment 3B follows an existing sewer line and due to the elevation above the creek floodway to the north, is not as likely to experience flooding during storm events. Segment 3C is aligned through a wetland near the culvert under the Fourth Street crossing, and would be at a high risk of flooding during and following significant rains. Furthermore, due to the proximity of the wetland areas, construction activities under any of these alignment options could temporarily degrade water quality. However, this potential constraint could be remedied through existing permitting requirements. Overall, constraints for Segment 3C are high, while constraints for Segments 3A, 3B, and 3D are moderate.

E. Services and Utilities:

- 1. Segment 1A-1F:** Segments 1A, 1B, 1C, and 1F are located near existing water and/or sewer lines. Depending on whether grading is required, constraints for these segments could be low to moderate. Segment 1D is not located in a developed area, and major water or sewer lines are neither documented nor likely to occur in this area. Segment 1E is located near existing water and/or sewer lines. However, this proposed alignment is already paved, and grading should not be necessary. Therefore, potential constraints associated with these utilities are anticipated to be low. Prior to construction of the preferred alignment alternative, coordination with the appropriate jurisdiction will be required to ensure that potential conflicts with existing utilities or service systems are avoided. Also, as required by law, notification of excavation will need to be provided through the Underground Service Alert of Southern California, to ensure that buried gas or electric lines, or fiber optic cables are not impacted.
- 2. Segment 2A-2F:** Segments 2A, 2B, 2C, and 2E are located near existing water and/or sewer lines. Depending on whether grading is required, constraints for these segments could be low to moderate. Segment 2D is not located in a developed area, and major water or sewer lines are neither documented nor likely to occur in this area. Potential constraints for this segment are anticipated to be low. Segment 2F is not located above any major water or sewer lines, and therefore potential constraints associated with these utilities are anticipated to be low. Prior to construction of the preferred alignment alternative, coordination with the appropriate jurisdiction will be required to ensure that potential conflicts with existing utilities or service systems are avoided. Also, as required by law, notification of excavation will need to be provided through the

Underground Service Alert of Southern California, to ensure that buried gas or electric lines, or fiber optic cables are not impacted.

- 3. Segment 3A-3D:** Segments 3A, 3B and 3C are located near existing sewer lines, and Segment 1A is also located near an existing water line. Depending on whether grading is required, constraints for these segments could be low to moderate. Segment 3D is not located above any major water or sewer lines, and therefore potential constraints associated with these utilities are anticipated to be low. Prior to construction of the preferred alignment alternative, coordination with the appropriate jurisdiction will be required to ensure that potential conflicts with existing utilities or service systems are avoided. Also, as required by law, notification of excavation will need to be provided through the Underground Service Alert of Southern California, to ensure that buried gas or electric lines, or fiber optic cables are not impacted.

F. Aesthetics:

- 1. Segment 1A-1F:** Segments 1A, 1B, 1C, and 1F would parallel the UPRR tracks and Fourth Street, which are surrounded by varying land uses described in Section A, *Land Use Compatibility*, above. Aesthetics constraints for these segments would be low, because the addition of a multi-purpose trail would not significantly alter the viewshed or character of the area.

Segment 1D meanders through the Pismo State Beach dunes, where informal equestrian and pedestrian trails currently exist. Due to intervening topography and vegetation, the majority of this trail would not be visible from surrounding roadways. The formalization of a trail along this corridor would be not significantly alter the character of the beach, and would allow users access to this scenic recreational area. Segment 1E also takes advantage of the scenic beach as it parallels Highway 1 (a City-designated Scenic Route). The proposed trail would be visually compatible with the recreational uses including the beach to the west, and the RV park to the east. Therefore, constraints for Segments 1D and 1E would also be low.

- 2. Segment 2A-2F:** Aesthetic constraints for Segments 2A, 2B, 2C, 2D, 2E, and 2F would all be low. Segments 2A, 2C, 2E, and 2F parallel the UPRR tracks, which are bordered by Highway 1 and Front Street. Although Highway 1 is designated as a Scenic Route by the City, the addition of a trail would not create a significant visual change in the character of the area, as viewed from surrounding residents or motorists. Segments 2B and 2D follow along the perimeter of Pismo State Beach, Monarch Grove, and the State Beach Golf Course. The development of a multi-purpose trail along either of these alignment options would not impair views of or from these existing recreational uses, and would allow users to take advantage of the scenic quality of this area.
- 3. Segment 3A-3D:** The Segment 3 options are located in and around the Pismo Lakes Ecological Reserve, which is bordered by residential uses to the south and a mobile home park and commercial uses to the north. While only short segments of various trail alignment options would be readily visible from public vantage points, private residents' views of the scenic preserve may be affected, especially as a result of any vegetation removal associated with trail construction. Although the trail would not restrict private views, the slight change in the visual character of this wetland represents

a moderate constraint for Segments 3A and 3D, since surrounding residential units are elevated above and adjacent to the proposed alignments. Segment 3B follows an existing sewer line and access trail, and would not substantially alter the landscape; therefore, aesthetic constraints for this segment would be low. Segment 3C is largely hidden from view by intervening vegetation and is further from surrounding residences. Although vegetation removal may be visible from the Fourth Street crossing, the proposed alignment would not significantly alter the visual quality of the viewshed from this location. Aesthetic constraints for Segment 3C would therefore be low.

G. Hazardous Materials:

1. **Segment 1A-1F:** Segments 1A, 1B, 1C, and 1F follow the UPRR corridor. Historically, oil and pesticides were used for weed abatement along the railroad tracks. Therefore, there is the potential that soil near the railroad tracks could be impacted with petroleum hydrocarbons and/or pesticides. Soil sampling may be necessary to ensure that construction workers are not exposed to hazardous contaminants. In addition, Segments 1A, 1B and 1C are sited along industrial districts, which present an increased potential for accidental spills and releases and for releases occurring when standard practices for handling of hazardous wastes, chemicals and materials are not followed. Constraints for Segments 1A, 1B, 1C, and 1F would all be moderate. Segments 1D and 1E do not travel through any land uses that could be sources of hazardous materials. Constraints for these segments are considered low.
2. **Segment 2A-2F:** Segments 2A, 2C, 2E, and 2F also follow the UPRR corridor, and would therefore require sampling prior to any grading activities to ensure that potential contamination is addressed. Constraints for these segments are therefore considered to be moderate. Segment 2B follows S. Dolliver St along Pismo State Beach. The State Water Resources Control Board has identified one open case where a leaking underground storage tank at the 7-11 store is being monitored. Regulatory agency oversight will ensure that surrounding land uses are not significantly impacted. Therefore, constraints for this segment are considered low. Segment 2D does not pass through any land uses that could be sources of hazardous materials. Constraints for this segment are considered low.
3. **Segment 3A-3D:** Segments 3 (Options A through D) do not cross through any known or potentially contaminated sites, nor are they near any sources, such as industrial uses, that may expose construction crews or future users to hazardous materials. Constraints for Segments 3A through 3D are low.

H. Transportation:

1. **Segment 1A-1F:** Segments 1A, 1B, and 1C propose pedestrian/bicycle bridges over the UPRR tracks. Segments 1B and 1C also propose controlled at-grade crossings on Highway 1. While the bridges would only result in temporary impacts during construction, the potential conflicts between pedestrians/bicyclists and motorists and trains at the proposed Highway 1 and UPRR crossings, respectively, would be a moderate to high constraint. Segment 1D requires a controlled at-grade crossing at its access on West Grand Avenue. Potential safety concerns associated with an at-grade crossing constitute a moderate environmental constraint. Segment 1E proposes a

pedestrian/bicycle bridge to cross over the Oceano Lagoon along Pier Avenue, and a controlled at-grade crossing would be added at Pier Avenue. While the bridges would only result in temporary impacts during construction, the potential conflicts between pedestrians/bicyclists and motorists would constitute a moderate environmental constraint. Segment 1F requires a controlled at-grade crossing at its southern access on Highway 1. As previously stated, potential safety concerns associated with an at-grade crossing constitute a moderate environmental constraint.

