

Draft City of Carlsbad Trails Master Plan dated March 2017 Revisions

Partners:

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US Fish and Wildlife Service

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California Department of Parks & Recreation

California State Transportation Agency

San Diego Gas & Electric

North County Transit District

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Page ii, add new Executive Summary entry and adjust Table of Contents page number references as needed.

Executive Summary

Insert new Executive Summary after Table of Contents, as follows:

Executive Summary

The Carlsbad Trails Master Plan (TMP) builds on previous efforts related to trails and is the principal planning document for developing and maintaining the citywide trails system. It sets the framework for a robust trails system and alternative modes of transportation for use by residents and visitors alike. As evidenced in the mission statement, the Citywide Trails Program strives to meet the leisure and recreational needs of Carlsbad residents while protecting and preserving open spaces and coastal resources in accordance with the City of Carlsbad General Plan.

The TMP also supports the following Carlsbad Community Vision Core Values:

- Small town feel, beach community character and connectedness
- Open space and natural environment
- Access to recreation and active, healthy lifestyles
- The local economy, business diversity and tourism
- Walking, biking, public transportation and connectivity
- Sustainability
- Neighborhood revitalization, community design and livability

The Trails Master Plan consists of the following chapters:

- Chapter 1: Introduction & Project Background
- Chapter 2: Planning Efforts & Consideration
- Chapter 3: Analysis of Existing Conditions
- Chapter 4: Trails Network Subarea Recommendations
- Chapter 5: Trail Development Implementation

- Chapter 6: Trail Standards and Design Guidelines
- Chapter 7: Trails Operations and Maintenance
- Chapter 8: Funding Opportunities

Chapter 1 - Introduction & Project Background

Chapter 1 summarizes local and regional planning efforts related to trails. A formal trail system did not occur until early '90s. In 1990, an Open Space Ad Hoc Committee appointed by the City Council provided advice on the alignment of an open space trails system. Based on that advice, staff completed a Trails Feasibility Study. In 1992, the Open Space and Conservation Resource Management Plan (OSCRMP) expanded upon that study, and provided the framework for the city's trails development and maintenance.

The 1994 General Plan Open Space and Conservation Element incorporated principal trail recommendations from the OSCRMP by establishing trails development as a top citywide open space priority. In 2001, the City Council approved the Citywide Trails Program Report, which outlined the future vision and immediate steps necessary to implement the Citywide Trails Plan. In 2002, the Citywide Trails Implementation Plan was created. It identified which segments of existing private trails would be accepted by the city as public trails. It also identified which segments of public trails would be built over the next 5 years, either by private development or by the city. The Citywide Trails Maintenance Plan was also developed at this time.

From 2008 to 2010 the city engaged the community in Envision Carlsbad, resulting in a community vision based upon a set of nine core values. Three of these core values relate directly to trails:

- Access to Recreation and Active, Healthy Lifestyles
- Walking, Biking, Public Transportation, and Connectivity
- Neighborhood Revitalization, Community Design, and Livability

In 2013, the draft Open Space, Conservation and Recreation Element of the Carlsbad General Plan identified a need to provide a comprehensive Carlsbad Trails Master Plan to address diverse user groups and trails connectivity. Later that year, the active transportation strategy and trails master planning process began simultaneously by hiring a consultant, and developing a public outreach program.

Trails development is an important regional initiative, addressed in the long-term North Coast Corridor Public Works Plan/Transportation and Resource Enhancement Program (NCCC PWP/TREP) developed by Caltrans and SANDAG. It is a multi-modal transportation program that will implement a variety of improvements (highway, rail, bicycle, and pedestrian) to meet the North Coast Corridor's different transit needs. The North Coast Bike Trail and Coastal Rail Trails represent the most significant projects included in this plan.

Chapter 2 - Planning Efforts & Consideration

Chapter 2 identifies the Trails Master Plan and Carlsbad Active Transportation Strategy (CATS) vision statement which was developed through the public outreach process. Trails should provide options for walking, hiking, running and biking, and to support community connectivity, sustainable transportation and access to open space. These objectives will encourage healthy lifestyles, social interaction, appreciation of natural processes, support for economic vitality and connections to neighborhoods, businesses and popular destinations. Chapter also describes the major goals that were assembled as a result of the initial public input surveys and workshop, and from public comments on the draft TMP:

- Create a connected and complete trails system
- Accommodate a variety of trail users in a safe and environmentally sensitive manner
- Identify existing and future trail development opportunities
- Integrate transportation related facilities as part of the trails system objectives
- Manage, operate and maintain trails to encourage their proper use

This chapter summarizes the public input process which is a foundation of the trails planning process that aided significantly in drafting the master plan. Input was collected through a comprehensive public engagement that included an online survey and a public workshop. Over 330 surveys were submitted and more than 270 comments on interactive maps were provided. Additionally, during the public workshop, more than 100 written comments were received, including many on the master plan vision, mapping components, and a variety of other topics. City staff and consultants then set out to create a comprehensive Carlsbad Trails Master Plan.

Chapter 3 - Analysis of Existing Conditions

Chapter 3 analyzes the existing context and conditions of Carlsbad. These elements assist in making decisions on where future trails and CATS related infrastructure can provide for an integrated trail system. Analysis of the existing trail inventory identifies gaps in the network which aids in future trail development planning. During that process, additional trail segments were identified that had not been accounted for in the previous calculations. A majority of these segments include trails developed and maintained by private or non-profit entities, that are accessible to the general public or trails that were added to the public trail system in recent years. Currently, there are 66.5 total miles of existing trails in the City of Carlsbad.

Chapter 4 - Trails Network Subarea Recommendations

Chapter 4 discusses the distribution of trails within each of the 14 subareas identified in this plan. The goal for each subarea is to have a distributed open space and trail system in close proximity to the local population. Components identified in each subarea include potential trail destination, level of difficulty, range of surface types, and opportunities for connectivity.

Chapter 5 - Trail Development Implementation

Chapter 5 identifies the estimated project costs of future trail segments and the projected year for implementation. The prioritization for developing these trail segments will be based on several criteria, including the conditions of approval for private development; government transportation initiatives; and funding for public projects (both locally and regionally), such as the Coastal Rail Trail Extension Projects, and the I-5 Freeway Widening Project. The development of trails is an opportunistic and flexible process. Some of the smaller/shorter trails segments, such as the Type 1 trails, may be constructed by the city, depending upon available resources. The majority of future trails, however, will likely be constructed as a part of larger projects. The initial step in considering development of most trail segments is the completion of an environmental analysis, which determines the necessary measures to avoid, minimize and/or mitigate impacts to natural resources.

Chapter 6 - Trails Standards & Design Guidelines

The contents of this chapter are organized around the trail types, which describe what should be expected in terms of width, trail surface, steepness, firmness, and types of amenities. Additionally, this chapter includes design considerations; state and federal trail standards; trail layout and locational

guidelines; accessibility requirements; and supporting infrastructure. These standards and design guidelines provide a basis for estimating costs associated with trail development and operating costs associated with on-going trails maintenance – both of which vary significantly depending on trail classification, construction materials, location and complexity of the trail system.

Chapter 7 - Trail Operations & Maintenance

Chapter 7 focuses on the proper maintenance of the city trails to ensure a safe and productive use of the facility; and for continued future recreational benefit to citizens and visitors. It includes an overview of trail maintenance responsibilities; maintenance schedules; and maintenance standards for typical tasks associated with trail management. It also describes the Trail Volunteer Program, which plays a vital role in maintaining existing trails in the city.

Chapter 8 – Funding Opportunities

Trails connect people to natural and cultural amenities, as well as to important destinations, such as parks, schools, libraries, community centers, businesses and transit stops. Carlsbad’s trails system enhances sustainable transportation, access to open space, and community and regional connectivity. In so doing, the city is encouraging community social interaction, economic vitality and appreciation of natural resources. The Trails Master Plan positions the city for an exciting future and provides opportunities for residents to enjoy nature and healthy lifestyles right at their doorsteps. Chapter 8 discusses a variety of funding sources for development of trails. In general, the City of Carlsbad has funded the majority of its trails by way of private developer dedications, and conditional requirements for development. Although this approach will continue into the future, the ultimate number of new developments is finite and other sources of funding will be needed, especially for existing built areas of the city. This chapter identifies a range of funding sources and grant programs that could assist the City of Carlsbad in expanding the trail system.

Chapter 1: Introduction & Project Background

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1.4 Trails Master Plan Purpose

The Trails Master Plan (TMP) build on the previous efforts completed by staff, volunteers and partners over the past two decades for the City of Carlsbad’s vibrant citywide trails program. Since the Open Space and Conservation Resource Management Plan (OSCRMP) was approved in the 1990’s, until this current undertaking, much of the trail system was made possible via many satellite policies and planning efforts. This update for the trails planning in the city provides a comprehensive planning document to reference for developing and maintaining the city’s trail system into the future and takes into consideration both the larger public and private projects more recently underway in the coastal corridor and opportunities to see some of the trails developed along with the CATS program. The TMP identifies important east/west connections around the city’s major lagoons out to the Pacific Coast..

The City of Carlsbad has been working for many years to develop and implement a comprehensive trails system. During the early 1990s, residents recognized the natural beauty of the many open space areas and the city’s three large lagoons as desirable recreational and outdoor education opportunities. Over the years, several important planning documents consistently provided guidance during the growth of the city to ensure that these unique natural resources were protected and yet available for enjoyment

by residents and visitors to the city.

1.5 Local Planning Efforts

Several important planning documents that have provided guidance for the trail development are presented below to provide context on how the trails system has developed to date.

The City of Carlsbad has been working for many years to develop and implement a comprehensive trails system. During the early 1990s, residents recognized the natural beauty of the many open space areas and the city's three large lagoons as desirable recreational and outdoor education opportunities. Over the years, several important planning documents consistently provided guidance during growth of the city to ensure that the unique natural resources were protected and yet available for enjoyment by residents and visitors to the city.

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Open Space and Conservation Resource Management Plan (OSCRMP)

The OSCRMP, adopted in 1992, expanded upon the study and provided the framework for the city's trail development, as the conceptual alignments laid out for the system were utilized as the city was rapidly developing in the 1990's up to present times. The conceptual layout of identified trail segments allowed for flexibility and fine tuning as private and public opportunities for development occurred. The plan was intended to protect the open space resources and land- scape identity of the city while allowing for growth opportunities identified in the city's long-range plans. The plan defined a program for implementation of an integrated open space and trails system incorporating:

- Open space for the preservation of natural resources, such as wetlands and other valuable habitats;
- Open space for the managed production of resources, such as agricultural lands;
- Open space for outdoor recreation, including parks and other open space recreation areas;
- Open space for aesthetic, cultural and educational purposes, including key scenic and cultural resources;
- Open space for public health and safety, such as floodways; and
- Open space for the proposed City of Carlsbad Trail System;

The TMP refines the original trail alignments outlined in the OSCRMP as a backbone for the trail system and enhances it to provide a truly unique trail network.

The OSCRMP proposed 63 total miles of pedestrian, bicycle and joint use trails:

- Paved pedestrian and bike path: 2 miles
- Unpaved hiking and biking path: 61 miles

In addition, the OSCRMP anticipated 11 miles of sidewalks and bike lanes.

The primary objective of the OSCRMP was to provide connectivity to the various existing and proposed community parks:

- Hosp Grove Park

- Hidden Canyon Park (formerly known as Larwin Park)
- Calavera Park
- Future Veterans Park (formerly known as Macario Canyon Park)
- Poinsettia Park (formerly known as Alta Mira Park)
- Alga Norte Park
- Leo Carrillo Ranch Historic Park
- Stagecoach Park

Another major objective was to develop a system of trails in the Special Resource Areas of Hosp Grove and the Lake Calavera Preserve.

The 1994 General Plan Open Space and Conservation Element incorporated principal trails recommendations from the OSCRMP by: establishing trails development as a top citywide open space priority; identifying trail linkages in the Conceptual Open Space & Conservation Map; and providing policy direction for the creation of a comprehensive trail and greenway linkage system.

Citywide Trails Program Report

In 2001, the City Council approved the Citywide Trails Program Report which outlined the future vision and immediate steps to be taken to implement what was commonly referred to as the Citywide Trails Plan. The report outlined ambitious steps to make more trails available to the public and offered a new classification of trails aligned with the Circulation Element of the General Plan (1994).

The program proposed a total of 145 miles of trails not including sidewalks:

- Paved pedestrian and bike path: 12 miles
- Unpaved hiking and biking path: 56 miles
- Circulation Element Trails: 77 miles

The report identified approximately 14 miles of existing recreational trails (12 miles in the category of unpaved hiking and biking paths) with the highest concentration of trails at Hosp Grove, Rancho Carrillo, and south of La Costa. In addition, 13 miles of existing sidewalks/bike paths were included in the trail network. The report also outlined next steps for the city to prepare and put in place policies for plan review, trail easement acceptance policies for trail Irrevocable Offer to Dedicate (IOD's), and maintenance and operations standards.

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Citywide Trails 5 Year Implementation Plan

In February of 2002, the City Council approved funding for the Citywide Trails Program to be allocated from the General Fund (AB 16, 55).

Staff initiated work on developing a 5-year work plan to identify city trail segments that would be accepted into the public trail network or that would be built during Fiscal Year (FY) 2008-09. Funding options and the implementation of a city trail volunteer program were also documented as goals for carrying out the 5-year work plan.

The implementation schedule anticipated three phases for trail development:

- Phase 1 - inventory of existing trails.

- Phase 2 - projected 26.7 miles of future trail development within the 5-year period. These trails were concentrated at the Lake Calavera Preserve, Crossings Golf Course and Reach 1, 2, 4 and 5 of the Coastal Rail Trail. A large percentage of these future trails were associated with anticipated development at the master planned communities of Calavera Hills, Bressi Ranch, Villages of La Costa and Poinsettia Shores.
- Phase 3 - segments to be developed after FY 2008-09. This category included Reach 3 of the Coastal Rail Trail, Agua Hedionda Lagoon, the north shore of Batiquitos Lagoon, Villages of La Costa, Buena Vista Creek and trails associated with private development, including, Robertson Ranch, Cantarini/Holly Springs and Aviara.

The current Trails Master Plan continues the systematic process of analyzing existing conditions, assessing needs, identifying gaps and proposing future trail links. Major objectives of the OSCRM have been accomplished. All listed park sites are incorporated into the fabric of the city through the system of sidewalks, open space and mobility trails. Hosp Grove and the Lake Calavera Preserve are major recreational destinations with publicly accessible trails designed to protect natural resources while allowing for responsible trail use.

Rancho Carrillo became one of the most popular hiking destinations, offering a complete loop of recreational trails through the open space and connecting local neighborhoods with the Leo Carrillo Ranch Historic Park. Likewise, the network of trails in La Costa is well developed, providing residents and visitors with a vast array of hiking and biking opportunities.

Previous planning documents identified an opportunity to condition private developers with trail construction. The city's dynamic growth - fueled by a significant number of developers interested in investing in Carlsbad resulted in the successful trail network that we enjoy today. Trails in the master planned communities of Calavera Hills, Robertson Ranch, Bressi Ranch, Aviara, Poinsettia Shores and La Costa have been constructed utilizing this planning mechanism. Cantarini/Holly Springs is the last remaining major residential development that includes future trail connections.

Today, private development is phasing out with the city reaching its built-out phase. Future trail development will require extensive collaboration with other government agencies that hold rights to the land. The best examples are trails within the Carlsbad Highlands and Buena Vista Creek Ecological Reserves. Opening these routes to the public will be contingent upon successful collaboration and approval from the California Department of Fish and Wildlife. The TMP also recognizes an opportunity for future public access within SDG&E utility roads. Acquisition of these links will require collaboration with SDG&E and authorization from the California Public Utilities Commission.

The existing Trails Master Plan identified a need for trail connectivity along the coastal corridor. Staff is currently working on a number of initiatives to improve safety and pedestrian circulation, and enhance the recreational benefit of the Carlsbad coast. A majority of the future trails in this area are part of larger transportation projects associated with the I-5 Freeway Widening Project, Carlsbad Boulevard improvements and Encina Power Station decommissioning. Development of the Coastal Rail Trail continues, with Reach 1 and 2 completed to date. The plan also recognizes important west-east corridors along city lagoons and proposes links to close gaps in the trail network that connects inland communities with the beach.

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Citywide Trails Maintenance Plan

In order to provide proper maintenance of the citywide trails, and provide safe and productive use of the facilities, protecting the financial investment community had made in developing trails, and for

continued future recreational benefit to citizen and visitors of the city, staff developed the Citywide Trails Maintenance Plan.

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Local Coastal Program (LCP)

The California Coastal Commission was established in 1972 with the passage of Proposition 20. The voter initiative laid the foundation for statewide preservation, protection, restoration and enhancement of California's coastal environment. In 1976, the state legislature passed the California Coastal Act, which made permanent the policy and regulatory authorities of the Coastal Commission. Protection of coastal resources is a shared responsibility between the state and local governments. Coastal communities are delegated authority to carry out Coastal Act policies through certification of their Local Coastal Programs (LCP). As of 2017, Carlsbad has certified local permitting authority over much of its Coastal Zone, with the exception of the Agua Hedionda Lagoon area, scattered properties adjacent to the I-5 freeway, and areas retained as original permit jurisdiction by the Coastal Commission (e.g., tidelands and public trust lands). Land and water use of deferred certification and original permit jurisdiction areas are regulated by the Coastal Commission.

The California Coastal Act places a high priority on maximizing public access to and recreational opportunities along the coast. Implementation of Trails Master Plan projects in the Coastal Zone can go a long way toward realizing these twin goals. Although not a direct component of it, the Trails Master Plan has been developed to be consistent with and complementary to the city's certified LCP. Within the Coastal Zone, should any conflict arise between the Trails Master Plan and certified provisions of the LCP, the provisions of the certified LCP shall prevail.

Habitat Management Plan (HMP)

The Habitat Management Plan was developed by the city, in cooperation with federal and state wildlife agencies, to preserve and protect sensitive biological resources within the city while allowing for continued economic growth and development. The HMP is part of a regional planning effort to create an interconnected system of open space lands that will function at the ecosystem level. The HMP constitutes the city's subarea (city-specific) plan within the Multiple Habitat Conservation Program Subregional Plan for north coastal San Diego County. It is also a certified component of the city's LCP, meaning that HMP provisions are enforceable policies and standards for development in the Coastal Zone.

Goals & Objectives:

The overall goal of the HMP is to contribute to regional biodiversity and the viability of rare, unique or sensitive biological resources throughout the City of Carlsbad and the larger region while allowing public and private development to occur consistent with the Carlsbad General Plan and Growth Management Plan.

The specific biological objectives of the Plan are to:

- Conserve the full range of vegetation types remaining in the city, with a focus on rare and sensitive habitats;
- Conserve areas of habitat capable of supporting the HMP Species in perpetuity; and
- Maintain functional wildlife corridors and habitat linkages within the city and to the region,

including linkages that connect gnatcatcher populations and movement corridors for large mammals.

- The specific conservation objectives of the Plan are to:
 - Maintain functional biological cores;
 - Maintain functional linkages and movement corridors;
 - Conserve rare vegetation communities;
 - Conserve narrow endemic species and maintain populations of target species; and
 - Apply a “no net loss” policy to the conservation of wetlands, riparian and oak woodland habitats.
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- The specific land use objectives of the Plan are to:
 - Protect important wildlife habitats while allowing for orderly growth and development;
 - Provide a menu of land use measures to protect and conserve habitat according to the Plan including standards relating to mitigation, open space dedications and density transfers;
 - Provide a framework for coordinating and monitoring the protection and management of biological resources in natural open space; and
 - Provide for the continued implementation of the Growth Management Plan, particularly the provision for ensuring adequate public facilities to serve new growth.
 - The specific economic objectives of the Plan are to:
 - Minimize ESA-related mitigation costs to public and private projects;
 - Allow continued economic growth and development in the city; and
 - Minimize the overall cost of HMP implementation to the city and its residents.

Chapter 2 - Planning Efforts & Considerations

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Goal 5: Manage, operate and maintain trails to encourage their proper use

Objectives:

- Provide resources, maintenance and monitoring programs to ensure that user safety, resource conditions, the environment, and adjacent land uses are not compromised.
- Trails management shall be consistent with the Habitat Management Plan, Management Recommendations.

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In many cases, proposed trail corridors lead through lands or easements owned by entities other than the City of Carlsbad. These groups may include private owners, San Diego Gas & Electric, and variety of resource agencies. Close cooperation with these stakeholder groups ensure that proposed trail connections are vetted, constructed and maintained. Figure 2.2 “Carlsbad Citywide Trail Network Collaboration” illustrates relationships among trail network stakeholders.

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2. **Geographic Area Summary:** Identifies areas and specific locations that were frequently

recognized during the public workshop and on-line survey. A summary map of geographic-specific comments is included.

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4. on-line survey.

Chapter 3 – Analysis of Existing Conditions

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3.4 Existing Preserve System

The existing Habitat Management Plan (HMP), approved November 2004 includes guidelines for the development of trails in conserved sensitive habitat areas (see Figure 3.2 “Habitat Management Plan Preserve System”). The objective of this conservation plan is to protect the rich diversity of plants and wildlife in San Diego County. Although the primary purpose of conserved lands is protection of plant and wildlife species, some types of recreational uses can be appropriate within the preserve system. Recreational uses of the preserve, where allowed, must be consistent with the protection and enhancement of biological resources. Existing recreational facilities should be managed to maintain and/or enhance the habitat value surrounding these facilities. It should be noted however, that the majority of trails in the city preserves have already been developed. The most desirable trail types within these areas are Type 1 - Nature Trail, and Type 2 - Recreational Trail to limit impacts to the surrounding habitat from the trail development.

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3.6 Existing Public Property Ownership

Closely related to public open space, publicly owned lands are generally available for public access, unless the access would be dangerous to the users, would interrupt operations, or would cause major impacts to sensitive habitats, or resources. In this case, “No Access” signs should be posted with a contact number for information.




3.7 Existing Private Property Ownership

Although a significant portion of Carlsbad is maintained as public parkland and open space systems, the remaining portion of land is privately owned and either currently developed or likely to be developed in the future. Normally, most privately held land would be considered inaccessible or unobtainable when considering a trail system. However, for larger parcels with proposed development, adopting trail easement is common and allowed under the Subdivision Map Act of California. If a trail has been identified in an adopted trails plan, then the local municipality can require the dedication of a public trail easement and the construction of the project as part of the private development approval process. For the purposes of this plan, all properties where a trail easement has been negotiated or has been discussed represents an opportunity for a future trail. For smaller parcels already developed, the alignment of a trail system would be challenging. However, within the coastal zone, in instances where the Local Coastal Program requires dedication of an easement(s) for public access, the city and the California Coastal Commission routinely obtain access easements for future trails as a condition of approval for private development. In some of these cases, an access easement, utility easement or

developed or undeveloped right-of-way may be utilized.

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MILES OF OPEN SPACE (UNPAVED) RECREATIONAL TRAILS			
			EXISTING
1	Nature Trail		12.0 41.2
2	Recreation Trail		26.9 27.7
3	Wide Dirt Trail or Utility Roadbed		12.0 12.5
Total Miles of All Open Space Trails			50.9 51.4




MILES OF MOBILITY (MOSTLY PAVED) TRAILS			
			EXISTING
4	Roadside or Connector Trails		7.8
5	Connector Sidewalks		not counted in the overall trail mileage
6	Multi-use Paved Path or Trail (Class 1)		7.8
Total Miles of Mobility Trails (Transportation related)			15.6

Table 3.1: Summary of Existing Trails

Table 3.1: Summary of Existing Trails

3.14 Existing Trail Mileage analysis

The total mileage of existing trails is 66.5 miles, and vary from the mileage reported in the Carlsbad General Plan (2015). It is a result of trail network expansion since 2014, when the trail inventory was reported.

