PARADISE COAST TRAIL

Pathway Report and Feasibility Study

NAPLES PATHWAYS COALITION
Safe pathways for bikers, walkers & runners

FDOT

Collier County

CITY OF NAPLES, FLORIDA — ON THE GULF

FPID #: 447302-1-14-01

Study Team Lead

Naples Pathways Coalition (NPC) is a 501(c)(3) non-profit advocacy group dedicated to improving the safety of pedestrians and cyclists, and working to protect and provide equal access for vulnerable road users. Their goal is to increase the number of people who can safely bike and walk as an alternate form of transportation and for recreation. NPC's keystone project is the Paradise Coast Trail.

Study Team Partners

Study Team Advisor

Study Team Consultant

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Opening

This report presents the following information for the Paradise Coast Trail (PCT) Feasibility Study:

- **Chapter 1 – Feasibility Study Introduction and Background**
  - Provides background on the PCT
  - Summarizes key themes from stakeholder coordination and public engagement
  - Touches on principal points from the existing conditions inventory and documentation
- **Chapter 2 – Systemwide Existing Conditions Summary**
  - Documents comprehensive existing conditions for the PCT study area
  - Includes data for land use, right-of-way, transportation, and natural environment
- **Chapter 3 – Systemwide Feasibility Analysis**
  - Builds on existing conditions review, stakeholder and public input, and corridor evaluation
  - Provides analysis results for the five (5) major PCT connections and respective alternatives
- **Chapter 4 – Implementation Action Plan**
  - Draws from the Systemwide Feasibility Analysis to identify recommended actions that will carry project momentum forward

The Naples Pathways Coalition (NPC) first proposed the vision for a connected trail system within Collier County in 2018. In June 2019, the Collier Metropolitan Planning Organization adopted Resolution 2019-06 in support of the vision for this trail system which was, by that time, named the Paradise Coast Trail. During the 2020 session of the Florida Legislature, Senator Kathleen Passidomo sponsored Local Funding Initiative Request #1167 to provide funding for the Paradise Coast Trail Feasibility Study. The approved 2020 state budget included this funding, directing the funds through the Florida Department of Transportation (FDOT). Collier County, the City of Naples, and NPC provided funding for the local match, setting the stage for this report.

The Study Team and funding breakdown are as follows:

- Study Team Lead: Naples Pathways Coalition
- Study Team Partners: Florida Department of Transportation, Collier County, City of Naples
- Study Team Advisor: Collier Metropolitan Planning Organization (MPO)
- Study Team Consultant: Kimley-Horn and Associates, Inc.

Paradise Coast Trail Feasibility Study Funding

State Funds	Local Matching Funds			Total
FDOT	**Collier County**	**City of Naples**	**NPC**	
$250,000	$60,000	$30,000	$10,000	**$350,000**

The methodology for this Feasibility Study was defined in the scope of work approved by the Study Team Partners and consisted of:

- Launch the study and establish a Project Charter **(Appendix A)** to ensure that all project partners share a consistent vision for the PCT and the study's purpose
- Conduct an inventory of existing conditions and data collection to develop the Systemwide Existing Conditions Summary
- Conduct Stakeholder and Public Outreach to receive input at appropriate points in the study development process
- Conduct a Systemwide Feasibility Analysis to include:
    - Preparation and evaluation of preliminary alternative alignments
    - Development of conceptual typical sections
    - Preparation of opinions of probable construction cost
    - Estimation of right-of-way requirements
- Develop an *Implementation Action Plan* that defines a recommended path forward to maximize the value of this feasibility analysis
- Prepare a *Pathway Report* document to incorporate all of the above

Chapter 1.
Introduction and Background

What is the PCT?

At the outset of the Feasibility Study development process, the agency partners developed a Project Charter **(Appendix A)**. The charter provided the Study Team a succinct and clear statement of the project's purpose, objectives, approach, and scope. It also provided a consistent and transparent project foundation to ensure that all partners and stakeholders were aligned.

As defined in the Project Charter, the purpose and planned use of the PCT is to be:

- A premier facility that connects Naples to destinations throughout Collier County and beyond, serving as a catalyst for trail-based business and economic activity
- An inviting corridor that draws visitors and residents to explore the beauty of the Paradise Coast
- A 70+ mile spine trail that links and significantly advances Collier County's bicycling and walking network
- A safe, separated, non-motorized path that provides healthy recreation and accommodates the following uses[1]:
    - Walking
    - Hiking
    - Jogging
    - Bicycling
    - Rollerblading/Skating
    - Walking with Strollers
    - Walking with Dogs
    - Use of Mobility Assistive Devices for Persons with Disabilities

The objectives of the Feasibility Study were to:

- Engage and solicit input from the community and stakeholders
- Provide baseline documentation for the entire conceptual corridor
- Divide the corridor into logical and manageable segments
- Conduct high-level evaluation of up to two alternative routes for each segment
- Categorize corridor segments by level of readiness to inform prioritization

[1] *Equestrian use is not currently planned for the PCT. As individual trail segments are developed in the future, equestrian use within a parallel non-paved pathway may be a consideration in specific settings where: the appropriate context exists; the right criteria can be met to provide for safe use and interaction with other trail uses; the demand is sufficient to justify including an equestrian pathway; and appropriate additional funding is provided.*

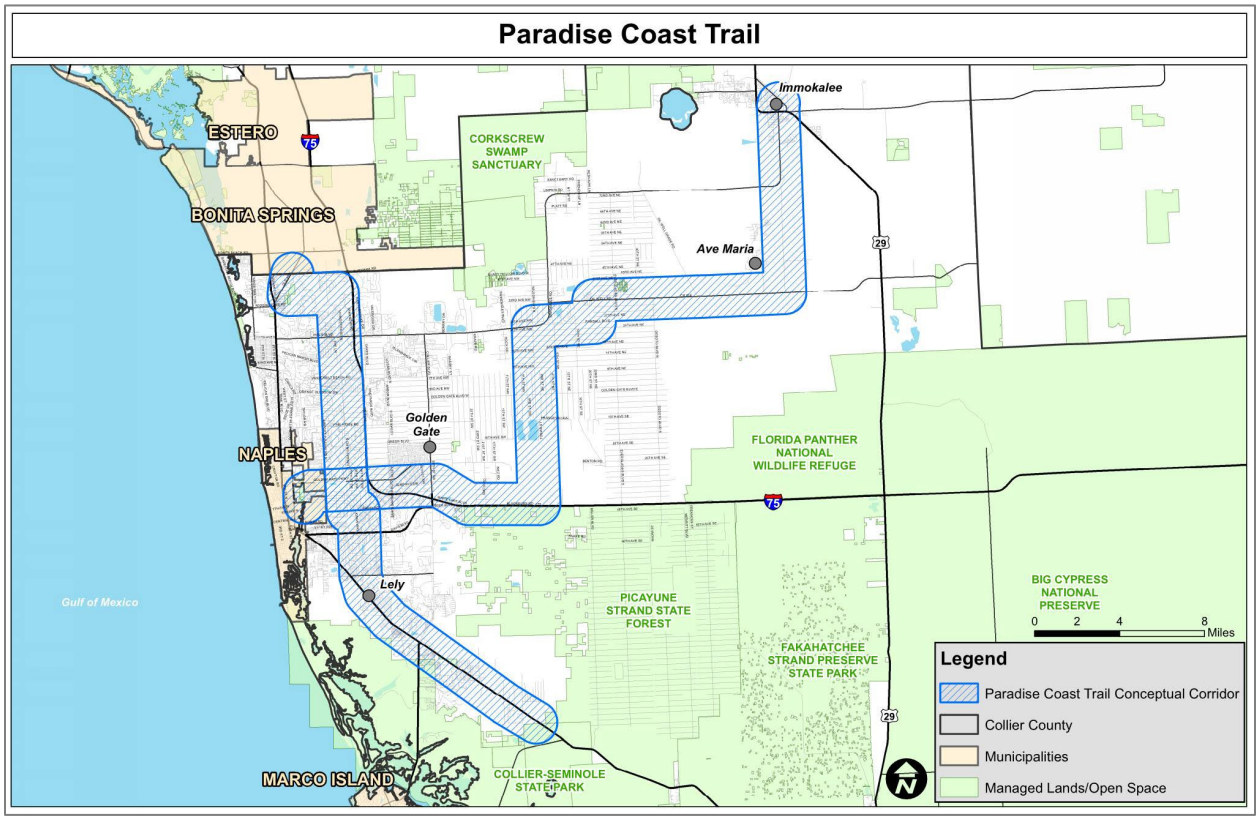
- Focus initial environmental reviews on the segments that connect from Naples, balanced with the consideration of segment readiness and the ability to advance segments directly to design
- Develop an action plan that defines the path forward for programming and project development

The starting point for the study was the Conceptual Corridor as defined during the 2018-2019 visioning process for a connected spine trail system in Collier County (**Exhibit 1**). The conceptual corridor envisioned two major components:

1) the north-south component which aligns with major segments of the priority pathway planned for Collier County that is also included in the State Priority Land Trails and SUN Trail networks; and
2) the east-west component which is based upon preliminary information regarding potential alignment options and was adapted from segments of the spine trail network defined in the Collier MPO Bicycle and Pedestrian Master Plan.

At the conclusion of the visioning stage, it was recommended to move forward with a feasibility study to more clearly define the potential corridor.

Exhibit 1: Map of the Conceptual Corridor from the 2018-2019 PCT Vision



Why the PCT?

The concept for the PCT aligns with state and local planning efforts. The idea of a connected multi-use trail network in Collier County is not new. There are several existing plans and efforts that contemplate a similar concept. The Collier MPO Bicycle and Pedestrian Master Plan (2019) includes goals and objectives that would be furthered by the PCT, including connectivity, transportation choice, community livability, and healthy lifestyles. In particular, a key master plan strategy is to "increase total miles of designated Shared Use Paths." The Master Plan also identifies a spine trail network that is the basis for the PCT. Further, the PCT advances and is consistent with other plans including:

- Collier County Growth Management Plan
- Collier County Recreation and Parks Master Plan
- Southwest Florida Regional Planning Council Strategic Regional Policy Plan
- Florida Greenways and Trails System Plan
- FDOT's District One Active Transportation Master Plan

Trail networks like the PCT are established in many places throughout Florida and the United States. Cities, towns, counties, regions, and states are increasingly investing in the development of connected multi-use trails designed for non-motorized transportation. Florida is a national leader in its efforts to plan and fund a statewide priority trail system.

- Florida's Greenways and Trails System Plan defines an ambitious statewide system of trails that includes segments of what will become the PCT.
- Since the launch of Florida's Shared-Use Nonmotorized (SUN) Trail Program in 2015, FDOT has programmed over $280 million statewide for multi-use trails.
- Major Florida trail networks include the Coast-to-Coast Trail, River to Sea Loop Trail, and Capital City to Sea Loop Trail.

Trails have the potential to transform communities. Many communities have been changed by the presence of a multi-use trail. Important Florida examples include Winter Garden and Dunedin.

- The West Orange Trail has been a key component behind the transformation of Downtown Winter Garden. The success of this effort led to recognition in 2018 as a winner for Great Places in Florida (Florida Chapter of the American Planning Association).
- Dunedin's transformation has been just as significant. Downtown business occupancy rates were 30% before the Pinellas Trail, but have typically been at or near 100% since the trail opened over two decades ago. Bob Ironsmith, Dunedin's Economic & Housing Development Director has described the trail as an "economic engine" for the community.

The economic benefits of trails are well-documented.

- Three Central Florida trails were estimated to have a regional economic impact of $42.6 million annually (East Central Florida Regional Planning Council).
- Greenways, sidewalks, and bicycle facility construction create 17 jobs for every $1 million spent which is a greater employment impact than any other type of transportation facility (American Association of State Highway and Transportation Officials).
- A North Carolina study found that the annual economic impact of bicyclists was nine times the initial one-time public expenditure to build bicycle facilities (North Carolina DOT).

- Trails are one of the most desired community amenities among prospective homebuyers (National Association of Homebuilders).
- Studies show the importance of developing long-distance trails like the PCT. The longer a trail is, the farther people will travel to visit it, the longer they will stay, and the more money they will spend (Allegheny Trail Alliance).

Trails provide residents and visitors healthy recreation and active transportation.

- 43% of Americans would be more likely to ride a bicycle if motor vehicles and bicycles were physically separated (People for Bikes).
- 46% of Americans say they would bike to work if designated trails were available (Bikes Belong Coalition).
- In a 2014 Pinellas Trail survey, 31% of users surveyed in Downtown Clearwater were using the trail for commuting to work (Forward Pinellas).
- Walking, jogging, and bicycling are the most desired outdoor recreation activities among Sunshine State residents (Florida Department of Environmental Protection).
- In response to the obesity crisis in the US, providing access to trails is considered an important community health strategy (Centers for Disease Control and Prevention).

The PCT will provide increased opportunity to bicycle and walk for non-recreational activities such as commuting to work and school, and for personal trips to stores and other locations. Similar to statistics above, 62% of respondents to a 2021 FDOT District One survey said that bike lanes not being separated from traffic discourages them from bicycling. The PCT is planned to be developed as a separated pathway. Even where the trail will be within a roadway corridor, it will be separated from motorized vehicle travel lanes, typically by a buffer of five feet (see typical section for Trail Adjacent to Roadway – **Exhibit 19** on **page 61**).

Right-of-Way Opportunities and Constraints

Identifying existing or potential corridors to locate the PCT required consideration of viable opportunities for development of a linear trail. PCT alternatives include segments within utility, canal, and rail corridor to the extent feasible. As discussed further in the introduction of Chapter 3, the subdivided nature of development patterns within Collier County limit the opportunities for establishment of a trail. Therefore, significant segments of the PCT are proposed within road right-of-way (see typical section for Trail Adjacent to Roadway on **page 61**). Some trails are proposed within newly developed roadway corridors or within existing corridors programmed for widening or improvement. Others are proposed in roadways that are not currently programmed for any future improvements.

To meet the desired intent of separating the trail from vehicle travel lanes, it will be important to consider availability of existing and potential right-of-way. Right-of-way constraints will be an important factor in determining the corridor profile in specific locations and, in a couple of cases, determining which roadways will be the most appropriate location for the trail. For example, because of its pivotal location in proximity to existing trails, a segment of Radio Road is recommended as a potential location for the trail. Existing, constrained right-of-way within this corridor will be a significant factor in determining how the roadway might be reconfigured to accommodate the trail.

Because of the strong planning foundation for the PCT, the expected range of benefits it will provide, and the anticipated need that a trail of this scale will address, the project was determined worthy of further evaluation at the state and local level as evidenced by the multi-agency funding partnership.

The study process began in April 2021 and was completed in June 2022. Principal components of the process included:

- Stakeholder Coordination and Public Outreach – Summarized on **pages 7-10** and fully documented in **Appendix B**
- Existing Conditions Inventory and Documentation – Summarized on **pages 11-13** and included as **Chapter 2**
- Systemwide Feasibility Analysis – **Chapter 3**
- Implementation Action Plan – **Chapter 4**

Stakeholder Coordination and Public Outreach

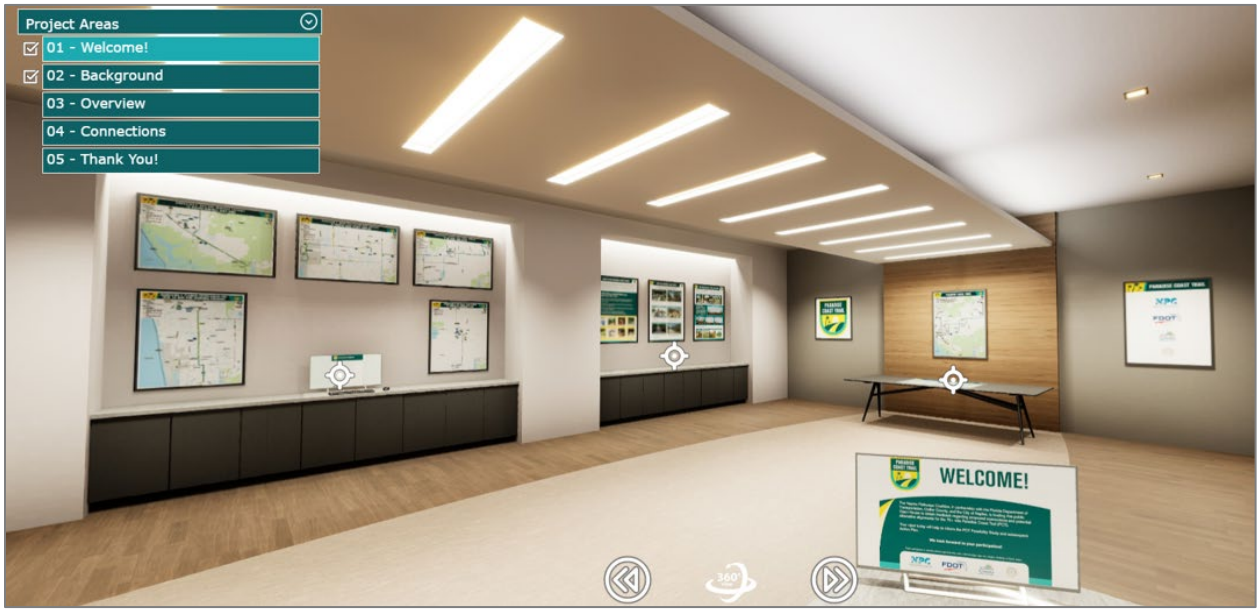
The Coordination and Outreach process for the PCT Feasibility Study was extensive and included input from a wide range of stakeholders and citizens. Complete documentation of this effort is provided in the *Coordination and Outreach Summary* **(Appendix B)**.

The public engagement effort consisted of the following components:

Paradise Coast Trail Feasibility Study Web Page – NPC hosted a web page for the study on its website (www.naplespathways.org) to provide updates related to the study and links to the Virtual Open House where the public could provide comments on the study.

Paradise Coast Trail Feasibility Study Public Open House – An in-person open house was held at the River Park Community Center (301 11th St. North, Naples) on January 26th from 4:00 PM to 7:00 PM. 46 people attended with several submitting comment forms on-site.

Paradise Coast Trail Feasibility Study Virtual Open House – A virtual meeting room including all materials presented at the in-person Open House was available to the public from January 26th through February 25th.



Paradise Coast Trail Feasibility Study Virtual Meeting – A Zoom Webinar was held on Monday, January 31st from 5:00 PM to 6:00 PM to provide an overview of the materials available for public review and to receive public comments.

Paradise Coast Trail Community Celebration – NPC and partners sponsored a community celebration at Baker Park (50 Riverside Circle, Naples) on February 5th from 1:00 PM to 4:00 PM. Attendees to this free event could participate in various activities such as a 1K Fun Run and Kids Bike Rodeo. The Study Team presented the boards and materials from the Open House which provided an excellent opportunity for attendees to learn about the trail study and provided comments during this casual community event. While 14 attendees signed-in, the actual number of attendees who viewed the materials was much greater due to the open access nature of the display area.