2. **Segment 2A-2F:** Segments 2A and 2E would be accessed by a proposed pedestrian/bicycle bridge over Atlantic City Avenue, and Segment 2B proposes one at its northern end over Pismo Creek. Aside from temporary traffic coordination during construction activities, these proposed bridges represent a low traffic-related constraint. Segment 2C proposes a controlled at-grade crossing over Five Cities Drive, and a pedestrian/bicycle bridge over Meadow Creek. The southern end of Segment 2D splits and intersects West Grand Avenue in two locations. One of these spurs includes a proposed pedestrian/bicycle bridge, and the other spur has a controlled at-grade crossing. Access to the southernmost section of Segment 2D would also be provided at the existing signalized intersection of West Grand and Highway 1. Due to the potential safety concerns associated with the proposed at-grade crossings, constraints for Segments 2C and 2D are considered moderate. Segment 2F would also be accessed by the existing signalized intersection of West Grand and Highway 1, and additionally proposes one pedestrian/bicycle bridge over Atlantic City Avenue. Aside from temporary construction-related impacts, traffic constraints for these proposed facilities along Segment 2F are low.
3. **Segment 3A-3D:** Segment 3A proposes one controlled at-grade crossing on Five Cities Drive near the future Hilton Hotel site. This roadway has fairly high traffic volumes and speeds, and presents potential conflicts for pedestrians and bicyclists crossing the road to access this segment of the trail. In addition, Segment 3A proposes three pedestrian/bicycle bridges: one over Fourth Street, and the other two over the Pismo Lakes. These bridges do not present traffic safety concerns, however because of the traffic safety coordination during construction and the analysis required for the roadway crossings as well as potential difficulty obtaining landowner permission, constraints for this segment are considered moderate.

Segments 3B and 3D do not propose any roadway crossings or bridges, and therefore would not be constrained by potential traffic conflicts. Segment 3C proposes one pedestrian/bicycle bridge crossing over the Pismo Lakes. This bridge would not affect any roadways or intersections, therefore no potential traffic conflicts would result.

I. *Paleontological Resources:*

The geological formations found within the overall project site (south of US 101) include Quaternary alluvial, sand dune and terrace. Within the Quaternary deposits, Pleistocene vertebrate fossils localities occur within the older sand dune and marine terrace deposits in the Nipomo area, south of the currently proposed project area. Because there may be a potential for paleontological resources within the project area, it is recommended that future studies be performed, should extensive grading be proposed as part of the project. These studies would yield a more detailed description

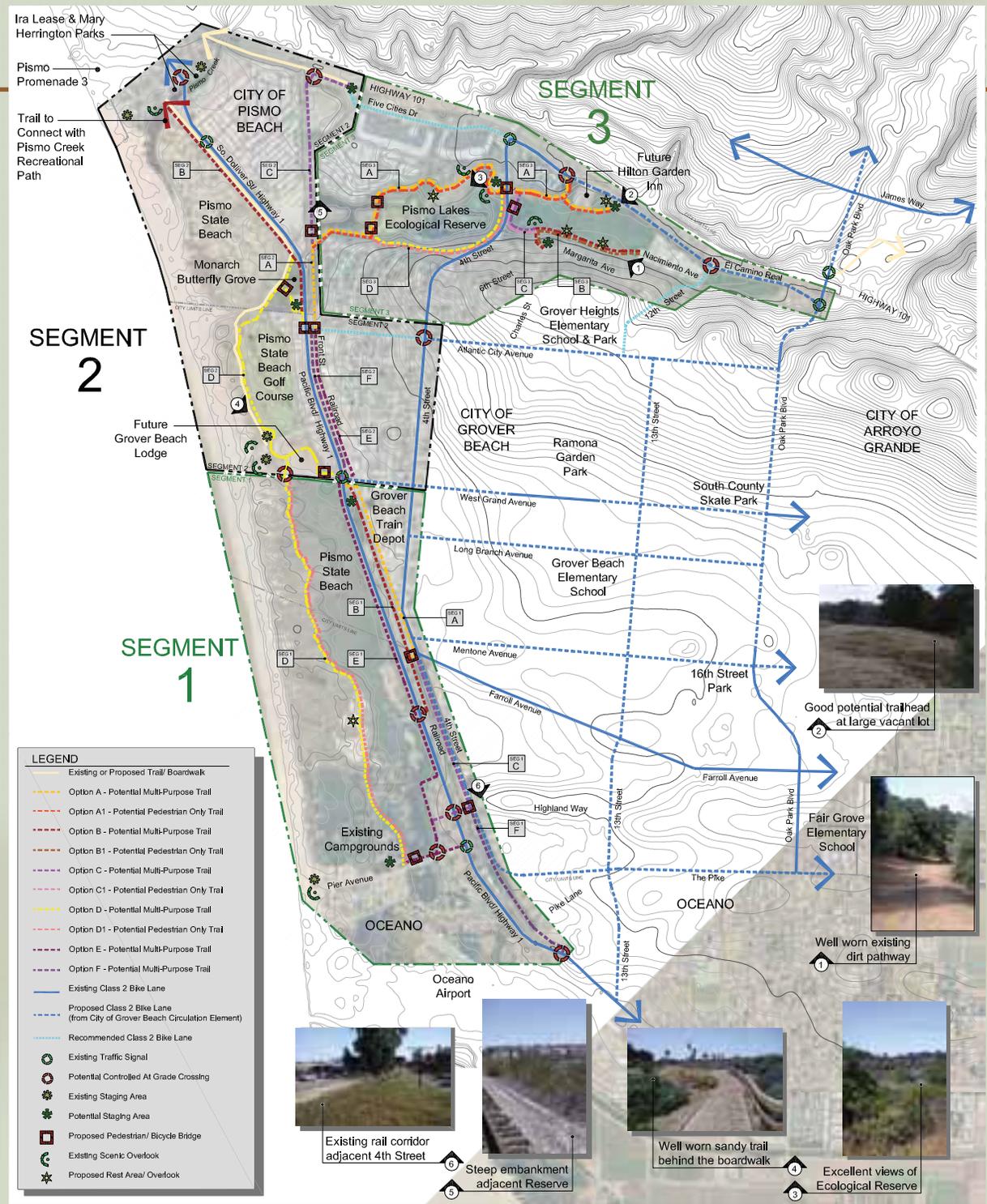
on current fossil localities within the geological formations within and surrounding the project site and provide monitoring or mitigation recommendations specific to the project.

1. **Segment 1A-1F:** Segments 1A, 1B, 1C and 1F are located along the UPRR corridor, which has been previously graded. Segment 1E parallels Pacific Blvd./Highway 1 and other existing roadways, that have undergone grading and ground disturbance activities in the past. Constraints for these five segments are considered low. Segment 1D would be constructed in an area that has not undergone previous ground disturbance, and therefore there is a greater potential for discovery of paleontological resources, given the presence of fossil-bearing Quaternary formations in the vicinity of the project. Paleontological constraints for this segment are considered moderate. Should substantial excavation be proposed, a Phase I Paleontological Resources Assessment would be necessary to determine the actual potential for impact to these resources.
 2. **Segment 2A-2F:** Segments 2A, 2C, 2E, and 2F are located along the UPRR corridor, which has been previously graded. Segment 2B parallels South Dolliver Street, and would primarily be located in an area that has undergone grading and ground disturbance activities in the past. Constraints for these four segments are considered low. Segment 2D would be constructed in an area that has not undergone previous ground disturbance, and therefore there is a greater potential for discovery of paleontological resources, given the presence of fossil-bearing Quaternary formations in the vicinity of the project. Paleontological constraints for this segment are considered moderate. Should substantial excavation be proposed, a Phase I Paleontological Resources Assessment would be necessary to determine the actual potential for impact to these resources.
 3. **Segment 3A-3D:** Segments 3A, 3C, and 3D are located in the Pismo Lakes Ecological Reserve, surrounding the Pismo Lakes. The lakes region itself has been extensively graded for drainage improvements and to create artificial islands; however, other areas of these segment options have not been graded. Since some of these trail segments would be constructed in areas that has not undergone previous ground disturbance and because of the presence of fossil-bearing Quaternary formations in the area, there is a potential for discovery of paleontological resources. Should substantial additional excavation be proposed, a Phase I Paleontological Resources Assessment would be necessary to determine the actual potential for impact to these resources. Potential constraints for these segments are considered moderate. Segment 3B is also located in the Pismo Lakes Ecological Reserve, however this segment follows an existing sewer access road. Since this portion has been graded/disturbed in the past, the potential for impacts to paleontological resources is considered low.
- J. Follow-up Environmental Studies:**
- Focused biological surveys and seasonally timed botanical surveys would be required to determine the presence or absence of special status species (both plant and animal), as well as potential coordination with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) should any special status species be located within any future trail alignment.