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Table 3.2 Existing Trails Inventory 2018

TRAIL ID	TRAIL NAME	SIMARS	STATUS	QUADRANT	TRAIL TYPE	LENGTH (MILES)	TRAIL CATEGORY	APPROVED BY	MAINTAINED BY
2.2	Hoop Grove	1	Existing	NW	Type 1	0.6	Open Space	Volunteers	Volunteers/City Parks
2.1	Hidden Canyon Park	2	Existing	NE	Type 2	4.2	Open Space	Volunteers	Volunteers/City Parks
5.2	Village H - North of Carlsbad Village Drive	5	Existing	NE	Type 1	0.6	Open Space	Volunteers	Volunteers/City Parks
5.5	Robertson Ranch West	5	Existing	NE	Type 2	4.9	Open Space	Developer	Volunteers/City Parks
6.2	La Jolla Calavera - Calavera Hills Land Manager	6	Existing	NE	Type 0	0.5	Open Space	Developer	Volunteers/City Parks
6.3	La Jolla Calavera South Trail - Sage Creek	6	Existing	NE	Type 0	0.7	Open Space	Developer	Volunteers/City Parks
6.4	La Jolla Calavera (City Preserve)	6	Existing	NE	Type 1	1.3	Open Space	Volunteers	Volunteers/City Parks
6.4	La Jolla Calavera (City Preserve)	6	Existing	NE	Type 2	4.3	Open Space	Volunteers	Volunteers/City Parks
6.4	La Jolla Calavera (Judy's road)	6	Existing	NE	Type 0	1.5	Open Space	Volunteers	Volunteers/City Parks
7.2	Agua Hedionda Harbor Dr	7	Existing	NW	Type 1	0.2	Open Space	AHEP	Volunteers/City Parks
7.6	Agua Hedionda Early Trail (Halfway Bend)	7	Existing	NW	Type 0	0.9	Open Space	Volunteers	Volunteers/City Parks
8.5	The Coastings/Palmsara Park	8	Existing	NW	Type 2	1.6	Open Space	City	Volunteers/City Parks
8.5	The Coastings/Palmsara Park	8	Existing	NW	Type 0	0.6	Open Space	City	Volunteers/City Parks
9.2	Carlsbad Oaks North Business Park	9	Existing	NE	Type 1	0.2	Open Space	Volunteers	Volunteers/City Parks
9.2	Carlsbad Oaks North Business Park	9	Existing	NE	Type 2	0.6	Open Space	Volunteers	Volunteers/City Parks
10.2	Hidden Valley Road	10	Existing	SW	Type 2	0.4	Open Space	Developer	Volunteers/City Parks
11.4	Rancho Carlsbad	11	Existing	SE	Type 2	3.6	Open Space	Developer	Volunteers/City Parks
12.2	Rainbow Lagoon North Bluff	12	Existing	SW	Type 2	0.7	Open Space	Developer	Volunteers/City Parks
13.1	Villages of La Costa The Ridgepole	13	Existing	SE	Type 2	0.9	Open Space	Developer	Volunteers/City Parks
13.1	Villages of La Costa The Ridgepole	13	Existing	SE	Type 1	1.3	Open Space	Developer	Volunteers/City Parks
13.2	Villages of La Costa Andrew St Trail Circle	13	Existing	SE	Type 1	0.2	Open Space	Developer	Volunteers/City Parks
13.3	Villages of La Costa The Oaks - North	13	Existing	SE	Type 0	0.7	Open Space	Vol./Dir.	Volunteers/City Parks
14.1	La Costa Glen	14	Existing	SW	Type 2	1.1	Open Space	Developer	Volunteers/City Parks
14.2	La Costa Valley	14	Existing	SE	Type 2	4.8	Open Space	Developer	Volunteers/City Parks
14.6	Village	14	Existing	SE	Type 2	0.3	Open Space	Developer	Volunteers/City Parks
14.7	Arroyo Vista	14	Existing	SE	Type 1	0.4	Open Space	Developer	Volunteers/City Parks
14.7	Arroyo Vista	14	Existing	SE	Type 2	0.3	Open Space	Developer	Volunteers/City Parks
14.7	Arroyo Vista	14	Existing	SE	Type 0	4.0	Open Space	Developer	Volunteers/City Parks
14.8	Santa Fe Trails	14	Existing	SE	Type 1	0.3	Open Space	Volunteers	Volunteers/City Parks
14.9	The Ranch	14	Existing	SE	Type 0	4.4	Open Space	Volunteers	Volunteers/City Parks
TOTAL MILEAGE OF OPEN SPACE TRAILS MAINTAINED BY THE CITY'S PAR DEPT AND VOLUNTEERS						30.2	36.0		
5.4	Robertson Ranch East - TRAIL	5	Existing	NE	Type 1	4.8	Open Space	Developer	Private
5.6	Robertson Ranch West - TRAIL	5	Existing	NE	Type 0	4.9	Open Space	Developer	Private
6.5	Carlsbad Highlands Trail	6	Existing	NE	Type 0	1.27	Open Space	CDPW	CDPW Land Manager
7.1	Agua Hedionda Hubble Trail	7	Existing	NW	Type 0	0.5	Open Space	NRS	AHEP
7.3	Agua Hedionda Bayshore Drive Trail	7	Existing	NW	Type 2	4.3	Open Space	Developer	Private
7.5	Agua Hedionda Serranowind Trail	7	Existing	NW	Type 2	0.3	Open Space	Developer	Private
7.6	Agua Hedionda Waters Center	7	Existing	NW	Type 2	4.4	Open Space	AHEP	AHEP
8.1	Mexicano Trail	8	Existing	NW	Type 2	0.2	Open Space	State Beaches	State Beaches
8.2	Flower Fields (along Carson Road)	8	Existing	NW	Type 2	0.2	Open Space	Developer	Private
8.6	Rally Ranch	8	Existing	NW	Type 1	0.3	Open Space	Developer	Private
9.3	Palmers Business Park/Medusa Drive	9	Existing	NE	Type 2	0.2	Open Space	Developer	Private
10.1	Water's End	10	Existing	SW	Type 2	0.5	Open Space	Developer	Private
10.3	24-Hour Fitness - Lateral Tree Trail	10	Existing	SW	Type 2	0.8	Open Space	Developer	Private
10.4	Cahvey Chapel Trail	10	Existing	SW	Type 0	0.2	Open Space	Developer	Private
11.1	San Pacific	11	Existing	SW	Type 1	0.8	Open Space	Developer	Private
12.3	Rainbow Lagoon North Shore	12	Existing	SW	Type 1	0.8	Open Space	Developer	Private
12.3	Rainbow Lagoon North Shore	12	Existing	SW	Type 2	1.9	Open Space	Developer	Private
12.4	Aviera Trails	12	Existing	SW	Type 2	2.5	Open Space	Developer	Private
12.4	Aviera Trails	12	Existing	SW	Type 0	0.6	Open Space	Developer	Private
13.4	Villages of La Costa (CHM)	13	Existing	SE	Type 1	2.7	Open Space	Volunteers	Private
13.4	Villages of La Costa (CHM)	13	Existing	SE	Type 2	1.6	Open Space	Volunteers	Private
13.4	Villages of La Costa (CHM)	13	Existing	SE	Type 0	0.9	Open Space	Volunteers	Private
13.5	Villages of La Costa utility Rd	13	Existing	SE	Type 0	1.6	Open Space	Developer	Private
13.7	Villages of La Costa The Oaks - South (To La Costa Ave)	13	Existing	SE	Type 2	4.3	Open Space	Developer	Private
13.9	Southern Preserve	13	Existing	SE	Type 2	4.0	Open Space	Developer	Private
13.9	Southern Preserve	13	Existing	SE	Type 0	0.2	Open Space	Developer	Private
14.5	Stagecoach Trail	14	Existing	SE	Type 2	4.3	Open Space	Developer	Private
TOTAL MILEAGE OF OPEN SPACE TRAILS PRIVATELY MAINTAINED						21.8	33.5		
TOTAL MILEAGE OF ALL OPEN SPACE TRAILS						51.0	69.5		
TRAIL ID	TRAIL NAME	SIMARS	STATUS	QUADRANT	TRAIL TYPE	LENGTH (MILES)	TRAIL CATEGORY	DEVELOPER	MAINTAINED BY
2.3	Quarry Creek Trail	2	Existing	NE	Type 6	1.6	Mobility	Developer	Volunteers/City Parks
3.2	Coastal Hill Trail (Reach-Up)	3	Existing	NW	Type 6	0.7	Mobility	City	Volunteers/City Parks
5.3	Carlsbad Village Drive (to Village H)	5	Existing	NE	Type 4	0.4	Mobility	Developer	Volunteers/City Parks
6.1	Calavera Rd - Calavera Hills URB	6	Existing	NE	Type 4	1.1	Mobility	Developer	Volunteers/City Parks
6.1	Carson Rd to Calavera (SW)	6	Existing	NE	Type 4	0.8	Mobility	Developer	Volunteers/City Parks
11.1	Poinsettia Lane - El Camino Real to El Camino Real	11	Existing	SE	Type 4	1.4	Mobility	Developer	Volunteers/City Parks
11.2	Albarran Rd - The Streets (north of Poinsettia Lane)	11	Existing	SE	Type 4	4.4	Mobility	Developer	Volunteers/City Parks
11.3	El Fuerte - Brawl Ranch	11	Existing	SE	Type 4	4.8	Mobility	Developer	Volunteers/City Parks
13.6	Villages of La Costa The Oaks - South (Old Rancho Santa Fe Road)	13	Existing	SE	Type 4	4.1	Mobility	Developer	Volunteers/City Parks
13.6	Villages of La Costa The Oaks - South (Old Rancho Santa Fe Road)	13	Existing	SE	Type 6	1.2	Mobility	Developer	Volunteers/City Parks
14.3	La Costa Valley Rec Center	14	Existing	SE	Type 6	0.4	Mobility	Developer	Volunteers/City Parks
TOTAL MILEAGE OF MOBILITY TRAILS MAINTAINED BY THE CITY'S PAR DEPT AND VOLUNTEERS						4.2	46.0		
1.1	Coastal Hill Trail (Reach-Up)	1	Existing	NW	Type 6	3.2	Mobility	City	City Streets
3.1	Sea Wall	3	Existing	NW	Type 6	4.7	Mobility	City	City Streets
8.3	Arroyo Drive Trail	8	Existing	NW	Type 6	1.7	Mobility	Developer	City Streets
11.5	Albarran Road - South of Poinsettia	11	Existing	SE	Type 6	1.1	Mobility	Developer	City Streets
14.4	Cafe Barcelona	14	Existing	SE	Type 6	1.3	Mobility	Developer	City Streets
TOTAL MILEAGE OF MOBILITY TRAILS MAINTAINED BY THE CITY'S PW DEPT						3.3	44.0		
5.8	Calavera Hills Trail	5	Existing	NE	Type 4	0.1	Mobility	Developer	Private
6.4	Jagoland	6	Existing	NW	Type 6	0.5	Mobility	Developer	Private
10.5	Poinsettia Lane - Arroyo Park to Brigantine	10	Existing	SW	Type 4	0.5	Mobility	Developer	Private
10.6	Poinsettia Lane - El Camino Real to Silverwood Court	10	Existing	SW	Type 4	0.3	Mobility	Developer	Private
13.9	Southern Preserve - Paseo Encino	13	Existing	SE	Type 4	4.2	Mobility	Developer	Private
14.5	Stagecoach Trail	14	Existing	SE	Type 4	4.0	Mobility	Developer	Private
TOTAL MILEAGE OF MOBILITY TRAILS PRIVATELY MAINTAINED						0.1	44.0		
TOTAL MILEAGE OF MOBILITY TRAILS (EXCLUDING TYPE 5 SIDEWALK CONNECTORS)						15.6			
TOTAL MILEAGE OF ALL TRAILS MAINTAINED BY THE CITY OF CARLSBAD						37.7	69.0		
TOTAL MILEAGE OF ALL TRAILS IN THE CITY OF CARLSBAD						86.5	100.0		

Table 3.2: Existing Trails Inventory 2017

Add Segment 1.3 North Beach Trail, Subarea 1, NW, Type 1, 0.3 mile, Open Space, Improved by Developer, Maintained by Volunteers/City Parks

Add Segment 2.2 Quarry Creek Trail, Subarea 2, Existing, NE, Type 1, 0.8 mile, Open Space, Improved by Developer, Maintained Privately

Move to Open Space Trails maintained by the City and volunteers

Move to Mobility Trails Privately Maintained

Move to Mobility Trails Privately Maintained

Figure 3.2 Habitat Management Plan Preserve System

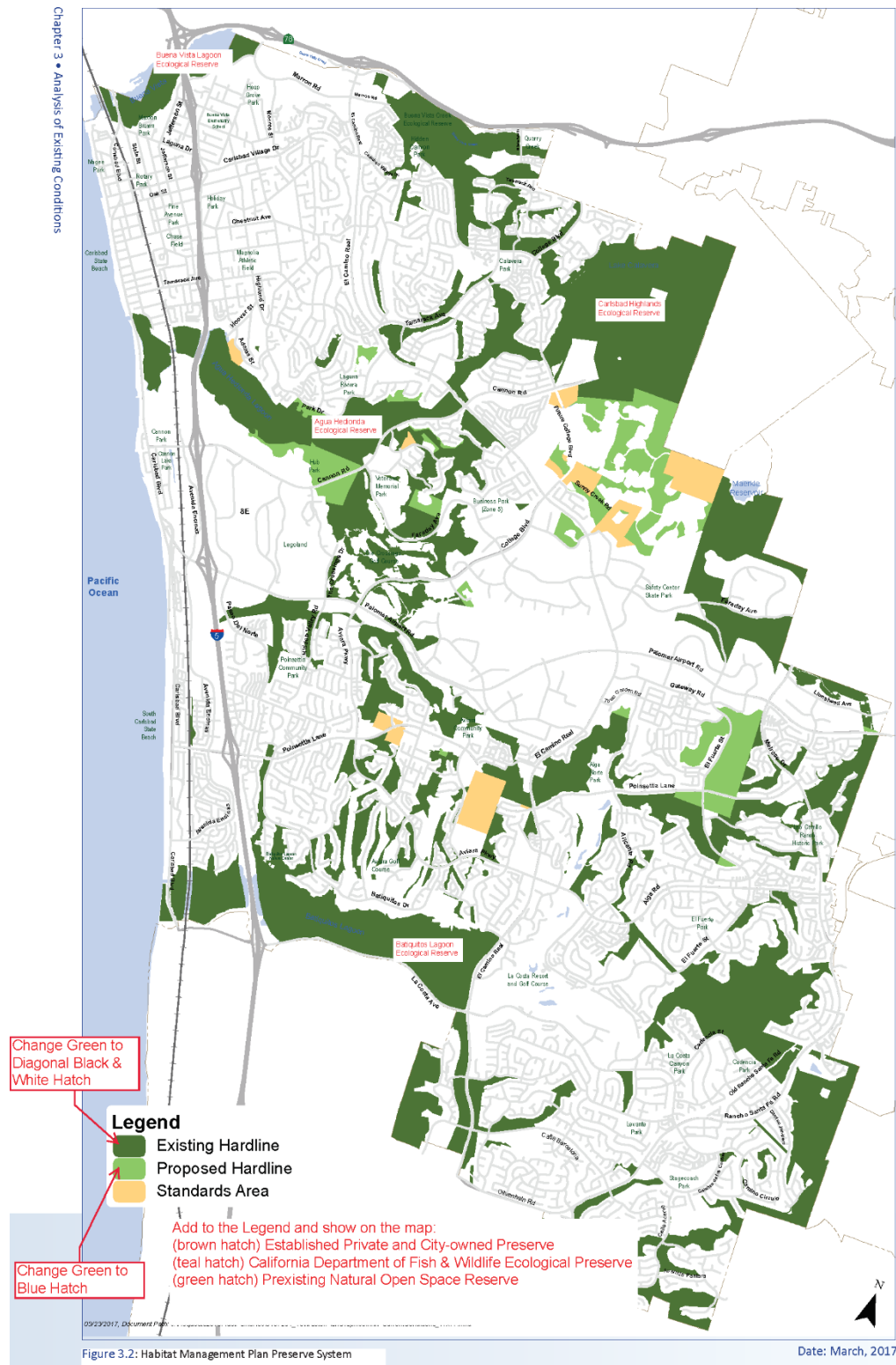


Figure 3.3 Existing Open Space System



Figure 3.3: Existing Open Space System

Figure 3.4 Existing and Future Bike System

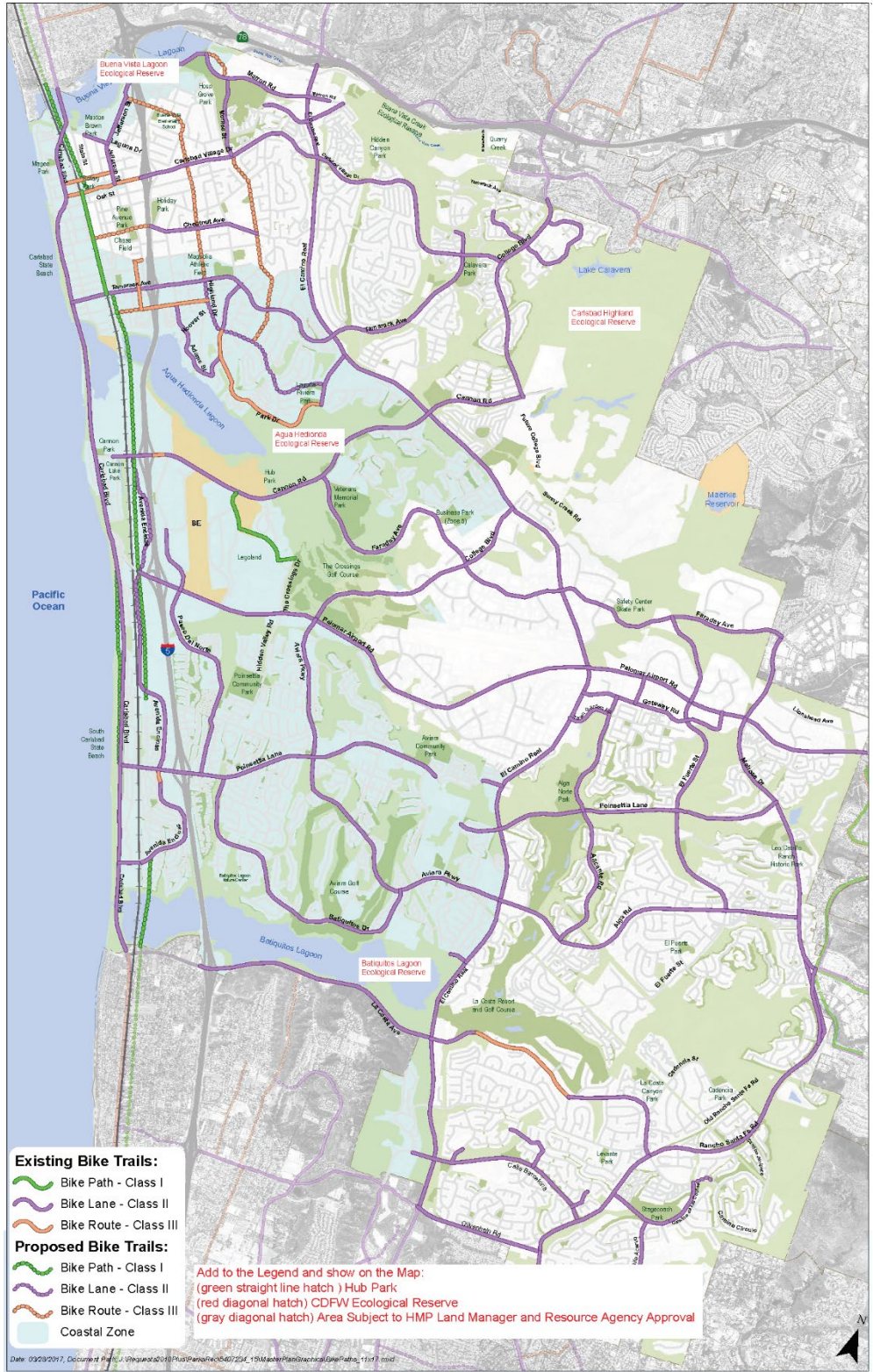
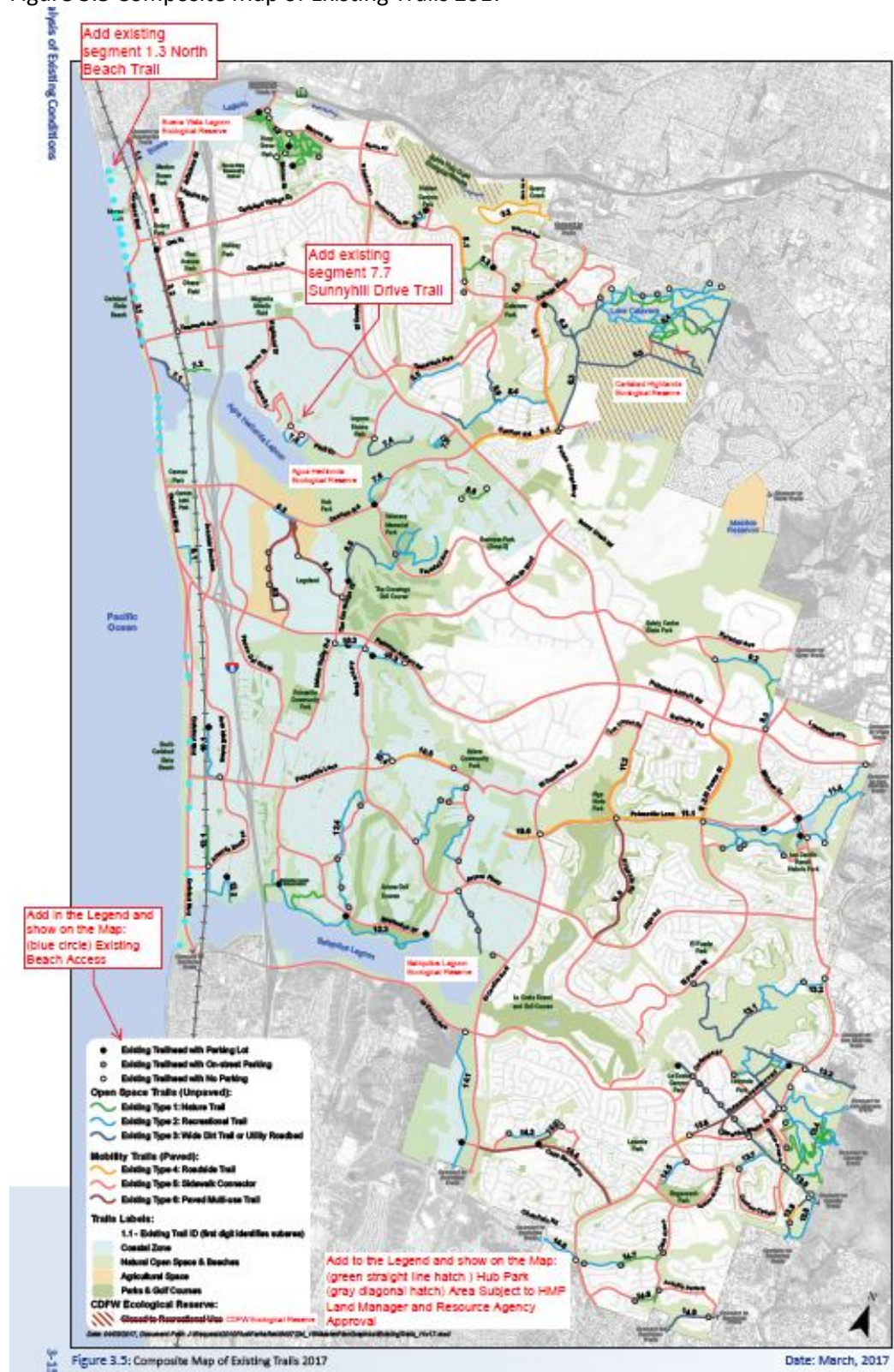


Figure 3.4: Existing and Future Bike System

Date: March, 2017

Figure 3.5 Composite Map of Existing Trails 2017



Chapter 4 - Trail Network SubareaRecommendations

Figure 4.2 – 4.15 Legend (typ)

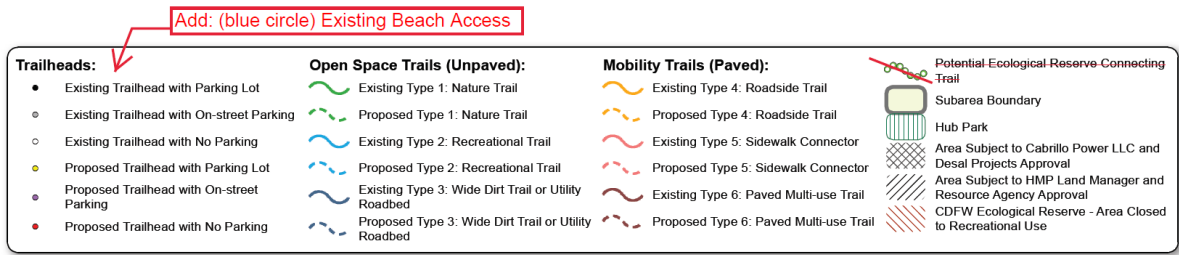
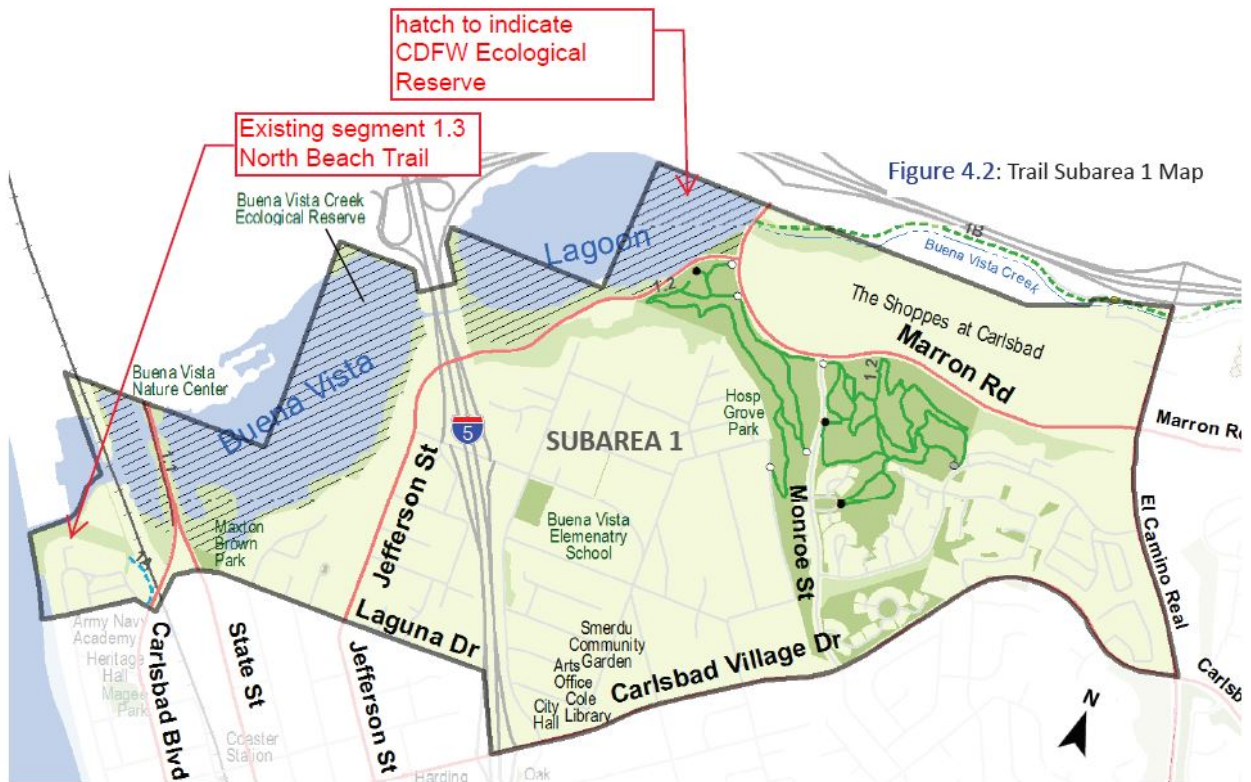


Figure 4.2 Trail Subarea 1 Map



Subarea 2 General Description: (...)CDFW staff expressed concerns for potential impacts to habitat from recreational use, however the city supports completing the trail for connectivity and to be consistent with the Mobility Element of the City of Carlsbad General Plan.