The complete materials presented at these events are included **Appendix B**.

Public response to the project was very favorable. Many residents provided strong support for advancing the PCT and there were no clear expressions of opposition to the project. Some commentors cited potential benefits such as increased safety and healthy lifestyles. Affirming the strong public interest in the project, several made suggestions regarding how to expand the proposed corridor beyond the currently defined connections. Geographically, the highest level of support was expressed for:

- Connection 3 – Baker Park/Gordon River Greenway to the Paradise Coast Sports Complex
- Connection 1 – Planned Estero-Bonita Rail Trail to Rich King Memorial Greenway

Despite preference given to these connections as priorities, there was broad support for completing all connections to develop the entire PCT.

Key points from the public comments included:

- The project would be good for healthy lifestyles and would help meet the demand for these types of facilities by Collier County residents.
- New pathways are needed since bicycling and pedestrian infrastructure is limited in many places and existing routes can be dangerous for bicyclists.
- Please consider including trees and landscaping for shade and aesthetics.
- Don't try to take on too much in the beginning – focus efforts near Naples and let success there help drive further development of the pathway.
- Start with the segment that will have the least resistance to ensure a successful start – this will help to increase community support for the broader project.
- In the future, consider adjacent trails where appropriate for horseback riding.
- Consider use of the Golden Gate Canal right-of-way as an alignment for the trail.
- Various comments suggested considering expansion of the proposed PCT in the future to include connections:
    - To Marco Island
    - To Everglades City
    - To North Naples
    - To Lee and Hendry counties from Immokalee
    - Further into Downtown Naples
    - Along the entire length of Vanderbilt Beach Road
    - Along SR 29 between Immokalee and Everglades City

The complete set of public comments are included in **Appendix B**.

Over 25 agency partner and stakeholder meetings were conducted with the following:

- Florida Department of Transportation, District One [Study Team Partner]
- Collier County – Growth Management, Transportation Planning, Conservation Collier, Parks & Recreation, Stormwater Management [Study Team Partner]
- City of Naples – Community Services, Streets & Stormwater [Study Team Partner]

- Collier Metropolitan Planning Organization [Study Team Advisor]
- Lee County Metropolitan Planning Organization
- Seminole Tribe of Florida
- Miccosukee Tribe of Indians of Florida *(formally contacted; Tribe communicated that they would contact Study Team if their Council is interested in a meeting)*
- Florida Department of Environmental Protection – Office of Greenways and Trails and Collier-Seminole State Park
- Florida Wildlife Federation
- Conservancy of Southwest Florida
- Audubon Society
- Naples, Marco Island and the Everglades Convention and Visitors Bureau
- Blue Zones Project
- Naples Community Hospital Healthcare
- Immokalee Chamber of Commerce
- Immokalee Community Redevelopment Area
- Greater Naples Chamber
- Community Foundation of Collier County
- Immokalee Foundation
- Florida Power & Light (FPL)
- Naples Airport Authority
- Barron Collier Companies (Ave Maria)
- Arthrex
- Pulte
- Lennar

Selected highlights of partner and stakeholder input included the following:

- Across all stakeholders, there was strong support to develop the PCT and a desire to collaborate to make the project happen.
- Some organizations and agencies expressed interest in partnering with the PCT ranging from accommodating a segment of the trail (Naples Airport Authority and Ave Maria) to providing for secondary needs (Community Foundation of Southwest Florida).
- Florida Power & Light is willing to explore incorporating a trail connection within its right-of-way along the Livingston Road corridor.
- The importance of linking the PCT to parks, schools, and economic centers was a major theme.
- Environmental organizations support the project but noted the importance of avoiding sensitive conservation areas such as Belle Meade.

Existing Conditions Inventory and Documentation

A comprehensive existing conditions inventory was conducted for the PCT study area. The results of the inventory are documented in **Chapter 2**, the Systemwide Existing Conditions Summary. The information was utilized to evaluate segments, identify opportunities and challenges, guide corridor segmentation, and conduct alternatives analysis.

The Summary provides detailed information regarding the following categories:

Jurisdictional Boundaries

Land Use

- Existing Land Uses
- Future Land Use
- Parks and Schools
- Planned Development

Right-of-Way

- Utility, Drainage, Railroad and Other Rights-of-Way/Easements

Transportation Network

- Adjoining Roadways, Intersections, and Markings
- Planned Roadway Improvements
- Existing and Proposed Local and Regional Trails

Natural Environment

- Wetlands
- Soil Classifications
- Farmlands
- Threatened and Endangered Species
- Essential Fish Habitat
- Conservation and Mitigation Areas
- Cultural, Historic, and Archaeological Resource Inventory
- Contamination

Brief highlights from the review of existing conditions include:

- The **existing land cover** within the study area consists of a mixture of developments (residential, commercial, industrial, community facilities), wetlands, agriculture (pastures), and native uplands (pine flatwoods, xeric oak, and other hardwood forests). Generally, the western portions of the corridor are located within a more urban/suburban context. East of Collier Boulevard, the corridor alignment traverses through a more rural and agricultural context until reaching the communities of Ave Maria and Immokalee.
- The predominant **future land use** designations along the conceptual corridor within Collier County's jurisdiction are Urban Residential, Urban Coastal Fringe Estates, and Agriculture. Within the City of Naples jurisdiction, proximate City future land use designations include Airport, Commercial (Business Park), and Recreation.

- It is important to consider the location of **parks and schools** in trail planning. Parks and recreation areas can serve as hub locations for trails to connect to and/or provide access and parking, provided that such use is consistent with the management approach of the area. The following major parks and schools were among those identified for consideration during feasibility analysis and consideration of alternatives.

  Parks

  - Gordon River Greenway
  - Baker Park
  - Big Cypress Regional Park
  - Eagle Lakes Community Park
  - Golden Gate Community Park
  - Immokalee Community Park
  - North Collier Regional Park
  - Paradise Coast Sports Complex

  Schools

  - Ave Maria University (Private)
  - Bottles, Blocks, and Books Preschool (Private)
  - Child's Path Preschool (Private)
  - Community School of Naples (Private)
  - Corkscrew Elementary School (Public)
  - First Baptist Academy (Private)
  - Golden Gate High School (Public)
  - Immokalee Community School (Public)
  - Immokalee High School (Public)
  - Mike Davis Elementary School (Public)
  - Royal Palm Academy (Private)
  - Veterans Memorial Elementary School (Public)

- Portions of the PCT conceptual corridor coincide with existing linear alignments including **utility and railroad corridors and canals**. A significant north-south portion of the conceptual corridor from Veterans Memorial Boulevard to Golden Gate Boulevard aligns with a Florida Power & Light (FPL) powerline easement adjacent to Livingston Road. A small portion of the corridor aligns with the Seminole Gulf Railway that extends into Lee County. East-west segments of the conceptual corridor align with existing canals, including the Golden Gate Canal.
- The **roadway network** within and adjacent to the PCT conceptual corridor was identified and reviewed. The location and type of intersections related to the conceptual corridor were also reviewed to analyze how the trail may interface with traffic operations and to identify connectivity opportunities or potential conflict points. This information was used to determine how to subdivide the PCT corridor into segments for the purpose of future analysis.

- The corridor was also reviewed in relation to **planned roadway and intersection improvements** as identified in readily available documentation and through information provided by partner agencies. These planned improvements influence the alignment, routing, and segmentation of the trail. Additionally, and based on respective implementation timelines and scope, some of these projects, such as a new roadway or resurfacing, restoration, and rehabilitation (RRR) projects, may provide opportunities to integrate supportive trail infrastructure for the PCT. Categories of projects reviewed included:
    - Proposed Collier County roadway projects
    - Collier MPO 2045 Long Range Transportation Plan cost feasible projects
    - Collier MPO 2022-2026 Transportation Improvement Program (TIP)
    - FDOT's 5-Year Adopted Work Program
- The PCT conceptual corridor was reviewed in relation to the Collier MPO Bicycle & Pedestrian Master Plan (BPMP), particularly the SUN Trail Alignments and Spine Pathway Corridors map, to determine alignment of the corridor with any **existing or proposed bicycle, pedestrian, and trail facilities** as identified in the BPMP. This analysis was performed to identify existing or planned facilities that may possibly be leveraged in the alignment and implementation of the PCT.
- **Environmental, cultural, historic, and archaeological resources** were inventoried and identified to determine the potential for impacts. Wetlands, protected species, soils, and farmlands were identified within the study area. **Conservation and mitigation areas** were also identified and include the Railhead Scrub Preserve, Gordon River Greenway, Rookery Bay National Estuarine Research Reserve, and Collier-Seminole State Park. **Contamination sites** were inventoried to identify potential challenges to project development.

Chapter 2 provides the full Systemwide Existing Conditions Summary, followed by the Systemwide Feasibility Analysis **(Chapter 3)** and Implementation Action Plan **(Chapter 4)**.

Chapter 2.
Systemwide Existing Conditions Summary

This Systemwide Existing Conditions Summary includes the results and analysis of a data inventory and collection process to map and describe existing conditions across the entire Paradise Coast Trail (PCT) study area. The information and data documented for this summary was utilized to identify the constraints and opportunities that guided the development of the trail segmentation and alternative alignment analysis for the PCT.

Study Area

The PCT study area is based on the vision initiated by the Naples Pathways Coalition (NPC) in 2018, in coordination with Collier County and the Collier MPO. The 70+ mile Conceptual Corridor, identified in 2019 as part of the visioning effort, was created with consideration of existing and planned trails. For purposes of existing conditions review, the study area consists of a 1/4-mile-wide corridor consistent with the PCT conceptual corridor (**Exhibit 2**) identified during the vision phase. This width was utilized to account for potential modifications to the conceptual corridor and to identify potential constraints and opportunities. The existing conditions identified within this chapter, as well as input provided by agency partners, stakeholders, and other sources, informed feasibility analysis. It is important to note that feasibility analysis led to realignment of the corridor and consideration of alternatives in certain segments that are beyond the existing conditions study area summarized here. The Systemwide Feasibility Analysis in Chapter 3 reflects these modifications.

Jurisdictional Boundaries

The PCT conceptual corridor study area is primarily located within the jurisdictional boundaries of Collier County, with the westernmost portion of the corridor adjacent to, or within close proximity to, the City of Naples. The northwest terminus of the conceptual corridor is located at the Collier/Lee County line and the City of Bonita Springs. **Exhibit 3** depicts the jurisdictional boundaries within the study area, as well as other communities, neighborhoods, and/or relevant planned developments**.** These include the communities of Immokalee, Ave Maria, and Golden Gate Estates.

Exhibit 2: PCT Conceptual Corridor Study Area

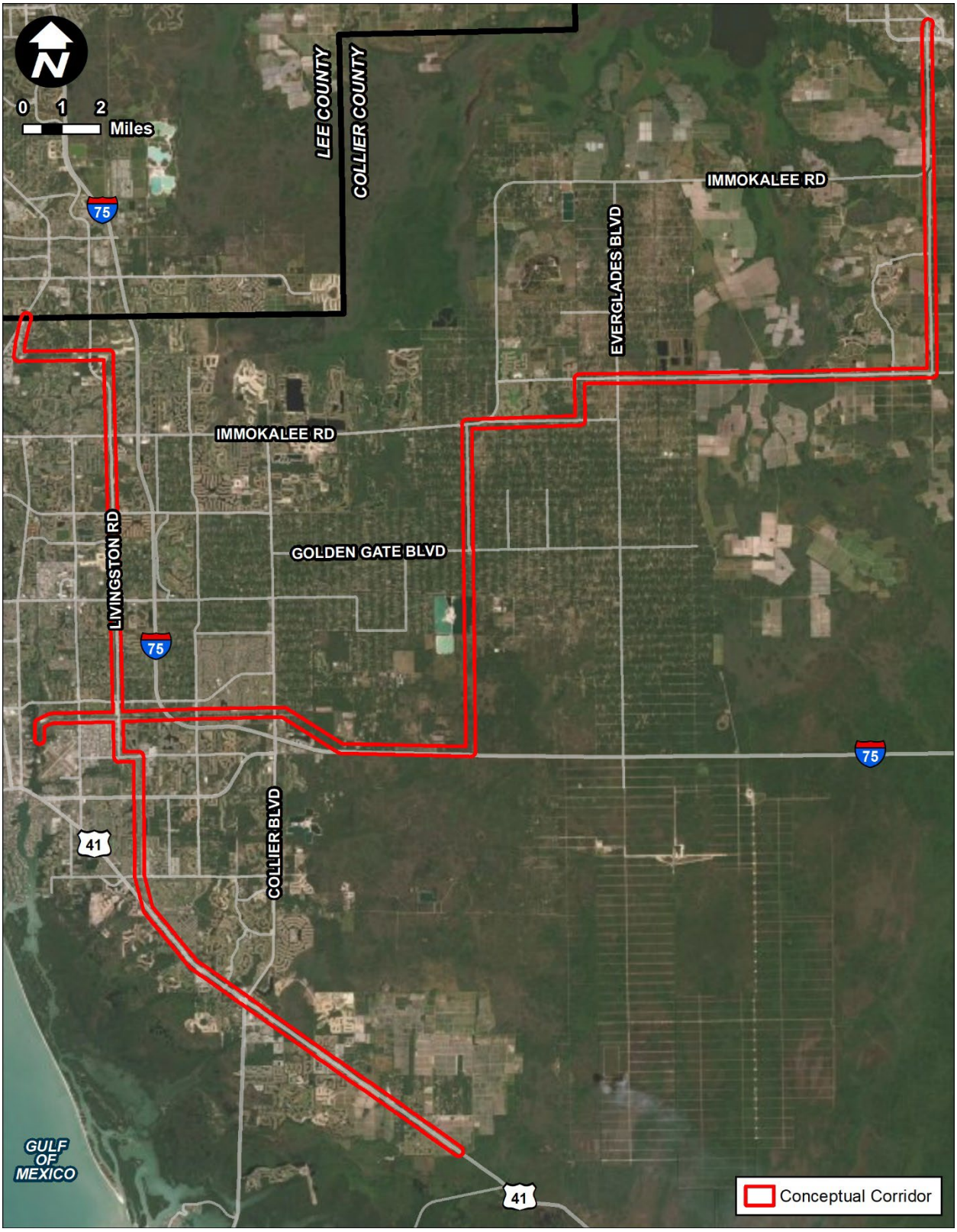
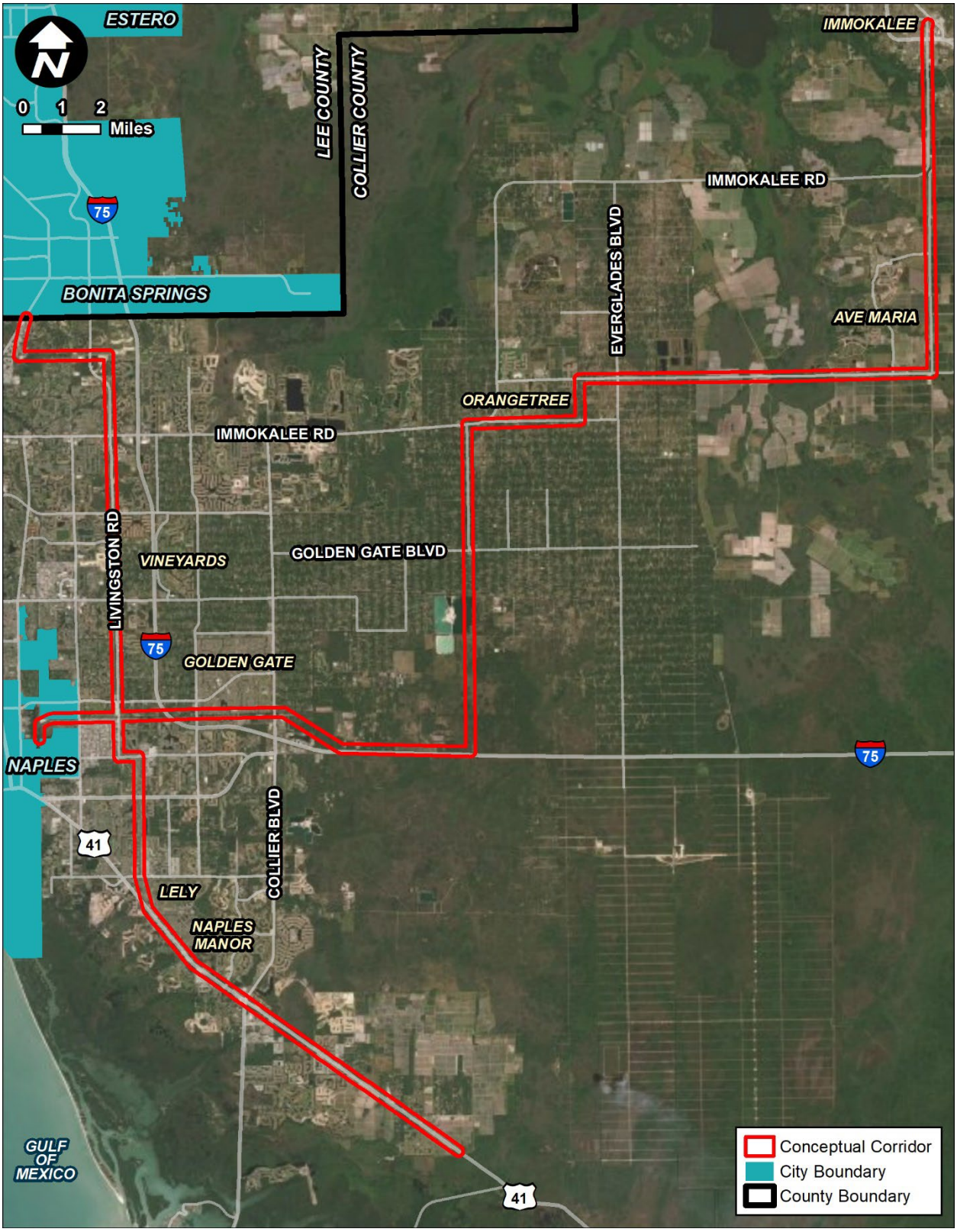


Exhibit 3: Jurisdictional Boundaries



Data Sources: Collier County, Lee County

Land Use

Existing and future land uses must be considered both for their effect on the eventual alignment of the Paradise Coast Trail, as well as related to the trail's potential effects on land uses along the corridor.