- Prior to project implementation, a jurisdictional delineation of waters of the U.S. and State of California would need to be conducted to determine the nature and extent of USACE, RWQCB, and CDFG jurisdiction on-site.
- In areas where tree removal is proposed, a tree inventory should be conducted prior to project implementation.
- Soil sampling and a Phase I Environmental Site Assessment would be recommended if:
1) the preferred trail alignment is within the UPRR corridor or adjacent to industrial areas; and 2) additional grading is proposed for trail construction.
- Since the entirety of the project area has not been surveyed, and because of the existence of known cultural resource sites along the project corridor, the Central Coast Information Center recommends that a cultural resource survey (Phase I or Extended Phase I, at a minimum) be prepared prior to implementation of the project.
- A Phase 1 Paleontological Resources Analysis would be recommended should extensive ground disturbance be proposed in areas of previously undisturbed soils. This includes a records search from institutional collections and scientific literature.

K. Regulatory Permitting:

- U.S. Fish and Wildlife Service – Federal Endangered Species Act Section 7 Consultation or Section 10 Habitat Conservation Plan
- U.S. Army Corps of Engineers – Clean Water Act Section 404 Permit
- Central Coast Regional Water Quality Control Board – Clean Water Act Section 401 Water Quality Certification and/or Porter-Cologne Water Quality Control Act Waste Discharge Requirements Permit
- Central Coast Regional Water Quality Control Board – General Construction Permit, including a Storm Water Pollution Prevention Plan
- California Department of Fish and Game – Fish and Game Code 1600 *et seq.* Lake or Streambed Alteration Agreement
- California Department of Fish and Game – California Endangered Species Act Sections 2081(b) and (c) Incidental Take Permit
- City of Grover Beach, City of Pismo Beach, County of San Luis Obispo – land use, grading, and road encroachment permits
- California Department of Transportation Encroachment Permit
- UPRR and California Public Utilities Commission permits for any encroachments into the UPRR right of way

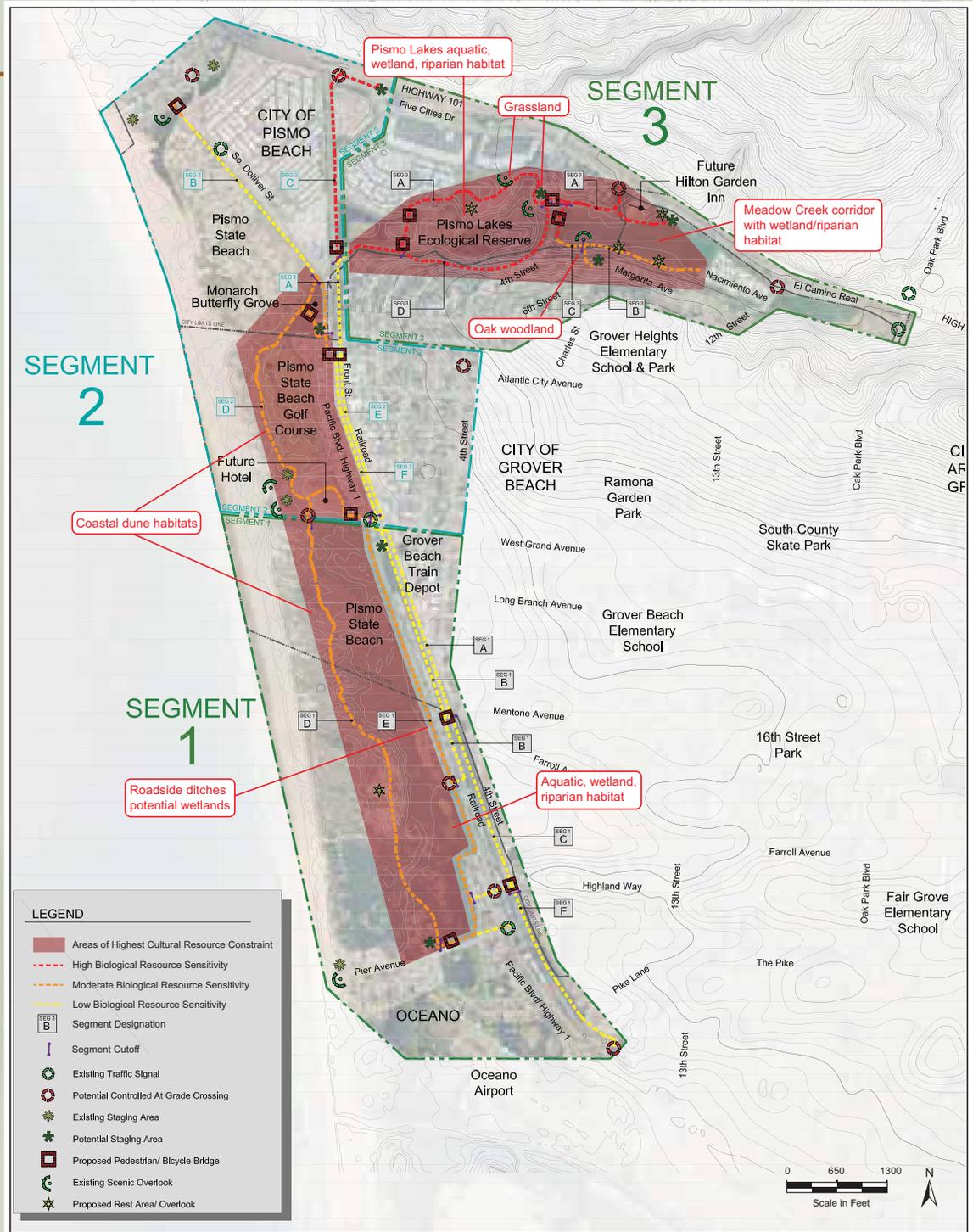


Matrix of Environmental Constraints

ENVIRONMENTAL CONSTRAINTS	SEGMENT 1						SEGMENT 2						SEGMENT 3			
	1A	1B	1C	1D	1E	1F	2A	2B	2C	2D	2E	2F	3A	3B	3C	3D
Land Use Compatibility	M	M	L/M	L	L	L	L	L	L	L	L	L	M	L	L	M
Biological Resources	L	L	L	M	L/M	L	L	L/M	H	M	L	L	H	M	M/H	H
Cultural Resources	L/M	L/M	L/M	M/H	L	L/M	L/M	L/M	L/M	M/H	L/M	L/M	M/H	M/H	M/H	M/H
Water Quality/Flooding	L	L/M	M	M	M	L	L	M	M	M	L	L	M	M	H	M
Services and Utilities	L/M	L/M	L/M	L	L	L/M	L/M	L/M	L/M	L	L/M	L	L/M	L/M	L/M	L
Aesthetics	L	L	L	L	L	L	L	L	L	L	L	L	M	L	L	M
Hazardous Materials	M	M	M	L	L	M	M	L	M	L	M	M	L	L	L	L
Transportation	M/H	M/H	M/H	M	M	M	L	L	M	M	L	L	M	L	L	L
Paleontological Resources	L	L	L	M	L	L	L	L	L	M	L	L	M	L	M	M

L: Low potential for environmental constraints
M: Moderate potential for environmental constraints
H: High potential for environmental constraints

Attachment 2





Appendix D

*Opinion of Preliminary Cost -
All Routes*



Beach Cities Multi-Purpose Trail

TRAIL FEASIBILITY STUDY

NOTE: All costs are planning-level opinions of probable cost for constructing the Beach Cities Trail. These costs are based upon the trail description contained in this Feasibility Study. Costs are provided for specific design and construction related components of four types of trail improvements: design, trail construction, crossing construction, and trail amenities as described in Section 4.0 of this Feasibility Study.

SEGMENT 1	TRAIL LENGTH (MILES)	COST PER MILE	TOTAL COST
Option A - Multi-Purpose	0.55	\$1,084,963	\$598,990
Option B - Multi-Purpose	0.68	\$689,166	\$465,970
Option C - Multi-Purpose	0.49	\$1,257,960	\$619,450
Option D - Multi-Purpose	1.26	\$851,762	\$1,071,155
Option D1 - Pedestrian Only	*	1.26	\$291,008
Option E - Multi-Purpose	*	1.21	\$979,399
Option F - Multi-Purpose	0.50	\$766,085	\$379,415

SEGMENT 2	TRAIL LENGTH (MILES)	COST PER MILE	TOTAL COST
Option A - Multi-Purpose	*	0.23	\$13,559,212
Option B - Multi-Purpose	*	0.72	\$1,056,556
Option C - Multi-Purpose	0.59	\$831,199	\$491,950
Option D - Multi-Purpose	*	1.04	\$589,728
Option E - Multi-Purpose	0.46	\$717,211	\$330,080
Option F - Multi-Purpose	0.50	\$940,850	\$465,970