...

Figure 4.3 Trail Subarea 2 Map

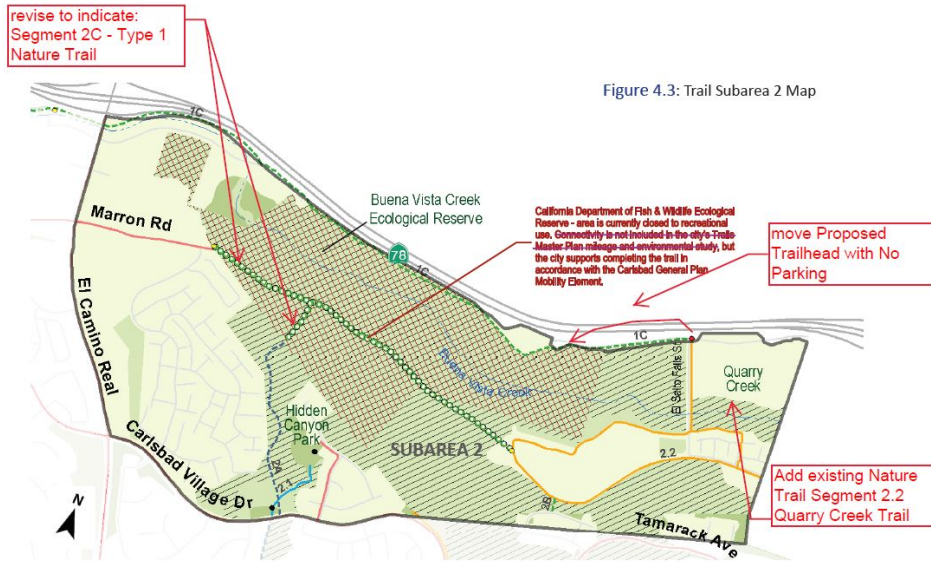


Figure 4.3: Trail Subarea 2 Map

Page 4-9

Figure 4.4 Trail Subarea 3 Map

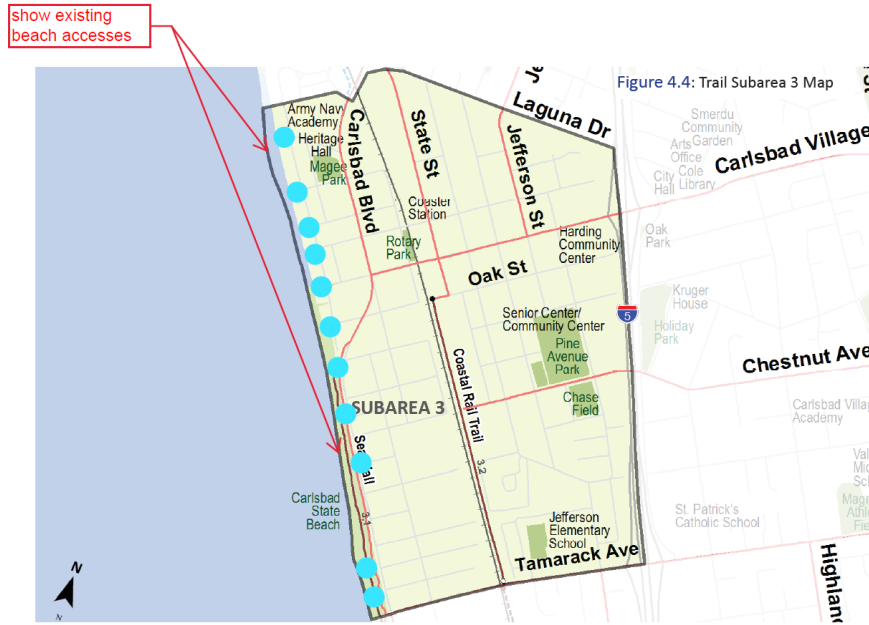
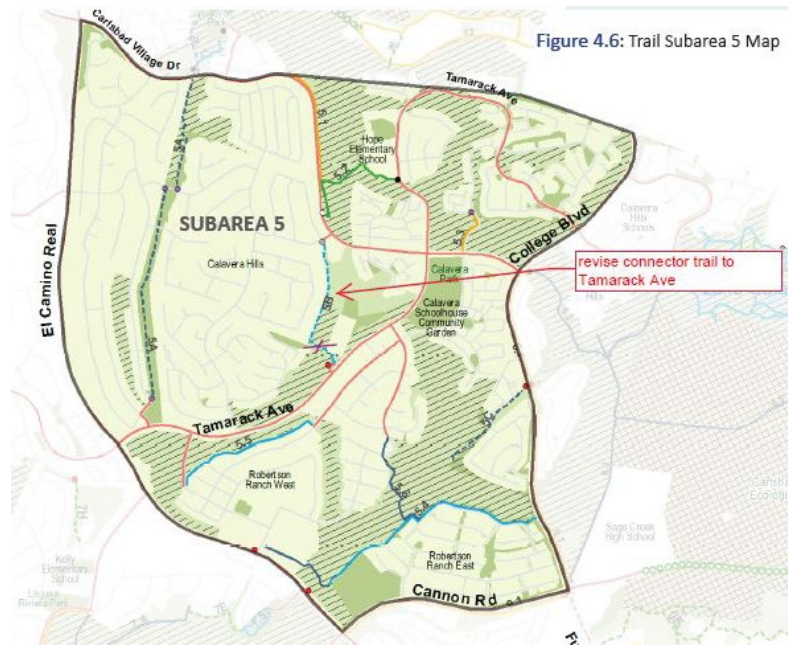


Figure 4.4: Trail Subarea 3 Map

Page 4-13

...

Figure 4.6 Trail Subarea 5 Map



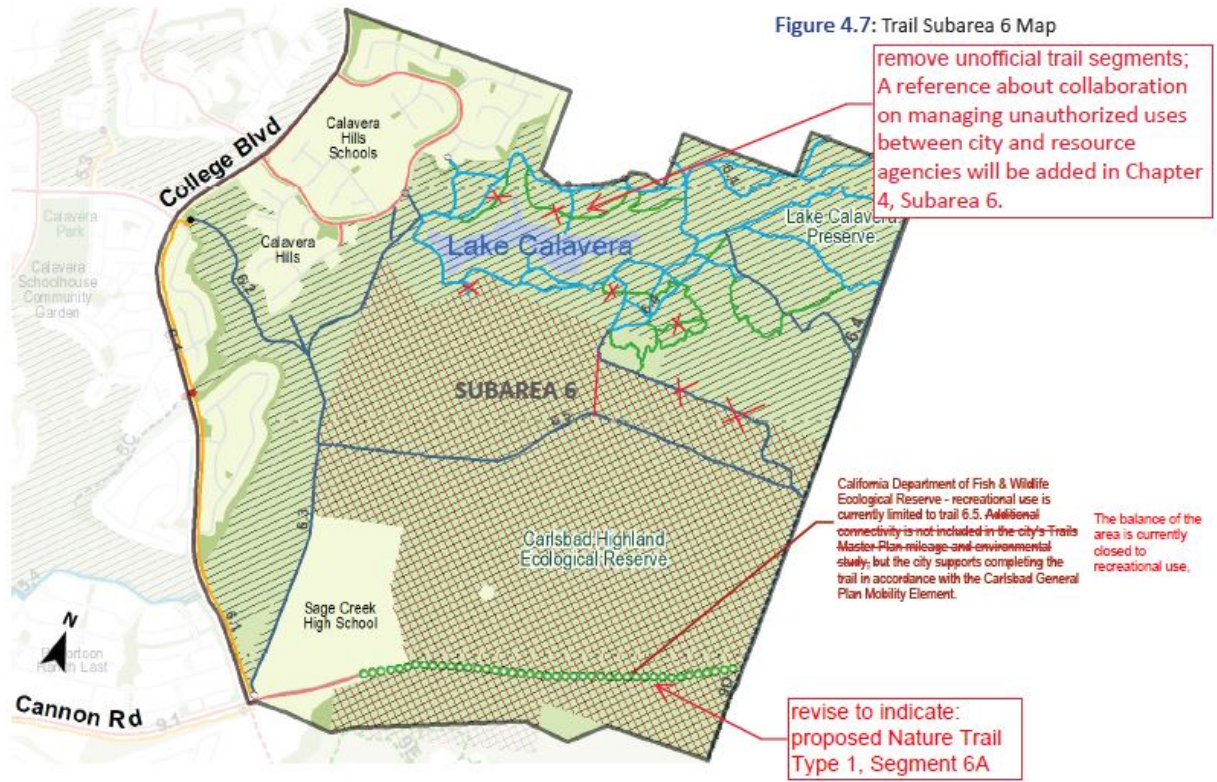
Page 4-15

...

Subarea 6 General Description: The main focus of this subarea is to maintain existing trails. The land managers, city staff, and resource agencies educate public and enforce trail use regulations, such as authorized uses, staying on designated trails and dogs on-leash. At Carlsbad Highlands Ecological Reserve recreational use is currently limited to segment 6.5, where only pedestrian use is allowed. CDFW staff expressed concerns for potential impacts to habitat from recreational use, however the city supports completing future trail for connectivity and to be consistent with the Mobility Element of the City of Carlsbad General Plan.

Lake Calavera Preserve is the largest of 13 city-owned, dedicated and managed nature preserves in Carlsbad, established in the city's Habitat Management Plan. The city has developed the Lake Calavera Trails Master Plan for a network of multi-use trails. In the process, some of the trails have been closed for safety reasons, to protect wildlife or due to unsustainable soils and slopes. In other areas, elevated boardwalks have been built to protect sensitive wetlands, and give users an opportunity to experience lush greenery of riparian plants. Eight acres of non-native vegetation have been restored to native sage scrub or riparian habitat. Other restoration activities are required as mitigation for impacts from city projects.

Figure 4.7 Trail Subarea 6 Map

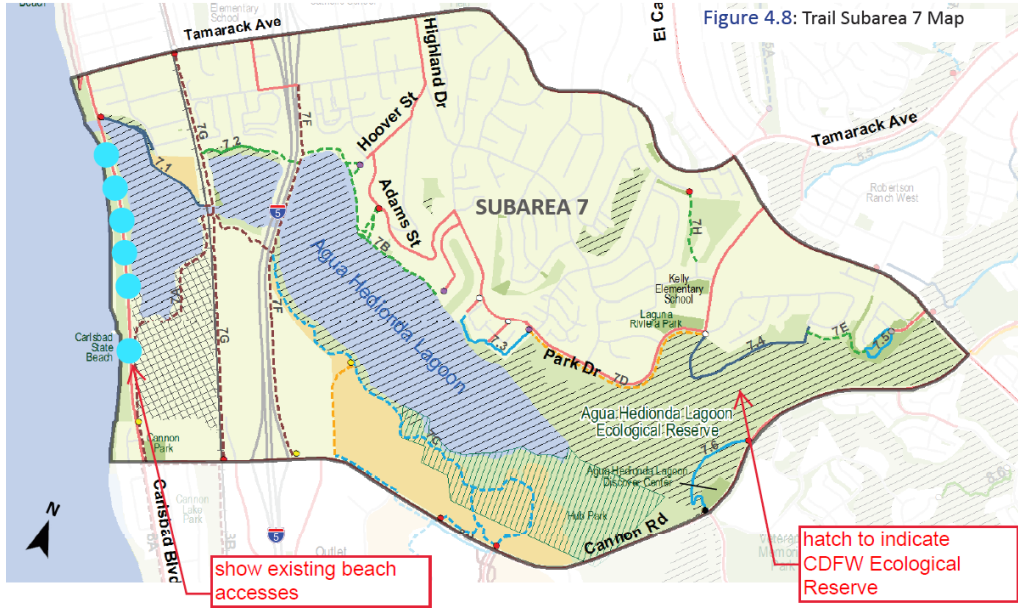


Page 4-17

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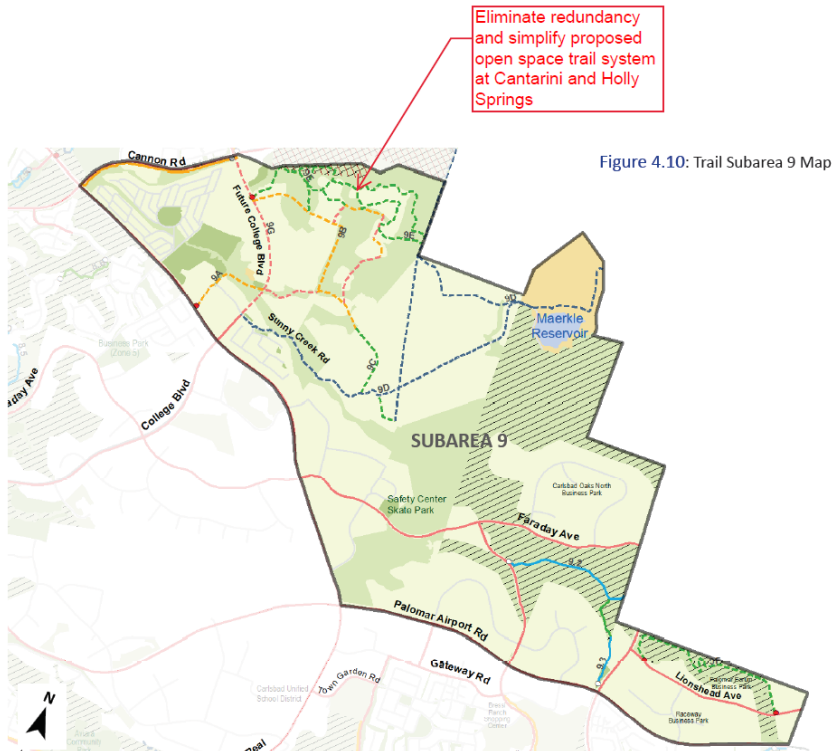
Possible Loops: The variety of the proposed coastal and lagoon trails will create a major east-west regional recreation corridor, from the beach to the Agua Hedionda Lagoon Discovery Center, The Crossings golf course, future Veterans Memorial Park and east communities Robertson Ranch and Calavera Hills. On the south shore of the lagoon, the proposed trail will run from the future I-5 bridge (proposed as part of the CALTRANS widening project), through upper bluff, loop within the Hub Park lease area, and terminate at Cannon Road’s underpass.

Figure 4.8 Trail Subarea 7 Map



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Figure 4.10 Trail Subarea 9 Map



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Figure 4.11 Trail Subarea 10 Map

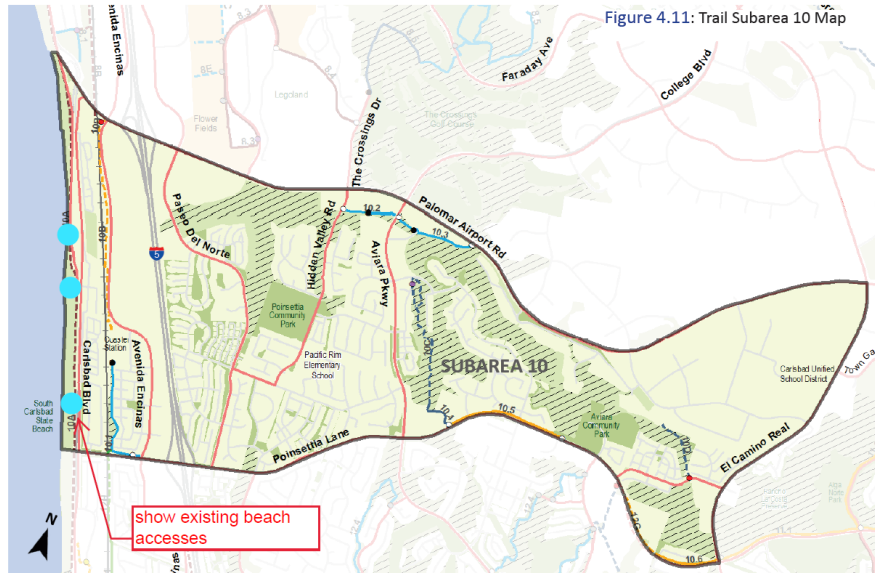


Figure 4.11: Trail Subarea 10 Map

Page 4-27

...
Possible Loops: Several loops already exist through the area Future coastal trail projects will allow connectivity along the beach and on the north shore of the lagoon.

Figure 4.13 Trail Subarea 12 Map

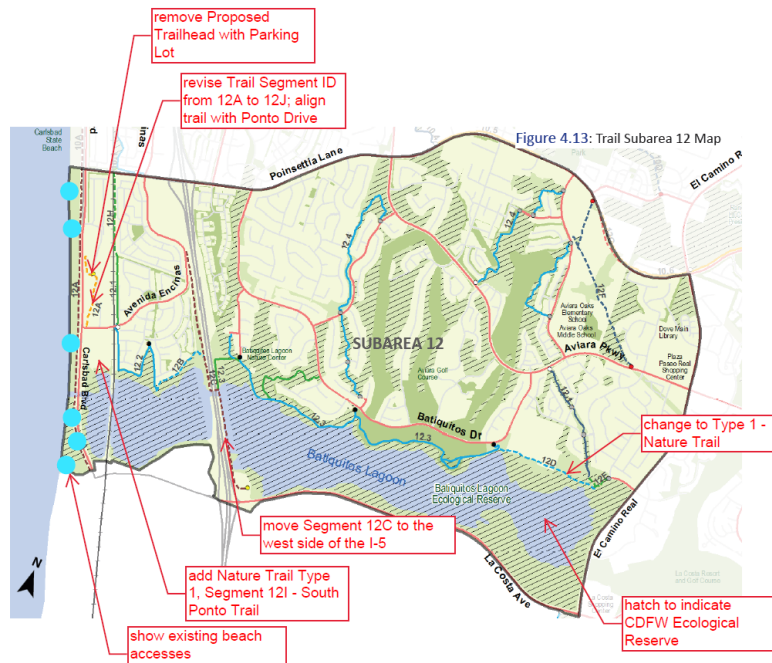


Figure 4.13: Trail Subarea 12 Map

Chapter 5 – Trail Development Implementation

Table 5.1: Future Development Opportunities

TRAIL SEGMENT ID	TRAIL NAME	LENGTH (MILES)	TRAIL CATEGORY	DEVELOPMENT ENTITY	PROJECT TYPE
1A	CARLSBAD BOULEVARD BUENA VISTA LAGOON OVERLOOK AREA	0.1	OPEN SPACE	CITY OF CARLSBAD (PUBLIC)	NEW CONSTRUCTION
1B	WAYMAR ROAD (FROM MARRON ROAD TO EL CAMINO REAL)	0.8	OPEN SPACE	CITY OF CARLSBAD (PUBLIC) WITHIN EXISTING UTILITY EASEMENT OR ROADSIDE ROW; CITY OF OCEANSIDE	IMPROVEMENTS
1C	WAYMAR ROAD (FROM EL CAMINO REAL TO QUARRY CREEK DEVELOPMENT)	1.5	OPEN SPACE	CITY OF CARLSBAD (PUBLIC) WITHIN EXISTING UTILITY EASEMENT OR ROADSIDE ROW	IMPROVEMENTS
2A	HIDDEN CANYON PARK & NORTH SODGE UTILITY ROAD	0.4	OPEN SPACE	CITY OF CARLSBAD (PUBLIC) WITHIN EXISTING UTILITY EASEMENT	IMPROVEMENTS
2B	QUARRY CREEK TRAILS (CONNECTION TO THE SIMSBURY COURT)	0.1	OPEN SPACE	PRIVATE DEVELOPMENT	NEW CONSTRUCTION
5A	SODGE CORRIDOR (CARLSBAD VILLAGE DRIVE TO TAMARACK AVENUE)	1.0	OPEN SPACE	CITY OF CARLSBAD (PUBLIC) WITHIN EXISTING UTILITY EASEMENT	IMPROVEMENTS
5B	VILLAGE H SOUTH (CARLSBAD VILLAGE DRIVE TO TAMARACK AVENUE)	0.6	OPEN SPACE	CITY OF CARLSBAD (PUBLIC)	NEW CONSTRUCTION
5C	SODGE CORRIDOR (CALAVERA HILLS 2)	0.3	OPEN SPACE	CITY OF CARLSBAD (PUBLIC) WITHIN UTILITY EASEMENT	IMPROVEMENTS
7A	COASTAL CORRIDOR (CANNON PARK TO ENCINAS POWER STATION)	1.2	MOBILITY	CITY OF CARLSBAD (PUBLIC)	NEW CONSTRUCTION
7B	NORTH SHORE AGUA HEDIONDA LAGOON TRAIL (I-5 TO COVE DRIVE)	1.1	OPEN SPACE	PRIVATE DEVELOPMENT	NEW CONSTRUCTION
7C	SOUTH SHORE AGUA HEDIONDA LAGOON TRAILS	2.4	OPEN SPACE	PRIVATE DEVELOPMENT; CITY OF CARLSBAD	NEW CONSTRUCTION
7D	PARK DRIVE TRAIL	0.7	MOBILITY	CITY OF CARLSBAD (PUBLIC)	NEW CONSTRUCTION
7E	HALLMARK EAST TRAIL (CONNECTING TO KELLY TRAIL)	0.2	OPEN SPACE	CALIFORNIA FISH & WILDLIFE; CALTRANS (PUBLIC); AHL; CITY OF CARLSBAD	IMPROVEMENTS
7F	I-5 NORTH COAST BIKE TRAIL (CHINGUAFIN TO CANNON ROAD)	1.1	MOBILITY	CALTRANS (PUBLIC)	NEW CONSTRUCTION
7G	COASTAL RAIL TRAIL (TAMARACK AVENUE TO CANNON ROAD) REACH 3	1.2	MOBILITY	CITY OF CARLSBAD (PUBLIC)	NEW CONSTRUCTION
7H	SHAYAN PROPERTY TRAIL (HIGH RIDGE AVENUE TO AURA CIRCLE)	0.2	OPEN SPACE	PRIVATE DEVELOPMENT	NEW CONSTRUCTION
8A	COASTAL CORRIDOR TRAIL (CANNON ROAD TO PALOMAR AIRPORT ROAD)	0.8	MOBILITY	CITY OF CARLSBAD (PUBLIC)	NEW CONSTRUCTION
8B	COASTAL RAIL TRAIL (CANNON ROAD TO PALOMAR AIRPORT ROAD) REACH 4	0.9	MOBILITY	CITY OF CARLSBAD (PUBLIC)	NEW CONSTRUCTION
8C	FLORAL TRADE CENTER TRAIL	0.6	OPEN SPACE	PRIVATE DEVELOPMENT	NEW CONSTRUCTION
8D	OCEAN VIEW POINT TRAIL (CONNECTION TO VETERANS MEMORIAL PARK)	0.1	OPEN SPACE	PRIVATE DEVELOPMENT	NEW CONSTRUCTION
8E	CARLSBAD RANCH	0.3	OPEN SPACE	PRIVATE DEVELOPMENT	NEW CONSTRUCTION
9A	SUNNY CREEK ROAD	0.4	OPEN SPACE	PRIVATE DEVELOPMENT	NEW CONSTRUCTION
9B	CANTARINI/ HOLLY SPRINGS	2.1	OPEN SPACE	PRIVATE DEVELOPMENT	NEW CONSTRUCTION
9C	KATO TRAIL	0.5	OPEN SPACE	PRIVATE DEVELOPMENT	NEW CONSTRUCTION
9D	UTILITY PIPE LINE TRAIL	4.7	OPEN SPACE	CITY OF CARLSBAD (PUBLIC) WITHIN EXISTING UTILITY EASEMENT	IMPROVEMENTS
9E	CANTARINI/HOLLY SPRINGS; CANTARINI-OPEN SPACE TRAILS	1.0 -0.5	OPEN SPACE	PRIVATE DEVELOPMENT	NEW CONSTRUCTION
9F	CARLSBAD RACEWAY PARK	1.0	OPEN SPACE	CITY OF CARLSBAD (PUBLIC)	IMPROVEMENTS
9G	COLLEGE BOULEVARD	0.8	MOBILITY	CITY OF CARLSBAD (PUBLIC)	NEW CONSTRUCTION
10A	COASTAL CORRIDOR TRAIL (PALOMAR AIRPORT ROAD TO POINSETTA LANE)	1.8	MOBILITY	CITY OF CARLSBAD (PUBLIC)	NEW CONSTRUCTION
10B	COASTAL RAIL TRAIL (PALOMAR AIRPORT ROAD TO POINSETTA COASTER STATION) REACH 5	1.0	MOBILITY	CITY OF CARLSBAD (PUBLIC)	NEW CONSTRUCTION
10C	SODGE UTILITY ROAD (FLUM TREE COURT TO POINSETTA LANE)	0.8	OPEN SPACE	CITY OF CARLSBAD (PUBLIC)	IMPROVEMENTS
10D	SODGE UTILITY ROAD (CASSIA ROAD TO CAMINO VIDA ROBLE)	0.3	OPEN SPACE	CITY OF CARLSBAD (PUBLIC)	IMPROVEMENTS
12A	COASTAL CORRIDOR TRAIL (POINSETTA LANE TO LA COSTA AVENUE)	1.4 -0.6	MOBILITY	CITY OF CARLSBAD (PUBLIC)	NEW CONSTRUCTION
12B	ROSARENA TRAIL (NORTH SHORE OF BATIQUITOS LAGOON, NEAR NAVIGATOR CIRCLE TO I-5)	0.3	OPEN SPACE	PRIVATE DEVELOPMENT	NEW CONSTRUCTION
12C	I-5 NORTH COAST BIKE TRAIL (LA COSTA AVENUE TO AVENIDA ENCINAS)	1.2	MOBILITY	CALTRANS (PUBLIC)	NEW CONSTRUCTION
12D	BATIQUITOS LAGOON EXTENSION (BATIQUITOS DRIVE TO ARENAL DRIVE)	0.5	OPEN SPACE	BATIQUITOS LAGOON FOUNDATION	NEW CONSTRUCTION
12E	BATIQUITOS LAGOON TRAIL (CHOXA POINT TO ARENAL DRIVE)	0.2	OPEN SPACE	CITY OF CARLSBAD	NEW CONSTRUCTION
12F	SODGE UTILITY ROAD (POINSETTA LANE TO AVIARA PARKWAY)	0.9	OPEN SPACE	CITY OF CARLSBAD (PUBLIC)	IMPROVEMENTS
12G	POINSETTA LANE/ POINSETTA GS	0.7	MOBILITY	PRIVATE DEVELOPMENT	NEW CONSTRUCTION
12H	SAKESHORE GARDENS	0.4	OPEN SPACE	CITY OF CARLSBAD (PUBLIC) WITHIN EXISTING EASEMENT (MTCO)	NEW CONSTRUCTION
13A	SODGE UTILITY ROAD (ALGA ROAD TO EL FUERTE STREET)	0.5	OPEN SPACE	CITY OF CARLSBAD (PUBLIC)	IMPROVEMENTS
TOTAL MILEAGE OF ALL PROPOSED TRAILS		41.0 -10.0			