Existing Land Uses

GIS data was obtained from the South Florida Water Management District (SFWMD) to assist in identifying land cover and natural communities adjacent to the conceptual corridor and within the broader study area. Land covers were classified according to the Florida Land Use, Cover and Forms Classification System (FLUCCS). The general land cover within the study area consists of a mixture of developments (residential, commercial, industrial, community facilities), wetlands, agriculture (pastures), and native uplands (pine flatwoods, xeric oak, and other hardwood forests). Generally, the western portions of the corridor are located within a more urban/suburban context. East of Collier Boulevard, the corridor alignment traverses through a more rural and agricultural context until reaching the communities of Ave Maria and Immokalee. **Table 1** provides an overview of the FLUCCS types within the study area. The FLUCCS map is included as **Exhibit 4.**

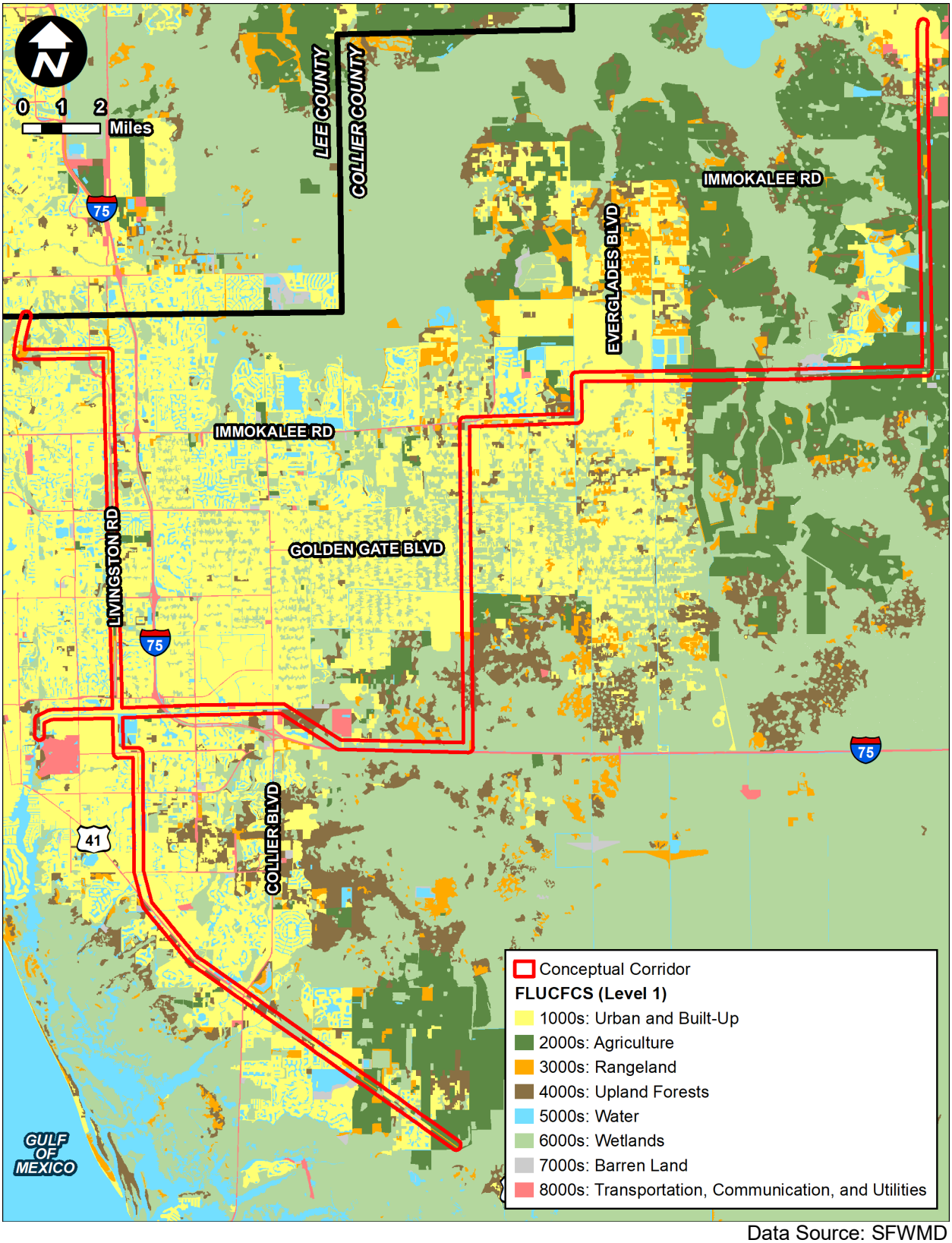
Table 1: FLUCCS Type and Acreage within the Study Area

FLUCCS Code	FLUCCS Type	Acres	% of Study Area
1110	FIXED SINGLE-FAMILY UNITS (LESS THAN TWO DWELLING UNITS PER ACRE)	637	5.7
1120	MOBILE HOME UNITS (LESS THAN TWO DWELLING UNITS PER ACRE)	16	0.1
1180	RURAL RESIDENTIAL	652	5.8
1210	FIXED SINGLE-FAMILY UNITS (TWO-FIVE DWELLING UNITS PER ACRE)	1003	9.0
1220	MOBILE HOME UNITS (TWO-FIVE DWELLING UNITS PER ACRE)	60	0.5
1230	RESIDENTIAL, MIXED UNITS (FIXED AND MOBILE HOME UNITS) (TWO-FIVE DWELLING UNITS PER ACRE)	21	0.2
1290	RESIDENTIAL, MEDIUM DENSITY UNDER CONSTRUCTION (TWO-FIVE DWELLING UNITS PER ACRE)	58	0.5
1310	FIXED SINGLE-FAMILY UNITS (SIX OR MORE DWELLING UNITS PER ACRE)	54	0.5
1320	MOBILE HOME UNITS (SIX OR MORE DWELLING UNITS PER ACRE)	104	0.9
1330	MULTIPLE DWELLING UNITS, LOW RISE (TWO STORIES OR LESS)	336	3.0
1340	MULTIPLE DWELLING UNITS, HIGH RISE (THREE STORIES OR MORE)	82	0.7
1350	RESIDENTIAL, MIXED UNITS (FIXED AND MOBILE HOME UNITS) (SIX OR MORE DWELLING UNITS PER ACRE)	33	0.3
1400	COMMERCIAL AND SERVICES	461	4.1
1410	RETAIL SALES AND SERVICES	52	0.5
1490	COMMERCIAL AND SERVICES UNDER CONSTRUCTION	24	0.2
1550	OTHER LIGHT INDUSTRIAL	110	1.0

FLUCCS Code	FLUCCS Type	Acres	% of Study Area
1620	SAND AND GRAVEL PITS	35	0.3
1660	HOLDING PONDS	113	1.0
1670	ABANDONED MINING LANDS	14	0.1
1700	INSTITUTIONAL	91	0.8
1710	EDUCATIONAL FACILITIES	143	1.3
1820	GOLF COURSES	427	3.8
1850	PARKS AND ZOOS	9	0.1
1860	COMMUNITY RECREATIONAL FACILITIES	66	0.6
1900	OPEN LAND	196	1.8
2110	IMPROVED PASTURES	71	0.6
2120	UNIMPROVED PASTURES	3	<0.1
2130	WOODLAND PASTURES	10	0.1
2140	ROW CROPS	654	5.9
2150	FIELD CROPS	123	1.1
2210	CITRUS GROVES	619	5.6
2410	TREE NURSERIES	3	<0.1
2430	ORNAMENTALS	34	0.3
2510	HORSE FARMS	15	0.1
2610	FALLOW CROP LAND	137	1.2
3100	HERBACEOUS (DRY PRAIRIE)	243	2.2
3200	SHRUB AND BRUSHLAND	106	1.0
3210	PALMETTO PRAIRIES	48	0.4
3300	MIXED RANGELAND	26	0.2
4110	PINE FLATWOODS	640	5.7
4130	SAND PINE	0	<0.1
4200	UPLAND HARDWOOD FORESTS	1	<0.0
4220	BRAZILIAN PEPPER	69	0.6
4240	MELALEUCA	7	0.1
4280	CABBAGE PALM	7	0.1
4340	HARDWOOD - CONIFEROUS MIXED	80	0.7
4370	AUSTRALIAN PINES	2	<0.1
5120	CHANNELIZED WATERWAYS - CANALS	190	1.7

FLUCCS Code	FLUCCS Type	Acres	% of Study Area
5200	LAKES	0	<0.1
5300	RESERVOIRS	512	4.6
6120	MANGROVE SWAMPS	29	0.3
6170	MIXED WETLAND HARDWOODS	393	3.5
6180	WILLOW AND ELDERBERRY	31	0.3
6190	EXOTIC WETLAND HARDWOODS	36	0.3
6200	WETLAND CONIFEROUS FORESTS	84	0.8
6210	CYPRESS	328	2.9
6240	CYPRESS - PINE - CABBAGE PALM	97	0.9
6250	HYDRIC PINE FLATWOODS	630	5.6
6300	WETLAND FORESTED MIXED	117	1.0
6410	FRESHWATER MARSHES	288	2.6
6430	WET PRAIRIES	55	0.5
6440	EMERGENT AQUATIC VEGETATION	4	<0.1
7400	DISTURBED LAND	73	0.7
7430	SPOIL AREAS	26	0.2
8110	AIRPORTS	4	<0.1
8140	ROADS AND HIGHWAYS	483	4.3
8200	COMMUNICATIONS	5	<0.1
8310	ELECTRIC POWER FACILITIES	11	0.1
8320	ELECTRICAL POWER TRANSMISSION LINES	53	0.5
8330	WATER SUPPLY PLANTS	9	0.1
8340	SEWAGE TREATMENT	12	<0.1
TOTAL		**11,153**	**100%**

Exhibit 4: Existing Land Use



Data Source: SFWMD

Future Land Use

To analyze the compatibility of the Paradise Coast Trail with future land uses, the Future Land Use Maps of Collier County and the City of Naples were reviewed. **Exhibit 5** depicts the both the Collier County and City of Naples future land use designations within the study area and their relation to the conceptual corridor. The predominant future land use designations along the conceptual corridor within Collier County's jurisdiction are Urban Residential, Urban Coastal Fringe Estates, and Agriculture. Within the City of Naples jurisdiction, proximate City future land use designations include Airport, Commercial (Business Park), and Recreation.

Parks and Schools

As part of trail planning, it is important to consider the location of parks and schools. Parks and recreation areas can serve as hub locations for trails to connect to and/or provide access and parking, provided that such use is consistent with the management approach of the area. This section identifies key community and regional parks and recreation areas. Existing trails, like the Rich King Memorial Greenway, are addressed under *Existing and Proposed Local and Regional Trails* on **page 31** and conservation lands are identified under *Conservation and Mitigation Areas* on **page 51**. Schools are another important factor in choosing the location of trails because of the growing need to provide safe, accessible routes for students to bicycle and walk to school. The location of parks and schools adjacent to the PCT conceptual corridor were identified using geospatial data. These locations are listed below and depicted in **Exhibit 6**.

Parks

- Gordon River Greenway
- Baker Park
- Big Cypress Regional Park
- Eagle Lakes Community Park
- Golden Gate Community Park
- Immokalee Community Park
- North Collier Regional Park
- Paradise Coast Sports Complex

Schools

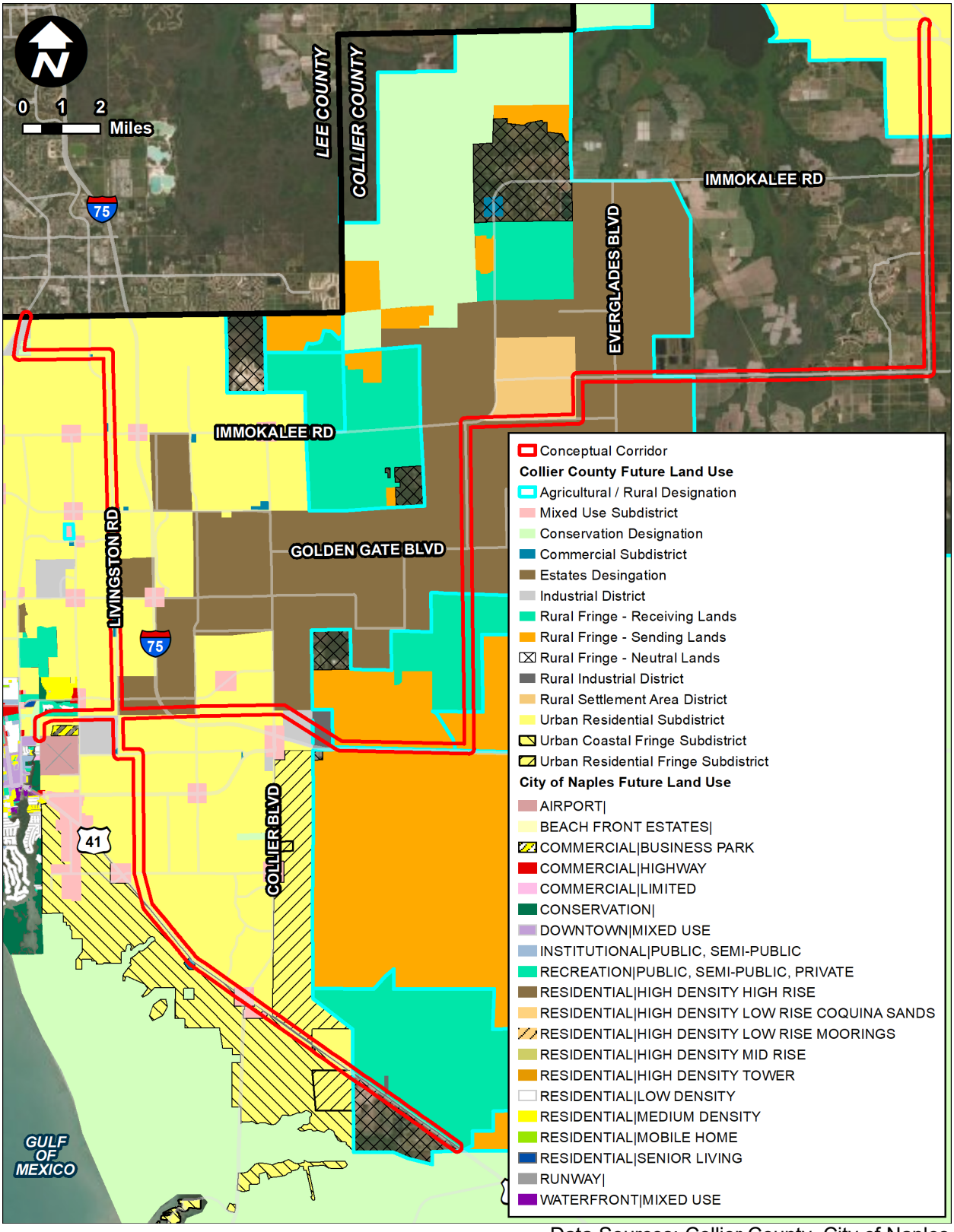
- Ave Maria University (Private)
- Bottles, Blocks, and Books Preschool (Private)
- Child's Path Preschool (Private)
- Community School of Naples (Private)
- Corkscrew Elementary School (Public)
- First Baptist Academy (Private)
- Golden Gate High School (Public)
- Immokalee Community School (Public)
- Immokalee High School (Public)
- Mike Davis Elementary School (Public)
- Royal Palm Academy (Private)
- Veterans Memorial Elementary School (Public)

The potential for connecting to and from parks and schools from the PCT is considered further in the Systemwide Feasibility Analysis (Chapter 3), including additional data for the number of these facilities in proximity to various alternatives.

Planned Development

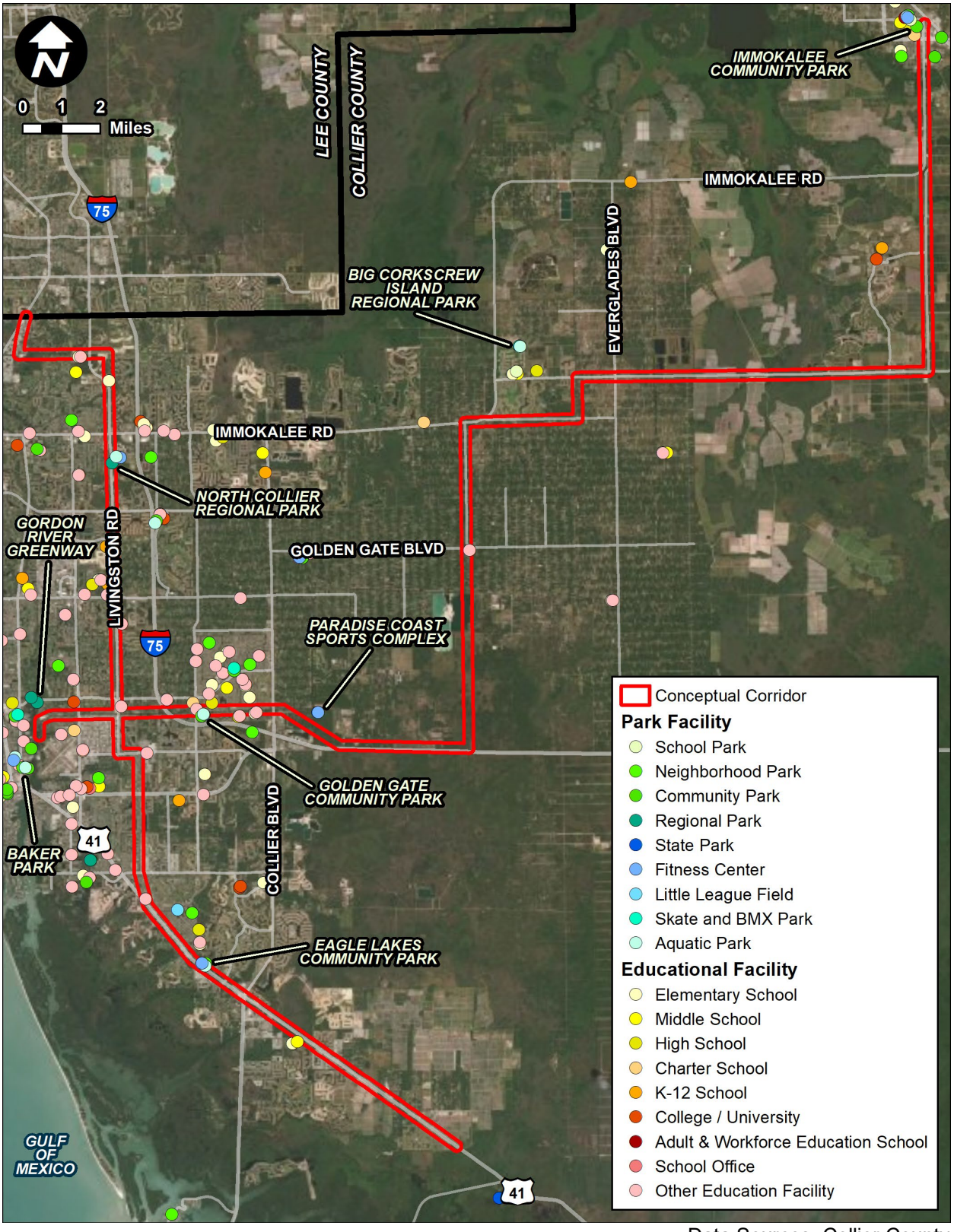
Based on data available from Collier County and the Florida Geographic Data Library (FGDL), the location of planned unit developments (PUDs) and Developments of Regional Impact (DRIs) in relation to the study area were identified and depicted in **Exhibit 7**.