SEGMENT 3	TRAIL LENGTH (MILES)	COST PER MILE	TOTAL COST
Option A - Multi-Purpose	1.17	\$2,047,290	\$2,398,586
Option A1 - Pedestrian Only	*	1.17	\$1,177,548
Option B - Multi-Purpose	0.36	\$716,898	\$260,690
Option B1 - Pedestrian Only	0.36	\$386,375	\$140,500
Option C - Multi-Purpose	0.18	\$544,770	\$99,565
Option C1 - Pedestrian Only	0.18	\$214,127	\$39,135
Option D - Multi-Purpose	0.50	\$537,464	\$269,750
Option D1 - Pedestrian Only	0.50	\$208,909	\$104,850

* The costs for these trails are in Section 4.0

SEGMENT 1

Option A - Multi-Purpose (Segment 1)				
	QUANTITY	UNIT	UNIT COST	TOTAL COST
TRAIL CONSTRUCTION (3915 LF)				
CLEAR, GRUBB, & GRADING FOR NEW TRAIL	46,640	SF	3.50	\$163,240.00
12FT WIDE AC PAVING- 4" OVER 4" BASE	34,980	SF	3.50	\$122,430.00
2' DG SHOULDERS EACH SIDE	11,660	SF	0.50	\$5,830.00
PAINT STRIPING - CENTER LINE	2,915	LF	1.00	\$2,915.00
PAINT STRIPING - ARROWS	8	EA	25.00	\$200.00
TRAIL FENCING - RAILROAD	2,915	LF	25.00	\$72,875.00
TRAIL FENCING - 4th STREET	700	LF	25.00	\$17,500.00
REMOVABLE BOLLARDS	2	EA	500.00	\$1,000.00
DIRECTIONAL & SAFETY SIGNS	4	EA	750.00	\$3,000.00

SUBTOTAL \$388,990.00

BRIDGE CONSTRUCTION (1)				
	QUANTITY	UNIT	UNIT COST	TOTAL COST
BRIDGE, ABUTMENTS & INSTALLATION- 125 LF (RAILROAD)	1	EA	210,000.00	\$210,000.00

SUBTOTAL \$210,000.00

TOTAL OPTION A (SEGMENT 1) \$598,990
COST PER MILE \$1,084,963

Note: Does not include proposed staging area at Grover Beach Train Depot parking lot



Option B - Multi-Purpose (Segment 1)				
	QUANTITY	UNIT	UNIT COST	TOTAL COST
TRAIL CONSTRUCTION (1065 LF)				
CLEAR, GRUBB, & GRADING FOR NEW TRAIL	57,120	SF	3.50	\$199,920.00
12FT WIDE AC PAVING- 4" OVER 4" BASE	42,840	SF	3.50	\$149,940.00
2' DG SHOULDERS EACH SIDE	14,280	SF	0.50	\$7,140.00
PAINT STRIPING - CENTER LINE	3,570	LF	1.00	\$3,570.00
PAINT STRIPING - ARROWS	8	EA	25.00	\$200.00
TRAIL FENCING - RAILROAD	3,570	LF	25.00	\$89,250.00
REMOVABLE BOLLARDS	2	EA	500.00	\$1,000.00
DIRECTIONAL & SAFETY SIGNS	4	EA	750.00	\$3,000.00

SUBTOTAL \$454,020.00

AT GRADE CROSSING - UNSIGNALIZED (1)				
DECORATIVE CROSSWALK (DERMATHERM) 50' X 12'	600	SF	15.00	\$9,000.00
RUMBLE STRIPS OR DOTS (50' X 10')	500	SF	1.00	\$500.00
STREET PAINTING (XING AHEAD)	2	EA	100.00	\$200.00
ROADWAY APPROACH SIGN	3	EA	750.00	\$2,250.00

SUBTOTAL \$11,950.00

TOTAL OPTION B (SEGMENT 1) \$465,970

COST PER MILE \$689,166

Note: Does not include proposed staging area at Grover Beach Train Depot parking lot





Option D - Class 1 Multi-Purpose (Segment 1)				
	QUANTITY	UNIT	UNIT COST	TOTAL COST
TRAIL CONSTRUCTION (6,640 LF)				
CLEAR, GRUBB, & GRADING FOR NEW TRAIL	106,240	SF	3.50	\$371,840.00
12FT WIDE AC PAVING- 4" OVER 4" BASE	79,680	SF	3.50	\$278,880.00
PAINT STRIPING - CENTER LINE	6,640	LF	1.00	\$6,640.00
PAINT STRIPING - ARROWS	4	EA	25.00	\$100.00
TRAIL FENCING (DUNES AREA)	13,280	LF	25.00	\$332,000.00
REMOVABLE BOLLARDS	2	EA	500.00	\$1,000.00
DIRECTIONAL & SAFETY SIGNS	2	EA	750.00	\$1,500.00

SUBTOTAL \$991,960.00

REST AREA/ OVERLOOK (1)				
DECOMPOSED GRANITE PAVING	10,000	SF	3.00	\$30,000.00
TRAIL FENCE	500	LF	25.00	\$12,500.00
BENCHES - METAL - 72" LENGTH	2	EA	2,000.00	\$4,000.00
PICNIC TABLES - WOOD & CONCRETE	1	EA	1,570.00	\$1,570.00
TRASH & RECYCLING RECEPTACLES - METAL	2	EA	820.00	\$1,640.00
BIKE RACKS - 6 SLOT	1	EA	835.00	\$835.00
INTERPRETIVE SIGN & BASE	1	EA	3,500.00	\$3,500.00

SUBTOTAL \$54,045.00

AT GRADE CROSSING - UNSIGNALIZED (1)				
DECORATIVE CROSSWALK (DERMATHERM) 50' X 12'	600	SF	15.00	\$9,000.00
RUMBLE STRIPS OR DOTS (50' X 10')	500	SF	1.00	\$500.00
STREET PAINTING (XING AHEAD)	2	EA	25.00	\$50.00
ROADWAY APPROACH SIGN	2	EA	750.00	\$1,500.00

SUBTOTAL \$11,050.00

STAGING AREA (1)				
DECOMPOSED GRANITE PAVING	3,200	SF	3.00	\$9,600.00
INFORMATION TRAILHEAD KIOSK	1	EA	3,500.00	\$3,500.00
PARKING ENTRY SIGN	1	EA	1,000.00	\$1,000.00

SUBTOTAL \$14,100.00

TOTAL OPTION D (SEGMENT 1) \$1,071,155
COST PER MILE \$851,762

Note: Does not include enhancing existing facilities at the Pismo State Beach parking lots

Option D1 - Pedestrian Only (Segment 1)

Segment 1, Option D1 was rated as one of the most feasible trail alignments; refer to Section 4.0 for description.

Option E - Multi-Purpose (Segment 1)

Segment 1, Option E was rated as one of the most feasible trail alignments; refer to Section 4.0 for description.

Option F - Multi-Purpose (Segment 1)

	QUANTITY	UNIT	UNIT COST	TOTAL COST
TRAIL CONSTRUCTION (2,615 LF)				
CLEAR, GRUBB, & GRADING FOR NEW TRAIL	41,840	SF	3.50	\$146,440.00
12FT WIDE AC PAVING- 4" OVER 4" BASE	31,380	SF	3.50	\$109,830.00
2' DG SHOULDERS EACH SIDE	10,460	SF	0.50	\$5,230.00
PAINT STRIPING - CENTER LINE	2,615	LF	1.00	\$2,615.00
PAINT STRIPING - ARROWS	4	EA	25.00	\$100.00
TRAIL FENCING - RAILROAD	2,025	LF	25.00	\$50,625.00
TRAIL FENCING - 4th STREET	2,025	LF	25.00	\$50,625.00
REMOVABLE BOLLARDS	1	EA	500.00	\$500.00
DIRECTIONAL & SAFETY SIGNS	2	EA	750.00	\$1,500.00
SUBTOTAL				\$367,465.00

AT GRADE CROSSING - UNSIGNALIZED (1)

DECORATIVE CROSSWALK (DERMATHERM) 50' X 12'	600	SF	15.00	\$9,000.00
RUMBLE STRIPS OR DOTS (50' X 10')	500	SF	1.00	\$500.00
STREET PAINTING (XING AHEAD)	2	EA	100.00	\$200.00
ROADWAY APPROACH SIGN	3	EA	750.00	\$2,250.00
SUBTOTAL				\$11,950.00

TOTAL OPTION F (SEGMENT 1) **\$379,415**
COST PER MILE **\$766,085**





SEGMENT 2

Option A - Multi-Purpose (Segment 2)

Segment 2, Option A was rated as one of the most feasible trail alignments; refer to Section 4.0 for description.

Option B - Multi-Purpose (Segment 2)

Segment 2, Option B was rated as one of the most feasible trail alignments; refer to Section 4.0 for description.