Add: Segment 1D Buena Vista Lagoon South Shore Trail, 1.3 mile, Open Space, Development Entity: City of Carlsbad/ CDFW/ Private Development; Project Type: New Construction

Add: Segment 2C Buena Vista Creek Ecological Reserve Trail, 1.0 mile, Open Space, Development Entity: City of Carlsbad/ CDFW; Project Type: Improvements

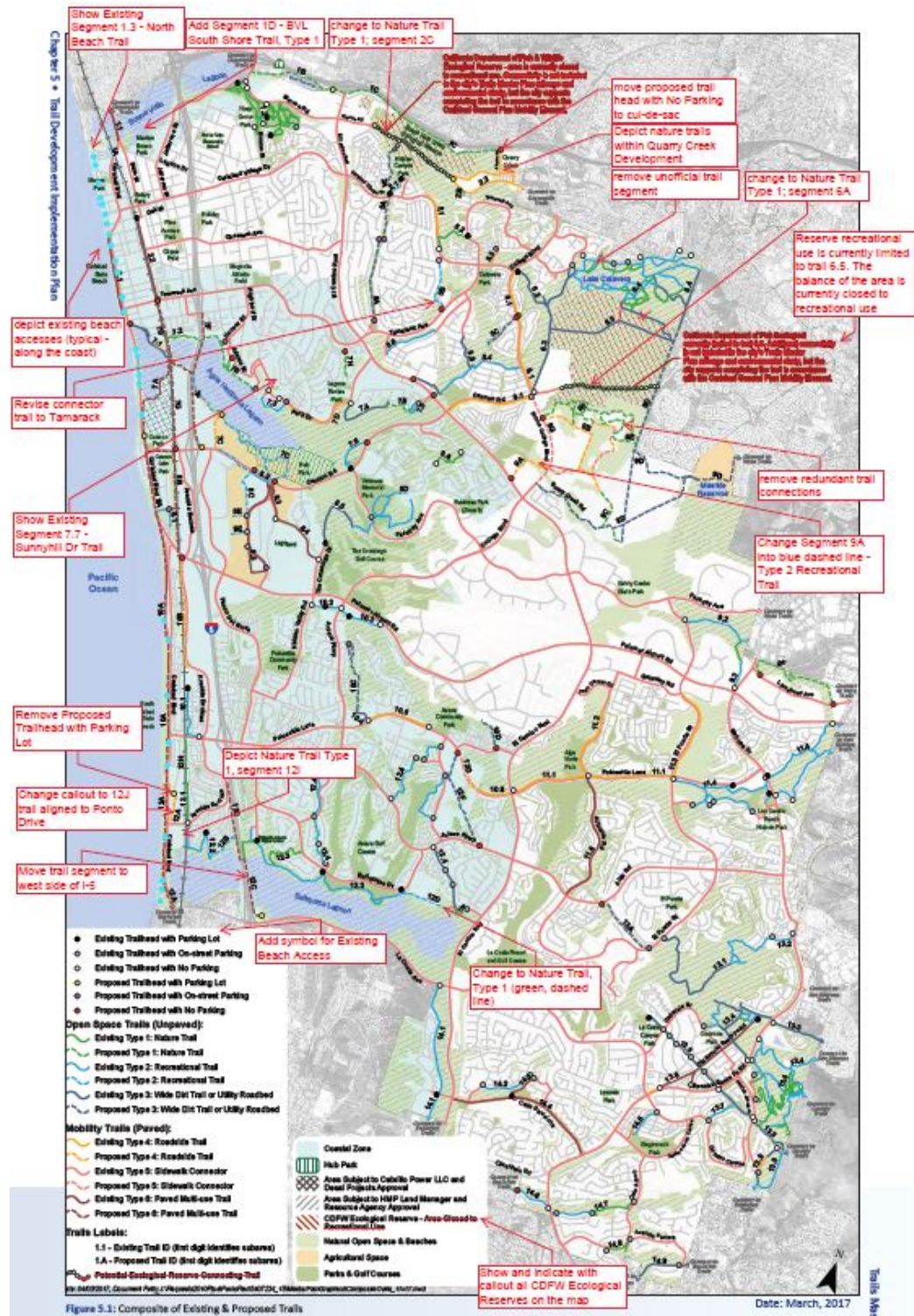
Add: Segment 8A Carlsbad Highlands Reserve Trail, 0.5 mile, Open Space, Development Entity: City of Carlsbad/ CDFW; Project Type: Improvements

Add: Segment 12I South Ponto Trail, 0.6 mile, Open Space, Development Entity: Private; Project Type: New Construction

Add: Segment 12J Ponto Drive Trail, 0.4 mile, Mobility, Development Entity: Private; Project Type: New Construction

Table 5.1 Future Trail Development Opportunities

Figure 5.1: Composite of Existing & Proposed Trails



Trail Segment 1A:

...

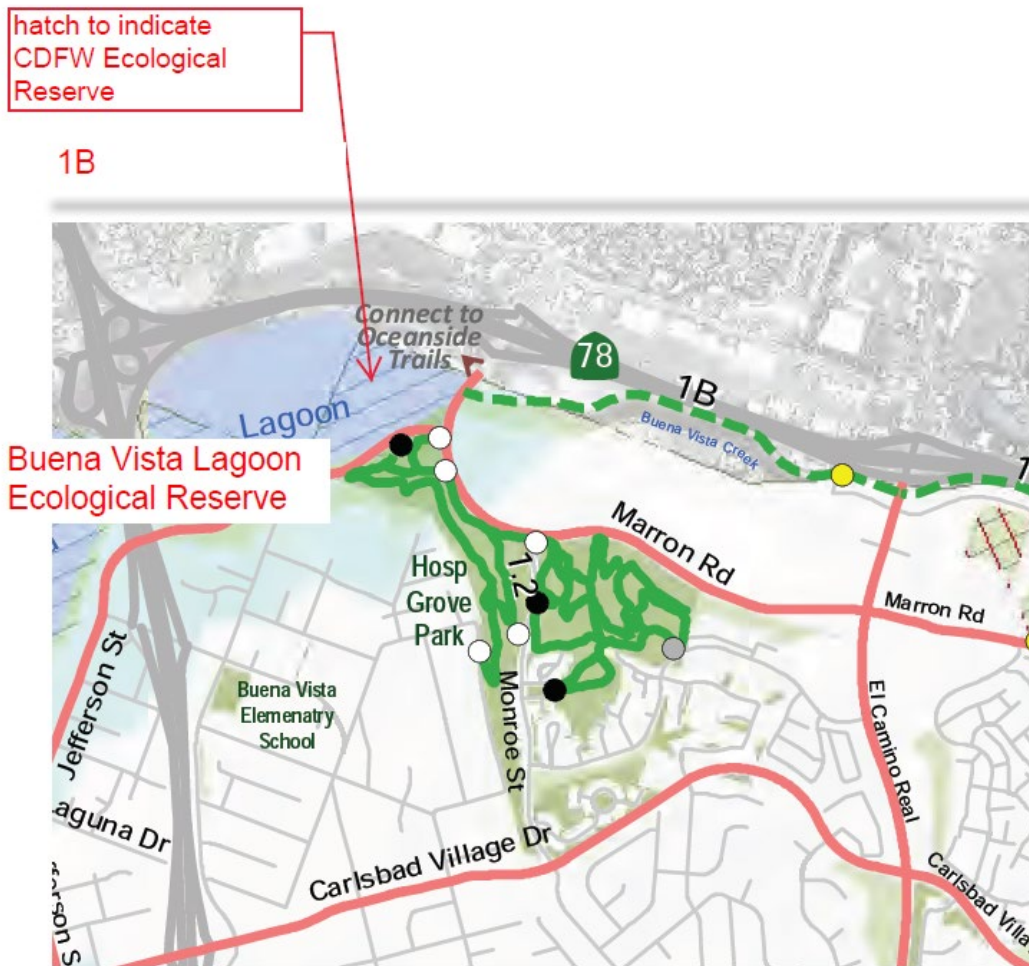
Project Description

This is a short recreational connector leading towards the Buena Vista Lagoon overlook area and to the existing North Beach Trail.

...



Trail Segment 1B:
Haymar Road (from Marron Road to El Camino Real)
...
Estimated Implementation: 2022



Project Description

Haymar Road four-foot wide nature trail is proposed along the Buena Vista Creek and Highway 78. Part of the proposed trail lies within the City of Oceanside boundaries. Collaboration between cities will be required in order to develop this trail. The trail will be located within existing utility easement or roadside right of way. Improvement cost includes decomposed granite surface and basic trail-head amenities, such as trail ID and trail regulation signs, dog station and trash receptacle. Trail specific environmental review shall be part of trail design and development. Environmental review, agency permitting, and mitigation is not included in the estimated project cost. Development of this trail should be considered with development of the Segment 2C in order to provide responsible passive recreation through Buena Vista Creek Ecological Reserve.

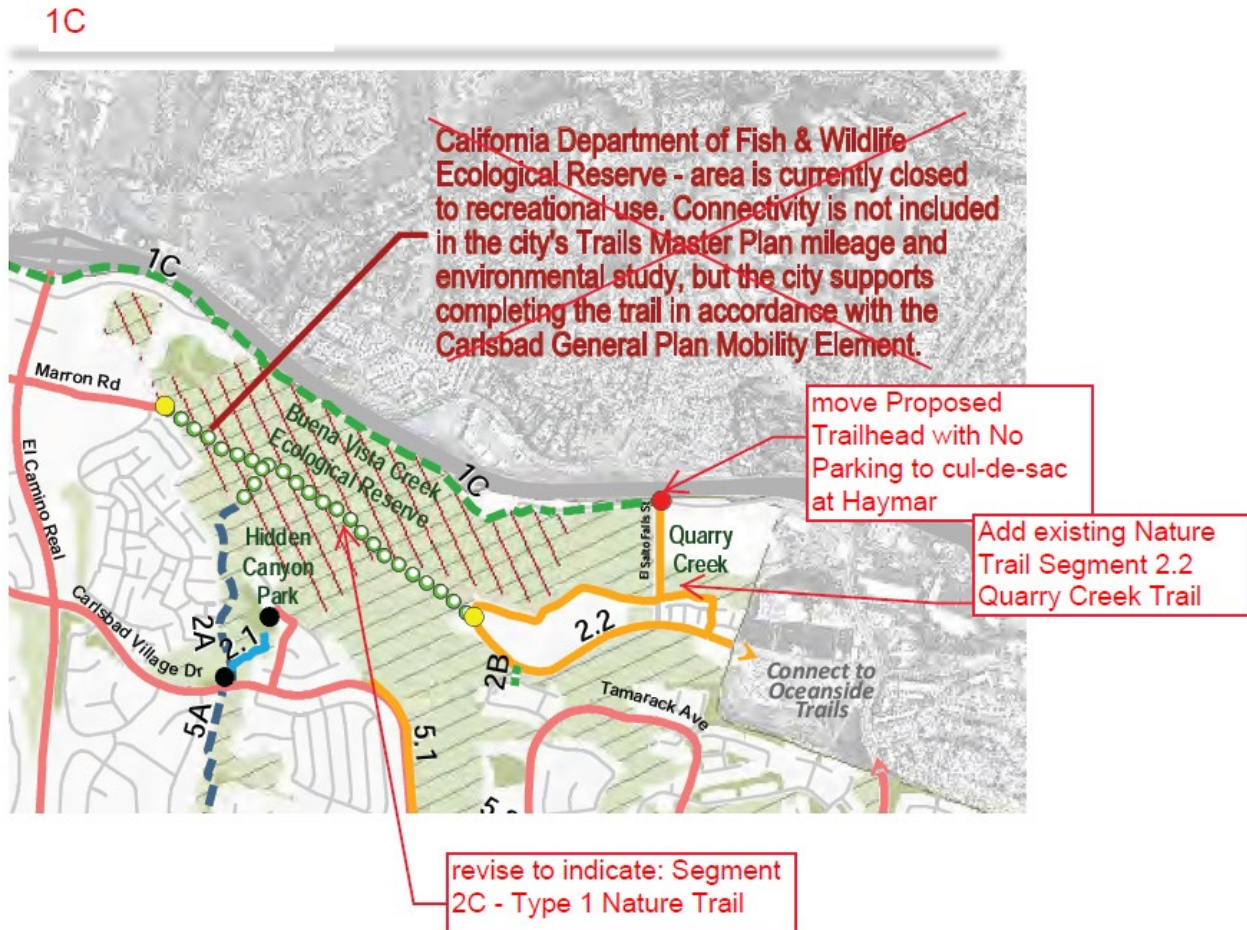
...

Trail Segment 1C:

Haymar Road (from to El Camino Real to Quarry Creek Development)

...

Estimated Implementation: 2022



Project Description

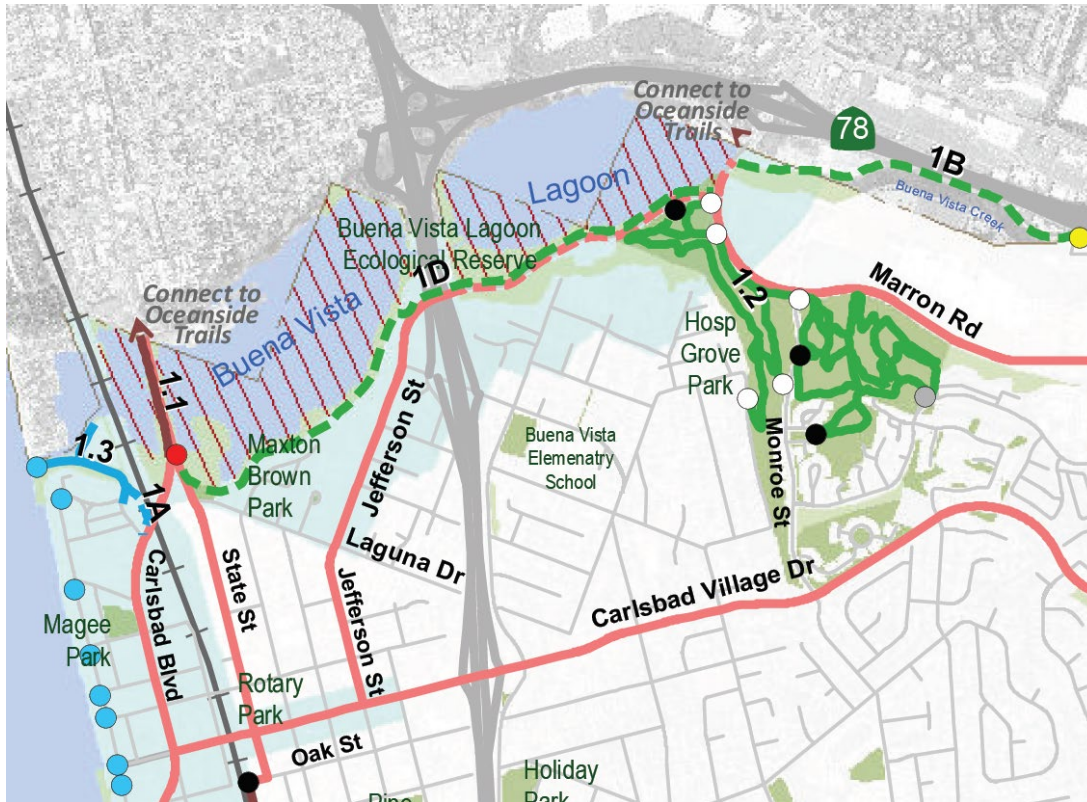
This segment of the Haymar Road nature trail is proposed between Highway 78 and the Buena Vista Creek Ecological Reserve, and runs along the boundary of the California Department of Fish and Wildlife land. The trail will be located within the existing utility easement or roadside right of way. Improvement cost includes decomposed granite surface and basic trail-head amenities such as trail ID and trail regulation signs, dog station and trash receptacle. Trail specific environmental review shall be part of trail design and development. Trail development is a subject to resource agency permitting and approval. Environmental review, agency permitting, and mitigation is not included in the estimated project cost. Development of this trail should be considered with development of the Segment 2C in order to provide responsible passive recreation through Buena Vista Creek Ecological Reserve.

Insert after Page 5-9 and renumber subsequent pages

Trail Segment 1D:

Buena Vista Lagoon South Shore Trail

Subarea: 1
Quadrant: NW
Trail Category: Open Space
Trail Type: 1
Length: 1.3 mile
Development Entity: City of Carlsbad, California Department of Fish & Wildlife, Private Development
Estimated Implementation: 2030



Project Description

This nature trail is proposed on the top bluff of the Buena Vista Lagoon's south shore, and is consistent with the Local Coastal Program which requires a public access in the coastal zone. Improvement cost includes decomposed granite surface and basic trail-head amenities such as trail ID and trail regulation signs, dog station and trash receptacle. Development of this trail and actual alignment is tentative, pending CDFW regulations and necessary environmental review. Trail specific environmental review shall be part of trail design and development. Environmental review, agency permitting, and mitigation is not included in the estimated project cost.

Estimated Project Cost:

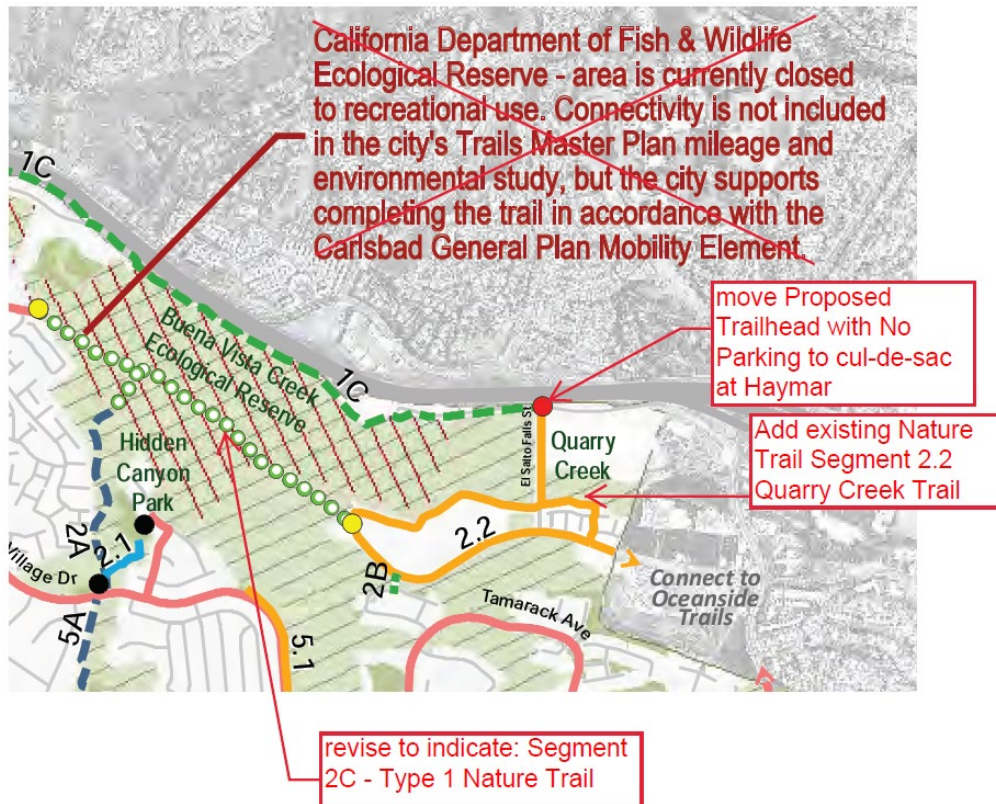
\$100,000

Segment 2A

Hidden Canyon Park & North SDG&E Utility Road

...

Estimated Implementation: 2022

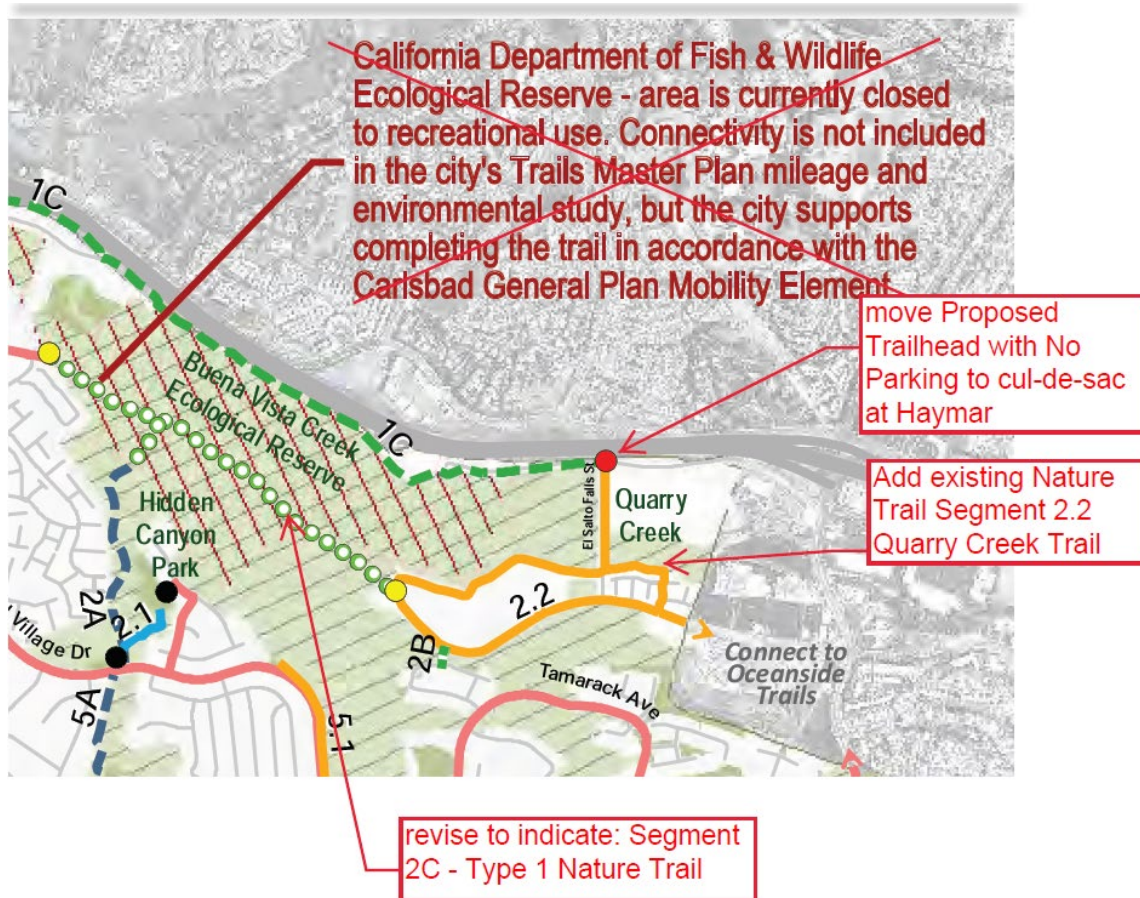


Project

Description

The width of the utility roadbed varies depending on the existing conditions. No new construction will be required, since the trail is proposed in already existing utility corridor. Development efforts may include trail repairs, erosion control, additional Class 2 road base, and basic trail-head signage, such as trail ID and trail regulation signs, dog station and trash receptacle. Cost also includes administrative time necessary to incorporate the trail into the citywide network. Trail specific environmental review shall be part of trail design and development. Environmental review, agency permitting, and mitigation is not included in the estimated project cost. Development of this trail should be considered with development of the Segment 2C in order to provide responsible passive connectivity through Buena Vista Creek Ecological Reserve.