Exhibit 5: County and Municipal Future Land Uses



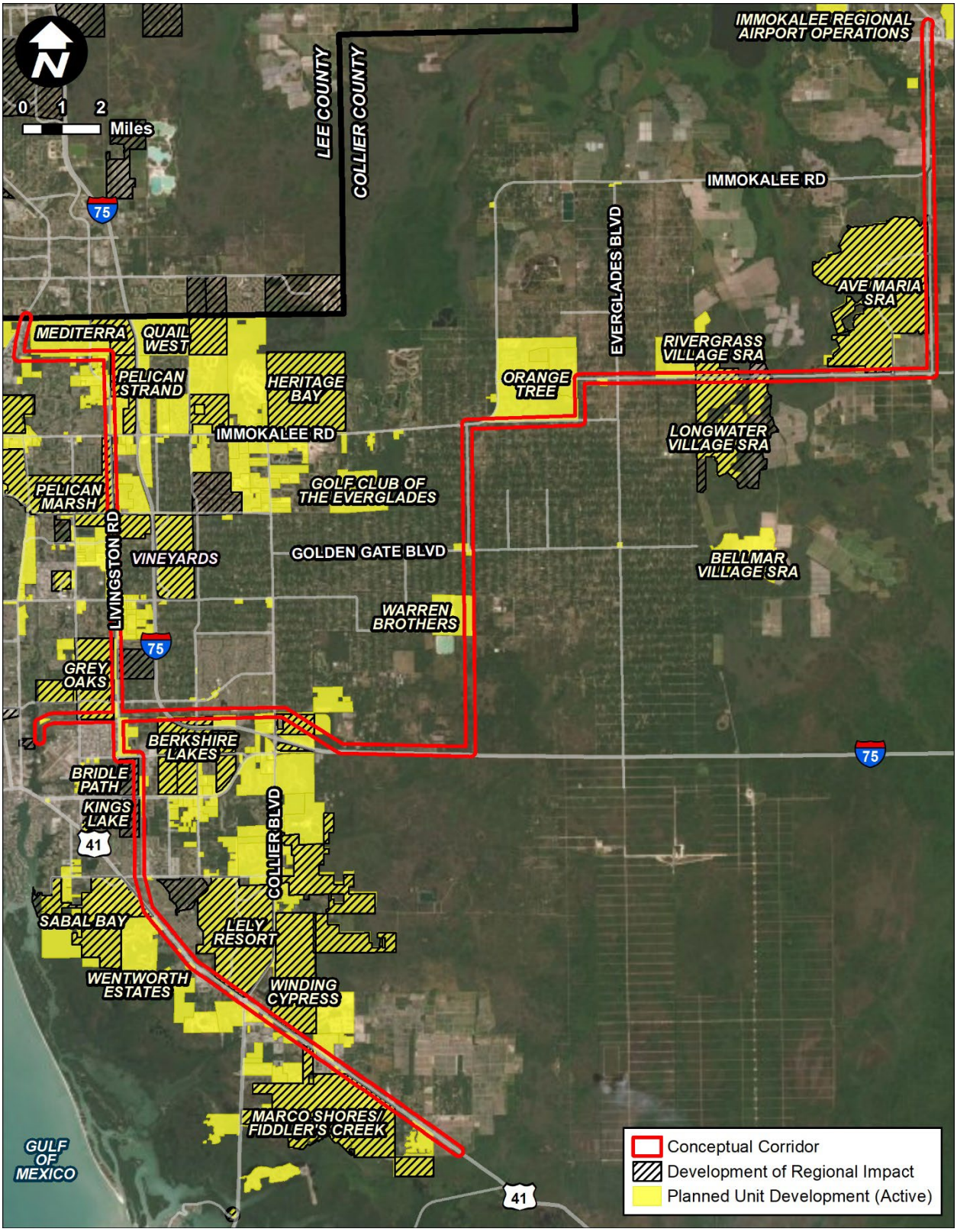
Data Sources: Collier County, City of Naples

Exhibit 6: Parks and Schools



Data Sources: Collier County

Exhibit 7: Planned Unit Developments



Data Sources: University of Florida GeoPlan Center, Collier County

Right-of-Way

A planning-level geospatial analysis was conducted of the study area and conceptual corridor to identify the profile of right-of-way ownership to underlying and adjacent properties. This analysis utilized 2019 parcel data from the Florida Department of Revenue's tax database, as obtained from the FGDL. Given the expansive study area and 70-mile length of the conceptual corridor, there is a broad profile of property ownership, both public and private, to be considered. A more detailed analysis of specific property ownership will be undertaken during the evaluation of individual trail segments and alternatives to determine any potential impacts or right-of-way acquisition requirements.

Utility, Drainage, Railroad, and Other Rights-of-Way/Easements

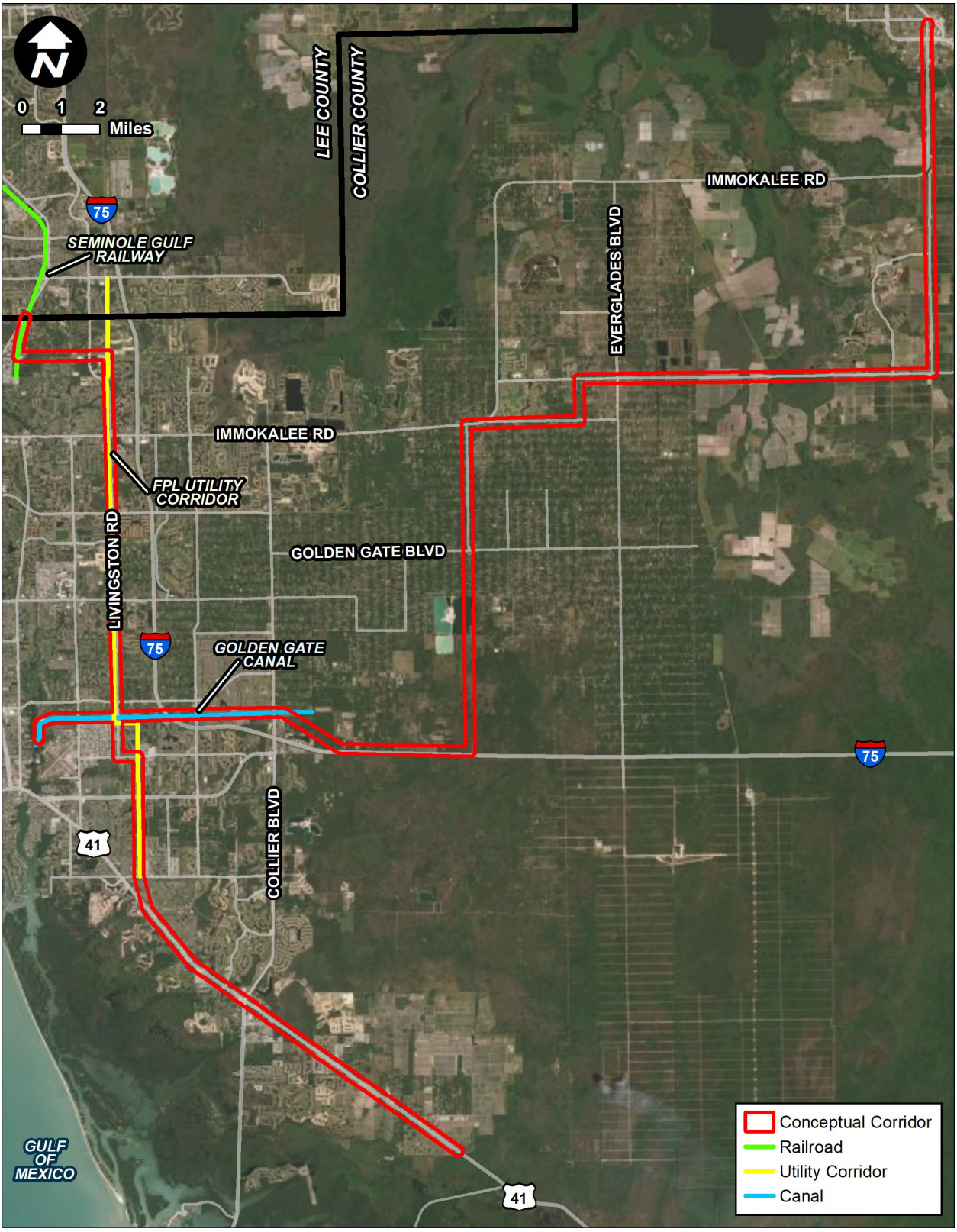
Portions of the PCT conceptual corridor follow existing linear alignments including utility and railroad corridors and canals. The right-of-way associated with these existing linear corridors will be evaluated further as segments are analyzed and alternatives are developed. A significant north-south portion of the conceptual corridor from Veterans Memorial Boulevard to Golden Gate Boulevard aligns with a Florida Power & Light (FPL) powerline easement adjacent to Livingston Road. This also aligns with the Bonita Springs to Collier – FPL segment of Florida's SUN Trail Network, listed as Partially Funded for Pre-Construction. It should also be noted that according to the available property ownership data, only limited parcels within this utility corridor are owned by FPL. While much of the underlying ownership in portions of this corridor is not owned by FPL, they hold an easement over the length of this segment.

Additionally, some east-west segments of the conceptual corridor align with existing canals, including the Golden Gate Canal. The PCT conceptual corridor alignment along the Golden Gate Canal consists of a large number of parcels under varying ownership, including many waterfront single-family homes. This portion of the corridor alignment also includes interaction with canal crossings and bridges at Airport Pulling Road, Livingston Road, I-75, Santa Barbara Boulevard, Tropicana Boulevard, and Collier Boulevard. As it proceeds north from I-75 and adjacent to Tobias Street, the conceptual corridor crosses Golden Gate Canal where there is currently no bridge. Further to the north, the corridor crosses that canal on existing bridges on Randall Boulevard and Oil Well Road. As stated previously, the evaluation of any segments adjacent to existing canals will include a more detailed analysis of required right-of-way and potential impacts.

The conceptual corridor also aligns with an approximately one-mile segment of the Seminole Gulf Railway rail corridor in the northwest portion of the study area.

Exhibit 8 displays the key rail, utility, and canal corridors adjacent to the PCT study area.

Exhibit 8: Key Rail, Utility, and Canal Corridors



Data Sources: Federal Railroad Administration (FRA), Google Earth

Transportation Network

Adjoining Roadways, Intersections, and Markings

The roadway network within and adjacent to the PCT conceptual corridor was identified and reviewed. The location and type of intersections related to the conceptual corridor were also reviewed to analyze how the trail may interface with traffic operations and identify connectivity opportunities or potential conflict points. This information will be used to determine how to subdivide the PCT corridor into segments for the purpose of future analysis.

Table 2: Roadways Adjacent to the PCT Conceptual Corridor

Adjacent Roadway	Maintaining Agency
Veterans Memorial Boulevard	Collier County
Livingston Road	Collier County
Radio Road	Collier County
US 41 (Tamiami Trail)	FDOT
I-75	FDOT
White Lake Boulevard	Collier County
Landfill Boulevard	Collier County
Black Burn Road	Collier County
Tobias Street	Collier County
Wilson Boulevard	Collier County
Immokalee Road	Collier County
Randall Boulevard	Collier County
Oil Well Road	Collier County
Camp Keais Road	Collier County

Table 3: Intersections and PCT Conceptual Corridor Crossings

Intersection	Type
Livingston Road at Entrada Avenue/Royal Palm Academy Entrance	Unsignalized
Livingston Road at Delasol Lane/Car	Unsignalized
Livingston Road at Immokalee Road	Signalized
Livingston Road at Vanderbilt Beach Road	Signalized
Livingston Road at Orange Blossom Drive	Signalized
Livingston Road at Ridge Farms Road	Unsignalized
Livingston Road at Osceola Trail	Signalized
Livingston Road at Ridgeway Drive	Unsignalized
Livingston Road at Pine Ridge Road	Signalized
Livingston Road at Grey Oaks Boulevard E	Signalized
Livingston Road at Golden Gate Parkway	Signalized
Livingston Road at Progress Avenue	Signalized
Livingston Road at Enterprise Avenue	Signalized
Livingston Road at Market Avenue	Unsignalized
Livingston Road at Radio Road	Signalized
Radio Road at Kings Way	Unsignalized
Tamiami Trail (US 41) at Treviso Boulevard/Johns Street	Unsignalized
Tamiami Trail (US 41) at Broward Street	Signalized
Tamiami Trail (US 41) at Southwest Boulevard/Whistlers Cove Boulevard	Signalized

Intersection	Type
Tamiami Trail (US 41) at Barefoot Williams Road	Signalized
Tamiami Trail (US 41) at Lely Resort Boulevard	Unsignalized
Tamiami Trail (US 41) at Price Street	Signalized
Tamiami Trail (US 41) at Collier Boulevard	Signalized
Wilson Boulevard at Golden Gate Boulevard	Signalized
Wilson Boulevard at 10th Ave	Unsignalized – 2-way EB/WB Stop
Wilson Boulevard at 12th Ave	Unsignalized – 2-way EB/WB Stop
Wilson Boulevard at 14th Ave	Unsignalized – 2-way EB/WB Stop
Wilson Boulevard at 16th Ave	Unsignalized – 2-way EB/WB Stop
Wilson Boulevard at Jung Boulevard	Unsignalized – 2-way EB/WB Stop
Wilson Boulevard at 18th Ave	Unsignalized – 2-way EB/WB Stop
Wilson Boulevard at 20th Ave	Unsignalized – 2-way EB/WB Stop
Wilson Boulevard at 22nd Ave	Unsignalized – 2-way EB/WB Stop
Wilson Boulevard at 24th Ave	Unsignalized – 2-way EB/WB Stop
Wilson Boulevard at Immokalee Road	Signalized
Immokalee Road at Randall Boulevard	Signalized
Immokalee Road at 8th Street NE	Unsignalized
Immokalee Road at16th Street NE	Unsignalized
Oil Well Road at Everglades Boulevard	Signalized
Oil Well Road at Camp Keais Road	Unsignalized
Camp Keais Road at Pope John Paul II Boulevard	Unsignalized
Camp Keais Road at Immokalee Road	Unsignalized
Immokalee Road at Stockade Road	Unsignalized
Immokalee Road at Bethune Avenue	Unsignalized
Immokalee Road at School Road/Seminole Crossing Trail	Unsignalized
Immokalee Road at Carver Street	Unsignalized
Immokalee Road at Eustis Avenue	Unsignalized
Immokalee Road at Delaware Avenue	Unsignalized
Immokalee Road at Colorado Avenue	Unsignalized
Immokalee Road at Boston Avenue	Unsignalized
Immokalee Road at Main Street	Signalized
Immokalee Road at 2nd Avenue	Unsignalized
Immokalee Road at 3rd Avenue	Unsignalized

Where it follows the north-south FPL utility corridor adjacent to Livingston Road, the PCT conceptual corridor intersects with the following:

- Delasol Lane
- Park and Ride Lot at Northwest Corner of the Livingston Road and Immokalee Road Intersection
- Immokalee Road
- Croix Way and Aston Gardens Way (Entrance to Aston Gardens)
- Vanderbilt Beach Road
- Bridgewater Bay Boulevard (Entrance to Bridgewater Bay)
- Ridge Farms Road (Entrance to First Baptist Church of Naples
- Monticello Boulevard (Entrance to Marbella Isles)
- Manchester Lane (Entrance to Manchester Square)

- Osceola Trail
- Ridgeway Drive (Entrance to Community School of Naples)
- Pine Ridge Road
- Eatonwood Lane (Entrance to Kensington)
- Grey Oaks Boulevard East (Entrance to Grey Oaks)
- Golden Gate Boulevard

Where it follows the existing Rich King Memorial Greenway, the PCT conceptual corridor intersects with the following:

- Radio Road
- Moon Lake Drive
- Davis Boulevard
- Rattlesnake Hammock Road

Planned Roadway Improvements

The PCT conceptual corridor was also reviewed in relation to planned future roadway and intersection improvements as identified in readily available documentation and through information provided by partner agencies. These planned improvements may influence the alignment, routing, and segmentation of the trail. Additionally, and based on respective implementation timelines and scope, some of these projects, such as a new roadway or resurfacing, restoration, and rehabilitation (RRR) projects, may provide opportunities to integrate supportive trail infrastructure for the PCT.

Collier County's Growth Management Division Major Projects Map and other available documentation were reviewed. **Table 4** includes projects that were identified as aligning with the PCT conceptual corridor and may impact and/or affect the alignment of the trail.

Table 4: Collier County Major Projects Within PCT Conceptual Corridor

Project	Description	Timeframe
Veterans Memorial Boulevard Extension Phase I	Capacity improvement from west of Livingston Road to Old 41. Includes four lane divided road, sidewalks, bike lanes, & signal upgrades.	Estimated Construction End – Summer 2023
Veterans Memorial Boulevard Extension Phase II	Capacity improvement from the new high school site to Old 41. Includes four lane divided road, sidewalks, bike lanes, & signal upgrades.	Estimated Design Start – Spring 2022 - Estimated Construction Start – Fall 2024
Pine Ridge Road at Livingston Road continuous flow intersection - Phase I	Improve traffic flow on Pine Ridge Road at I-75 interchange and Livingston Rd (FDOT 445296). To be completed in two phases.	Estimated Design Start – Fall 2021; Estimated Construction Start – January 2024

Project	Description	Timeframe
Sidewalks in Various Locations	Depicted on map on west side of Livingston Road from Progress Avenue to Radio Road	Estimated Design Start – Summer 2020; Estimated Construction Start – Spring 2021
Randall and Immokalee Road Intersection	Improvements include intersection realignment and capacity upgrades to turn lanes, signal and pedestrian upgrades, as well as drainage	Estimated Design Start – December 2021; Estimated Construction Start – December 2023
Immokalee Road Corridor Congestion Study	Recommended overpass where Livingston Road is bridged over Immokalee Road	Cost feasible for design and construction in 2026-2030
Golden Gate Parkway at Santa Barbara Canal Bridge Replacement	Existing bridge will be replaced with a new structure that will include two, 12-foot travel lanes eastbound and two, 12-foot travel lanes westbound with eight-foot shoulders, and 12-foot sidewalks on each side.	Estimated Design Start – Summer 2022; Estimated Construction Completion – Fall 2023

The Collier MPO 2045 Long Range Transportation Plan (LRTP) list of cost feasible projects was also reviewed to identify future improvements related to the PCT conceptual corridor to be considered in the context of the potential alignment of the trail and alternatives.