Option C - Multi-Purpose (Segment 2)

	QUANTITY	UNIT	UNIT COST	TOTAL COST
TRAIL CONSTRUCTION (3,125 LF)				
CLEAR, GRUBB, & GRADING FOR NEW TRAIL	50,000	SF	3.50	\$175,000.00
12FT WIDE AC PAVING- 4" OVER 4" BASE	37,500	SF	3.50	\$131,250.00
2' DG SHOULDERS EACH SIDE	12,500	SF	0.50	\$6,250.00
PAINT STRIPING - CENTER LINE	3,125	LF	1.00	\$3,125.00
PAINT STRIPING - ARROWS	8	EA	25.00	\$200.00
BOARDWALK/ LOW RETAINING WALL - ADJACENT RESERVE	925	LF	100.00	\$92,500.00
TRAIL FENCING - ADJACENT RAILROAD	2,345	LF	25.00	\$58,625.00
REMOVABLE BOLLARDS	2	EA	500.00	\$1,000.00
DIRECTIONAL & SAFETY SIGNS	4	EA	750.00	\$3,000.00

SUBTOTAL \$470,950.00

STAGING AREA (1)

DECOMPOSED GRANITE PAVING	3,200	SF	3.00	\$9,600.00
PARKING ENTRY SIGN	1	EA	1,000.00	\$1,000.00

SUBTOTAL \$10,600.00

AT GRADE CROSSING - UNSIGNALIZED (1)

DECORATIVE CROSSWALK (DERMATHERM) 40' X 12'	480	SF	15.00	\$7,200.00
CURB RAMPS & CURB-CUTS	2	EA	500.00	\$1,000.00
RUMBLE STRIPS OR DOTS (50' X 10')	500	SF	1.00	\$500.00
STREET PAINTING (XING AHEAD)	2	EA	100.00	\$200.00
ROADWAY APPROACH SIGN	2	EA	750.00	\$1,500.00

SUBTOTAL \$10,400.00

TOTAL OPTION C (SEGMENT 2) \$491,950

COST PER MILE \$831,199



Option D - Multi-Purpose (Segment 2)

Segment 2, Option D was rated as one of the most feasible trail alignments; refer to Section 4.0 for description.

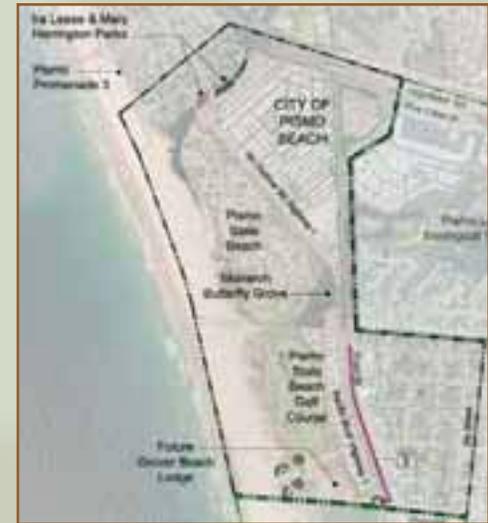
Option E - Multi-Purpose (Segment 2)				
	QUANTITY	UNIT	UNIT COST	TOTAL COST
TRAIL CONSTRUCTION (2,430 LF)				
CLEAR, GRUBB, & GRADING FOR NEW TRAIL	38,880	SF	3.50	\$136,080.00
12FT WIDE AC PAVING- 4" OVER 4" BASE	29,160	SF	3.50	\$102,060.00
2' DG SHOULDERS EACH SIDE	9,720	SF	0.50	\$4,860.00
PAINT STRIPING - CENTER LINE	2,430	LF	1.00	\$2,430.00
PAINT STRIPING - ARROWS	8	EA	25.00	\$200.00
TRAIL FENCING - RAILROAD	2,430	LF	25.00	\$60,750.00
REMOVABLE BOLLARDS	1	EA	500.00	\$500.00
DIRECTIONAL & SAFETY SIGNS	4	EA	750.00	\$3,000.00

SUBTOTAL \$309,880.00

AT GRADE CROSSING - SIGNALIZED (1)				
DECORATIVE CROSSWALK (DERMATHERM) GRAND 90' X 12'	1,080	SF	15.00	\$16,200.00
CURB RAMPS & CURB-CUTS	2	EA	500.00	\$1,000.00
ROADWAY APPROACH SIGN	4	EA	750.00	\$3,000.00

SUBTOTAL \$20,200.00

TOTAL OPTION E (SEGMENT 2) \$330,080
COST PER MILE \$717,211



SEGMENT 3

Option A - Class 1 Multi-Purpose (Segment 3)

Segment 3, Option A was rated as one of the most feasible trail alignments; refer to Section 4.0 for description.

Option A1 -Pedestrian Only (Segment 3)				
	QUANTITY	UNIT	UNIT COST	TOTAL COST
TRAIL CONSTRUCTION (6,186 LF)				
CLEAR, GRUBB, & GRADING FOR NEW TRAIL	37,116	SF	3.50	\$129,906.00
6 FT WIDE DG PAVING	37,116	SF	3.00	\$111,348.00
DIRECTIONAL & SAFETY SIGNS	11	EA	750.00	\$8,250.00
SUBTOTAL				\$249,504.00

BRIDGE CONSTRUCTION (3)				
BRIDGE, ABUTMENTS & INSTALLATION- 175 LF (PONDS)	2	EA	140,000.00	\$280,000.00
BRIDGE, ABUTMENTS & INSTALLATION- 225 LF (4TH STREET)	1	EA	650,000.00	\$650,000.00
SUBTOTAL				\$930,000.00

REST AREA/ OVERLOOKS (2)				
DECOMPOSED GRANITE PAVING	34,000	SF	3.00	\$102,000.00
TRAIL FENCE	500	LF	25.00	\$12,500.00
BENCHES - METAL - 72" LENGTH	8	EA	2,000.00	\$16,000.00
PICNIC TABLES - WOOD & CONCRETE	4	EA	1,570.00	\$6,280.00
TRASH & RECYCLING RECEPTACLES - METAL	4	EA	820.00	\$3,280.00
BIKE RACKS - 6 SLOT	4	EA	835.00	\$3,340.00
INTERPRETIVE SIGN & BASE	1	EA	3,500.00	\$3,500.00
SUBTOTAL				\$146,900.00

SCENIC OVERLOOKS (2)				
DECOMPOSED GRANITE PAVING	2,000	SF	3.00	\$6,000.00
TRAIL FENCE	300	LF	25.00	\$7,500.00
BENCHES - METAL - 72" LENGTH	4	EA	2,000.00	\$8,000.00
INTERPRETIVE SIGN & BASE	1	EA	3,500.00	\$3,500.00
SUBTOTAL				\$25,000.00

STAGING AREA (2)				
DECOMPOSED GRANITE PAVING	6,400	SF	3.00	\$19,200.00
INFORMATION TRAILHEAD KIOSK	2	EA	3,500.00	\$7,000.00
PARKING ENTRY SIGN	2	EA	1,000.00	\$2,000.00
SUBTOTAL				\$28,200.00

TOTAL OPTION A1 (Segment 3) **\$1,379,604**
COST PER MILE **\$1,177,548**





Option B - Class 1 Multi-Purpose (Segment 3)				
	QUANTITY	UNIT	UNIT COST	TOTAL COST
TRAIL CONSTRUCTION (1,920 LF)				
CLEAR, GRUBB, & GRADING FOR NEW TRAIL	30,720	SF	3.50	\$107,520.00
12FT WIDE AC PAVING- 4" OVER 4" BASE	23,040	SF	3.50	\$80,640.00
2' DG SHOULDERS EACH SIDE	7,680	SF	0.50	\$3,840.00
PAINT STRIPING - CENTER LINE	1,920	LF	1.00	\$1,920.00
PAINT STRIPING - ARROWS	6	EA	25.00	\$150.00
REMOVABLE BOLLARDS	2	EA	500.00	\$1,000.00
DIRECTIONAL & SAFETY SIGNS	3	EA	750.00	\$2,250.00

SUBTOTAL \$197,320.00

REST AREA/ OVERLOOKS (2)				
DECOMPOSED GRANITE PAVING	3,000	SF	3.00	\$9,000.00
TRAIL FENCE	500	LF	25.00	\$12,500.00
BENCHES - METAL - 72" LENGTH	4	EA	2,000.00	\$8,000.00
PICNIC TABLES - WOOD & CONCRETE	1	EA	1,570.00	\$1,570.00
TRASH & RECYCLING RECEPTACLES - METAL	4	EA	820.00	\$3,280.00
BIKE RACKS - 6 SLOT	2	EA	835.00	\$1,670.00
INTERPRETIVE SIGN & BASE	1	EA	3,500.00	\$3,500.00