Trail Segment 2B:
Quarry Creek Trail (connection to Simsbury Court)



Insert after Page 5-12 and renumber subsequent pages

Trail Segment 2C:

Buena Vista Creek Ecological Reserve Trail

Subarea: 2

Quadrant: NW

Trail Category: Open Space

Trail Type: 1

Length: 1.0 mile

Development Entity: City of Carlsbad, California Department of Fish & Wildlife

Estimated Implementation: FY 2022



Project Description

Recreational use in the CDFW Buena Vista Creek Ecological Reserve is currently not allowed, but the city supports completing the trail in accordance with the Carlsbad General Plan Mobility Element. Proposed nature trail 2C will begin at the current terminus of Marron Rd and extend eastward to the city's eastern boundary. Development of this trail and actual alignment is tentative, pending CDFW regulation review and necessary environmental review. Improvements may include trail repairs, erosion control, fencing where needed to protect existing habitat, and basic trail-head signage, such as trail ID and trail regulation signs, dog station and trash receptacle. Environmental review, agency permitting, and mitigation is not included in the estimated project cost.

Estimated Project Cost:

\$76,000

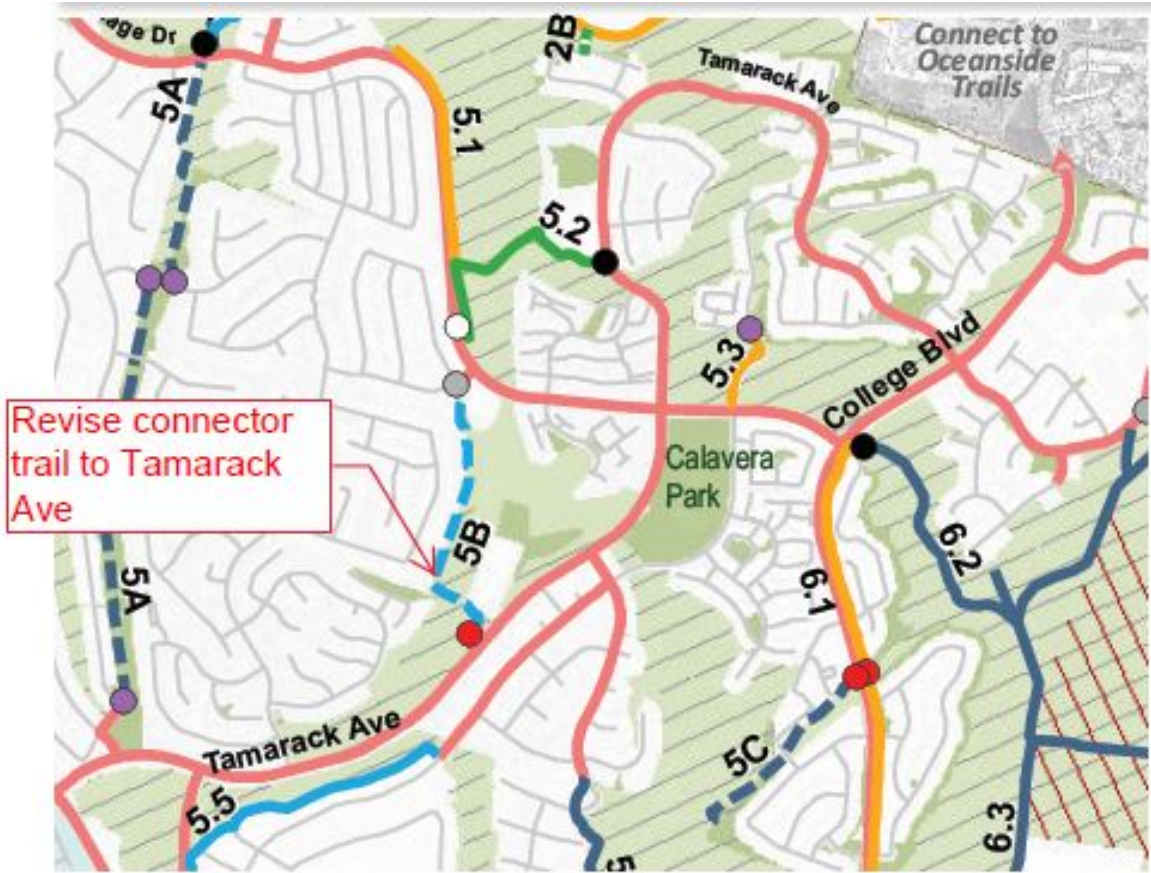
Page 5-15

Trail Segment 5B:

Village H South (Carlsbad Village Drive to Tamarack Avenue)

...

Estimated Implementation: 2019/2023



Project Description

Village H South Trail is a recreational trail up to 8-foot wide closing the loop connecting Calavera Hills Community Park, Hope Elementary and residential neighborhoods of Village H. Improvement cost includes decomposed granite surface, trail delineation and basic trail-head amenities, such as trail ID and trail regulation signs, dog station and trash receptacle. Cost of fence shall be added if required. Trail specific environmental review shall be part of trail design and development. Part of the trail from Victoria Avenue going south will be open to the public upon completion of a land transfer to the City of Carlsbad and needed improvement work. Part of the trail connecting to Tamarack Avenue is within slope terrain and will require further environmental analysis and may be developed in a later phase. Environmental review, agency permitting, and mitigation is not included in the estimated project cost.

...

**Trail Segment 5C:
SDG&E Corridor (Calavera Hills 2)**



Insert after Page 5-16 and renumber subsequent pages

Segment 6A

Carlsbad Highlands Reserve

Subarea: 6

Quadrant: NE

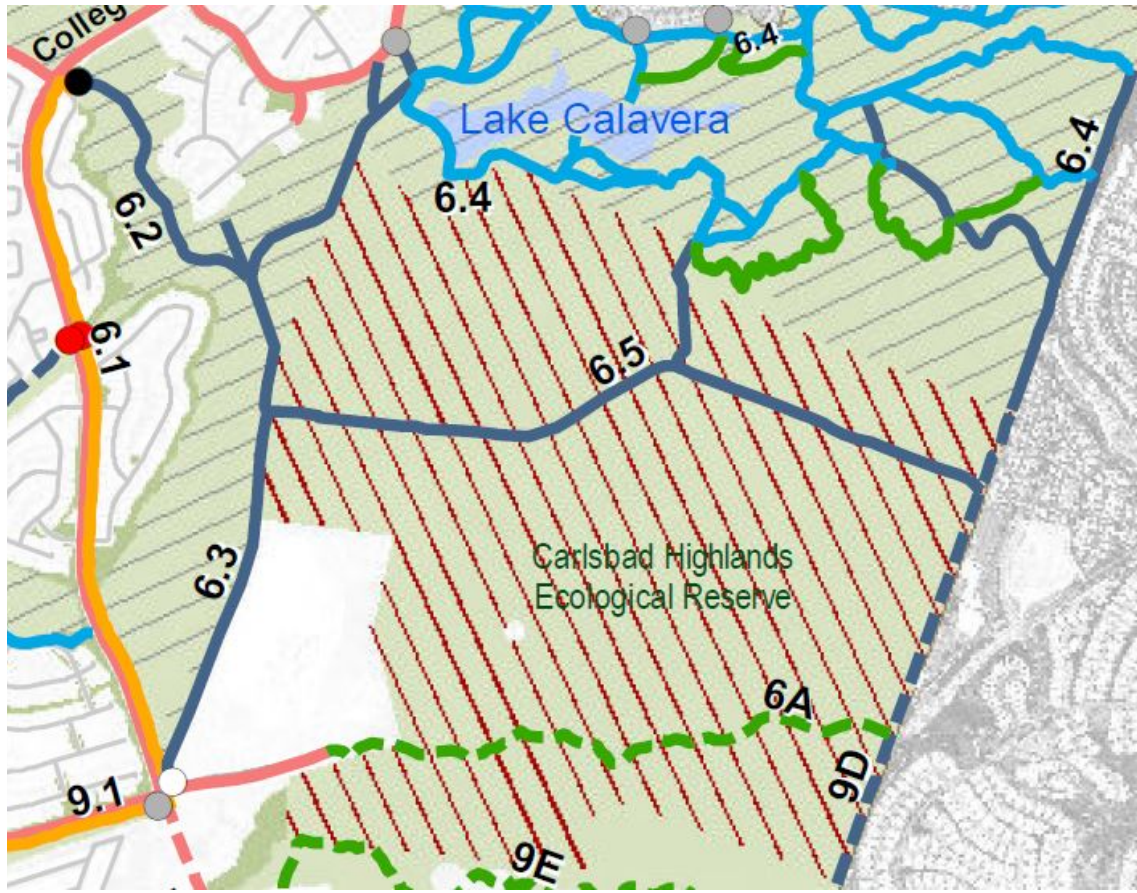
Trail Category: Open Space

Trail Type: 1

Length: 0.9 mile

Development Entity: City of Carlsbad, California Department of Fish & Wildlife

Estimated Implementation: 2030



Project Description

Recreational use in the CDFW Highlands Ecological Reserve is currently limited to existing segment 6.5. The balance of the area is currently closed to recreational use, but city supports completing the trail in accordance with the Carlsbad General Plan Mobility Element. Proposed nature trail 6A is an important link providing West-East connection from Cannon Road at Sage Creek High School to the City of Oceanside. Development of this trail and actual alignment is tentative, pending CDFW regulation review and necessary environmental review. Improvements may include trail repairs, erosion control, fencing where needed to protect existing habitat, and basic trail-head signage, such as trail ID and trail regulation signs, dog station and trash receptacle. Environmental review, agency permitting, and mitigation is not included in the estimated project cost.

Estimated Project Cost:
\$80,000

**Trail Segment 7A:
Coastal Corridor (Cannon Park to Encinas Power Station)**

...



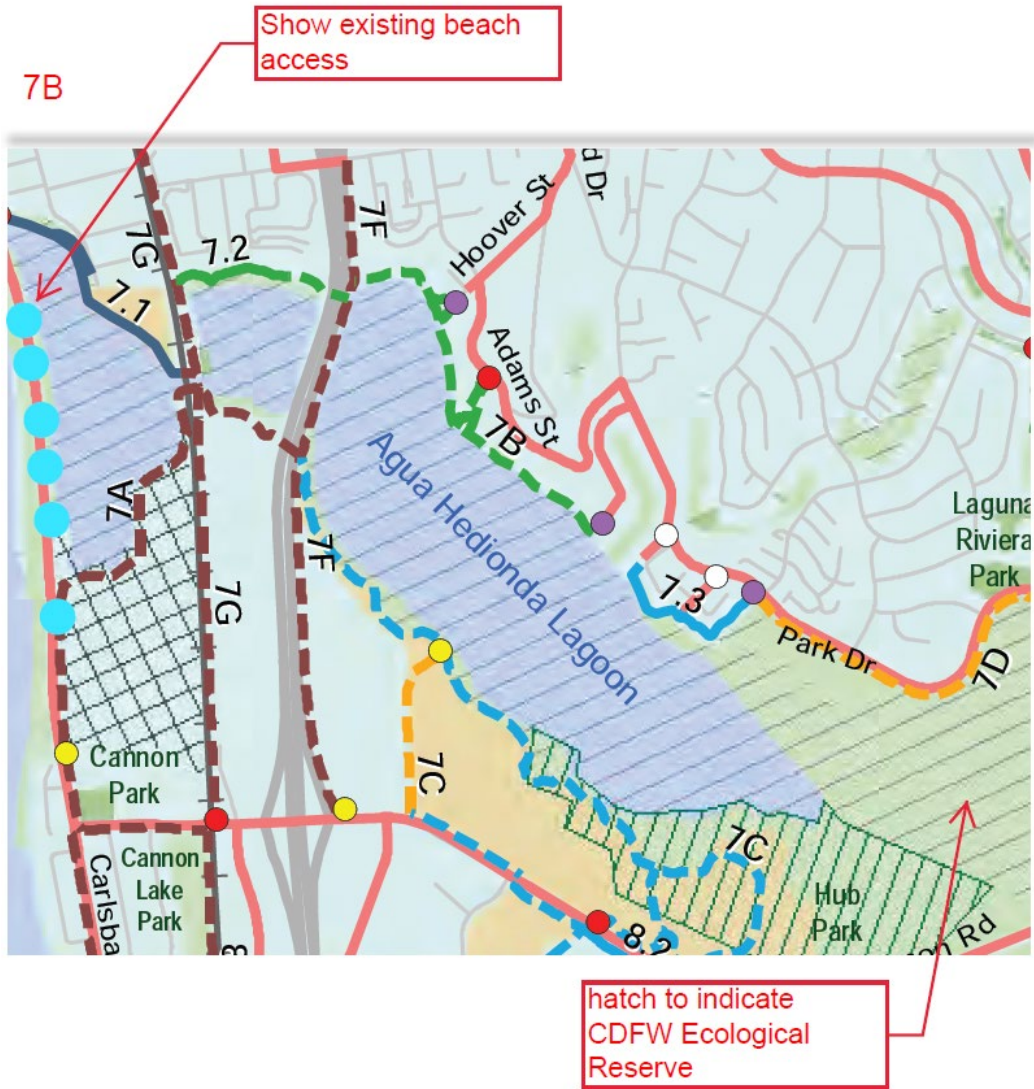
...

Estimated Project Cost:

\$2.5 million- trail development is part of the larger project, cost shown for entire project (per Transportation Department's estimate)

Trail Segment 7B:
North Shore Agua Hedionda Lagoon Trail (I-5 to Cove Drive)

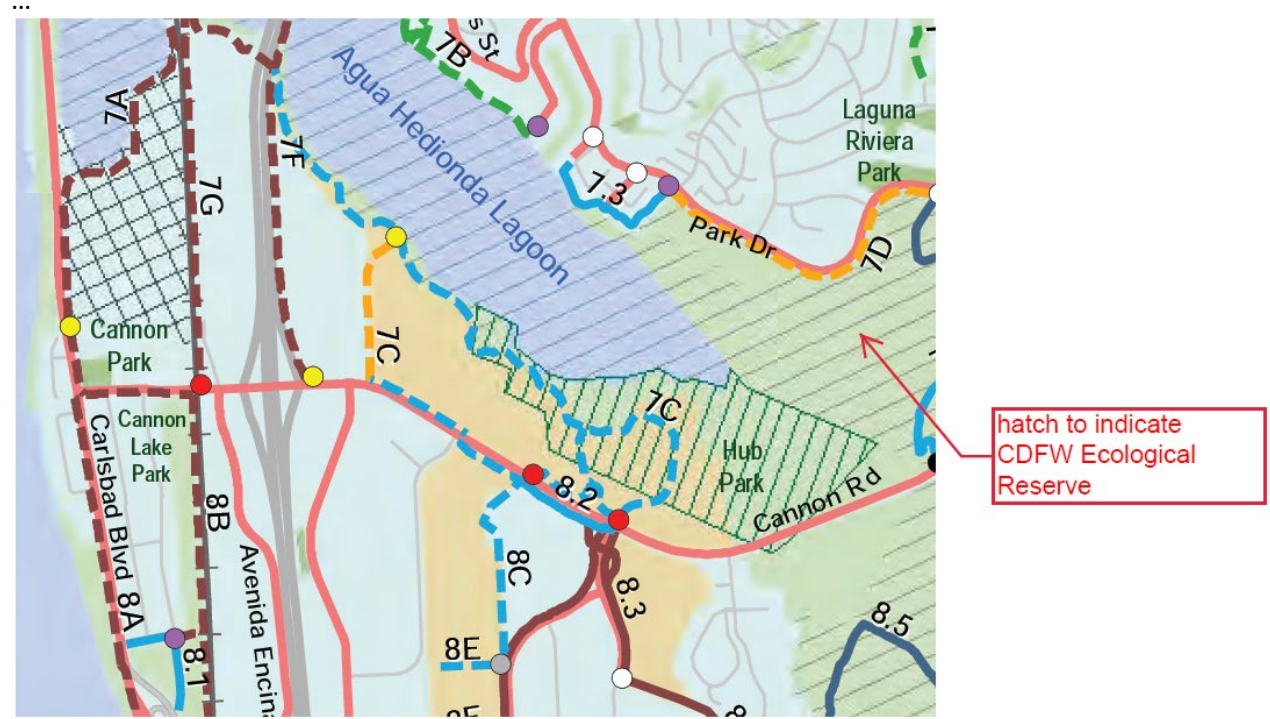
...



...

Trail Segment 7C:

South Shore Agua Hedionda Lagoon Trail (I-5 to Agua Hedionda Lagoon Discovery Center)



Project Description

Proposed eight-foot wide recreational trail will lead from I-5 new bridge crossing to the top bluff of the lagoon. It will loop around the Strawberry Fields and open space, providing connection to the south side of Cannon Road through existing underpasses. Trail segment within Hub Park lease area may be developed by City of Carlsbad. Segment outside Hub Park will be conditioned by private development and environmental permit required to construct the trail. Agreements and trails development is a subject to review and approval of SDG&E. Improvement cost includes decomposed granite surface, trail edging and basic trail-head amenities, such as trail ID and trail regulation signs, dog station and trash receptacle for public trails on Hub Park Lease area. Environmental review, agency permitting, and mitigation is not included in the estimated project cost.

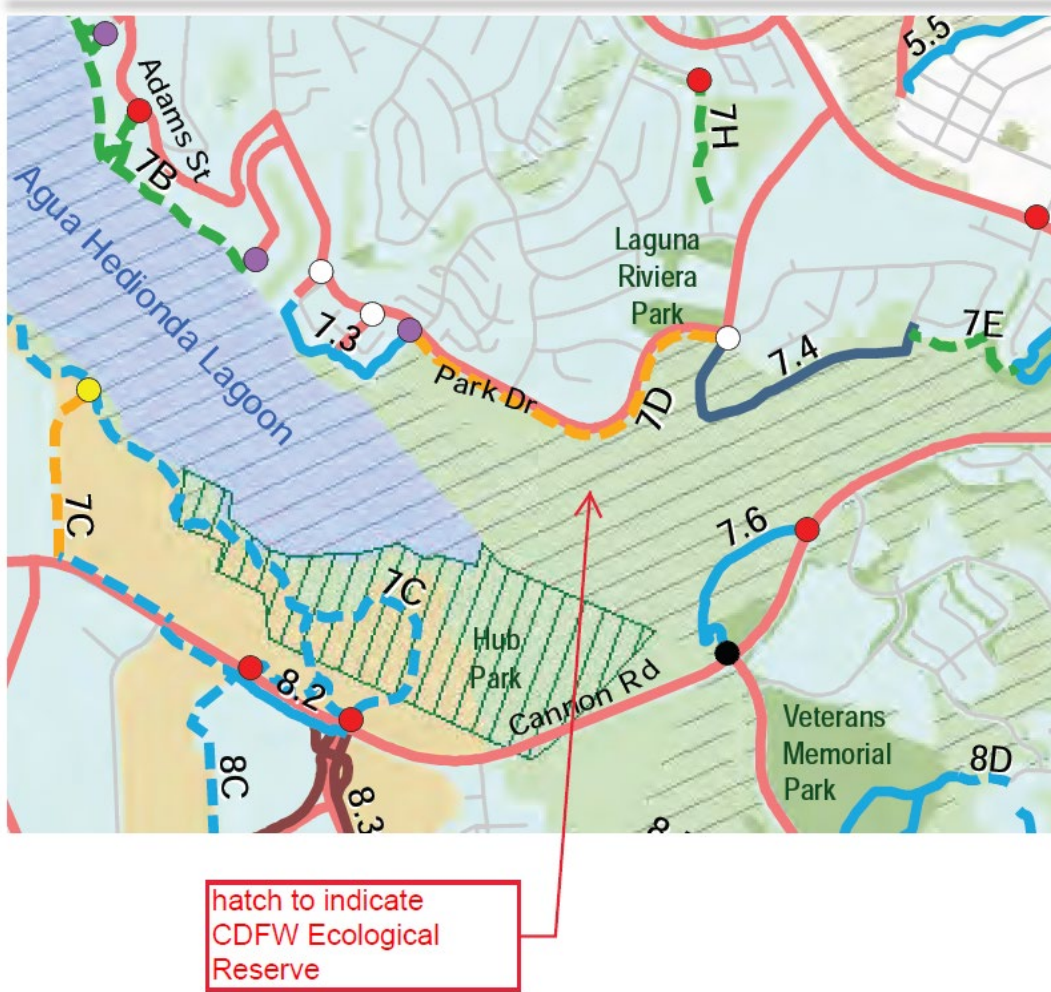
...

Trail Segment 7D:

Park Drive Trail

...

Estimated Implementation: 2019



This roadside trail will be constructed as part of the CATS program. It will provide a connection from Kelly Trail to Laguna Riviera Park, and westward to segment 7.3.

Improvement cost includes decomposed granite surface, trail-head amenities, such as signage and pet stations. Trail specific environmental review shall be part of trail design and development.

Estimated Project Cost:

\$1,686,000 (per CATS) - trail development is part of the larger project, cost shown for entire project (per Transportation Department's estimate)

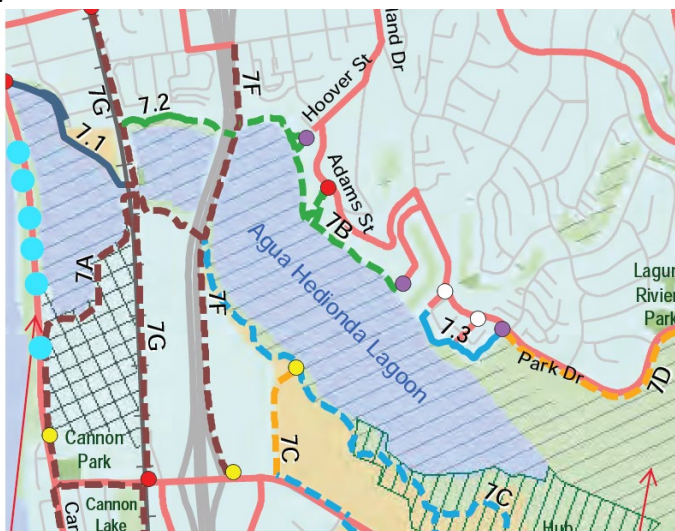
**Trail Segment 7E:
Hallmark East Trail**



hatch to indicate
CDFW Ecological
Reserve

Page 5-23

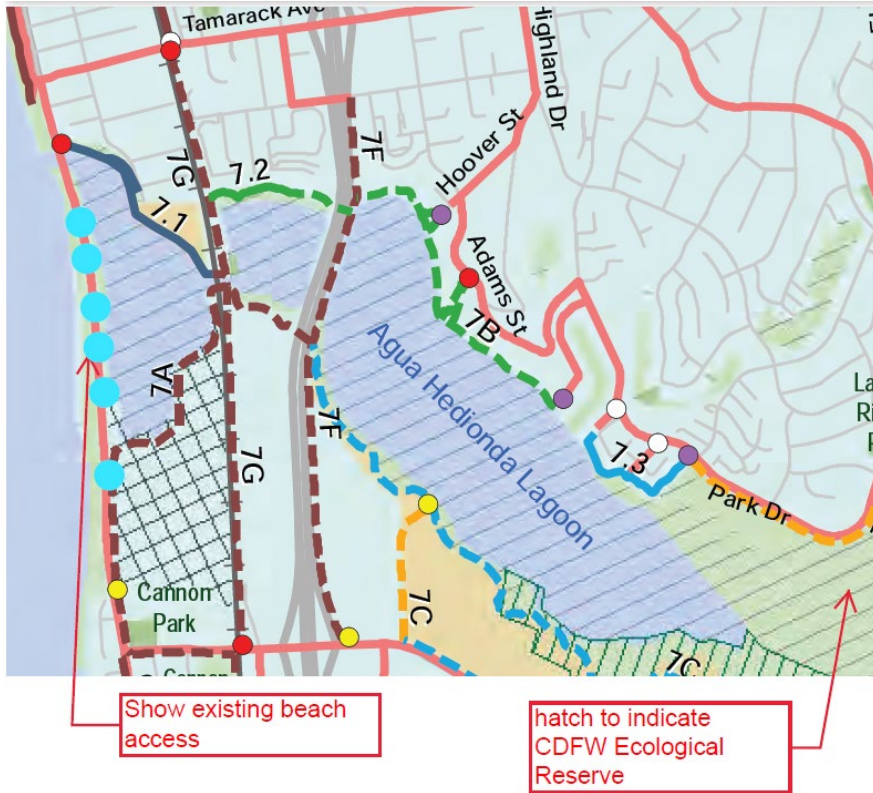
**Trail Segment 7F:
I-5 North Coast Bike Trail (Chinquapin Avenue to Cannon Road)**



Show existing beach
access

hatch to indicate
CDFW Ecological
Reserve

**Trail Segment 7G:
Coastal Rail Trail (Tamarack Avenue to Cannon Road - Reach 3)**



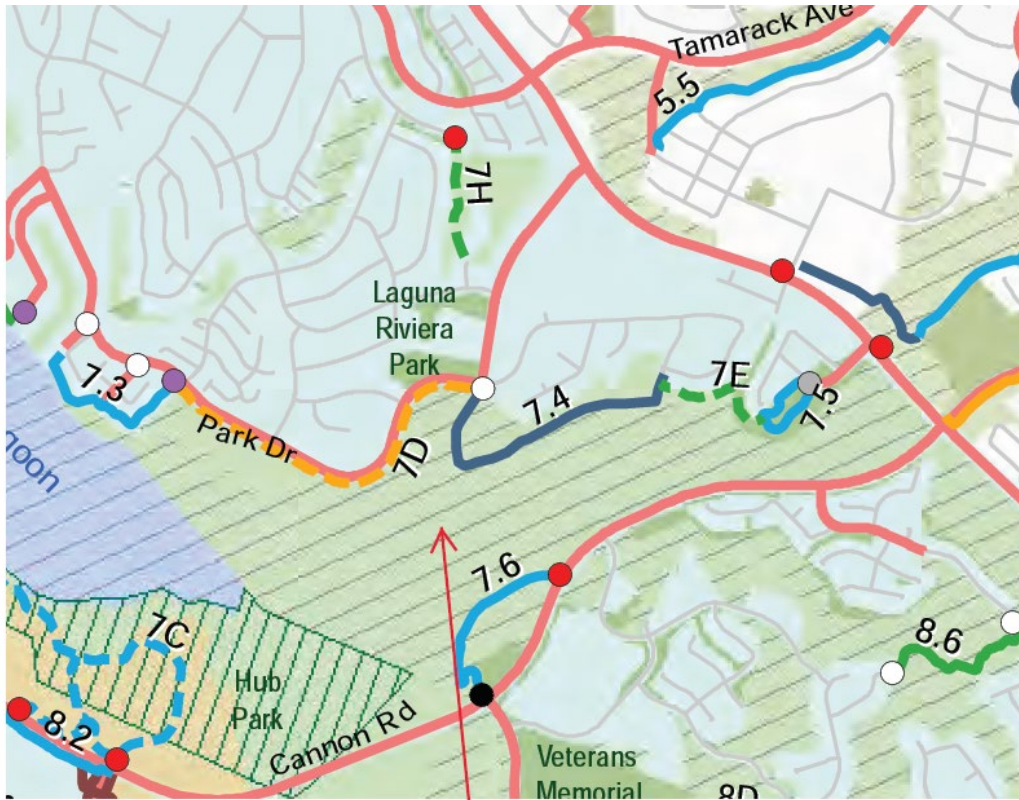
Project Description

Reach 3 is part of a much longer trail that will eventually connect all the San Diego County coastal cities, from Camp Pendleton in the north all the way down to the Mexican border. Not all segments of the trail lie alongside the railroad; in some areas, the trail traverses city bike lanes and sidewalks as close to the railroad right of way as possible. Improvement cost includes paving, lighting, landscape buffers, irrigation, fencing, public art and trail-head amenities. Environmental review, agency permitting, and mitigation is included in the estimated project cost.