Table 5: Collier MPO LRTP Cost Feasible Projects Within PCT Conceptual Corridor

Facility	Improvement	Implementation Timeframes	Funding Status
US 41 at Collier Boulevard	Major Intersection Improvement	Design 2026-2030 Construction 2031-2035	Fully Funded
Golden Gate Parkway at Livingston Road	Major Intersection Improvement	Design 2026-2030 Construction 2026-2030	Fully Funded
US 41 from Greenway Road to 6 L Farm Road	Widen to 4 Lanes	Design 2026-2030 Construction 2026-2030	Fully Funded
Randall Blvd. from 8th St. NE to Everglades Boulevard	Widen from 2 to 6 Lanes	Design 2026-2030 Construction 2031-2035	Fully Funded
Wilson Boulevard Extension	New 2-Lane Road (Expandable to 4 Lanes)	Design 2026-2030 Right-of-Way 2026-2030 Construction 2036-2045	Fully Funded
Immokalee Road from Camp Keais Road to Eustis Avenue	Study	Study 2026-2030	Partially Funded
Immokalee Road at Wilson Boulevard	Major Intersection Improvement	Design 2036-2045	Partially Funded
Randall Boulevard at Immokalee Road	Ultimate Intersection Improvement: Overpass	Design 2036-2045	Partially Funded

Although located east of the study area, other LRTP Cost Feasible Plan Projects include the proposed new Everglades Boulevard/I-75 interchange and the potential new four-lane connector roadway between this interchange and Golden Gate Boulevard, all of which will be considered in the evaluation of trail alternatives.

A review of the Collier MPO 2022-2026 Transportation Improvement Program (TIP) and FDOT's current 5-Year Adopted Work Program also resulted in identification of other projects based on their relation to the PCT conceptual corridor that may be considered during future analysis and in determining potential alignments of the trail.

Table 6: FDOT 5-Year Adopted Work Program Projects Within PCT Conceptual Corridor

Project	FM#	Project Type
CR 887 (Old US 41) from US 41 to Lee County Line	435347-1	PD&E
CR 951 (Collier Boulevard) from Golden Gate Canal to Green Boulevard	446412-1	Widen/Resurface Existing Lanes
County Barn Road from Rattlesnake Hammock to SR 84 (Davis Boulevard)	438091-1	Bike Path/Trail

Existing and Proposed Local and Regional Trails

Collier MPO Bicycle & Pedestrian Master Plan

The PCT conceptual corridor was reviewed in relation to the Collier MPO Bicycle & Pedestrian Master Plan (BPMP), particularly the SunTrail Alignments and Spine Pathway Corridors map, to determine alignment of the corridor with any existing proposed bicycle, pedestrian, or trail facilities as identified in the BPMP. This analysis was performed to identify existing or planned facilities that could be leveraged in the alignment and implementation of the PCT.

Exhibit 9 includes a depiction of the PCT conceptual corridor in relation to the map from the BPMP. The list below includes a summary of locations where existing facilities, as indicated in the BPMP, align with the PCT conceptual corridor. Where applicable, existing or planned facilities not aligned with but in the vicinity of the PCT conceptual corridor will also be considered when evaluating alternative alignments. Additional field verification of existing facilities may be required in certain areas.

Existing Bicycle Lanes

- US 41 from St. Andrews Boulevard to Collier Boulevard
- Golden Gate Parkway from Estuary Boulevard to Santa Barbara Boulevard
- Immokalee Road from Wilson Boulevard to Oil Well Road
- Oil Well Road from Immokalee Road to east of Everglades Boulevard

Proposed Bicycle Lanes

- White Lake Boulevard/Blackburn Road from east of White Lake Industrial Park to Wilson Boulevard
- Wilson Boulevard from Blackburn Road to Immokalee Road

- Oil Well Road from east of Everglades Boulevard to Camp Keais Road
- Camp Keais Road from Oil Well Road to Immokalee Road
- Immokalee Road from Camp Keais Road to E. Main Street

Connector Sidewalk

- Radio Road from Livingston Road to Rich King Memorial Greenway

Paved Shoulder

- East side of US 41 from Collier Boulevard to Greenway Road
- West side of US 41 from Greenway Road to North of Tomato Road

SUN Trail

The PCT conceptual corridor was reviewed in relation to available GIS data depicting FDOT's statewide Shared-Use Nonmotorized Trail (SUN Trail) network to identify where there is potential alignment and if existing SUN Trail facilities could be leveraged for inclusion in the PCT network. The PCT conceptual corridor aligns with the Bonita Springs to Collier - FPL Corridor segment of Florida's SUN Trail Network from Veterans Memorial Boulevard south to Golden Gate Boulevard. This segment of SUN Trail aligning with the PCT conceptual corridor is listed as Partially Funded for Pre-Construction. While both the PCT corridor and this segment of the SUN Trail corridor connect with the existing Rich King Memorial Greenway at Radio Road, the SUN Trail alignment utilizes a utility corridor east of Livingston Road whereas PCT follows Livingston Road. From Radio Road south to Rattlesnake Hammock Road, the PCT conceptual corridor utilizes Rich King Memorial Greenway which is a 12-ft paved pathway.

In the southern portion of the PCT conceptual corridor where it generally aligns with US 41/Tamiami Trail, the Tamiami Trail segment of the SUN Trail network is an existing 10-ft paved pathway from Collier Boulevard south to Duda Road. Based on the SUN Trail data, there is an unfunded gap of this segment from Duda Road to Six L's Farms Road where the trail continues to the south as a 10-ft paved pathway to San Marco Road. The target width for SUN Trail is 12 feet so any areas within the SUN Trail alignment that will be developed or improved in the future should be built to that standard, unless FDOT approval is received to do otherwise.

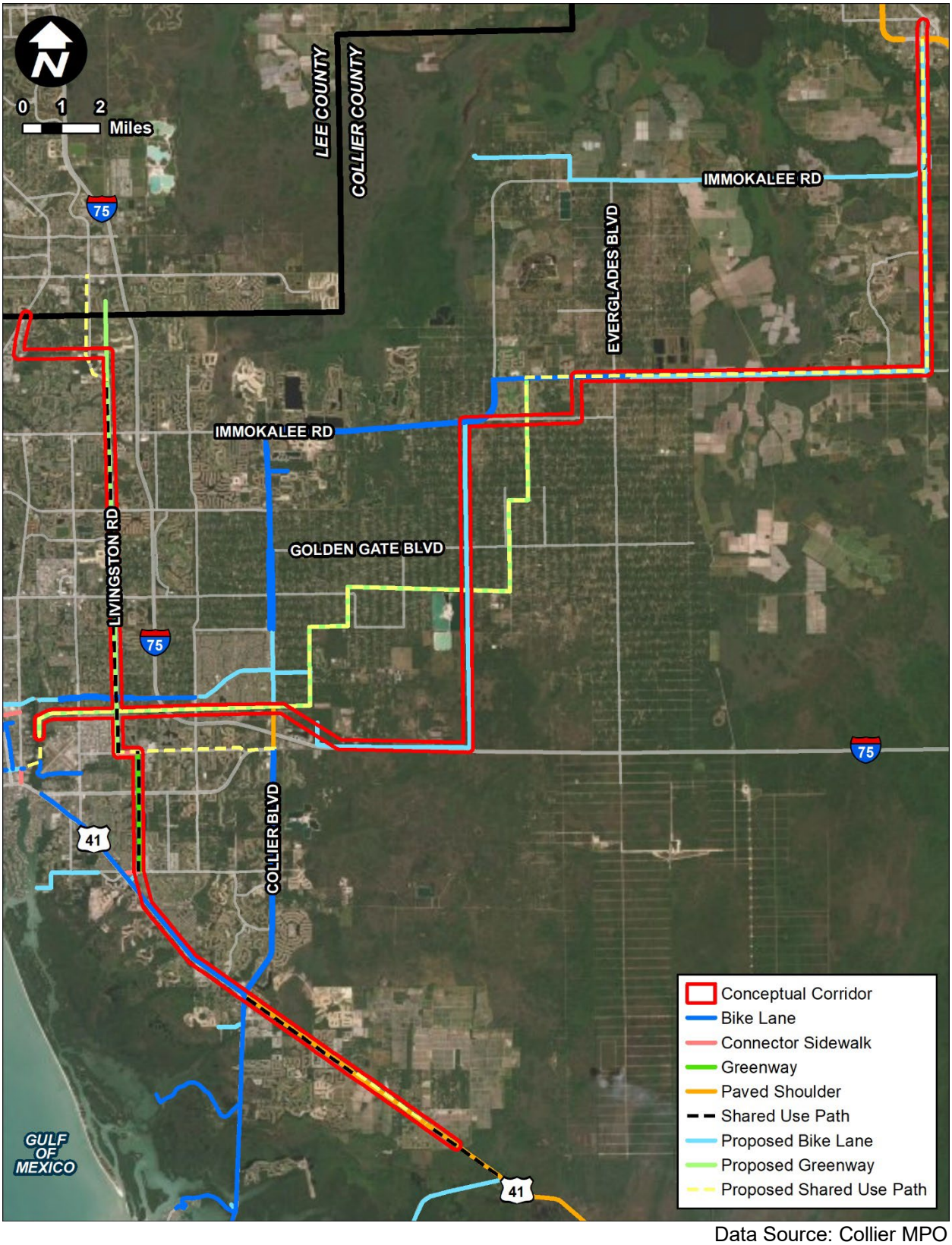
Florida Greenways and Trails

The PCT conceptual corridor was also reviewed in relation to available GIS data depicting the Florida Department of Environmental Protection (FDEP) Florida Greenways and Trails System (FGTS) to identify where there is potential for alignment with, and connections to, existing trails, and Opportunity and Priority Land Trails (2018-2022). In addition to the existing SUN Trail facilities listed in the previous section, the PCT conceptual corridor would provide a connection to the Marco Island Loop Corridor. Connections to FGTS land trail priorities such as the Naples Bay Greenway Corridor will be considered in the evaluation of PCT segments and alternatives, as well as potential access to unpaved trails at Picayune Strand State Forest and Collier Seminole State Park.

Exhibit 10 depicts the PCT conceptual corridor in relation to the SUN Trail Network and Florida Greenways and Trails system.

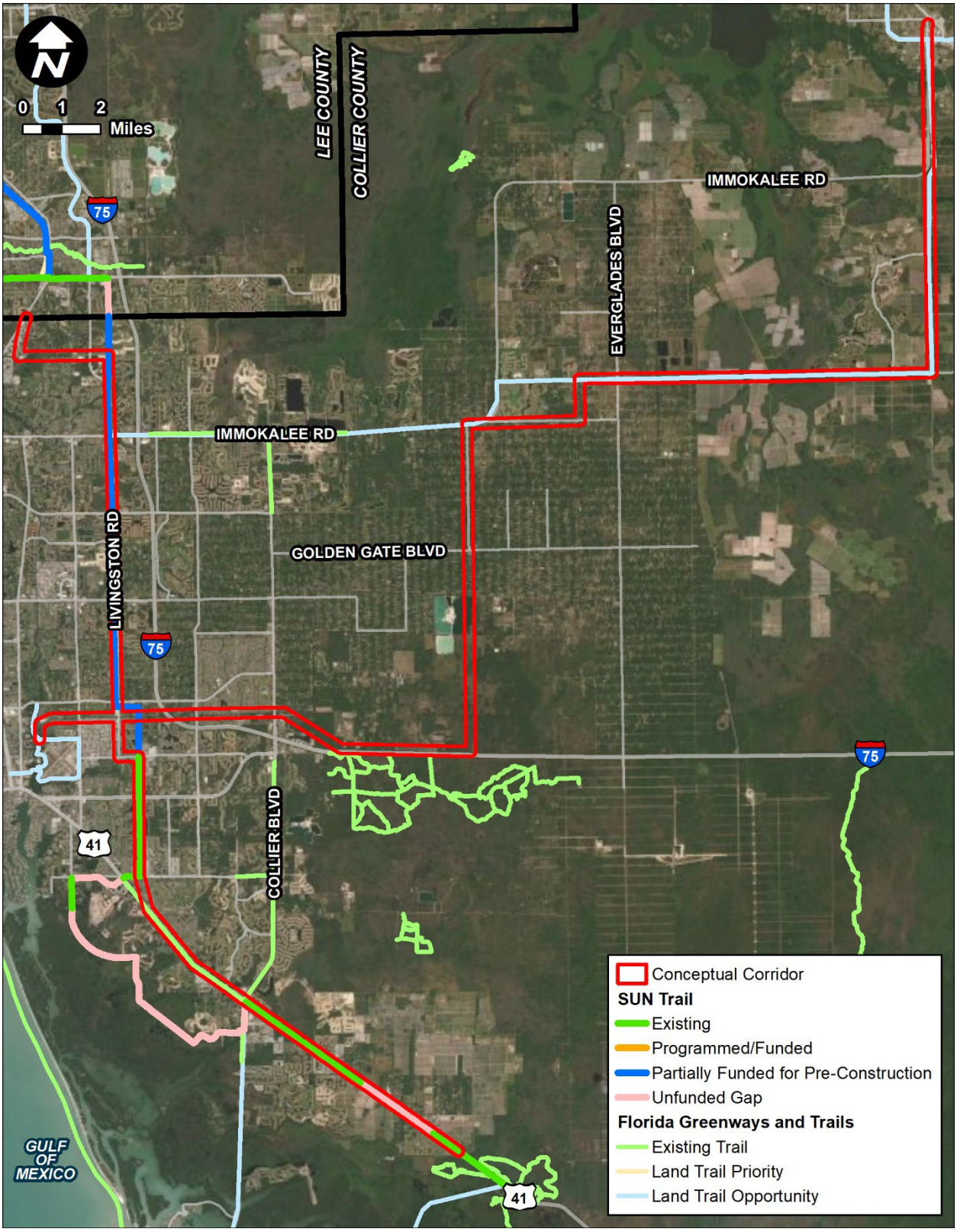
The Lee County MPO is currently conducting the Estero-Bonita Rail Trail Feasibility Study. The progress and outcomes of this study will have bearing on where the trail is located in this area. This information will also be considered during feasibility analysis.

Exhibit 9: Conceptual with Collier MPO Bicycle & Pedestrian Master Plan



Data Source: Collier MPO

Exhibit 10: PCT Conceptual Corridor with SUN Trail Network & Florida Greenways & Trails System



Data Sources: FDOT, FDEP

Natural Environment

Wetlands

Activities in, on, or over Waters of the United States (WOTUS), including wetlands, are regulated at the state and federal level. Executive Order 11990, Protection of Wetlands, 1977 (the Order), is to "minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands". To meet these objectives, the Order requires federal agencies, in planning their actions, to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. In Florida, the U.S. Environmental Protection Agency (EPA) had previously delegated the jurisdictional authority over activities in WOTUS under the Clean Water Act (CWA) of 1972, as amended, to the U.S. Army Corps of Engineers (USACE). On January 23, 2020, the EPA Administration and Assistant Secretary of the Army for Public Works signed a final rule defining the scope of waters federally regulated under the CWA. The Navigable Waters Protection Rule is the second step of a two-step process intended to review and revise the definition of WOTUS. It is intended to increase the predictability and consistency of the CWA programs by clarifying the scope of WOTUS federally regulated under the CWA. The final rule was posted on April 21, 2020 and became effective June 22, 2020. On December 17, 2020, the State of Florida applied for and received approval to formally transfer permitting authority under the CWA Section 404 from the USACE to FDEP for any project proposing dredge or fill activities within State assumed waters. Florida's Section 404 program became effective on December 22, 2020, upon publication of EPA's approval in the Federal Register.

In addition, s. 373.016, Florida Statutes, states that waters in the state are among its basic resources. If activities in, on, or over wetlands or surface waters cannot be avoided by an activity, it is subject to the conditions set forth in Florida Administrative Code (FAC) Rule 62-330. The USACE, SFWMD, as well as other local governments, have jurisdictional authority over wetlands and surface waters within the study area.

A preliminary assessment of wetlands and surface waters was conducted within the study area utilizing FLUCCS and National Wetland Inventory (NWI) GIS datasets for Lee and Collier Counties.

The study area contains large expanses of freshwater emergent wetlands. These areas are primarily associated with the Big Cypress watershed. Numerous areas of smaller freshwater forested/shrub wetlands are found throughout the study area. Based on a review of recent and historical aerial photography, the majority of the forested, shrub, and herbaceous systems are potentially hydrologically connected during the wet season and would, therefore, fall under the jurisdiction of the SFWMD and FDEP. Qualitative field reviews were not conducted within the study area; however, based on aerial interpretation, it is anticipated that these wetlands are low to medium quality due to the generally developed nature of the study area. Golf courses, roadways, and citrus groves may have altered the overall characteristics of the individual wetlands due to the introduction of nutrient rich chemicals or fertilizers, nuisance vegetation, and ditching associated with agriculture. A field review was conducted on August 4, 2021 to determine the general level of alteration to wetlands throughout the study area. A map depicting the SFWMD wetland land use types within the study area is presented on **Exhibit 11.**

The main wetland systems throughout the study area appear to be accurately depicted in NWI data. In some locations along the corridor, the data does not reflect the most recent development and subsequent change in wetlands. Nonetheless, the combination of NWI, hydric soils, and land use data provides an appropriate level of detail for purposes of this study. **Exhibit 12** depicts the areas mapped as wetlands according to the NWI data.

Soil Classifications

Custom soil resource reports (Custom Soil Resource Report for Collier County Area, Florida (1998) and Lee County, Florida (1984)) were obtained for the study area. Based on the resource report, several upland and wetland soil types occur within the study area. For the purpose of this study, soil data was used to assist with the determination of wetland and upland areas by their hydric soil classification. **Exhibit 13** depicts the NRCS hydric soil types within the study area.

The hydric soils classification shows a much broader expanse of hydric soils than the wetland boundaries mapped within the SFWMD land use dataset or the NWI dataset.

Farmlands

In 1981, the U.S. Congress passed the Agriculture and Food Act containing the Farmland Protection Policy Act (FPPA) and the final regulation was promulgated in 1994. The NRCS is the agency responsible for ensuring that FPPA is implemented. It is the responsibility of other Federal agencies and entities receiving Federal funds to lessen the effects of conversion activities on farmland and to ensure that their programs or activities are compatible, to the extent practicable, with State, local, and private programs to protect farmland. Important farmlands, including lands identified with soils that are prime, unique, or statewide or locally important farmland, are subject to the provisions of the Farmland Protection Policy Act.

In accordance with the 1981 FPPA (Public Law 97-98), important farmland includes all land that is defined as prime, unique, or statewide or locally important. Under the Code of Federal Regulations (7 CFR 657.5) these farmlands are based on soil types. The identification of important farmlands is determined from currently published or interim soil survey maps and data produced and certified by the NRCS National Cooperative Soil Survey Program. Soil map units with component(s) of prime farmland are considered 1) prime farmland where 50 percent or more of the component(s) in the map unit is prime farmland; 2) farmland of statewide importance where less than 50 percent of the component(s) in the map unit is prime farmland but the combination of prime farmland and farmland of statewide importance is 50 percent or more of the map unit; and 3) farmland of local importance where less than 50 percent of the component(s) in the map unit is prime farmland or farmland of statewide importance but the total of prime farmland and farmland of statewide or local importance is 50 percent or more of the map unit. All other soil map units should be shown as not important farmland unless they are unique farmland.

According to the FPPA, prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is also available for these uses. The land could be cropland, pastureland, rangeland, forestland, or other land but not urban built-up land or water.