SUBTOTAL \$39,520.00

SCENIC OVERLOOK (1)				
DECOMPOSED GRANITE PAVING	500	SF	3.00	\$1,500.00
TRAIL FENCE	250	LF	25.00	\$6,250.00
BENCHES - METAL - 72" LENGTH	1	EA	2,000.00	\$2,000.00

SUBTOTAL \$9,750.00

STAGING AREA (2)				
DECOMPOSED GRANITE PAVING (6TH STREET ONLY)	3,200	SF	3.00	\$9,600.00
INFORMATION TRAILHEAD KIOSK (NACIMIENTO ONLY)	1	EA	3,500.00	\$3,500.00
PARKING ENTRY SIGN (6TH STREET ONLY)	1	EA	1,000.00	\$1,000.00

SUBTOTAL \$14,100.00

TOTAL OPTION B (Segment 3) \$260,690
COST PER MILE \$716,898





Option C - Class 1 Multi-Purpose (Segment 3)				
	QUANTITY	UNIT	UNIT COST	TOTAL COST
TRAIL CONSTRUCTION (965 LF)				
CLEAR, GRUBB, & GRADING FOR NEW TRAIL	15,440	SF	3.50	\$54,040.00
12FT WIDE AC PAVING- 4" OVER 4" BASE	11,580	SF	3.50	\$40,530.00
2' DG SHOULDERS EACH SIDE	3,860	SF	0.50	\$1,930.00
PAINT STRIPING - CENTER LINE	965	LF	1.00	\$965.00
PAINT STRIPING - ARROWS	4	EA	25.00	\$100.00
REMOVABLE BOLLARDS	1	EA	500.00	\$500.00
DIRECTIONAL & SAFETY SIGNS	2	EA	750.00	\$1,500.00

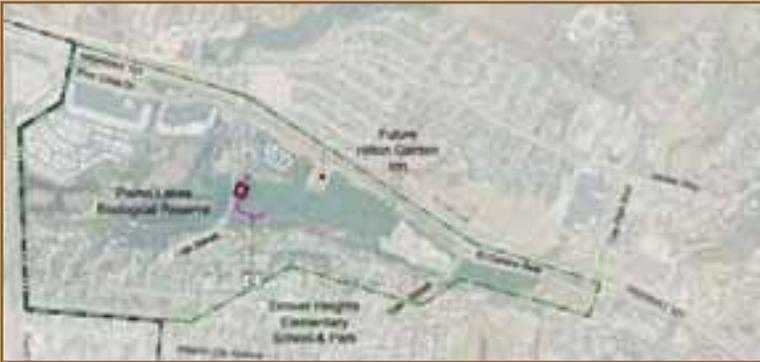
SUBTOTAL \$99,565.00

TOTAL OPTION C (Segment 3) \$99,565
COST PER MILE \$544,770

Option C1 - Pedestrian Only (Segment 3)				
	QUANTITY	UNIT	UNIT COST	TOTAL COST
TRAIL CONSTRUCTION (965 LF)				
CLEAR, GRUBB, & GRADING FOR NEW TRAIL	5,790	SF	3.50	\$20,265.00
6 FT WIDE DG PAVING	5,790	SF	3.00	\$17,370.00
DIRECTIONAL & SAFETY SIGNS	2	EA	750.00	\$1,500.00

SUBTOTAL \$39,135.00

TOTAL OPTION C1 (Segment 3) \$39,135
COST PER MILE \$214,127



Option D - Class 1 Multi-Purpose (Segment 3)				
TRAIL CONSTRUCTION (2,650 LF)				
CLEAR, GRUBB, & GRADING FOR NEW TRAIL	42,400	SF	3.50	\$148,400.00
12FT WIDE AC PAVING- 4" OVER 4" BASE	31,800	SF	3.50	\$111,300.00
2' DG SHOULDERS EACH SIDE	10,600	SF	0.50	\$5,300.00
PAINT STRIPING - CENTER LINE	2,650	LF	1.00	\$2,650.00
PAINT STRIPING - ARROWS	4	EA	25.00	\$100.00
REMOVABLE BOLLARDS	1	EA	500.00	\$500.00
DIRECTIONAL & SAFETY SIGNS	2	EA	750.00	\$1,500.00

SUBTOTAL \$269,750.00

TOTAL OPTION D (Segment 3) \$269,750
COST PER MILE \$537,464

Option D1 - Pedestrian Only (Segment 3)				
TRAIL CONSTRUCTION (2,650 LF)				
CLEAR, GRUBB, & GRADING FOR NEW TRAIL	15,900	SF	3.50	\$55,650.00
6 FT WIDE DG PAVING	15,900	SF	3.00	\$47,700.00
DIRECTIONAL & SAFETY SIGNS	2	EA	750.00	\$1,500.00

SUBTOTAL \$104,850.00

TOTAL OPTION D1 (Segment 3) \$104,850
COST PER MILE \$208,909





Appendix E

Funding Sources Matrix



Beach Cities Multi-Purpose Trail

TRAIL FEASIBILITY STUDY



PRIMARY FEDERAL FUNDING RESOURCES

Category	Description	Target Project Components
<p>Congestion Mitigation and Air Quality Improvement Program (CMAQ)</p> <p>http://www.fhwa.dot.gov/environment/cmaqpgs/</p> <p>California Department of Transportation 1120 N Street P. O. Box 942673 Sacramento, CA 94273 (916) 654-5267 http://www.dot.ca.gov</p>	<p>Provides funds aimed at projects that help improve air quality in regions that are designated as non-attainment or maintenance areas as defined by air quality standards. Major emphasis is placed upon projects that support alternative modes of transportation, provide congestion relief measures, provide non-polluting transit vehicles and equipment, pedestrian and bicycling facilities, and new or improved technologies geared toward providing a more efficient and safer transportation system.</p>	<p><i>Bicycle and pedestrian facilities and programs, traffic flow improvement programs.</i></p>
<p>Transportation Enhancement Activities (STIP TE)</p> <p>http://www.fhwa.dot.gov/environment/te/1999guidance.htm#eligible</p> <p>Caltrans Local Programs 805-549-3111</p>	<p>Funds environmental and alternative transportation projects which enhance the transportation system. Projects should creatively and sensitively integrate multi-modal transportation facilities into their surrounding communities. STIP TE projects must have a direct relationship, by function, proximity or impact, to surface transportation (streets, roads, and highways). Allocated to the local councils of governments for allocation to local projects on a competitive basis.</p>	<p><i>Provision of facilities for pedestrians and bicycles, acquisition of scenic easements and sites, scenic programs, landscaping and other beautification, and environmental mitigation.</i></p>



Category	Description	Target Project Components
<p>Energy Efficiency and Conservation Block Grant (EECBG)</p> <p>http://www.eecbg.energy.gov/</p> <p><i>State Energy Program Manager Pat Perez 916-654-4996 pperez@energy.state.ca.us</i></p>	<p>The U.S. Department of Energy (DOE) has a competitive Energy Efficiency and Conservation Block Grant (EECBG) funding opportunity which funds innovative programs which conserve energy used in transportation including bike lanes and pathways, and pedestrian walkways.</p>	<p><i>Development of bike lanes and pathways, and pedestrian walkways</i></p>



Category	Description	Target Project Components
<p>Regional Surface Transportation Program (RSTP)</p> <p>http://www.dot.ca.gov/hq/transprog/federal/rstp/Official_RSTP_Web_Page.htm</p> <p>Caltrans District 5 Tammy Marr 805-542-4605 tmarr@dot.ca.gov</p>	<p>Programs and projects that facilitate non-automobile travel and generally reduce the need for single occupant vehicle travel. In addition, programs for new construction and major reconstructions of paths, tracks or areas solely for the use by pedestrian or other non-motorized means of transportation when economically feasible and in the public interest. STP funds may be used for either the construction of bicycle transportation facilities and pedestrian walkways, or non-construction projects (such as maps, brochures, and public service announcements) related to safe bicycle use and walking. Allocations are made on the basis of priorities developed in the RTP by the MPO in cooperation with local jurisdictions.</p>	<p><i>Bicycle transportation and pedestrian walkway construction, bike lanes, trail connections, traffic signals. Mitigation of damage to wildlife, habitat, and ecosystems caused by a transportation project funded under RSTP.</i></p>
<p>Recreational Trails Program (RTP)</p> <p>http://www.fhwa.dot.gov/environment/rectrails/</p> <p>California State Parks Office of Grants & Local Services Jean Lacher, Manager PO Box 942896 Sacramento CA 94296-0001 916-653-6160; Fax 916-653-6511 jlach@parks.ca.gov</p>	<p>Provides federal funding for recreational trails and trails-related projects to public agencies and non-profit organizations that manage public lands. Funding comes from the Federal Highway Trust Fund, and it is distributed to the States by a legislative formula: half of the funds are distributed equally among all of the States, and half are distributed in proportion to the estimated amount of non-highway recreational fuel use in each State and may be used for maintenance and restoration of existing trails; development and rehabilitation of trailside and trailhead facilities, and trail linkages; construction of new recreational trails; acquisition of easements and fee simple title to property for recreational trails or corridors; and operation of educational or safety programs relating to the use of the recreational trails. A 20% minimum match is required.</p>	<p><i>Trail acquisitions, trail construction, restoration and maintenance, trailside rest facilities, educational programs, and directional and safety signage.</i></p>