Estimated Project Cost:

\$3 million - trail development is part of the larger project, cost shown for entire project (per Transportation Department's estimate)

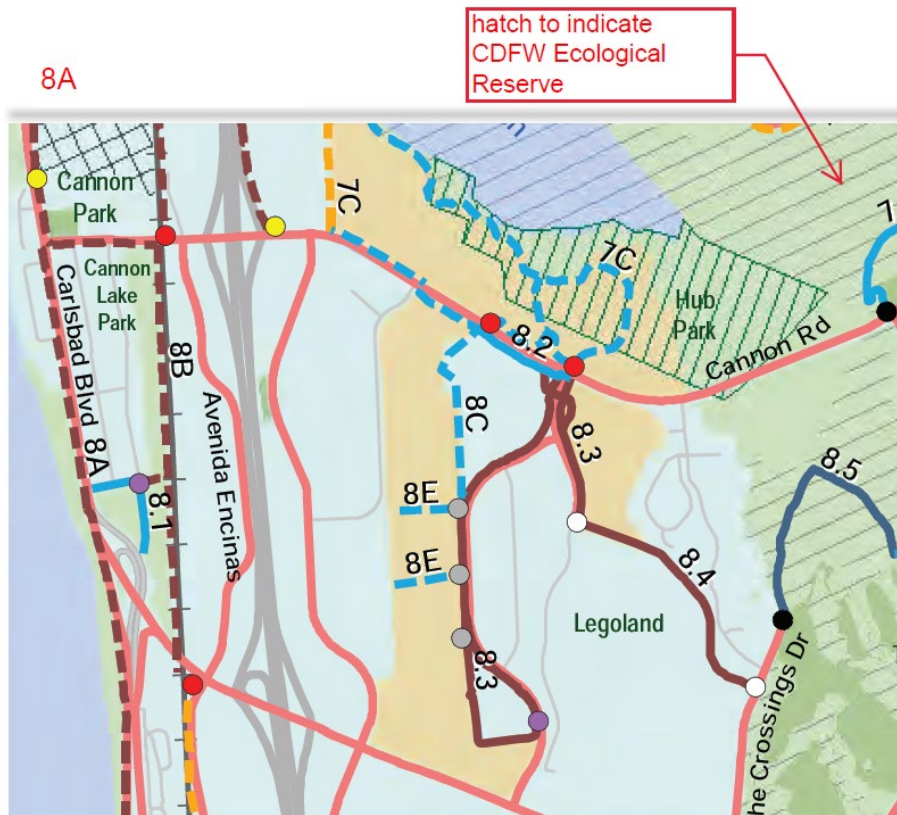
Trail Segment 7H:
Shayan Property Trail (High Ridge Avenue to Aura Circle)



hatch to indicate
CDFW Ecological
Reserve

**Trail Segment 8A:
Coastal Corridor Trail (Cannon Road to Palomar Airport Road)**

...



...

Project Description

The City of Carlsbad is working on a number of initiatives to make it easier and safer to get to the beach and travel along Carlsbad Boulevard (Highway 101), whether by car, on a bike or by foot. Project is part of the CATS and proposes to shift the southbound Carlsbad Boulevard between Cannon Road and BatiQUITOS Lagoon, thereby creating surplus right-of-way and pavement located west of Carlsbad Boulevard. Improvement cost includes paving, lighting, landscape buffers, public art and trail-head amenities. Environmental review, agency permitting, and mitigation is included in the estimated project cost.

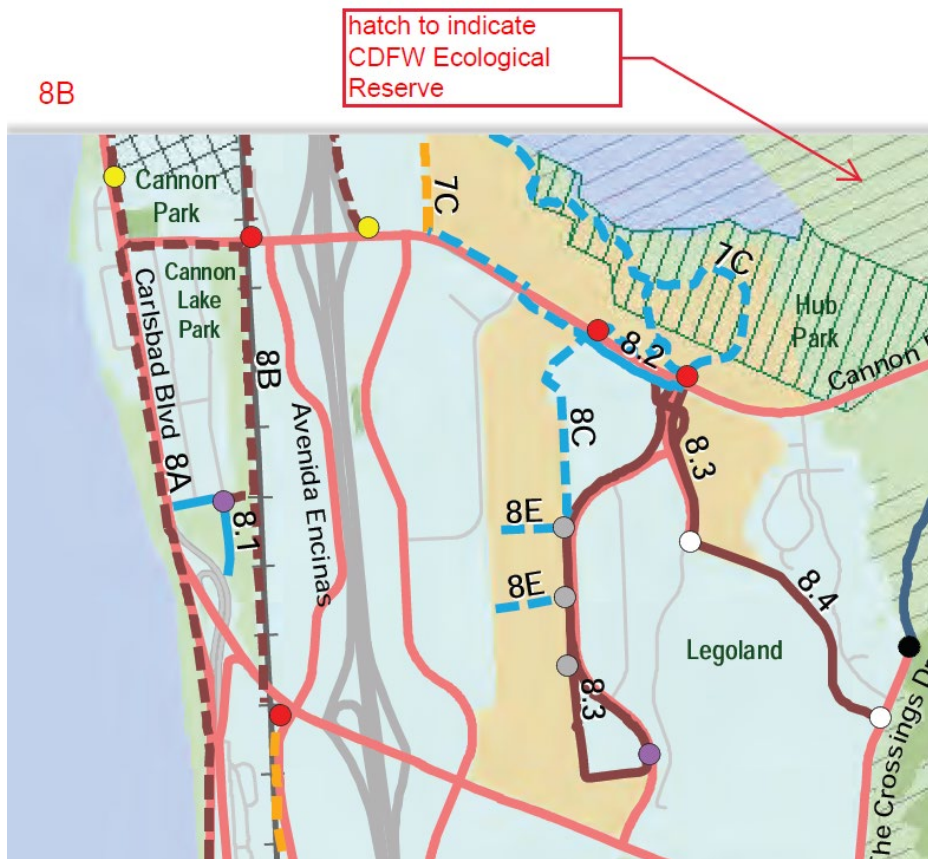
Estimated Project Cost:

\$3 million - trail development is part of the larger project, cost shown for entire project (per Transportation Department's estimate)

Trail Segment 8B:

Coastal Rail Trail (Cannon Road to Palomar Airport Road - Reach 4)

...



Project Description

Reach 4 is part of a much longer trail that will eventually connect all the San Diego County coastal cities, from Camp Pendleton in the north all the way down to the Mexican border. Not all segments of the trail lie alongside the railroad; in some areas, the trail traverses city bike lanes and sidewalks as close to the railroad right of way as possible. Cost includes paving, lighting, landscape buffers, irrigation, fencing, public art and trail-head amenities. Environmental review, agency permitting, and mitigation is included in the estimated project cost.

Estimated Project Cost:

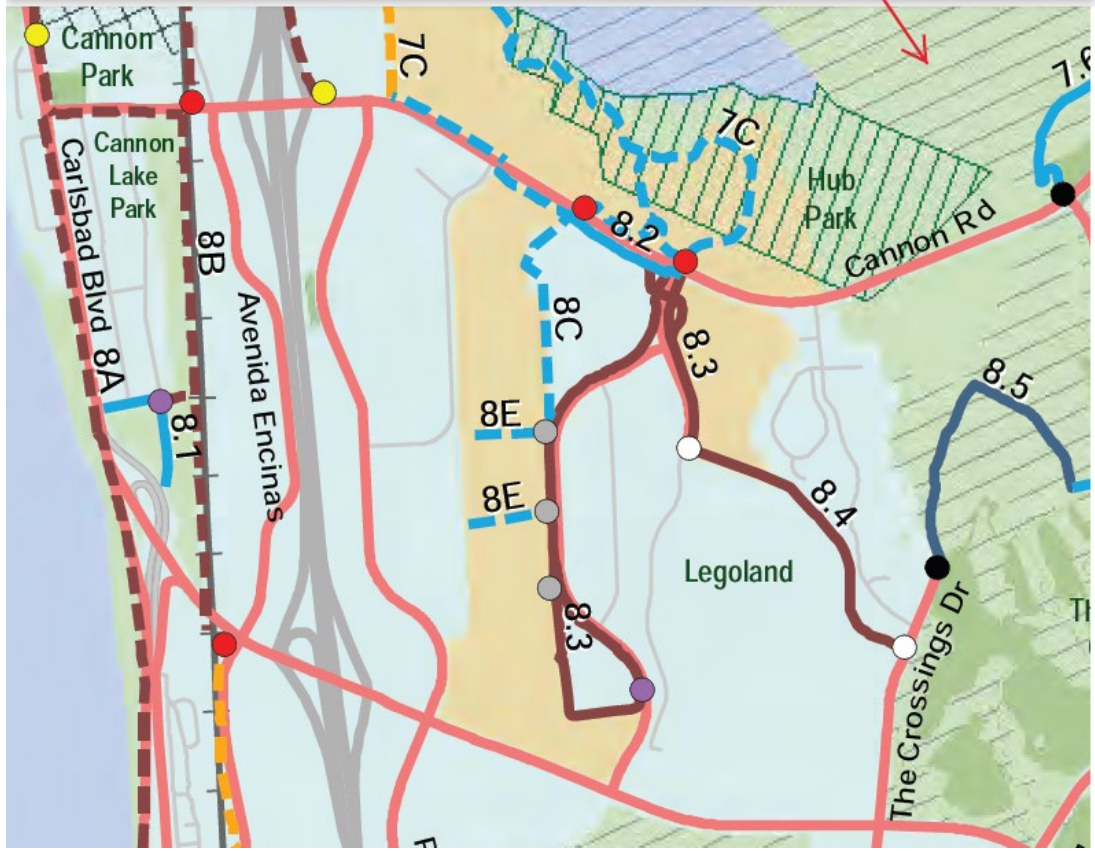
\$3,590,625 - trail development is part of the larger project, cost shown for entire project (per Transportation Department's estimate)

Trail Segment 8C:
Floral Trade Center Trail

...

8C

hatch to indicate
CDFW Ecological
Reserve



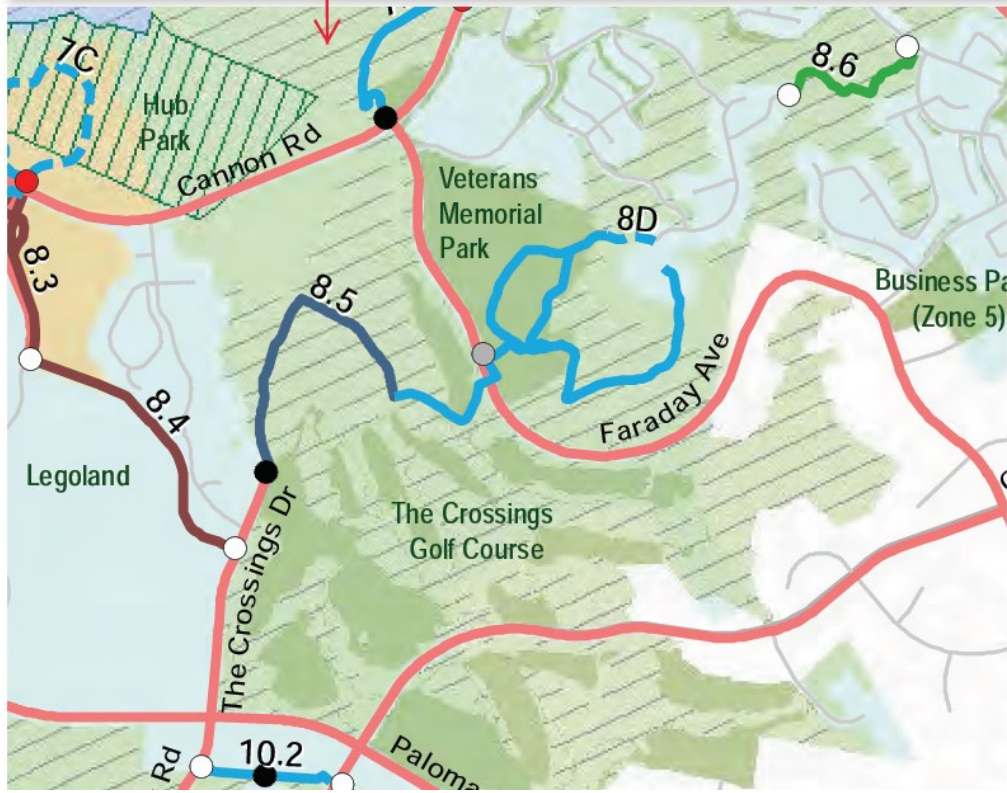
...

**Trail Segment 8D:
Ocean View Point (connection to Veterans' Park)**

...

hatch to indicate
CDFW Ecological
Reserve

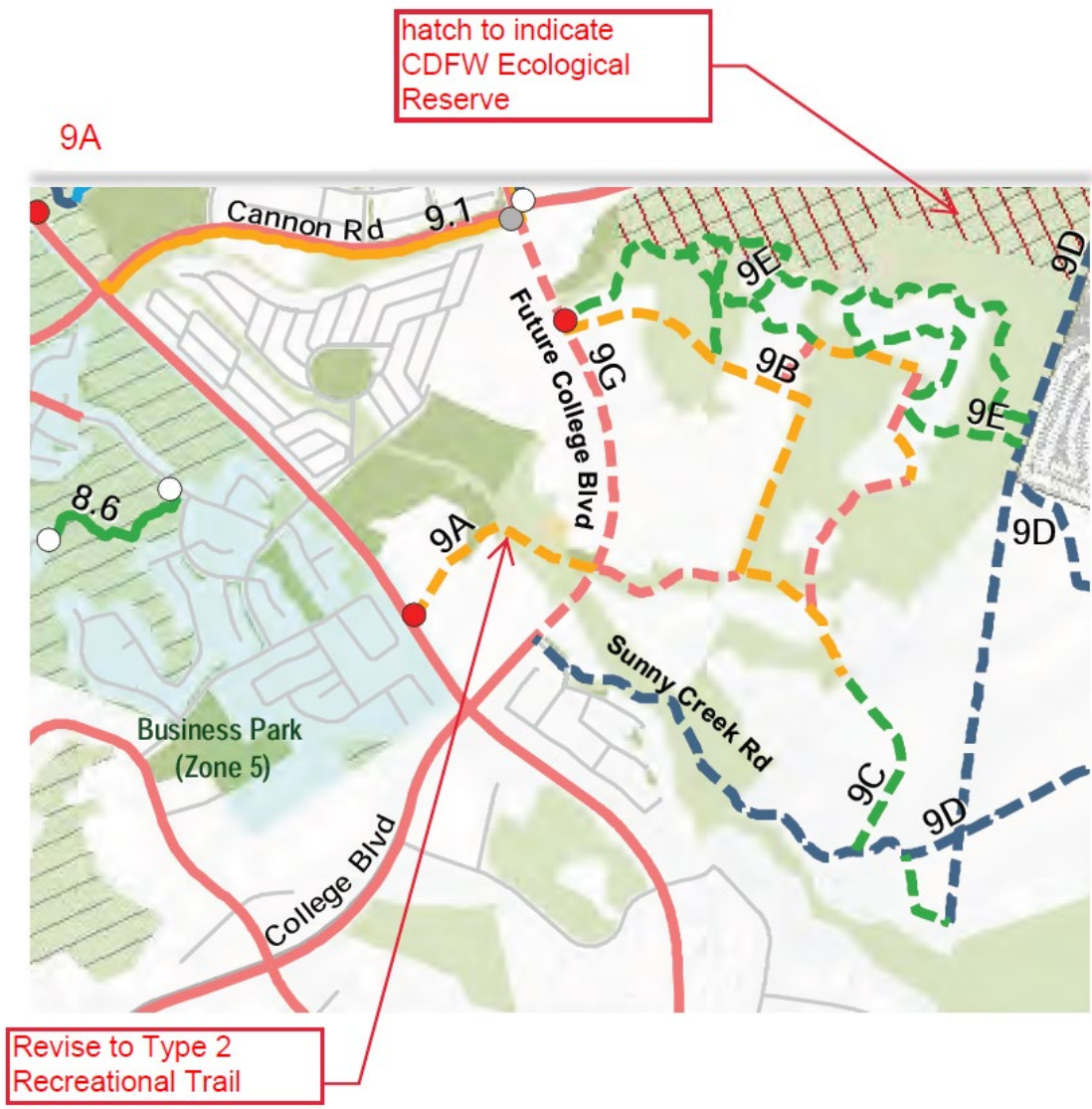
8D



...

Trail Segment 9A:
Sunny Creek Road

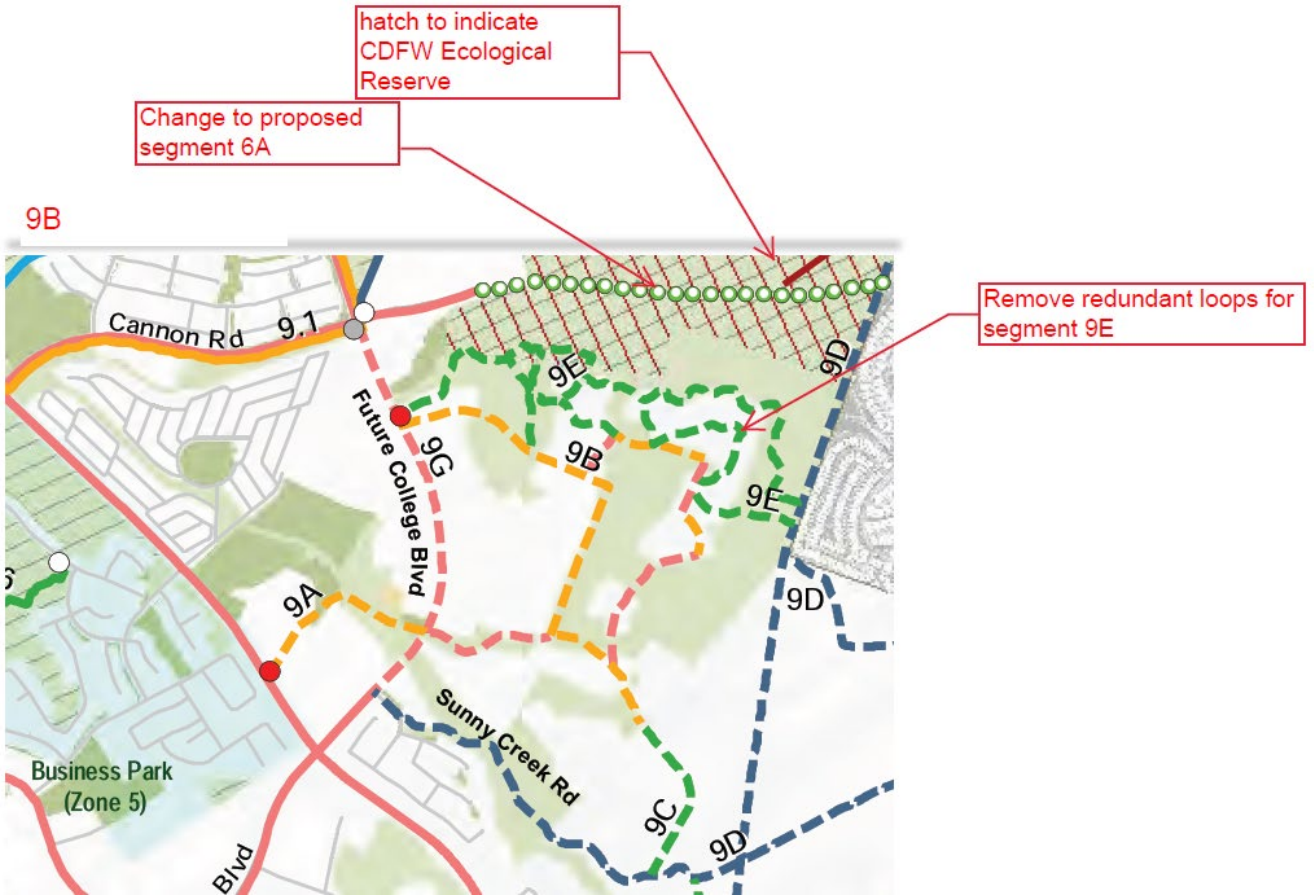
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...

**Trail Segment 9B:
Cantarini/Holly Springs**

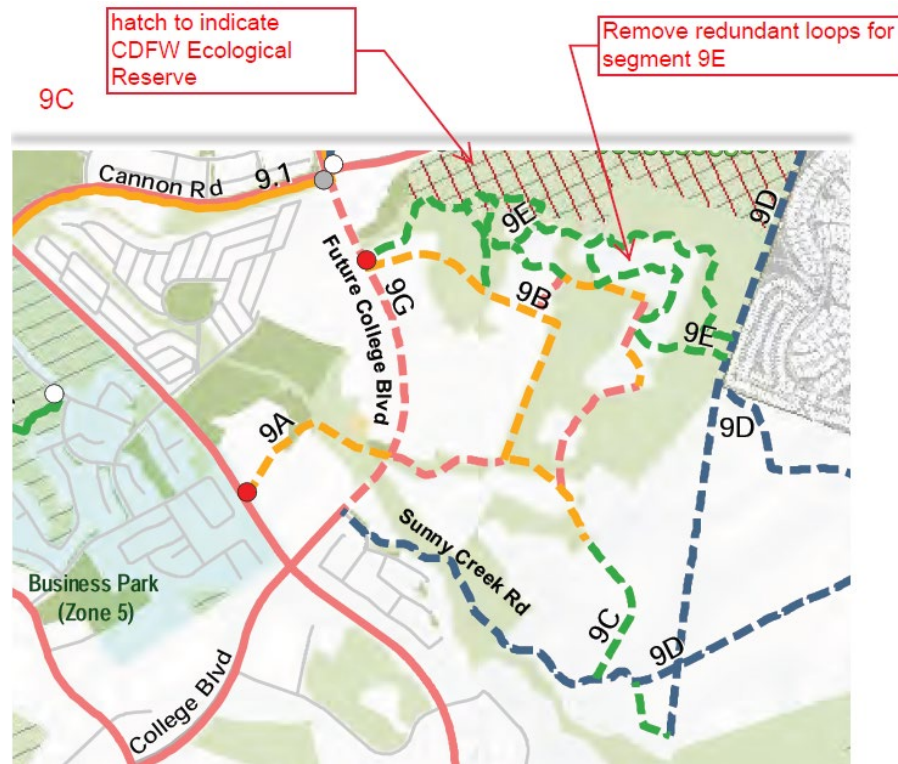
...
Estimated Implementation: 2030



Trail Segment 9C:

Kato Trail

...

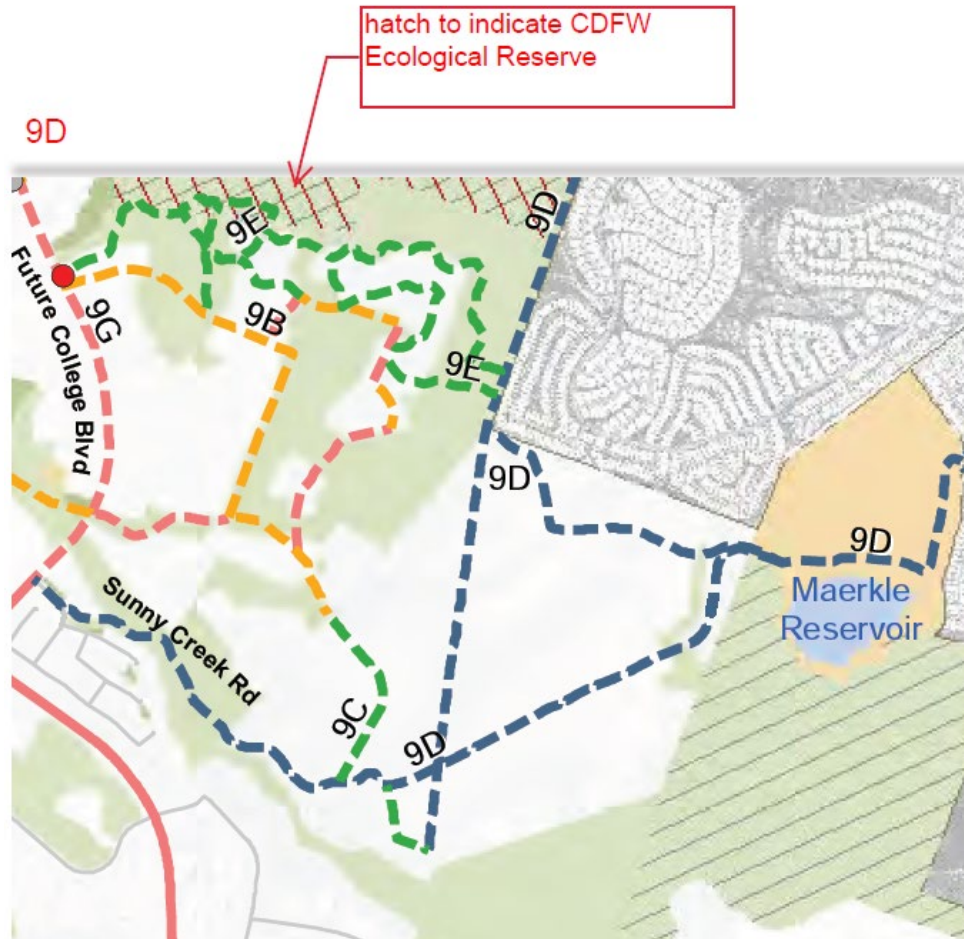


...