Unique farmland is land other than prime farmland that is used to produce specific high-value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high-quality and/or high yields of a specific crop when treated and managed according to acceptable farming methods and other conditions, such as nearness to market, that favor the growth of a specific food or fiber crop. Examples of such crops are red tart cherries, citrus, tree nuts, olives, cranberries, fruit, and vegetables.

Consultation with NRCS determines whether the farmland is classified as prime or unique. If an area is considered prime or unique, the FPPA requires a complete site assessment based on the length of time the area was farmed, an evaluation of the surrounding farmland, the level of local farm support services, and the level of urban land in the area.

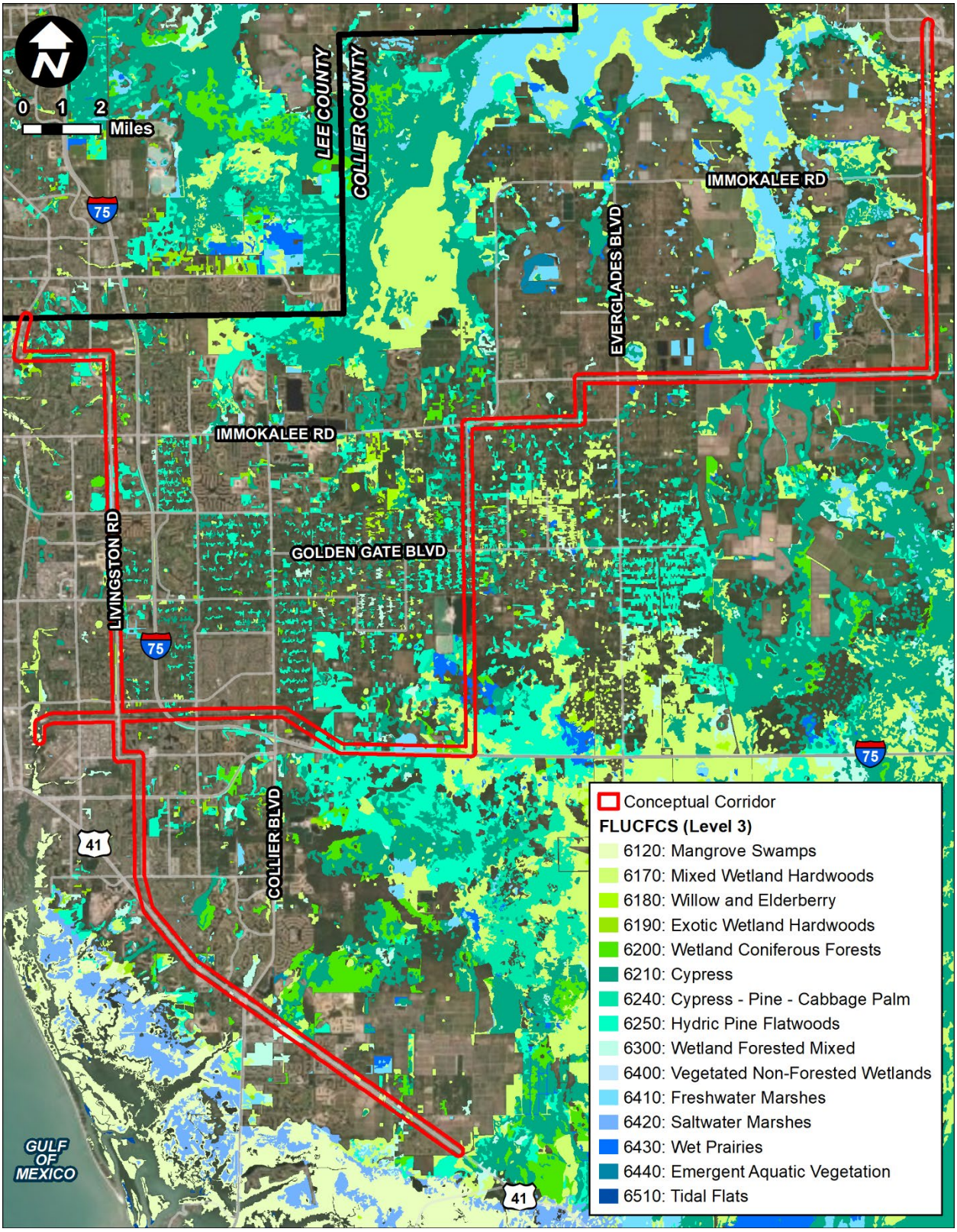
A further analysis of prime farmland was conducted by the University of Florida GeoPlan Center in 2018 and this analysis identifies prime farmland using NRCS soils data and cross-references it with the FLUCCS that are developed by the SFWMD.

Based on a review of the "University of Florida's Prime Farmlands in Florida with associated Level 3 Water Management District Land Use Descriptions" data, most of the prime or unique farmland occurs within the portions of the study area along Oil Well Road, Camp Keais Road, and Immokalee Road. Prime farmland constitutes 14.75% of the study area, of which citrus groves and row crops are the dominant land use types, comprising 11.25% of the study area (**Table 7**). **Exhibit 14** depicts the prime farmlands in the study area.

Table 7: Prime Farmland Land Use

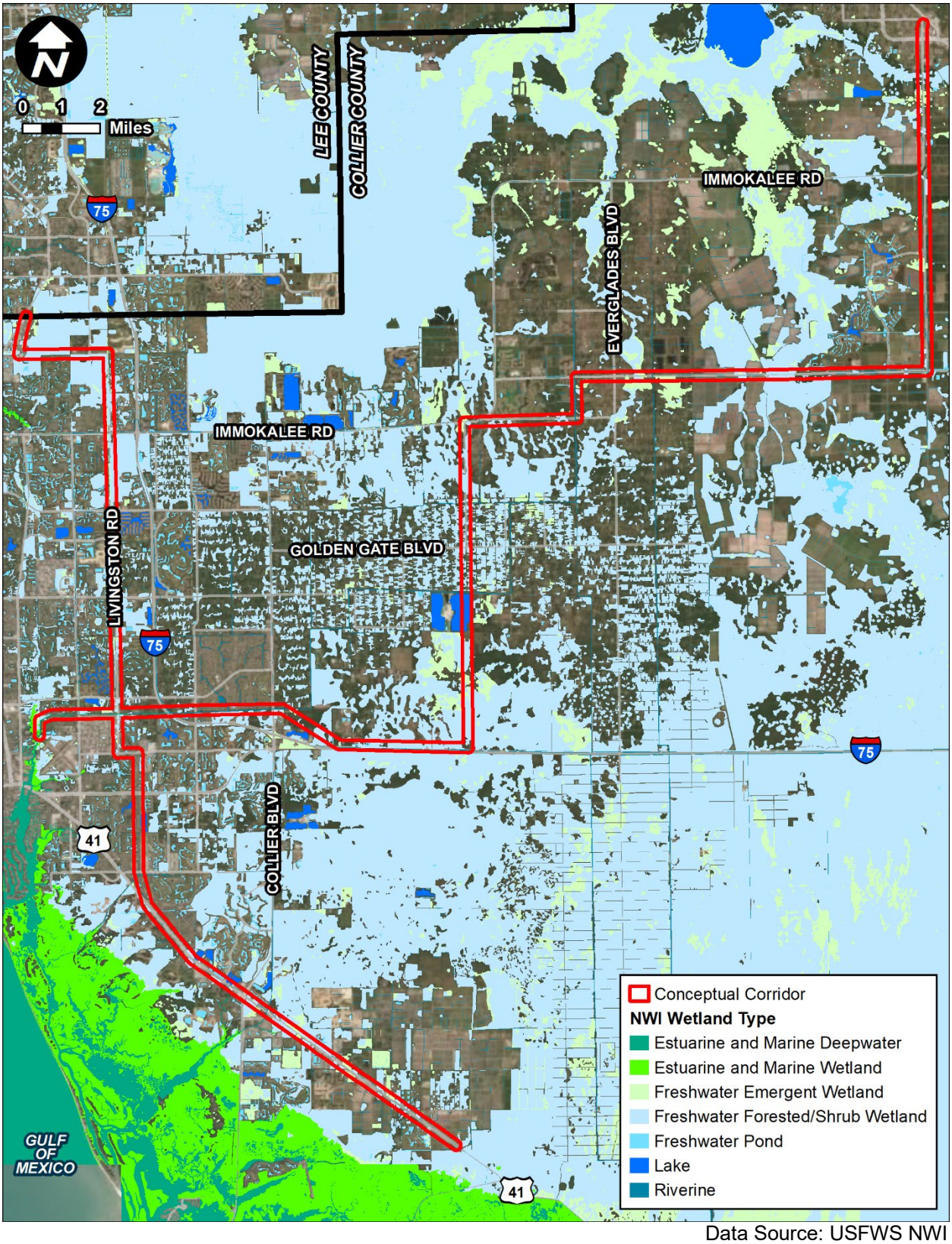
Farmland Land Use Type	Acres	Percent of Prime Lands	Percent of Study Area
Citrus Groves	614	37.15%	5.48%
Fallow Crop Land	137	8.26%	1.22%
Field Crops	120	7.29%	1.07%
Horse Farms	15	0.93%	0.14%
Improved Pasture	71	4.31%	0.64%
Ornamentals	32	1.93%	0.28%
Row Crops	646	39.09%	5.77%
Tree Nurseries	3	0.20%	0.03%
Unimproved Pastures	3	0.20%	0.03%
Woodland Pastures	10	0.63%	0.09%
Total	**1,653**	**100.00%**	**14.75%**

Exhibit 11: Wetlands (SFWMD)



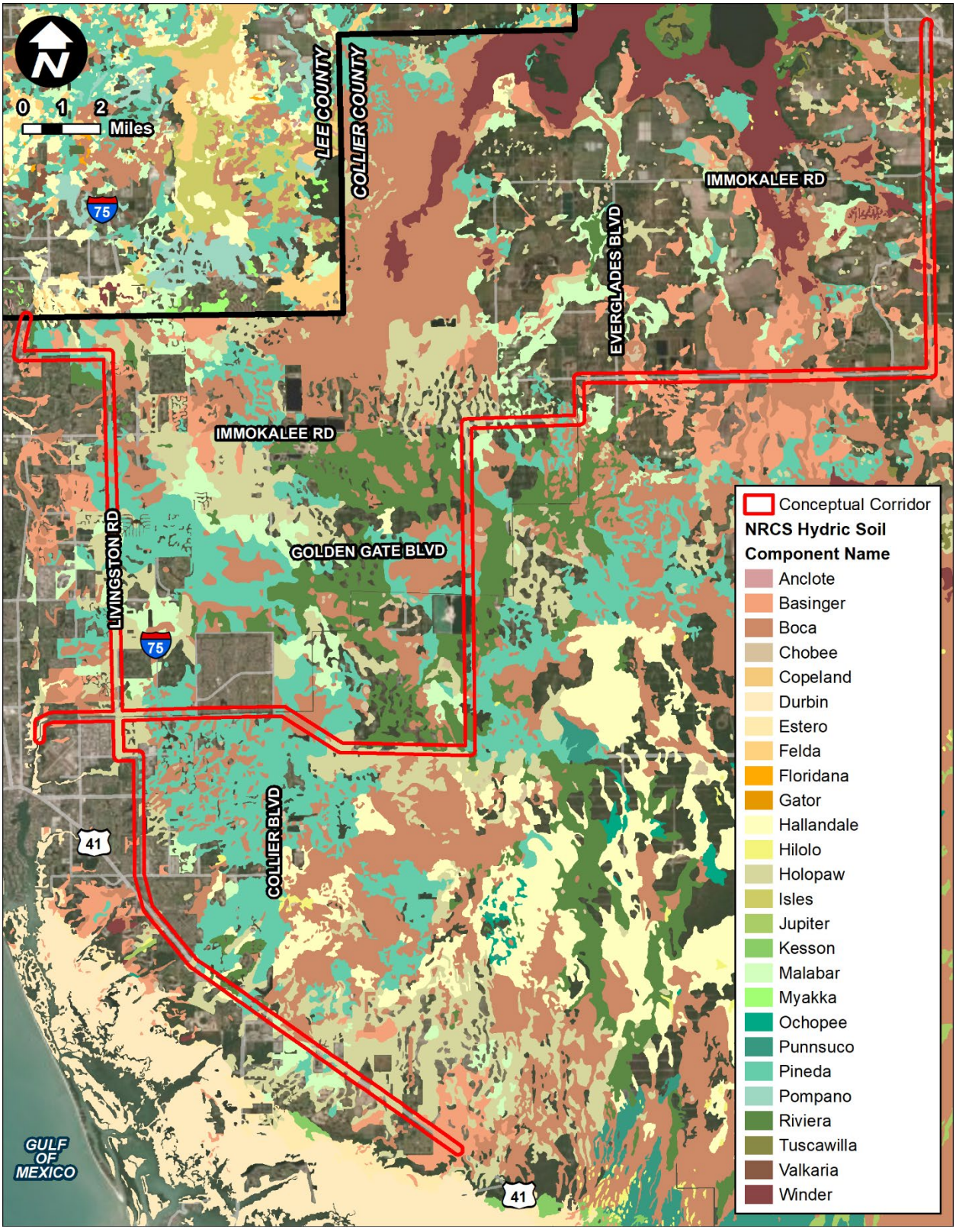
Data Source: SFWMD

Exhibit 12: Wetlands (National Wetlands Inventory)



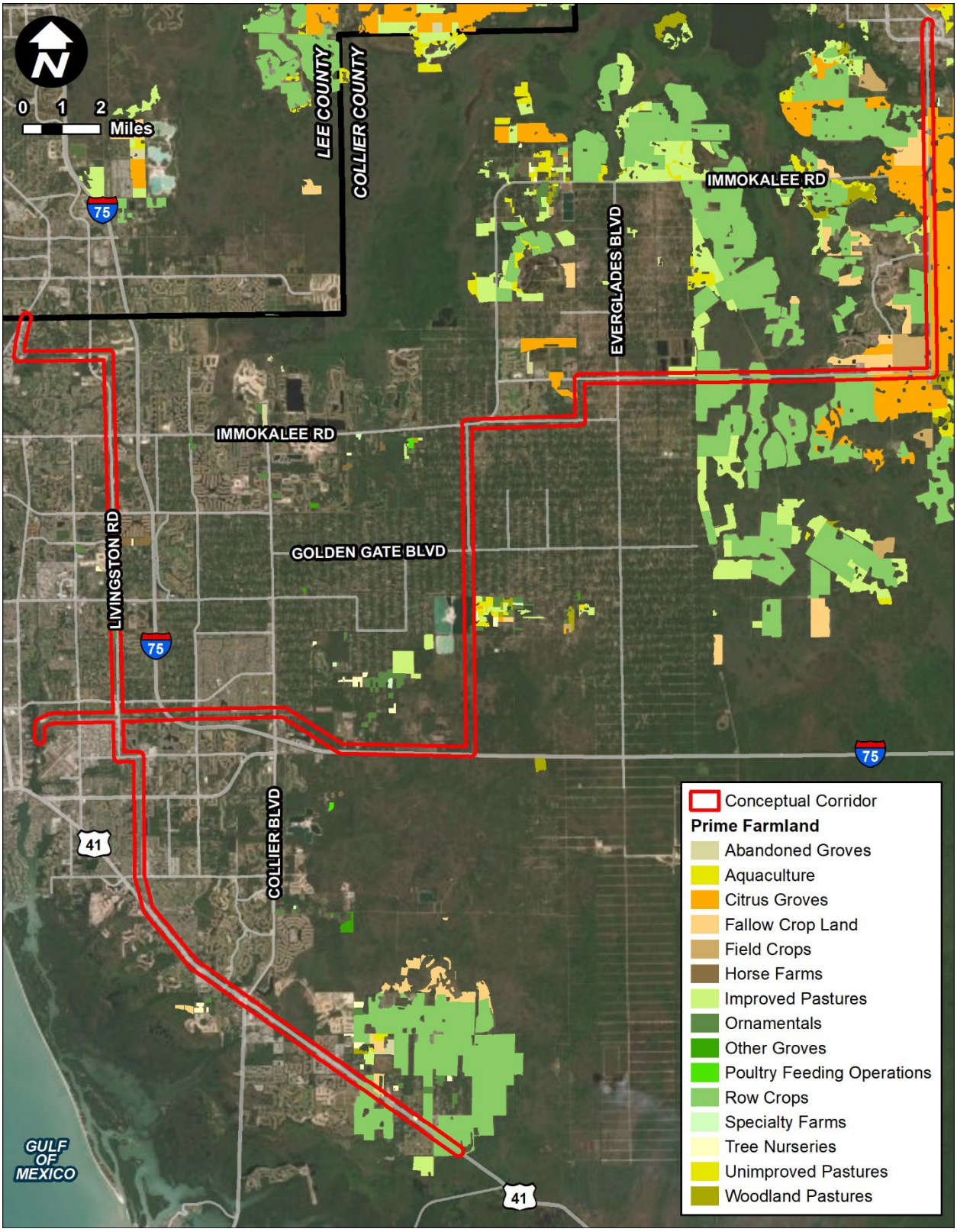
Data Source: USFWS NWI

Exhibit 13: Soils



Data Source: USDA NRCS

Exhibit 14: Prime Farmlands



Data Source: University of Florida GeoPlan Center

Threatened and Endangered Species

The U.S. Fish and Wildlife Service (USFWS) and Florida Fish and Wildlife Conservation Commission (FWC) have authority under the U.S. Endangered Species Act of 1973 (ESA) and the State of Florida's Endangered and Threatened Species Act (s. 379.2291, Florida Statutes) to provide comments and recommendations concerning protected species. Section 7 of the ESA requires federal agencies to ensure activities do not have a detrimental effect on the continued existence of listed species or their habitats. For some species, USFWS has designated consultation areas or critical habitat. If actions may affect state or federally-listed species or critical habitats, then coordination with USFWS and FWC will be required. The following information and datasets were reviewed to determine the likelihood of state and federally-listed species occurring within the study area:

- True color aerial photography (Environmental Science Research Institute's (ESRI) Online Database)
- USGS topographic (ESRI Online Database)
- U.S. Department of Agriculture NRCS Soils GIS Data for Lee and Collier Counties (2017)
- SFWMD Land Use Data (2019)
- SFWMD Permitting Portal (2021)
- USFWS NWI data (2013)
- Endangered & Threatened Wildlife and Plants, 50 CFR 17.11 and 17.12
- "Notes on Florida's Endangered and Threatened Plants," Florida Department of Agriculture and Consumer Services (2010), and 5B-40 FAC
- Florida Natural Areas Inventory (FNAI) database of listed species known to occur in Collier County (2021)
- FNAI Florida Conservation Lands and Florida Forever Board of Trustees Projects database (2021)
- USFWS Wood Stork Key for South Florida (revised 2010)
- USFWS Wood Stork Florida Nesting Colonies and Core Foraging Areas (CFA) Active 2008-2019 (2020)
- "Florida's Endangered and Threatened Species," FWC (2018)
- FWC listed species occurrence data (2017)
- FWC Gopher Tortoise Permitting Guidelines (2017)
- USFWS Consultation Areas and Critical Habitat Maps (2020)

The study area lies within the USFWS consultation areas for the American crocodile (*Crocodylus acutus*), Audubon's crested caracara (*Polyborus plancus audubonii*), Everglade snail kite (*Rostrhamus sociabilis plumbeus*), Florida bonneted bat (*Eumops floridanus*), Florida panther (*Puma concolor coryi*), Florida scrub-jay (*Aphelocoma coerulescens*), red-cockaded woodpecker (*Picoides borealis*), and Southwest plants. Based on a review of the USFWS Critical Habitat Mapper, there is USFWS designated critical habitat within the study area for the Florida manatee (*Trichechus manatus*) located in the Gordon River on the western end of the study area near the Naples Municipal Airport. Additionally, there is proposed critical habitat for the Florida bonneted bat located in the Big Cypress watershed along the I-75 corridor (Alligator Alley) and along US-41 (Tamiami Trail).