Category	Description	Target Project Components
<p>Safe Routes to School (SR2S)</p> <p>http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm</p> <p>Caltrans Safe Routes to School Coordinator Joyce Parks (916) 653-6920 joyce_parks@dot.ca.gov or Caltrans District 5 Tammy Marr 805-542-4605 tmarr@dot.ca.gov</p>	<p>This State-legislated program targets children in grades K-12, and eligible applicants include cities and counties. The program seeks to enhance pedestrian and bicycle safety facilities and related infrastructure. To be eligible for these funds, the project must be located on any state highway or local road, within a 2-mile radius of a school, and must be an infrastructure project. Projects must correct an identified safety hazard or problem on a route that students use for trips to and from school. A 10% match is required.</p>	<p><i>Trail segments which proximate to schools and/or provide safe connections to school campuses. New or upgraded bikeways and trails, sidewalk widening and gap closures, on-street and off-street bicycle and pedestrian facilities, crossing improvements, bicycle parking facilities, racks and lockers, traffic calming and speed reduction, and the traffic diversion improvements in the vicinity of schools.</i></p>
<p>Safe Routes to School (SRTS)</p> <p>http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/srts.htm</p> <p>Caltrans District 5 Program Management Nancy Wickersham 805-549-3146 nancy_wickersham@dot.ca.gov</p>	<p>This Federally-legislated program targets children in grades K-8, and eligible applicants include state, local, and regional agencies experienced in meeting federal transportation requirements. All components of the SRTS program require coordination with local government officials, law enforcement, school officials, parents, and the general public. The SRTS program application should address issues and strategies related to five main topics: engineering, education, encouragement, enforcement, and evaluation. Similar to the SR2S Program, the goals are to enhance pedestrian and bicycle safety facilities and related infrastructure. To be eligible for these funds, the project must be located on any state highway or local road. Projects must correct an identified safety hazard or problem on a route that students use for trips to and from school.</p>	<p><i>Trail segments proximate to schools and/or provide safe connections to school campuses.</i></p>



Category	Description	Target Project Components
<p>Land and Water Conservation Fund (LWCF)</p> <p>http://www.nps.gov/lwcf/</p> <p>CA Dept. of Parks and Recreation P.O. Box 942896 Sacramento, CA 94296 Tel: 916-653-8380</p>	<p>Acquisition or development of neighborhood, community, and regional top priority recreation projects or acquisitions of wetlands. The applicant must own or lease in perpetuity the site from a public agency at the time of application and projects on federal lands must be under at least a 25-year lease from the date of application. (Combination acquisition and development projects are not eligible.) Property acquired or developed under the program must be retained in perpetuity for public outdoor recreation use. This is a reimbursement program, and applicants are expected to finance the entire project. Fifty percent of the actual expenditures up to the support ceiling of the grant will be refunded when the project has been completed. CEQA must be complete at the time of application.</p>	<p><i>Acquisition or development of trails, picnic areas, natural and cultural areas, and interpretive exhibits.</i></p>
<p>Rivers, Trails, and Conservation Assistance (RTCA)</p> <p>http://www.nps.gov/pwro/rtca/</p> <p>Barbara Rice, Program Manager 1111 Jackson Street, Suite 700 Oakland, CA 94607 Phone: (510) 817-1449 Fax: (510) 817-1505 barbara_rice@nps.gov</p>	<p>National Park Service program provides technical assistance at the request of citizens, community groups, and government to establish and restore greenways, rivers, trails, watersheds and open space. Projects include natural area preservation, river conservation and development of recreational trails and greenways in urban, suburban and rural communities. Not all applicants are able to be assisted, and projects that rank the highest focus on conservation and community partnerships.</p>	<p><i>RTCA offers staff assistance in conceptual and master planning, organizational development, project coordination, facilitation, and public involvement.</i></p>

PRIMARY STATE FUNDING RESOURCES

Category	Description	Target Project Components
<p>Bicycle Transportation Account (BTA)</p> <p>http://www.dot.ca.gov/hq/LocalPrograms/bta/btawebPage.htm</p> <p>Ken McGuire (916) 653-2750 ken.mcguire@dot.ca.gov</p>	<p>Provides grant funds for new bike paths, bike lanes, and bike routes, bicycle parking facilities, bike racks on buses, and traffic control devices to improve the safety and convenience of bicycle commuting. To be eligible for BTA funding, cities and counties must have an adopted Bicycle Transportation Plan that complies with Streets and Highways Code §891.2 and has been approved by the appropriate regional transportation agency and Caltrans. Local match is ten percent of the total project cost.</p>	<p><i>New bike segments that serve major transportation corridors, secure bicycle parking, bicycle-carrying facilities on transit vehicles, installation of traffic control devices, bike trail/lane improvements, maintenance, and hazard eliminations.</i></p>
<p>Environmental Enhancement and Mitigation Program (EEMP)</p> <p>http://www.resources.ca.gov/eem/</p> <p>EEM Program Coordinator (916) 651-7593 eemcoordinator@resources.ca.gov</p>	<p>Offers grants to local state and federal agencies and non-profit organizations for projects to mitigate the environmental impacts caused by new or modified state transportation facilities. These are not stand-alone grants. EEMP projects must piggyback or add onto other mitigation projects. Grants are awarded in three categories: Highway Landscape and Urban Forestry; Resource Lands; Roadside Recreational. Roadside Recreational projects must provide for the acquisition and/or development of roadside recreational opportunities, and every EEMP project must be directly or indirectly related to the environmental impact of the modification of an existing Transportation Facility, or the environmental impact of the construction of a new Transportation Facility. A Transportation Facility is defined as a public street, highway, or mass transit guideway or their appurtenant features (e.g. park and ride facilities, transit stations, and railroad). Transportation mitigation projects are ineligible.</p>	<p><i>Roadside and railroad recreational portions of the project, but it will depend on timing and availability of transportation mitigation projects that could provide additional mitigation through this program.</i></p>



Category	Description	Target Project Components
<p>Habitat Conservation Fund (HCF)</p> <p>http://www.parks.ca.gov/?Pageid=21361</p> <p>Supervisor Deborah Viney (916) 651-8572 dvine@parks.ca.gov</p> <p>or</p> <p>Project Officer John Mason (916) 651-3143 jmason@parks.ca.gov</p>	<p>The Habitat Conservation Fund seeks to acquire or develop wildlife corridors and trails, and to provide for nature interpretation and other programs which bring urban residents into park and wildlife areas. It provides a competitive grant program for trail projects, land acquisition, and wildlife corridor restoration. Projects must employ CA Conservation Corps, when feasible, or local conservation corps. The HCF encourages applicants to develop partnerships or cooperative agreements with such entities as federal, state, and local parks, non-profit organizations, local business groups, and schools, to maximize project opportunities and funding strategies. Trails, programs and urban access projects evaluated according to benefit, long-term commitment of applicant, coordination with larger project, existing adopted plans or programs, and matching funds that are already budgeted. There is a non-state match of 50% and eligible match sources include local, federal, or private funds, or donated materials and services.</p>	<p><i>Programs – An event, or series of events intended to bring urban residents into areas with indigenous plants and animals, acquisition of species habitats, enhancement or restoration of species habitats, enhancement, restoration, or development of trails.</i></p>
<p>State Transportation Improvement Program (STIP)</p> <p>http://www.dot.ca.gov/hq/LocalPrograms/STIP.htm</p> <p>Brian Alconcel Senior STIP Coordinator Brian.Alconcel@dot.ca.gov</p>	<p>State funding for a variety of transportation projects including bicycle and pedestrian facilities. The Regional Transportation Planning Agency includes projects on the long-term Regional Transportation Improvement Plan (RTIP). Evaluation criteria determined by the RTPA. The City of Grover Beach should work through their Regional Transportation Planning Agency (SLOCOG), to nominate the project for inclusion in the STIP.</p>	<p><i>Permits and environmental studies, design, right-of-way acquisition, and construction.</i></p>