Trail Segment 9D:

Utility Pipeline Trail

...



...

Page 5-35

Trail Segment 9E:
Cantarini/Holly Springs Open Space Trails

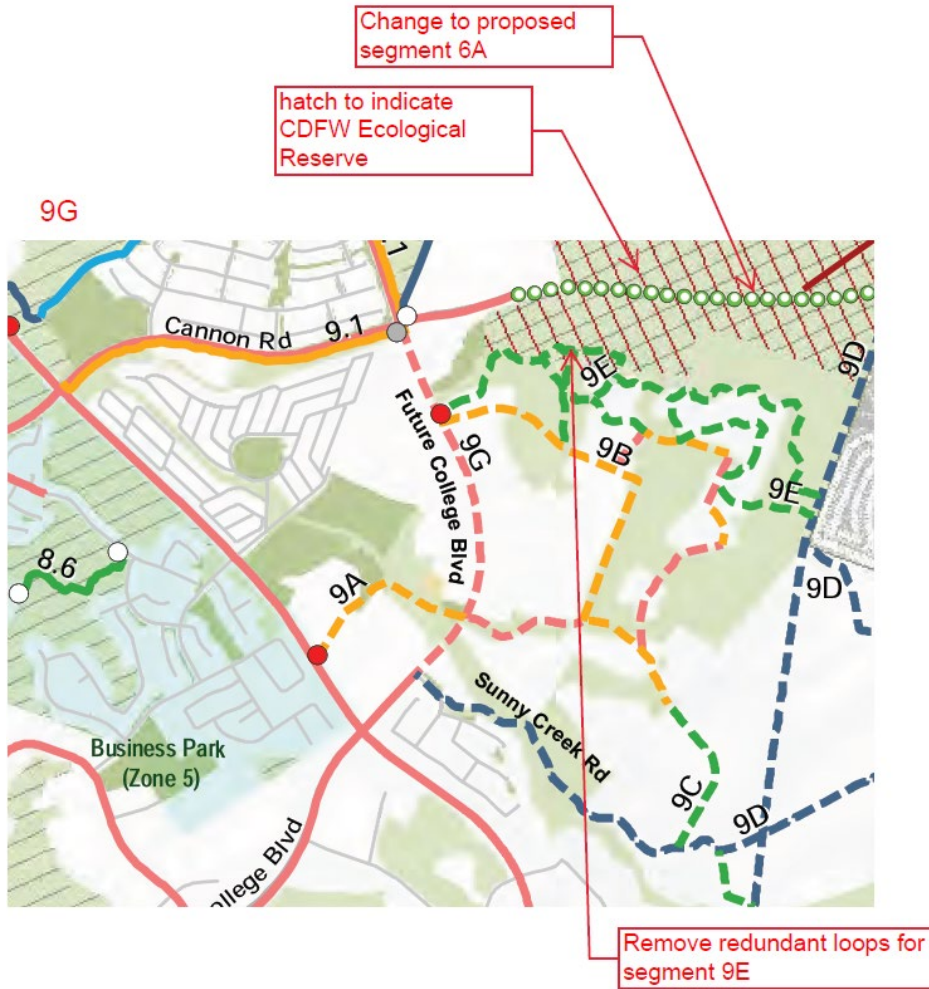
...

Length: 1.8 mile

9E

hatch to indicate
CDFW Ecological
Reserve





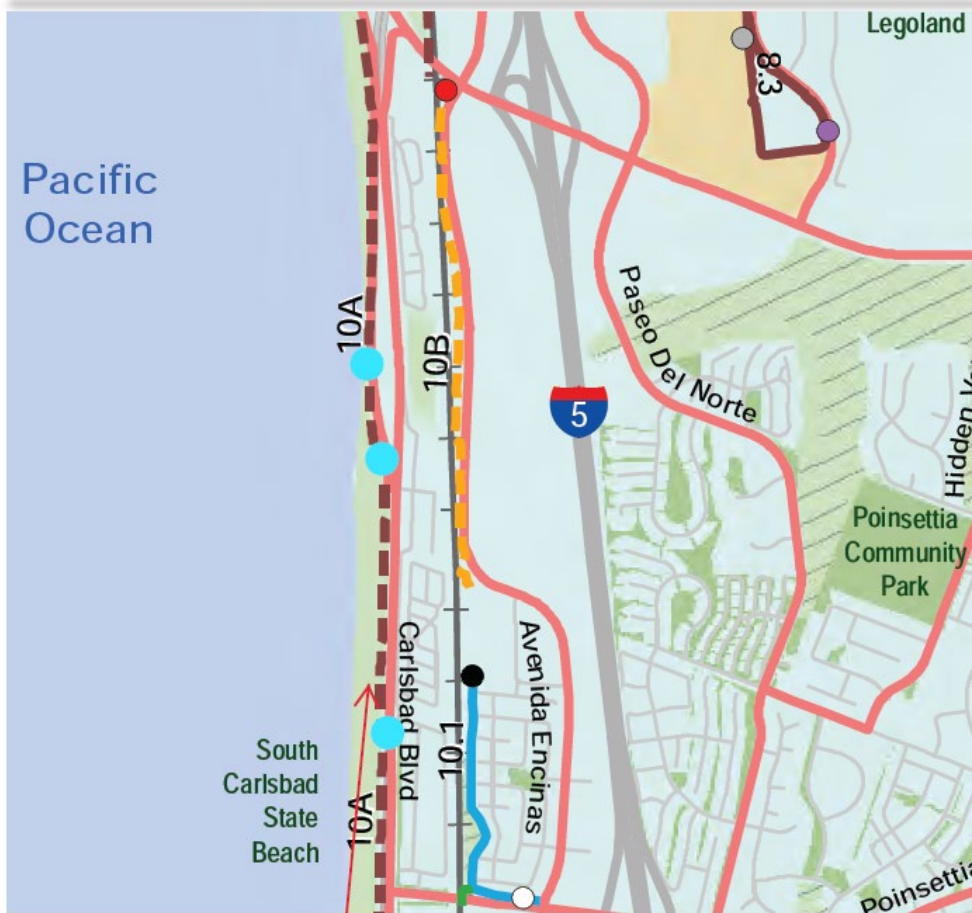
...

Estimated Project Cost:

\$24 million - trail development is part of the larger project, cost shown for entire project (per Transportation Department's estimate)

**Trail Segment 10A:
Coastal Corridor Trail (Palomar Airport Road to Poinsettia Lane)**

...



Show existing beach access

...

Estimated Project Cost:

\$7 million - trail development is part of the larger project, cost shown for entire project (per Transportation Department's estimate)

Trail Segment 10B:

Coastal Rail Trail (Palomar Airport Road to Poinsettia Coaster Station - Reach 5)



Project Description

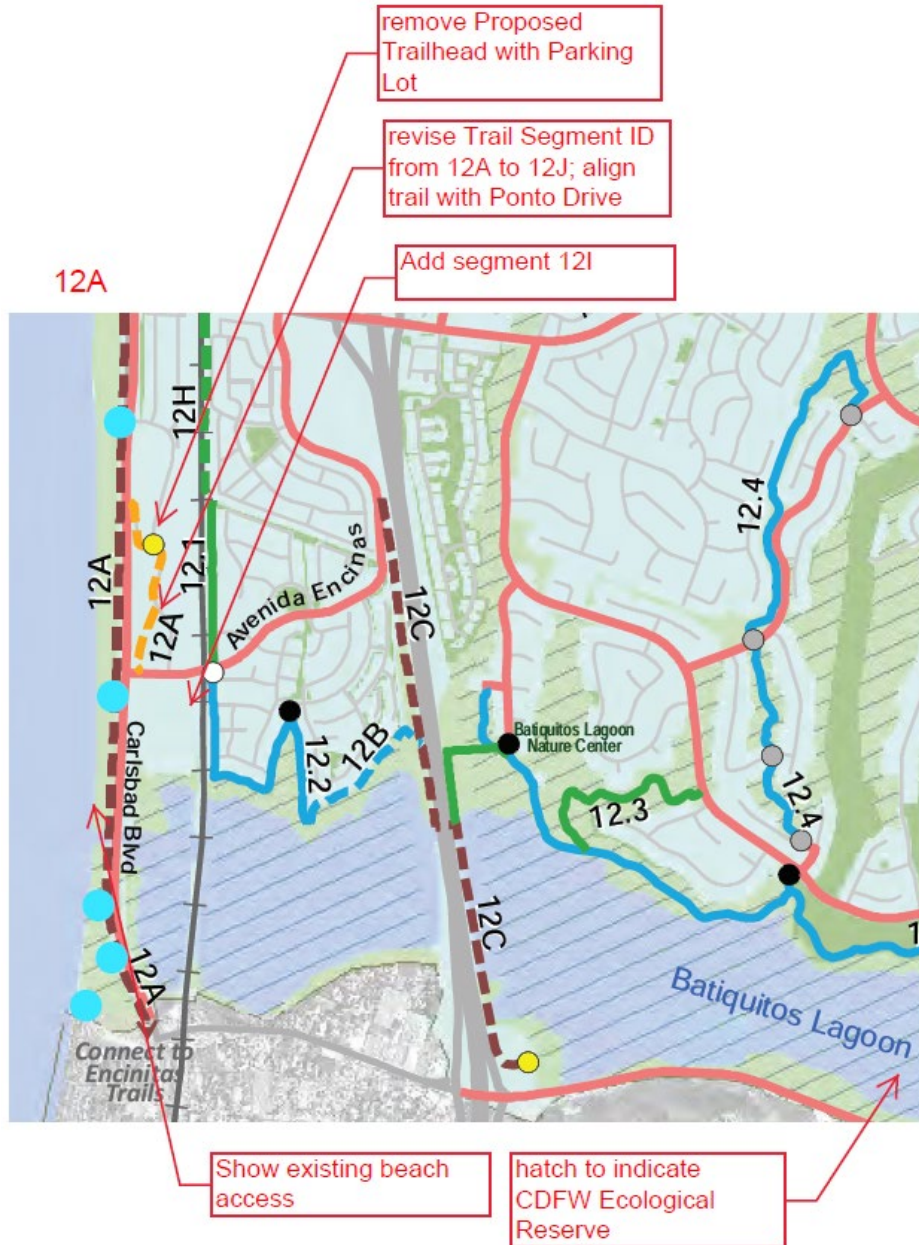
Reach 5 is part of a much longer trail that will eventually connect all the San Diego County coastal cities, from Camp Pendleton in the north all the way down to the Mexican border. Not all segments of the trail lie alongside the railroad. It is more desirable to locate this segment outside rail track right-of-way. Cost includes decomposed granite path, concrete curb and trail-head amenities. Potentially, improvements associated with I-5 widening as part of Public Work Plan (PWP). Environmental review, agency permitting, and mitigation is included in the estimated project cost.

Estimated Project Cost:

\$2.5 million - trail development is part of the larger project, cost shown for entire project (per Transportation Department's estimate)

...
Trail Type: 6
Length: 1.4 mile

...
Estimated Implementation: 2025



Project Description

The City of Carlsbad is working on a number of initiatives to make it easier and safer to get to the beach and travel along Carlsbad Boulevard (Highway 101), whether by car, on a bike or by foot. Project is part of the CATS and proposes to shift the southbound Carlsbad Boulevard between Cannon Road and Batiquitos Lagoon, thereby creating surplus right-of-way and pavement located west of Carlsbad Boulevard. Improvement cost includes paving, lighting, landscape buffers, public art and trail-head

amenities. Trail specific environmental review shall be part of trail design and development.

Estimated Project Cost:

\$7.8 million trail development is part of the larger project, cost shown for entire project (per Transportation Department's estimate)

Page 5-43

Trail Segment 12B:

Rosalena Trail (North Shore of Batiquitos Lagoon, near Navigator Circle to I-5)

...



Estimated Project Cost:

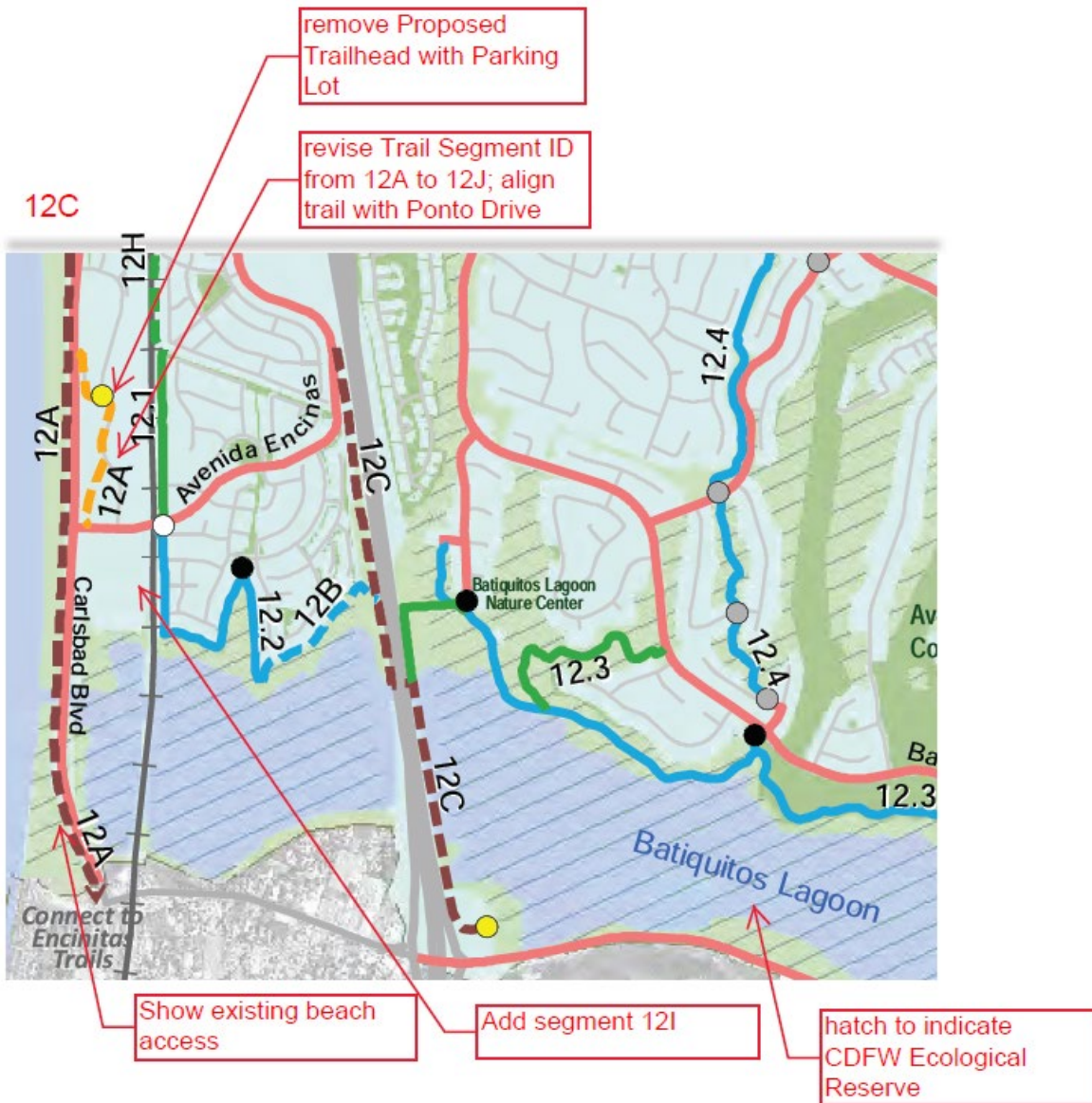
\$800,000 (Cost based on the Rosalena Trail development plans) and cost estimate developed by HOA

Page 5-44

Trail Segment 12C:

I-5 Corridor Bike Trail - North Coast Bikeway (La Costa Avenue to Avenida Encinas)

....

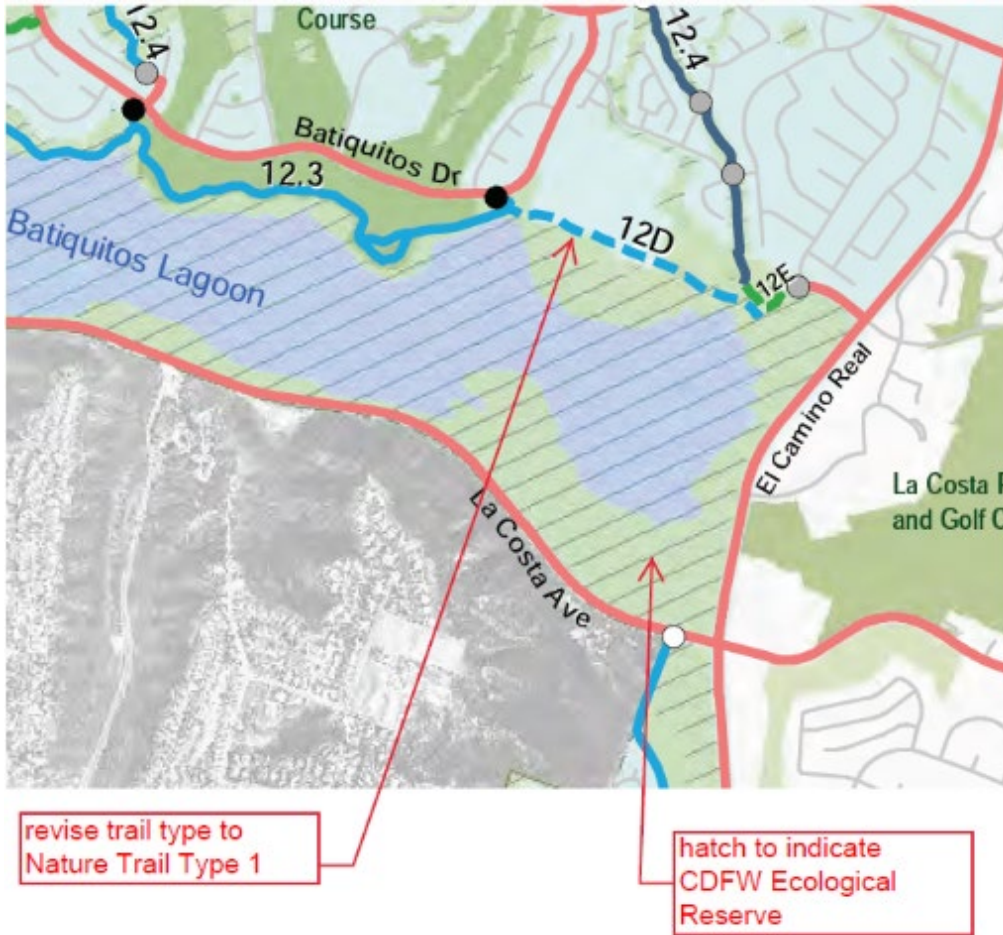


....

Trail Segment 12D:

Batiquitos Lagoon Extension (Batiquitos Drive to Arenal Drive)

Trail Type: 1



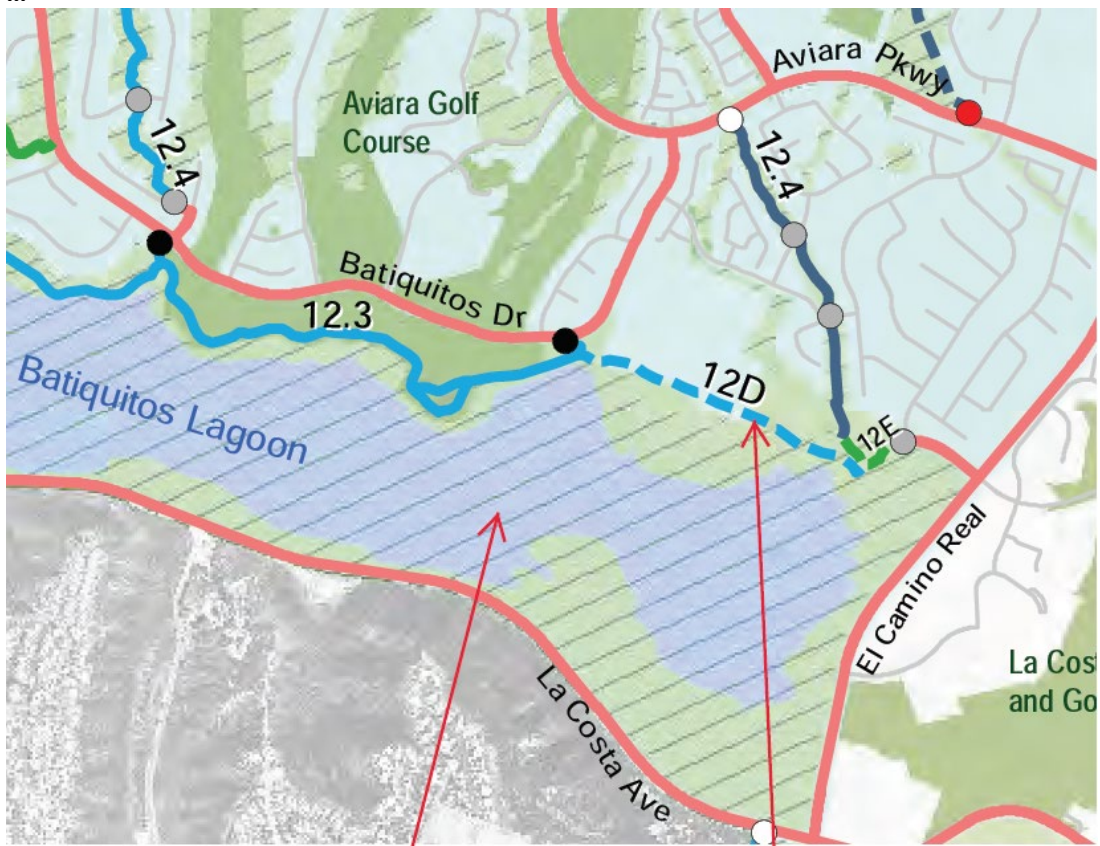
Project Description

This nature trail will complete the Batiquitos Lagoon trail corridor on north shore, providing residents and tourists with a waterfront trail stretching from El Camino Real to the beach. Improvement cost includes basic trail-head amenities provided by the City of Carlsbad, such as trail ID and trail regulation signs, dog station and trash receptacle. Trail specific environmental review shall be part of trail design and development. Environmental review, agency permitting, and mitigation is not included in the estimated project cost.

Page 5-46

Trail Segment 12E:

Batiquitos Lagoon Trail (Choya Point to Arenal Drive)



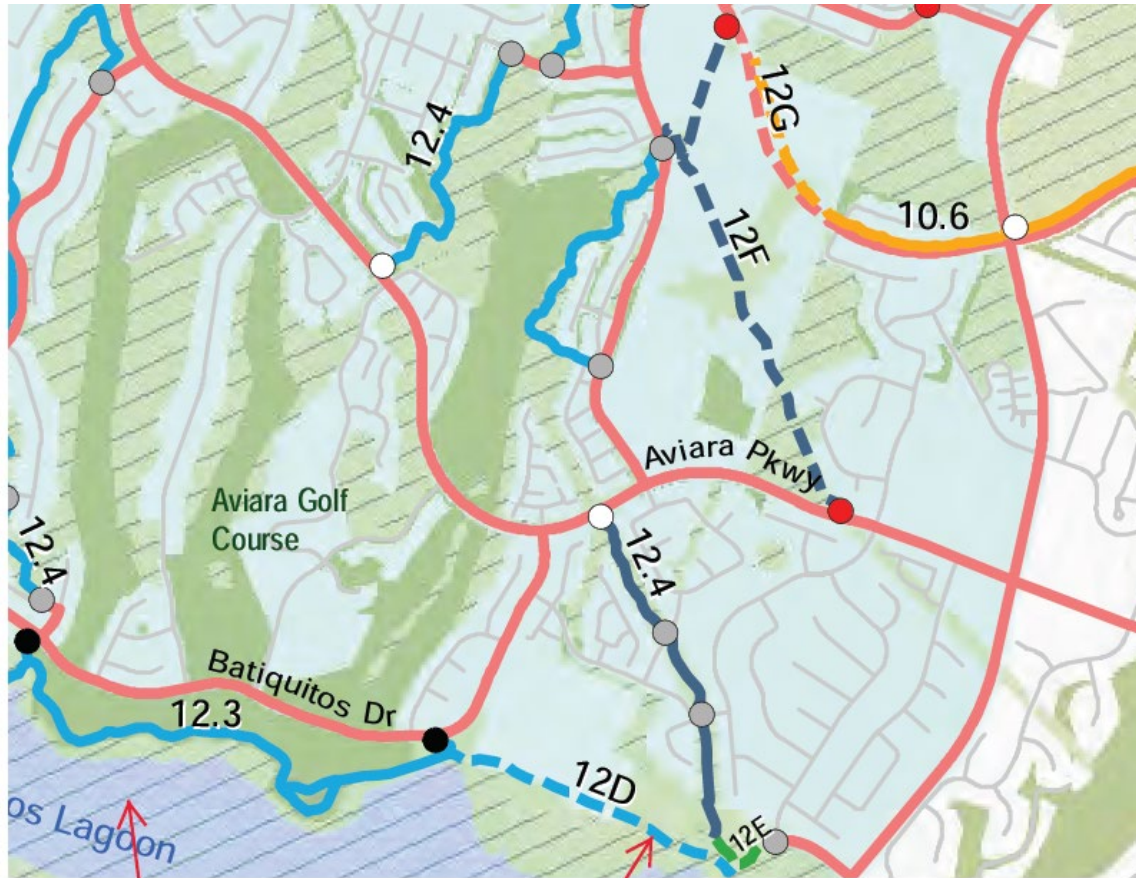
hatch to indicate
CDFW Ecological
Reserve

revise trail type to
Nature Trail Type 1

...