Areas identified by FWC as strategic habitat conservation areas (SHCA) are located within the study area. SHCAs are undeveloped natural areas identified by FWC as areas that could provide potential habitat to native plant and wildlife species and therefore may be considered for acquisition as conservation lands. However, these areas have no regulatory implications and have not been and may never be acquired for conservation.

Based on field reconnaissance and database reviews, a listing of the state and federally listed species potentially occurring within the immediate vicinity of the study area has been compiled. **Table 8** lists species that may occur and their likelihood of occurrence. Likelihood of occurrence is based on actual observation of the species, signs of the species (burrows, tracks, scat, etc.), observance of suitable habitat, or documented occurrences of the species within various databases. A Low ranking indicates that preferred habitat for that species was found within the study area, but the species has not been documented within one mile of the study area. A Moderate ranking indicates that suitable habitat exists and the species has been documented within one mile of the study area or the study area is within the species' critical habitat. A High ranking indicates that suitable habitat exists and the species was observed during field reconnaissance.

Table 8: Potential Listed Species and Likelihood of Occurrence

Common Name	Scientific Name	Federal Status	State Status	Comments	Likelihood of Occurrence
Mammals					
Florida bonneted bat	*Eumops floridanus*	E	E	The study area is within USFWS Consultation Area and proposed critical habitat for Florida bonneted bat. No documented occurrences within one mile of the study area; however, suitable nest/roost and foraging habitat is located within the study area.	Moderate
Florida manatee	*Trichechus manatus*	T	T	The study area is within USFWS critical habitat for Florida manatee. No documented occurrences within one mile of the study area; however, suitable habitat is located within the Gordon River.	Moderate
Florida panther	*Puma concolor coryi*	E	E	The study area is within USFWS Consultation Area. Several documented occurrences and suitable foraging habitat within the study area.	Moderate
Florida black bear	*Ursus americanus floridanus*	N*	N*	Several documented occurrences and suitable foraging habitat within the study area.	Moderate
Birds					
Audubon's crested caracara	*Polyborus plancus audubonii*	T	T	The study area is within the USFWS Consultation Area for Audubon's crested caracara. No documented occurrences within one mile of the study area; however, suitable foraging habitat exists within the study area.	Low
Bald eagle	*Haliaeetus leucocephalus*	N**	N**	No active bald eagle nests exist within the study area; however, twelve (12) nests exist within one mile of the study area and suitable foraging and nesting habitat exists within the study area.	Moderate

Common Name	Scientific Name	Federal Status	State Status	Comments	Likelihood of Occurrence
Everglade snail kite	*Rostrhamus sociabilis plumbeus*	E	E	The study area is within the USFWS Consultation Area for Everglade snail kite. No documented occurrences within one mile of the study area; however suitable foraging habitat exists within the study area.	Low
Florida scrub-jay	*Aphelocoma coerulescens*	T	T	The study area is within the USFWS Consultation Area for Florida scrub-jay. Three (3) documented occurrences within one mile of the study area and suitable foraging and nesting habitat exists within the study area.	Moderate
Least tern	*Sternula antillarum*	N	T	Two (2) documented occurrences within the study area and suitable foraging and nesting habitat exists within the study area.	Moderate
Red-cockaded woodpecker	*Picoides borealis*	E	E	The study area is within the USFWS Consultation Area for red-cockaded woodpecker. Two (2) documented occurrences within the study area and suitable foraging and nesting habitat exists within the study area.	Moderate
Wood stork	*Mycteria americana*	T	T	The study area falls within wood stork CFA's. No documented occurrences within the study area; however, foraging and nesting habitat exists within study area.	Low
Florida burrowing owl	*Athene cunicularia*	N	T	No documented occurrences within one mile of the study area; however, foraging and nesting habitat exists within study area.	Low
Florida sandhill crane	*Grus canadensis pratensis*	N	T	No documented occurrences within one mile of the study area; however, foraging and nesting habitat exists within study area.	Low
Little blue heron	*Egretta caerulea*	N	T	No documented occurrences within one mile of the study area; however, foraging and nesting habitat exists within study area.	Low
Reddish egret	*Egretta rufescens*	N	T	No documented occurrences within one mile of the study area; however, foraging and nesting habitat exists within study area.	Low
Roseate spoonbill	*Platalea ajaja*	N	T	No documented occurrences within one mile of the study area; however, foraging and nesting habitat exists within study area.	Low
Southeastern American kestrel	*Falco sparverius paulus*	N	T	No documented occurrences within one mile of the study area; however, foraging and nesting habitat exists within study area.	Low

Common Name	Scientific Name	Federal Status	State Status	Comments	Likelihood of Occurrence
Tricolored heron	*Egretta tricolor*	N	T	No documented occurrences within one mile of the study area; however, foraging and nesting habitat exists within study area.	Low
Reptiles					
American alligator	*Alligator mississippiensis*	T (S/A)	T (S/A)	No documented occurrences within one mile of the study area; however, habitat exists within study area.	Low
American crocodile	*Crocodylus acutus*	T	T	The study area is within the USFWS Consultation Area for the American crocodile. No documented occurrences within one mile of the study area; however, habitat exists within study area.	Low
Eastern indigo snake	*Drymarchon couperi*	T	T	No documented occurrences within one mile of the study area; however, foraging and nesting habitat exists within study area.	Low
Gopher tortoise	*Gopherus polyphemus*	C	T	Several documented occurrences within study area and suitable foraging and burrowing habitat exists within the study area.	Moderate
Florida pine snake	*Pituophis melanoleucus mugitus*	N	T	No documented occurrences within one mile of the study area; however, foraging and nesting habitat exists within study area.	Low

E = Endangered T = Threatened N = Not Listed C=candidate species T (S/A) = Threatened due to Similarity of Appearance
*The Florida Black Bear is still protected under Florida Black Bear Conservation Rule 68A-4.009 (F.A.C.) and the FWC Florida Black Bear Management Plan.
**The Bald eagle is still protected under the Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act and FWC Management Plan regulations.

Florida Bonneted Bat (Eumops floridanus)
The Florida bonneted bat is listed as endangered by the USFWS and FWC. Florida bonneted bats are thought to be exceedingly rare, only occurring in a handful of counties in south Florida, and have one of the most restrictive ranges of any bat species in the U.S. To date, only a few bonneted bat nursery roosts have been documented. Bonneted bats have been detected foraging in a variety of habitats, including semitropical forests with tropical hardwood, pineland, and mangrove habitats, as well as man-made areas such as golf courses and neighborhoods (Robson, 1989). The study area is within the USFWS consultation area for the Florida bonneted bat. No species occurrences have been documented within one mile of the study area; however, potential roosting and foraging habitat is present within the study area.

Florida Manatee (Trichechus manatus)
The Florida manatee is listed as threatened by USFWS and FWC. Manatees inhabit coastal waters, bays, rivers, and occasionally lakes. Manatees require warm water refugia such as springs or cooling effluent during cold weather events. Sheltered coves are important to the manatee for feeding, resting, and calving. The study area is within the USFWS critical habitat for the manatee. No sightings or mortalities have been documented in the study area; however, potential habitat for the manatee is present in the Gordon River on the western end of the study area near the Naples Municipal Airport.

Florida Panther (Puma concolor corvi)
The Florida panther is listed as endangered by USFWS and FWC. Florida panthers utilize a range of different habitats with survival requirements based on presence of food, cover, water, and space. Today only about 120-230 adult panthers exist, primarily in southwest Florida. The study area is within the USFWS consultation area for the Florida panther. Several species occurrences have been documented within the study area in the form of calls, tracks, observations, and roadkill. Potential habitat for the Florida panther is present within the study area.

Florida Black Bear (Ursus americanus floridanus)
The Florida black bear was removed from the FWC list of state-threatened species in August 2012; however, the Florida black bear remains protected under other laws, primarily the Florida Black Bear Conservation Rule 68A-4.009 (FAC) and the FWC Florida Black Bear Management Plan. Black Bear Management Units (BMU) have also been established based on the seven geographically distinct bear subpopulations in Florida. The study area is located within the South BMU with bears listed as occasionally occurring in the study area.

Black bears are adaptable and inhabit a variety of forested habitats including seasonally inundated pine flatwoods, tropical hammocks, hardwood swamps and xeric sand pine-scrub oak communities. Based on a review of GIS databases, there are several black bear occurrences in the form of calls, sightings, and roadkill within the study area (see **Exhibit 15**).

Audubon's Crested Caracara (Polyborus plancus audubonii)
Audubon's crested caracara is listed as threatened by USFWS and FWC. Caracaras prefer open land, including pastures and dry prairie with cabbage palm and/or live oak hammocks and shallow ponds or sloughs. They are often observed foraging for carrion along roadsides throughout south central Florida. Nesting occurs within cabbage palm trees, or live oaks, if cabbage palms are not present. Typically, a pair will maintain the same territory for several years. The study area is within the USFWS consultation area for the crested caracara. No species occurrences have been documented within one mile of the study area; however, potential nesting and foraging habitat for the crested caracara is present within the study area.

Bald Eagle (Haliaeetus leucocephalus)
The bald eagle is not listed by USFWS or FWC but is protected by the Bald and Golden Eagle Protection Act. Bald eagle nests are generally found in high pine trees or cell phone towers with the nest being used year after year by the same pair. The nests are typically located near lakes, marshes or coastlines where foraging habitat is available. Nests are reused each year with new material added, often resulting in very large nests. Disturbance too close to the nest tree or destruction of the nest tree can cause abandonment of the nesting site. According to the FWC's approved Bald Eagle Management Plan, 2008, a 660-foot radius buffer from an active nest must be maintained for all activities during anytime of the year. Seventeen active nests are located within one mile of the study area and potential nesting and foraging habitat is present within the study area.

Everglade Snail Kite (Rostrhamus sociabilis plumbeus)
The Everglade snail kite is listed as endangered by USFWS and FWC. Snail kites prefer large open freshwater marshes and lakes with shallow water and a low density of emergent vegetation. They nest solitarily, or in loose colonies, sometimes in association with other water birds. Nests are found in a variety of vegetation types, including trees, shrubs, and even cattails and bulrushes. Snail kites prey almost exclusively on freshwater apple snails (*Pomacea paludosa*). The study area is within the USFWS consultation area for the snail kite. No species occurrences have been documented within one mile of the study area; however, potential habitat for the snail kite is present within the study area.

Florida Scrub-Jay (Aphelocoma coerulescens)
The Florida scrub-jay is listed as threatened by USFWS and FWC. This species prefers low growing oak scrub habitats, including sand pine scrub and scrubby flatwoods found on sandy soils. The study area is located in the USFWS consultation area for the Florida scrub-jay. Three documented species occurrences have been documented within one mile of the study area and potential nesting and foraging habitat for the scrub-jay is present within the study area.

Least Tern (Sternula antillarum)
The least tern is listed threatened by FWC. Least tern habitat typically consists of coastal areas throughout Florida, including beaches, lagoons, bays, and estuaries. However, the species can also be found in more inland areas. This species often nests on gravel rooftops and other artificial nest sites, such as spoil islands, dredged material deposits, construction sites, causeways, and mining lands. Nesting areas have a substrate of well-drained sand or gravel and usually have little vegetation. Least terns have been documented within one mile of the study area and potential nesting and foraging habitat is present within the study area.

Red-Cockaded Woodpecker (Picoides borealis)
The red-cockaded woodpecker (RCW) is listed as endangered by USFWS and FWC. RCWs inhabit open, mature pine woodlands that have a diversity of grass and shrub species. Preferred habitat for this species includes longleaf pine flatwoods in north and central Florida and mixed longleaf pine and slash pine in south-central Florida. The study area is located within USFWS consultation area for the red-cockaded woodpecker. Two species occurrences have been documented within the study area and potential nesting and foraging habitat for this species is present within the study area.

Wood Stork (Mycteria americana)
The wood stork is listed as threatened by USFWS and FWC. Foraging habitats include cypress domes, mixed forested wetlands, freshwater marshes and sloughs, and sawgrass marshes. Additionally, drainage canals, shallow swales, golf courses and furrows in agricultural fields have become alternate foraging areas in Florida as long as there are appropriate foraging conditions. Five wood stork Core Foraging Areas (CFA) intersect the study area including Barron Collier, Collier – Hendry, Corkscrew, Okaloacoochee Slough, and Sadie Cypress. No species occurrences have been documented within one mile of the study area; however, potential foraging and nesting habitat is present within the study area.

Florida Burrowing Owl (Athene cunicularia floridana)
The Florida burrowing owl is listed as threatened by FWC. Burrowing owls will dig their own burrows in sparsely vegetated, sandy soils. Natural habitats include dry prairies and sandhill; however, burrowing owls can also inhabit urban and ruderal areas such as pastures, agricultural lands, and parks. Burrowing owls have been documented within one mile of the study area and potential burrowing and foraging habitat is present within the study area.

Florida Sandhill Crane (Grus canadensis pratensis)
The Florida sandhill crane is listed as threatened by FWC. This crane is non-migratory and inhabits open grasslands, marshes, swampy edges of lakes and ponds, riverbanks, and occasionally pine savanna throughout the state. Nesting occurs within herbaceous wetlands associated with freshwater ponds or marshes. No species occurrences have been documented within one mile of the study area; however, potential foraging and nesting habitat is present within the study area.

Little Blue Heron (Egretta caerulea)
The little blue heron is listed as threatened by FWC. This medium-sized, slate-blue, wading bird forages in shallow marine, brackish, or freshwater areas, including tidal ponds, sloughs, marshes, and human-created impoundments. It nests in colonies in woody shrubs that are separated from land by open water. No species occurrences have been documented within one mile of the study area; however, potential foraging and nesting habitat is present within the study area.

Reddish Egret (Egretta rufescens)
The reddish egret is listed as threatened by FWC. This egret inhabits and forages in shallow water of variable salinity. Broad, open, marine tidal flats and shorelines with little vegetation are ideal feeding areas. Also important are salt evaporation pools and lagoons, often located inside mangrove keys or just inside shoreline on mainland. The species typically nests on coastal mangrove islands, or in Brazilian pepper on manmade dredge spoil islands, near suitable foraging habitat. No species occurrences have been documented within one mile of the study area; however, potential foraging and nesting habitat is present within the study area.

Roseate Spoonbill (Platalea ajaja)
The roseate spoonbill is listed as threatened by FWC. The spoonbill inhabits and forages in shallow water of variable salinity, including marine tidal flats and ponds, coastal marshes, mangrove-dominated inlets and pools, and freshwater sloughs and marshes. The species primarily nests in mixed-species colonies on coastal mangrove islands or in Brazilian pepper on man-made dredge spoil islands near suitable foraging habitat. No species occurrences have been documented within one mile of the study area; however, potential foraging and nesting habitat is present within the study area.

Southeastern American Kestrel (Falco sparverius paulus)
The southeastern American kestrel is listed as threatened by FWC. The kestrel's range is limited by nest and perch site availability, foraging habitat, and food supply. Kestrels are secondary cavity nesters using abandoned woodpecker cavities. Nests are commonly found in open pine habitats, woodland edges, prairies, and pastures throughout much of Florida. In north central Florida, kestrels prefer open pine woodlands with adjacent open, pasture-like areas. Nest cavities are located in tall dead trees or utility poles generally with an unobstructed view of surroundings. Open patches of grass or bare ground are necessary for kestrels to effectively utilize flatwoods settings for foraging, since thick palmettos may prevent detection of prey. No species occurrences have been documented within one mile of the study area; however, potential foraging and nesting habitat is present within the study area.

Tricolored Heron (Egretta tricolor)
The tricolored heron is listed as threatened by FWC. This heron inhabits and forages in cypress domes, scrub cypress, freshwater marshes and sloughs, and sawgrass marshes. Additionally, drainage canals, shallow swales, golf courses and furrows in agricultural fields have become alternate foraging areas in Florida. No species occurrences have been documented within one mile of the study area; however, potential foraging and nesting habitat is present within the study area.

American Alligator (Alligator mississippiensis)
The American alligator is listed as threatened due to similarity of appearance to other imperiled crocodilians by USFWS and FWC. Alligators are found statewide in wetland habitats, including freshwater marshes, swamps, lakes, and rivers. The species is most active from spring to fall, with nesting in late spring and hatchlings emerging in the summer. No species occurrences have been documented within one mile of the study area; however, potential habitat is present within the study area.

American Crocodile (Crocodylus acutus)
The American crocodile is listed as threatened by USFWS and FWC. American crocodiles are a shy and reclusive species. They live in coastal areas throughout the Caribbean and occur at the northern end of their range in south Florida. They live in brackish or saltwater areas, and can be found in ponds, coves, and creeks in mangrove swamps. Nesting occurs in late April and early May on land and above high tide marks. The study area is within the USFWS consultation area for the American crocodile. No species occurrences have been documented within one mile of the study area; however, potential habitat is present within the study area.

Eastern Indigo Snake (Drymarchon couperi)
The eastern indigo snake is listed as threatened by USFWS and FWC. This species is a very large, stout-bodied, shiny black snake and is widespread but uncommon in Florida. Generally, this species lives and hunts in a wide variety of habitats and their territories can cover large tracts of land. Preferred Florida habitats include dry glades areas, tropical hammocks, fields and some flatwoods areas, disturbed areas and mangrove swamps as well as upland and even urban habitats. The indigo snake can be associated with gopher tortoise burrows as a commensal especially in the northern portion of its range. No species occurrences have been documented within one mile of the study area; however, potential foraging and nesting habitat is present within the study area.

Gopher Tortoise (Gopherus polyphemus)

The gopher tortoise is a candidate species for USFWS listing and listed as threatened by FWC. Gopher tortoises inhabit a variety of Florida's native upland communities including sandhills, scrub, xeric oak hammock, and dry pine flatwoods. They also commonly use disturbed habitats such as pastures, old fields, and road shoulders. Tortoises excavate deep burrows for refuge from predators, weather, and fire. Additionally, their burrows serve as important shelter for more than 300 other animal species. Gopher tortoises have been documented within one mile of the study area and potential burrowing and foraging habitat is present within the study area.