Category	Description	Target Project Components
<p>Community Based Transportation Planning Demonstration Grant Program (CBTP)</p> <p>http://www.dot.ca.gov/hq/tpp/offices/ocp/cbtp.html</p> <p>Caltrans District 5 Russ Walker 916-651-6886 russ_walker@dot.ca.gov</p>	<p>Caltrans program supports demonstration planning projects that encourage smart growth and livable community concepts. CBTP grants assist local agencies to better integrate land use and transportation planning, to develop alternatives for addressing growth and to assess efficient infrastructure investments that meet community needs, including those that expand transportation choices and provide pedestrian/ bicycle/ transit linkages. It helps communities develop projects that promote efficient land use-transportation infrastructure investments, which address sustainable growth while maintaining community values and integrity. A 20% match is required.</p>	<p><i>Trail connections to high volume pedestrian/ transit usage or residential neighborhoods.</i></p>
<p>Petroleum Violation Escrow Account (PVEA)</p> <p>http://www.dot.ca.gov/hq/LocalPrograms/lam/prog_g/q22state.pdf</p> <p>Caltrans Federal Resources Office – Grants Program, MS#23 Sacramento, California, 94274 (916) 654-2350</p>	<p>Funds projects that conserve energy and that benefit directly or indirectly consumers of petroleum products in the state. Projects that appear to result in little energy savings or focus primarily on health and environmental concerns rather than energy savings will not be approved. Actual energy savings must be quantifiable so that restitution to the public can be shown. For example, quantify how a project will make more efficient use of the corridor because of reduced traffic congestion, reduce the number of vehicle stops, or reduce the hours of traffic delay, etc. Projects will not be approved if the benefits occur too far in the future or if the benefits are too indirect or too remote. PVEA funds must supplement, not supplant, those funds already available for the proposed project, and the majority of court decisions do not allow PVEA funds to be used for program administration. Local agencies wanting to request PVEA funding for their project should contact their local State Legislator (Senate or Assembly).</p>	<p><i>Bicycle facilities with high commuter benefits and energy savings.</i></p>



Category	Description	Target Project Components
<p>CA Conservation Corps (CCC)</p> <p>http://www.ccc.ca.gov/PARTNER/PARTNERS.HTM</p> <p>Margaret Behan, www.ccc.ca.gov 916-341-3155</p>	<p>Not a grants program but a free source of volunteer labor and potential project partner, and working with the CCC can assist with achieving some eligibility with some grants. Projects must provide a natural resource or other public benefit, and provide corps members with education and training in employable skills. Project sites must be public land or publicly accessible. Regular maintenance is not eligible for CCC projects, however restoration and major repairs considered.</p>	<p><i>CCC can assist with trail and fence construction, installation of bike facilities such as bike racks, staging areas, rest areas and picnic areas, landscaping and restoration, irrigation system installation and water audits, habitat enhancement and removal of non-native species; and chipping and mulching.</i></p>
<p>Roberti-Z'berg-Harris Program (RZH) Proposition 40</p> <p>http://www.parks.ca.gov/?page_id=22329</p> <p>California State Parks Office of Grants & Local Services PO Box 942896 Sacramento, CA 94296 916-653-7423 localservices@parks.ca.gov</p>	<p>Available for the acquisition, development, or special major maintenance of recreational lands and facilities; and innovative recreation programs that respond to unique and other wise unmet recreation needs of special urban populations. This program consists of block grants and competitive grants to special districts, cities, counties, and regional districts. With the RZH grant it would be necessary to explain how the development of the trail meets an identifiable recreation need, and that when it is expanded it will allow for additional recreation opportunities. It will also be vital to explain how the trail is designed to link the community of Oceano to Pismo Beach, and how it ties into less affluent neighborhoods and links them into a regional trail.</p>	<p><i>Acquisition of park and recreation lands and facilities, and development/rehabilitation of park and trails and facilities.</i></p>
<p>The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, Proposition 84 (P84)</p> <p>http://bondaccountability.resources.ca.gov/P84Text.aspx</p> <p>Contact: fireel@dof.ca.gov</p>	<p>The Department of Parks and Recreation is allocating statewide funds through Proposition 84 for the creation of new parks and park improvements, and nature education opportunities. The program intends to benefit the health of families, youth, senior citizens, and other populations by meeting their recreational, cultural, social, educational, and environmental needs.</p>	<p><i>Land acquisition, trail construction, interpretive programs, and restoration projects.</i></p>

PRIMARY LOCAL FUNDING RESOURCES

Category	Description	Target Project Components
<p>Transportation Development Act (TDA) Article 3</p> <p>http://www.mtc.ca.gov/funding/STA-TDA/</p> <p><i>TDA Program Manager Bob Bates 510-817-5733 bbates@mtc.ca.gov</i></p>	<p>One quarter cent of retail sales tax is returned to the county of origin in order to fund transportation improvements in that county. Article 3 allows RTPAs (SLOCOG) to earmark 2% of the Local Transportation Fund (LTF) towards bicycle and pedestrian facilities, including safety programs and planning projects. TDS monies can be used as a local match for federal and state grants within one year of their allocation. May be a competitive process within the County.</p>	<p><i>General bicycle and pedestrian facilities.</i></p>
<p>Local Air District Funding for Vehicle Registration Fees</p>	<p>Various state legislation have authorized air districts in California to impose a two to four dollar motor vehicle registration fee to provide funds for air districts to meet CA Clean Air Act mandates. The funds can be used to support programs and projects that reduce air pollution from motor vehicles and to implement Transportation Control Measures (TCM) contained in local Air Quality Attainment Plans. Proposals need to show the project’s anticipated air quality benefits through vehicle trip reduction predictions and other data.</p>	<p><i>Project components with measurable commuter benefits and related facilities such as transit bike racks, bike lanes that connect to commuter routes.</i></p>
<p>Developer Impact Fees</p>	<p>Local government charge to developers to offset the public costs required to accommodate new development with public infrastructure. The fee must have a direct relationship between the need for facilities and the growth from new development. Generally used for local rather than regional improvements such as water and sewer. The amount of the fee must equal the cost of the proposed project or service. Sometimes these fees are known as traffic mitigation fees.</p>	<p><i>Trail and facility segments proximate to new development areas that will generate traffic increases.</i></p>



Other Funding Resources

Category	Description	Target Project Components
<p>CA ReLeaf Tree Planting Grant</p> <p>http://californiareleaf.org/</p> <p>Executive Director Martha Ozonoff (530) 757-7333 P.O. Box 72496 Davis, CA 95617</p>	<p>California ReLeaf programs are made possible from the support of the California Department of Forestry and Fire Protection and the USDA Forest Service. ReLeaf is dedicated to preserving, protecting, and enhancing California’s urban and community forests, and funds are available to community-based groups throughout California for projects that plan large-crowning environmentally tolerant trees on public property to provide shade and other benefits.</p>	<p><i>Trail landscaping and habitat enhancement/ revegetation projects.</i></p>
<p>Bikes Belong Coalition, Ltd.</p> <p>http://www.bikesbelong.org/</p> <p>P.O Box 2359 Boulder, CO, 80306 303-449-4893 mail@bikesbelong.org</p>	<p>Grants for facility project objective: To connect existing facilities or create new opportunities; leverage federal, state and private funds; influence policy; and generate economic activity. Proposals must include a specific program or project that is measurable. Applicants are also strongly encouraged, but not required, to contact Bikes Belong to ensure the proposal’s eligibility.</p>	<p><i>Focuses on bike paths, trails, routes, lanes, parking, and transit projects. Trail connections, construction, and programs that include measurable benefits. May be beneficial to combine with APCD project components for corresponding measurable benefits.</i></p>
<p>Gifts and Endowments</p>	<p>General contributions from private individuals or businesses are an attractive source of financing. Although fundraising through donations is unpredictable, it could help supplement other more reliable sources.</p>	<p><i>Trail amenities (benches, lights, staging areas, trees, etc.).</i></p>
<p>Adopt a Trail/ Adopt a Trail Feature</p>	<p>Donated monies may be earmarked to pay for trail construction or trail fixtures is to provide name recognition to donors or those who helped pay for specific features. A small plaque or sign could be fastened to the appropriate fixture or at trail heads of appropriate trail segments. This program would have to either be developed by the city or a local community group willing to assume responsibility for coordinating donors with projects.</p>	<p><i>Interpretive kiosks, lighting, bike racks, benches, or trail segments.</i></p>



Beach Cities Multi-Purpose Trail

TRAIL FEASIBILITY STUDY