SDG&E Utility Road (Poinsettia Lane to Aviara Parkway)

...



- revise trail type to Nature Trail Type 1
- hatch to indicate CDFW Ecological Reserve

...

**Trail Segment 12H:
Lakeshore Gardens**

...



...

Insert after Page 5-49 and renumber subsequent pages

Trail Segment 12I:

South Ponto Trail

Subarea: 12

Quadrant: SE

Trail Category: Open Space

Trail Type: 1

Length: 0.6 mile

Development Entity: Private Development

Estimated Implementation: 2023



Project Description

This is a nature trail creating a loop around the future hotel site between Avenida Encinas and the north shore of the Batiquitos Lagoon. North-west end will connect to the beach through the intersection at Carlsbad Boulevard, and north-east end will connect with the network of trails from the Poinsettia Station to Batiquitos Lagoon North Shore Trail through the bridge at Avenida Encinas. Assumed project is conditioned by private development and environmental permit required to construct the trail. Improvements cost includes basic trail-head amenities, such as trail ID and trail regulation signs, dog station and trash receptacle.

Estimated Project Cost:

\$6,000

Trail Segment 12J:

Ponto Drive Trail

Subarea: 12

Quadrant: SW

Trail Category: Open Space

Trail Type: 4

Length: 0.4 mile

Development Entity: Private Development

Estimated Implementation: 2023



Project Description

This is roadside trail along the Ponto Drive that will provide alternative route from Carlsbad Boulevard to Avenida Encinas through future commercial site. Assumed project is conditioned by private development and environmental permit required to construct the trail. Potential underpass pedestrian connection from Segment 12J to the west side of the Carlsbad Boulevard will be reviewed as part of the design phase for this project. Improvements cost includes basic trail-head amenities, such as trail ID and trail regulation signs, dog station and trash receptacle.

Estimated Project Cost:

\$6,000

5.2 Future Development and Trail Implementation Summary

The trail implementation dates were determined based on the anticipated schedules for known public and private projects. Trail development is an opportunistic and flexible process and its timing will be dependent largely upon the entity responsible for construction of the trails. For example, the I-5 Freeway North Coast Bike Trail is part of the Caltrans I-5 widening project, and its construction depends on the schedule for that project. Several other future links are conditioned to be constructed by private development and are dependent on those project schedules. Trail segments scheduled to be developed by the city are subject to budget approval.

Implementation of the trail development is based on several criteria, including: conditions of approval for private and public development; government transportation initiatives and funding for public projects (both local and regional).

Table 5.2 “Trail Implementation Summary” illustrates three general trail development phases:

Phase 1: Until Year 2020

Phase 2: Years 2021 - 2025

Phase 3: Years 2026 - 2030

Estimated Implementation Year marks beginning of the trail development process that will include refinement of the trail alignment, program development, environmental review, permitting and construction. Depending on the trail type, complexity of the design, and environmental and cultural resources, process may take from a few months to a year, and more. Provided projections are based on the current data available to staff and should not be interpreted as precise, firm dates. They may be adjusted as warranted, as better information becomes available.

Several trails will be incorporated into the citywide network as public access easements, allowing recreational use on existing utility roads and currently private trails. Project Type for these trails is categorized as “Improvements”.

Trails categorized as “New Construction” will undergo design development and review process, and will be built either as the capital improvement project, part of the larger municipal or regional initiative, or private development.

Table 5.2 Trail Implementation Summary

TRAIL IDENTIFIER	TRAIL NAME	ESTIMATED IMPLEMENTATION DATE	ESTIMATED CONSTRUCTION COST	DEVELOPMENT ENTITY	LENGTH (MILES)
74	PARKED BUS TRAIL	2018	\$ 1,400,000	CITY OF CARLSBAD (PUBLIC)	0.7
5A	SOCCER CORRIDOR (CARLSBAD VILLAGE DRIVE TO TAMMACK AVENUE)	2015	\$ 28,800	CITY OF CARLSBAD (PUBLIC) WITH EXISTING UTILITY EASEMENT	1.0
2A	REDFEET CANYON PARK & NORTH SHORE LIBERTY ROAD	2015	\$ 18,800	CITY OF CARLSBAD (PUBLIC) WITH EXISTING UTILITY EASEMENT	0.4
5C	SOCCER CORRIDOR (CALAWAY HILLS 2)	2015	\$ 18,800	CITY OF CARLSBAD (PUBLIC) WITH UTILITY EASEMENT	0.3
79	COASTAL CORRIDOR TRAIL (TAMMACK AVENUE TO ANSON ROAD/RAVENS)	2018	\$ 64,800	CITY OF CARLSBAD (PUBLIC)	1.1
8A	COASTAL CORRIDOR TRAIL (CANYON ROAD TO PALM SPRING AIRPORT ROAD)	2020	\$ 5,800,000	CITY OF CARLSBAD (PUBLIC)	0.8
2A	CARLSBAD BOUNDARY BELLERIVE LAGOON ON COASTAL DRIVE	2020	\$ 15,800	CITY OF CARLSBAD (PUBLIC)	0.1
7A	COASTAL CORRIDOR (CANYON ROAD TO SERRINS POWER STATION)	2020	\$ 2,500,000	CITY OF CARLSBAD (PUBLIC)	1.7
5F	CARLSBAD WIDEWAY PARK	2020	\$ 32,800	CITY OF CARLSBAD (PUBLIC)	1.0
10C	SOCCER UTILITY ROAD (PUMPKIN TREE COURT TO FORSETTA LANE)	2020	\$ 18,800	CITY OF CARLSBAD (PUBLIC)	0.8
10D	SOCCER UTILITY ROAD (CASAS BLANCO TO CARMEL VIDA ROAD)	2020	\$ 18,800	CITY OF CARLSBAD (PUBLIC)	0.3
12A	COASTAL CORRIDOR TRAIL - 1 (FORSETTA LANE TO LA COSTA AVENUE)	2020	\$ 7,800,000	CITY OF CARLSBAD (PUBLIC)	1.8
12F	SOCCER UTILITY ROAD (FORSETTA LANE TO WAWATY WARRAW)	2020	\$ 28,800	CITY OF CARLSBAD (PUBLIC)	0.9
12A	SOCCER UTILITY ROAD (LAKE ROAD TO D. BURKE STREET)	2020	\$ 18,800	CITY OF CARLSBAD (PUBLIC)	0.5
12F	LAKESHORE WARRIORS	2020	\$ 10,800	CITY OF CARLSBAD (PUBLIC) WITH EXISTING EASEMENT (UTILITY)	0.4
90	LIBERTY PARKING GARAGE	2020	\$ 4,800,000	CITY OF CARLSBAD (PUBLIC) WITH EXISTING UTILITY EASEMENT	4.7
9C	WYOMING ROAD (FROM R. CASINO ROAD TO LIBERTY DRIVE DEVELOPMENT)	2020	\$ 55,800	CITY OF CARLSBAD (PUBLIC) WITH EXISTING UTILITY EASEMENT AND ROADSIDE ROW	1.5
9A	WYOMING ROAD (FROM MARION ROAD TO R. CASINO ROAD)	2020	\$ 48,800	CITY OF CARLSBAD (PUBLIC) WITH EXISTING UTILITY EASEMENT AND ROADSIDE ROW, CITY OF OCEANVIEW	0.8
12E	BATIQUELOS LAGOON TRAIL (CHRYSLER POINT TO ARDVA DRIVE)	2025	\$ 64,800	CITY OF CARLSBAD	0.1
10B	COASTAL BAY TRAIL (PALOMAR AIRPORT ROAD TO POMSETTA LAKESHORE BEACHES)	2025	\$ 2,500,000	CITY OF CARLSBAD (PUBLIC)	1.0
55	VILLAGE II (SOUTH CARLSBAD VILLAGE DRIVE TO TAMMACK AVENUE)	2025	\$ 68,800	CITY OF CARLSBAD (PUBLIC)	0.4
8B	COASTAL BAY TRAIL (PALOMAR AIRPORT ROAD TO PALM SPRING AIRPORT ROAD) BEACHES	2025	\$ 1,200,025	CITY OF CARLSBAD (PUBLIC)	0.9
9G	COLLEGE BOULEVARD	2025	\$ 24,000,000	CITY OF CARLSBAD (PUBLIC)	0.8
2E	HAWAIIAN EAST TRAIL (STONINGTON TOWNHIP TRAIL)	2025	\$ 18,800	CITY OF CARLSBAD; CALIFORNIA FISH BOWL CLUB; CALTRANS (PUBLIC); AGLA HEDYONIA LAGOON FOUNDATIONS	0.1
10A	COASTAL CORRIDOR TRAIL (PALOMAR AIRPORT ROAD TO POMSETTA LANE)	2020	\$ 7,800,000	CITY OF CARLSBAD (PUBLIC)	1.8
7F	1.5 NORTH COAST BIRCH TRAIL (CHRYSLER POINT CANYON ROAD)	2020	unknown	CALTRANS (PUBLIC)	1.1
12C	1.5 NORTH COAST BIRCH TRAIL (LA COSTA AVENUE TO ANSON ROAD)	2020	unknown	CALTRANS (PUBLIC)	1.7
2A	LIBERTY DRIVE TRAIL (CONNECTION TO THE SHORELINE COURT)	2017	\$ 6,000	PRIVATE DEVELOPMENT	0.1
8C	FLORAL TRADE CENTER TRAIL	2020	\$ 6,000	PRIVATE DEVELOPMENT	0.6
8D	OCEANVIEW POINT TRAIL (CONNECTION TO VETERANS PARK)	2020	\$ 6,000	PRIVATE DEVELOPMENT	0.1
12B	ROSALEN TRAIL (NORTH SIDE OF BATIQUELOS LAGOON, NEAR NAVIGATOR CIRCLE TO S-3)	2020	\$ 800,000	PRIVATE DEVELOPMENT	0.3
12D	FORSETTA LANE/ FORSETTA TRAIL	2020	\$ 6,000	PRIVATE DEVELOPMENT	0.7
7C	SOUTHSHORE AQUA HEDYONIA LAGOON TRAILS	2022	\$ 450,000	PRIVATE DEVELOPMENT; CITY OF CARLSBAD	2.4
7B	SHAWAN PROPOSED TRAIL (HIGH RIDGE AVENUE TO ALVARO ROAD)	2025	\$ 6,000	PRIVATE DEVELOPMENT	0.1
9E	LAKESHORE WARRIORS	2025	\$ 6,000	PRIVATE DEVELOPMENT	2.1
7D	NORTHSHORE AQUA HEDYONIA LAGOON TRAIL (S-3 TO COVE DRIVE)	2020	\$ 6,000	PRIVATE DEVELOPMENT	1.1
8E	CARLSBAD WAVE	2020	\$ 6,000	PRIVATE DEVELOPMENT	0.3
9A	LIBERTY PARKING GARAGE	2020	\$ 6,000	PRIVATE DEVELOPMENT	0.4
9C	WATOT TRAIL	2020	\$ 6,000	PRIVATE DEVELOPMENT	0.5
9E	CANDARINE OPEN SPACE TRAILS	2020	\$ 6,000	PRIVATE DEVELOPMENT	2.0
12D	BATIQUELOS LAGOON EXTENSION (BATIQUELOS DRIVE TO ARDVA DRIVE)	2025	\$ 6,000	BATIQUELOS LAGOON TO NEUSTON	0.5
TOTAL MILEAGE OF ALL PROPOSED TRAILS					48.8

Table 5.2: Trail Implementation Summary

Replace with new table as shown on the next page

Chapter 6 – Trail Standards and Design Guidelines

Insert on Page 6-16, after subsection “Design for Shared Use”

...

Local Coastal Program

Implementation of any of the trail projects that are located within the city’s coastal zone will require a coastal development permit and must be consistent with applicable Local Coastal Program policies. Trail development within or adjacent to sensitive habitat areas shall be evaluated for adverse impacts, and must be consistent with Local Coastal Program and HMP policies and standards protecting environmentally-sensitive habitats.

Sea Level Rise Considerations

The city has developed a vulnerability assessment that presents a Carlsbad-specific sea level rise analysis to support an update to the city’s Local Coastal Program and Zoning Ordinance. The assessment evaluates the degree to which important community assets, including trails and public access ways, are susceptible to, and unable to, accommodate adverse effects of projected sea level rise.

...

Page 6-38

...

Tunnels

Tunnels are warranted as methods to get across very busy streets and, if planned for well in advance of roadway extensions, can be feasible regarding costs of construction. However, in most cases, at-grade lower cost, improved pedestrian crossing facilities will be used by the general public.

The openness ratio is important to consider when designing tunnels that can be used by wildlife. It is a function of structure length, which corresponds to the width of the roadway, the appropriate structural dimensions will be determined by road width. A relatively large openness ratio may enhance a structure’s use by allowing sight through a crossing structure, as well as by providing more natural lighting conditions.

The most important aspect of the tunnel is to ensure safety and avoid hiding places and alcoves. The use of lighting may be considered; however it may be a deterrent to the wildlife movement, so each facility should be analyzed case by case to ensure that the design addresses user needs and minimize disturbance to wildlife.

Tunnels are typically constructed of precast concrete box culverts. Other varieties of culverts are acceptable provided they meet the required dimensions, and allow footing that is appropriate for all types of trail users. The width of a trail traveling through an underpass should not be less than 12 feet. Vertical clearance is an important concern. The minimum vertical clearance is 9 feet at a distance of 4 feet from the centerline, and 11 feet at a distance of 3 feet from the centerline. Natural or vandal-resistant electric lighting should be installed for safety. Sight distances approaching and exiting the underpass must be adequate for safety. Underpass design must not allow the accumulation of nuisance

water on the trail. If water does not drain from the underpass by gravity flow, a pump system must be provided to remove the water. The surface of the underpass should be slip resistant.

Chapter 7 – Trail Operations and Maintenance

Page 7-3

...

Permanently Close Chronic Problematic Trails

Trail segments may need to be permanently closed due to degradation or if they pose hazards to users, or have begun to adversely impact sensitive environmental or cultural resources. Per the Habitat Management Plan, public access in the preserve areas must be consistent with the protection and enhancement of biological resources, which includes blocking-off unauthorized trails within sensitive habitats.

In these instances, it must be clearly communicated well in advance to staff, trail users and any other relevant groups that the trail is closing. Newsletters, kiosk notices, email, websites and meetings can be used to forewarn visitors that a specific section of trail will no longer be open and to explain the rationale behind the closure. Signs should be posted in advance of the closure and left up until no evidence of the trail remains so visitors are not tempted to detour from the new route. Other techniques include installing gates, planting vegetation at access points, and camouflaging access points with stumps, logs or brush.

Permanent closure of a trail in the coastal zone must be consistent with the Coastal Act and the city's certified LCP, and may require a coastal development permit to analyze alternatives to trail closure and evaluate the impacts any closure will have on coastal access.

Temporarily Close Trails

There may be times when it is appropriate to temporarily close the trail system due to emergency situations, inclement weather, flooding, or accidents. The operations and management plan should include an inclement weather policy that details procedures for warning visitors of poor trail conditions, closures and detours. If there are locations prone to flooding or other issues that result from severe weather events, consider posting an inclement weather policy on the city website, on signs at the trailhead, in newsletters and via email list-serves. In preserve areas, trails may be seasonally restricted if deemed necessary to prevent disturbance of breeding activities or to prevent habitat degradation (i.e. trampling vegetation and erosion during rains).

Seasonal trail closures are common where weather conditions are known to be consistently poor.

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Citywide Trail Inspection Form

Date: _____

Inspected By: _____

Trail Name			
Trail Captain:			
Item	Condition	Location	Comments
Surface Condition /Edge	<input type="checkbox"/> Good <input type="checkbox"/> Poor	X	
Erosion	<input type="checkbox"/> Present <input type="checkbox"/> Not Present		
Edging Type _____	<input type="checkbox"/> Good <input type="checkbox"/> Poor		
Vegetation			
Signage	<input type="checkbox"/> Good <input type="checkbox"/> Poor		
Fencing Type _____	<input type="checkbox"/> Good <input type="checkbox"/> Poor		
Dog Waste Stations	<input type="checkbox"/> Concrete <input type="checkbox"/> Earth/Stone		
Steps/Stairs/Perons Handrails	<input type="checkbox"/> Good <input type="checkbox"/> Poor		
Additional Comments			

For immediate trail maintenance items, please contact Park Maintenance at 760-434-2985. Such examples would include trees fallen over trails or drainage wash outs after a storm event. ~~graffiti.~~

Table 7.2 Trail Maintenance Inspection Form

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Monitor the Trail System

Monitoring is a general term for actively watching over trail users and activities and may be accomplished by local law enforcement, private security, preserve managers, staff, and other trail users. The Rails-to-Trails Conservancy recommends that local law enforcement agencies tasked to monitor trails do so on bicycles rather than in cars or ATVs.

In July 2017, City of Carlsbad launched the Ranger Pilot Program to patrol the open space in the City of Carlsbad, including the preserves, trails, lagoons, beaches and parks. The pilot program, which includes two full time positions and a new off road vehicle, is being run by the City of Carlsbad Police Department. Rangers have the power to issue citations, although they also focus on providing information about the law and why it's important to preserve these natural areas. Preserve managers also continue to provide patrolling and enforcement, in addition to police officers, who provide back up as needed.

Among other duties, the rangers patrol the city's habitat preserves to help ensure the sensitive plant and animal species there are not disturbed by human activity. They also help ensure trail users are aware of rules, such as keeping dogs on leashes.

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Mobile Application for Trails

The city is exploring a mobile application (app) for trails that can provide a unique platform to enhance outdoor adventures for trail users. It can create a better experience, offering an effortless way to enjoy nature yet have vital information within the palm of your hand. Visitors can follow the best route, visit the must-see sites and never get lost again. The app can provide general information about the trail, such as classification, topography, surface, accessibility; directions to its location; and updates about current conditions. Another potential option is an ability to download a trail map to your smart phone and use it off-line, in remote areas where cell service is not available. This technology is creating a new standard for the outdoor experience, where information is instantly available and communication with trail users is at the push of a button.

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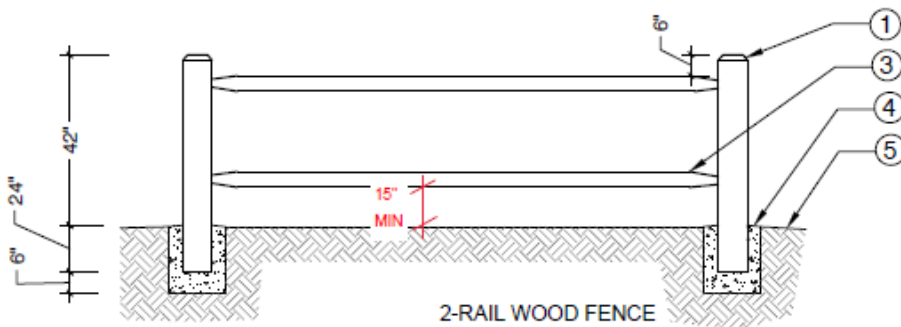
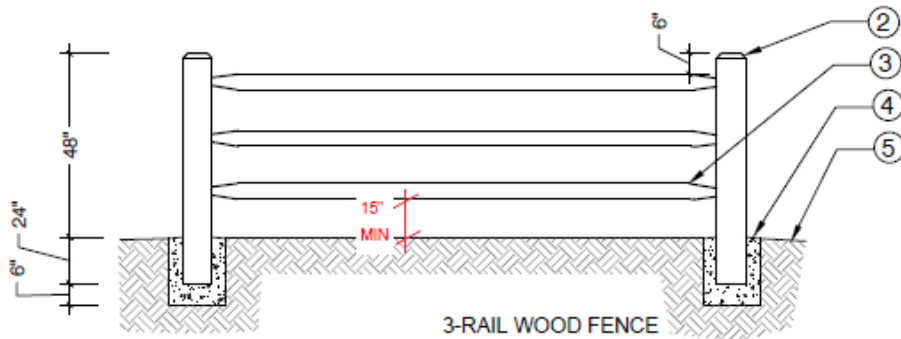
7.8 Trail Volunteer Programs

Volunteers fill many different positions throughout the city, also assist the Parks and Recreation Maintenance Division with trail work. They perform trails maintenance activities and assist with trails improvements such as installation of directional and interpretive signage, fencing, kiosks and other trails amenities. Volunteers play a vital role in the maintenance of existing trails throughout the city. In Carlsbad the primary volunteer program includes the Citywide Trails Program. Responsibilities are outlined and agreed upon by those who sign up to volunteer, which do not require any pre-registration or training.

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Appendix A

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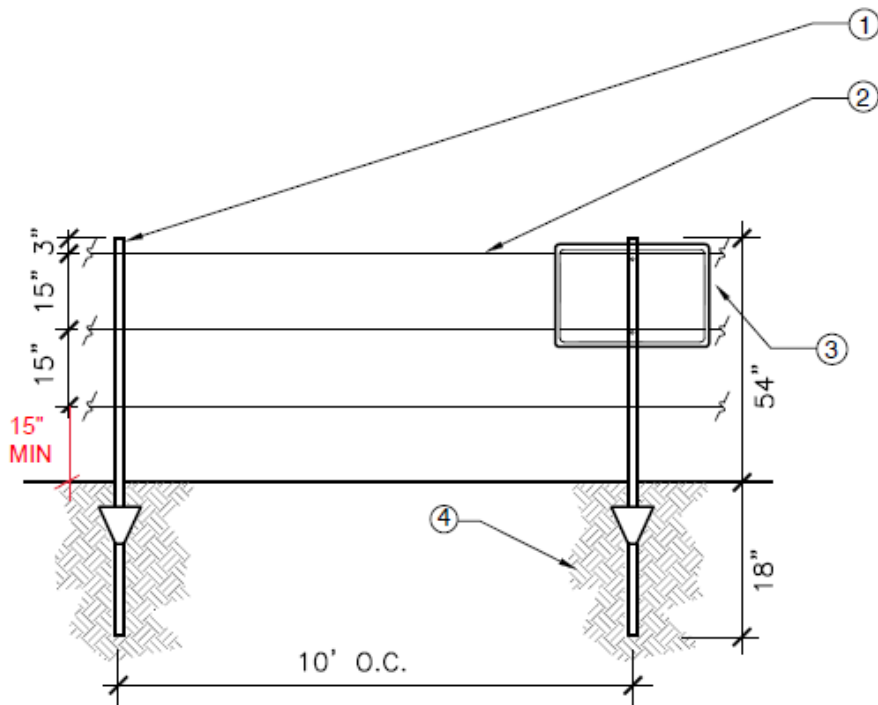
- ① 4 " DIAMETER ROUND POST WITH BEVELED TOP
- ② 6" DIAMETER ROUND POST WITH BEVELED TOP
- ③ 3" DIA. ROUND PRESSURE TREATED WOOD RAIL
- ④ 12" DIAMETER CONCRETE FOOTING
- ⑤ FINISH GRADE

NOTES

1. CONTRACTOR SHALL CALL DIG ALERT AND HAVE ALL UTILITIES MARKED PRIOR TO FENCE CONSTRUCTION OPERATIONS 2 DAYS BEFORE DIGGING. CALL DIG ALERT 1-800-422-4133
2. PRIOR TO EXCAVATION OF ANY POST FOOTERS, CONTRACTOR SHALL STAKE FENCING LOCATIONS AND OBTAIN OWNER APPROVAL.
3. POSTS SHALL BE CENTERED IN CONCRETE FOOTING.
4. CROWN ALL CONCRETE FOOTINGS TO SLOPE @ 2% AWAY FROM POSTS.
5. BOTTOM RAIL SHALL BE 16" CLEAR FROM FINISH GRADE

CITY OF CARLSBAD

WOOD RAIL FENCE FENCE



- ① 6' LONG METAL T-POSTS (TYP) W/ TOP 12" PAINTED FLUORESCENT YELLOW
- ② THREE STRAND 9 GAUGE WIRE PULLED TAUGHT
- ③ ENVIRONMENTAL SIGNS (RIGHT). INSTALL SIGNS AT LOCATIONS SHOWN ON PLANS.
- ④ COMPACTED NATIVE SOIL

NOTES:

- 1. PLACE POSTS AT 10' O.C. AND AT ALL VERTICES/CHANGES IN DIRECTION.
- 2. ATTACH WIRE SECURELY TO EACH POST WITH 18 GAUGE GALV. WIRE OR APPROVED T-POST CLIP.
- 3. INSTALL 2' DEEP BY 12" DIAMETER CONCRETE FOOTER ON EVERY 10TH POST AND AT CORNERS WHERE FENCE MAKES A 90 DEGREE TURN OR OTHER SHARP TURN.

CITY OF CARLSBAD

THREE-STRAND WIRE FENCE