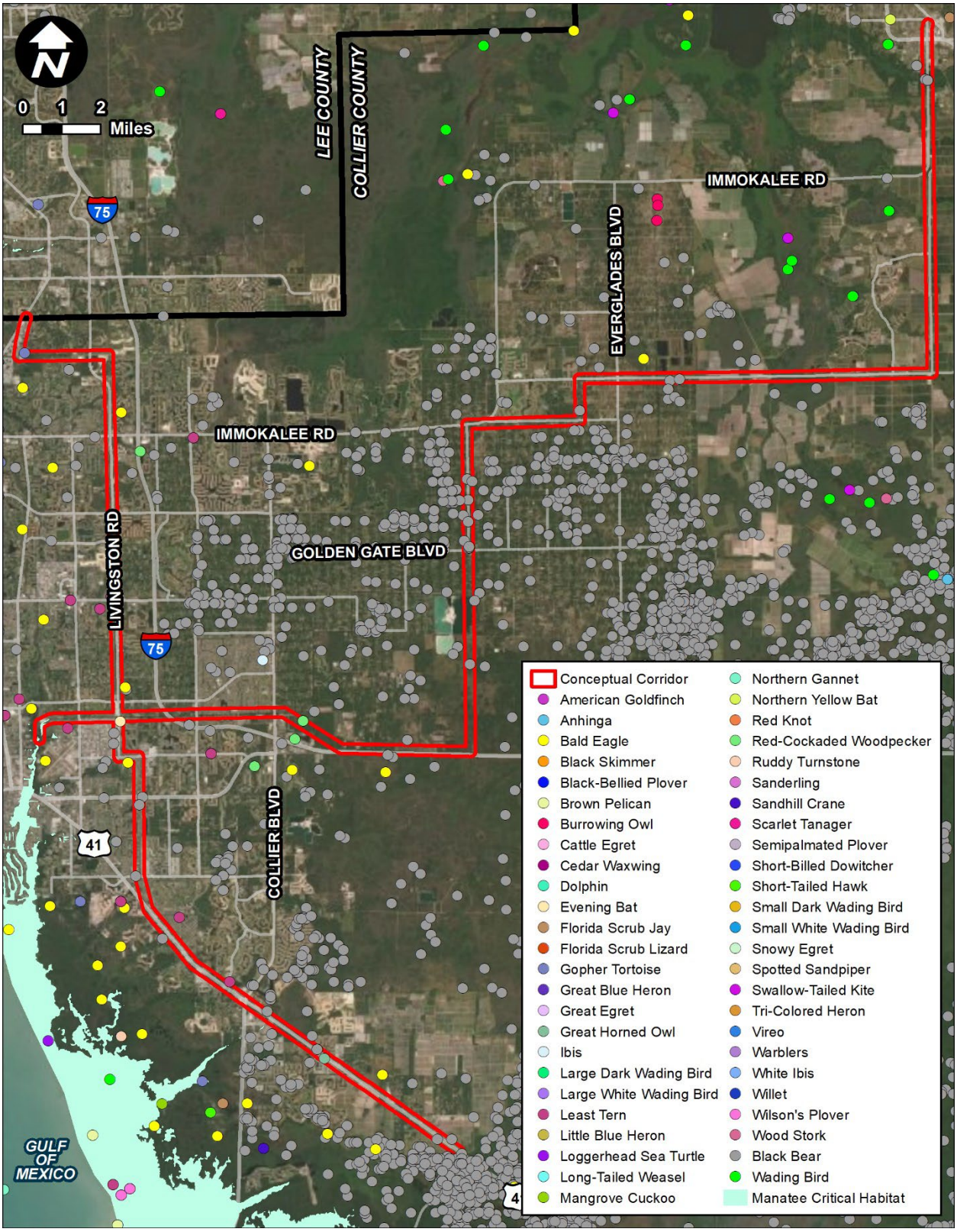
Florida Pine Snake (Pituophis melanoleucus mugitus)
The Florida pine snake is listed as threatened by FWC. This species is a large, stocky, tan or rusty colored snake with an indistinct pattern of large blotches on a lighter background. This snake is found throughout the state, excluding the Florida Keys, the Everglades, extreme southwest Florida, and immediately north of Lake Okeechobee. It is found most often in open, pine-turkey oak woodlands and abandoned fields, along with scrub, sandhills, and longleaf pine forest, as it requires dry sandy soils for burrowing. Florida pine snakes spend most of their time underground in pocket gopher or gopher tortoise burrows. No species occurrences have been documented within one mile of the study area; however, potential habitat is present within the study area.

Listed Plant Species
The Florida Department of Agriculture and Consumer Service's *Notes on Florida's Threatened and Endangered Plants*, and Richard Wunderlin's *Guide to Vascular Plants of Florida*, were consulted to assess habitat requirements for listed species. Based on the available habitats, state and federally-listed plant species have the potential to occur within the study area.

Essential Fish Habitat

A review of the National Marine Fisheries Service (NMFS) essential fish habitat (EFH) GIS data and literature was conducted, and it was determined that the study area does not contain EFH. Should revised EFH GIS data and literature become available, a further analysis will be conducted during a subsequent phase of the project.

Exhibit 15: Listed Species



Data Sources: FWC, USFWS

Conservation and Mitigation Areas

According to the FNAI Florida Conservation Lands GIS and SFWMD permitting databases, there are three areas that are identified as conservation areas within the study area. No mitigation lands are located within the study area. Listed below are the conservation lands within and adjacent to the study area and these areas are depicted on **Exhibit 16**. The conservation lands within the study area are also summarized in **Table 9**.

The Railhead Scrub Preserve, managed by the Conservation Collier Program of Collier County, is a 135-acre natural area located in the northwest corner of Collier County, south of the Railhead Industrial Park and East of Old US 41. The preserve protects significant areas of xeric upland habitat surrounded by industrial and commercial developments to the west and north, a residential community to the east, and Krehling Industries, Inc. to the south. This preserve is representative of several of the typical habitat types found in Collier County, including seasonally flooded cypress, hydric flatwoods, pine flatwoods and xeric oak scrub. This last habitat type is rapidly disappearing in Collier County due to its higher elevation and well drained soils, which make it ideal for development. For this reason, xeric oak scrub is a priority habitat for preservation in the Conservation Collier Program. This preserve contains one of the last few significant sized (approx. 50 acres) areas of xeric oak scrub in Collier County. Additionally, 409 species of plants have been identified on the preserve site, including ten species protected by the State of Florida.

The Gordon River Greenway, managed by the Southwest Florida Land Preservation Trust, is a 140-acre ecological corridor in the heart of urban Naples with pine flatwoods, scrub, and mangrove habitat present. Native plants found in this nature preserve include slash pine (*Pinus elliottii*), cabbage palm (*Sabal palmetto*), gumbo limbo (*Bursera simaruba*), live oak (*Quercus virginiana*), wild coffee (*Psychotria nervosa*), saw palmetto (*Serenoa repens*), myrsine (*Rapanea punctata*), bracken fern (*Pteridium aquilinum var pseudocaudatum*), white indigo berry (*Randia aculeata*), buttonwood (*Conocarpus erectus* var. *sericeus*), red mangrove (*Rhizophora mangle*), white mangrove (*Laguncularia racemosa*), and blazing star (*Liatris* spp.).

The Rookery Bay National Estuarine Research Reserve (Reserve) is owned and managed by the Florida Department of Environmental Protection. The Reserve encompasses 110,000 acres of coastal lands and waters, providing habitat for a wide variety of plants and animals. From barrier island beach and mangrove forest to freshwater marsh and pine flatwoods, these habitats provide foraging and nesting areas for a variety of animals. Although the Reserve does not fall within the study area, a portion of FDEP owned reserve lands that is in conjunction with the Reserve is located along US 41. Coordination with FDEP for potential impacts to this area is recommended.

Conservation Collier is also in the process of considering acquisition of 36 parcels totaling 252 acres in the vicinity of the study area, located east of Collier Boulevard and north of I-75. These properties are also located directly to the east of a 967-acre property acquired by Collier County in 2020. While the recent 967-acre acquisition by Collier County may include a variety of public uses, including a new roadway, both it and the properties being evaluated by Conservation Collier will be considered in the evaluation of alternatives for the Paradise Coast Trail.

It is important to note that the initial PCT conceptual corridor stopped at the state lands boundary for Collier-Seminole State Park so that property is not identified within this chapter. However, under feasibility analysis and alternatives development, the trail corridor was extended along US 41 to the Collier-Seminole State Park entrance road. Details about connecting the trail to the entrance road and seeking are included in **Chapter 3** and **Chapter 4**.

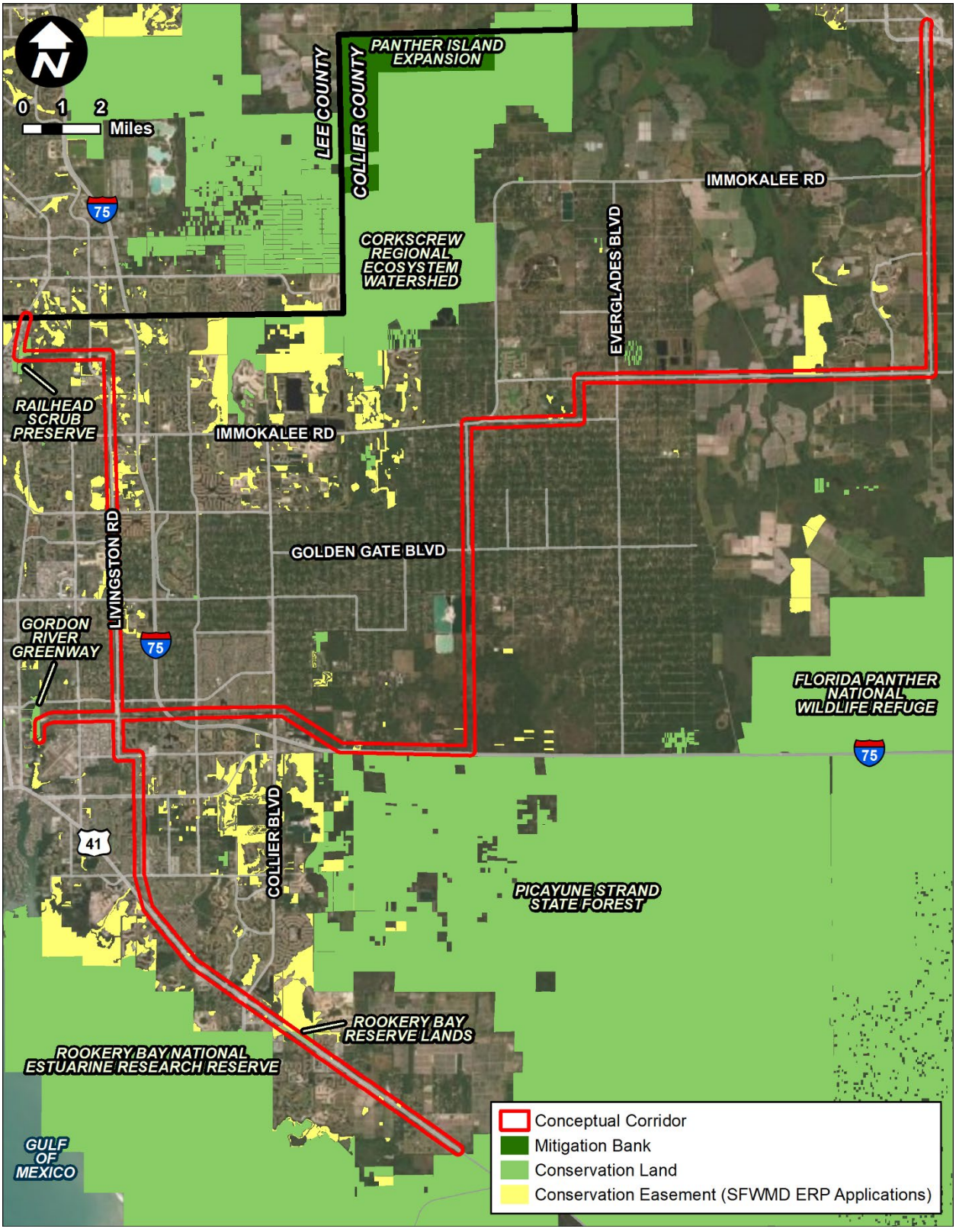
Table 9: Conservation Lands and Mitigation Banks within the Study Area

Conservation Land/ Mitigation Bank Name	Agency/Management Responsibility	Acres within Study Area	Percentage (%) of Study Area
Railhead Scrub Preserve	Conservation Collier - Collier County	54.33	0.5%
Gordon River Greenway	Southwest Florida Land Preservation Trust	40.34	0.6%
Rookery Bay National Estuarine Research Reserve	FDEP	31.41	0.3%
Total		**126.08**	**1.4%**

Resiliency

US 41 (Tamiami Trail) is a major component in the southern end of the conceptual corridor study area, so it will be important to coordinate trail development and improvements to existing paths along this roadway with FDOT's resiliency efforts for the state highway system. The Department's efforts include identifying risks related to storm events and flooding, assessing potential impacts, and employing strategies to avoid, mitigate, or eliminate impacts. During coordination with the Collier-Seminole State Park, it was noted by park staff that a small segment of existing shared use path along US 41 north of the park can flood during routine storm events. According to the Sea Level Scenario Sketch Planning Tool funded by FDOT and administered by the University of Florida GeoPlan Center, portions of US 41 are projected to be potentially impacted by sea level rise by 2040 (US Army Corps of Engineers LOW Scenario). Issues like these will require full consideration of how to effectively develop a resilient trail system.

Exhibit 16: Conservation and Mitigation Areas



Data Sources: FDEP, FNAI, SFWMD

Cultural, Historic, & Archaeological Resource Inventory

An inquiry was made to the Florida Department of State, State Historic Preservation Officer (SHPO), Division of Historical Resources, Florida Master Site File (FMSF) regarding the presence of known historical or archaeological findings within the study area. According to SHPO, eight (8) archaeological resources and thirteen (13) historical resources were found within the study area. Table 9 includes the roster of cultural resources within the study area as provided by SHPO. and roster of historic/archaeological resources within the study area is attached as **Exhibit 17**.

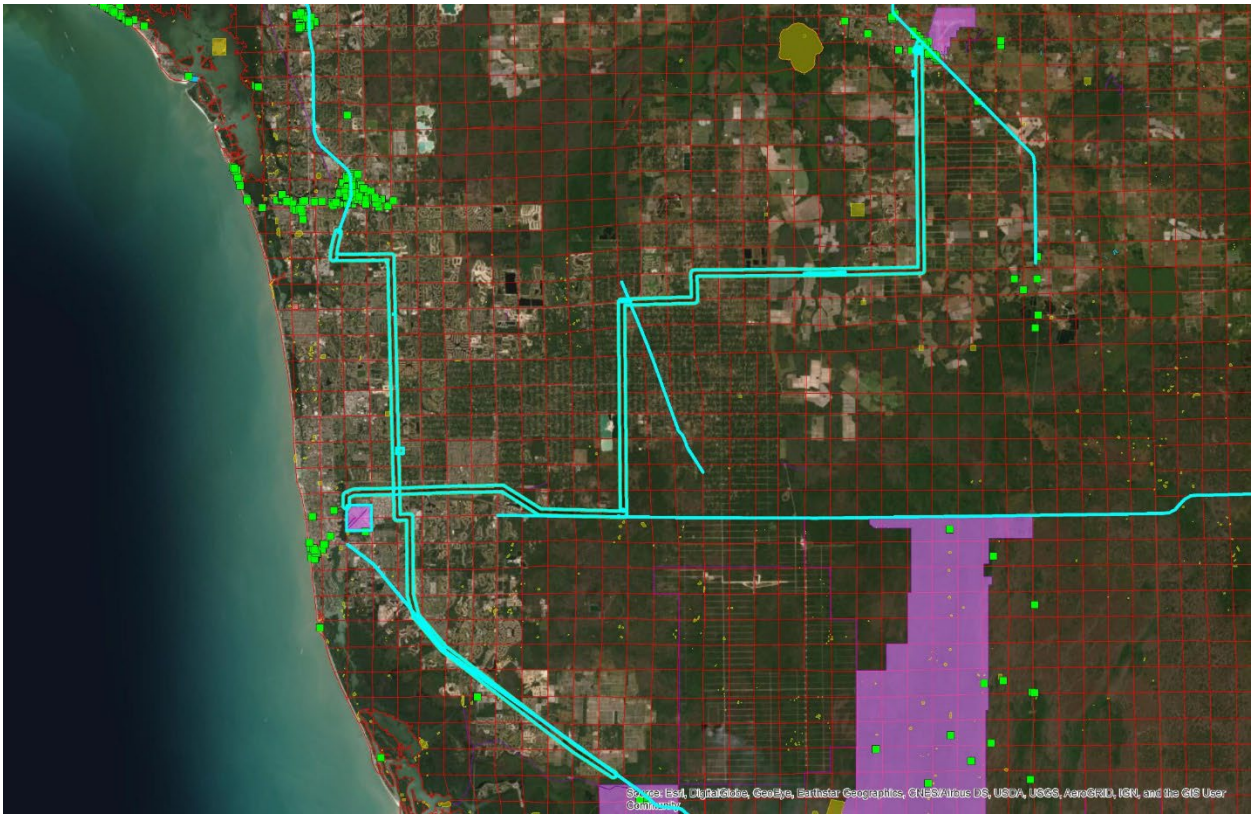
As part of the permitting process, SHPO is a reviewing agency for applications and additional coordination is recommended to determine if a Cultural Resource Assessment Survey (CRAS) would be required when the ultimate trail alignment has been determined.

Table 10: Roster of Historic/Archaeological Resources

Site ID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
CR00183	AR	CONCH	unsp		Insufficient Info	
CR00229	AR	POND APPLE HOLE				
CR00632	SS	IMMOKALEE HOUSE #1	NE CORN MAIN ST & 2ND ST, IMMOKALEE			
CR00697	AR	MULLBERRY MIDDEN	NAPLES GV			
CR00711	AR	MAYBEEA	NAPLES			
CR00737	AR	LIVINGSTON ROAD	NONE < 4 MILES		Not Eligible	
CR00791	AR	Twenty Oaks Island Site			Not Eligible	
CR00823	BR	LEE TIDEWATER CYPRESS LOGGING TRAM TREST	County Road 846 Immokalee Road	1950c	Not Eligible	
CR00927	RG	US-41		Linear Resource - 1 Contrib Resources	Eligible	
CR00928	RG	Tamiami Canal		Linear Resource - 1 Contrib Resources	Eligible	
CR00965	RG	Collier Enterprise Trail	none	Rural Historic Landscape - 1 Contrib Resources	Insufficient Info	

Site ID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
CR00978	AR	Airport Interface Site	Naples		Not Eligible	
CR01095	RG	Naples Municipal Airport	Naples	Designed Historic Landscape - 1 Contrib Resources	Not Eligible	
CR01104	RG	Alligator Alley/Everglades Parkway	Naples/Andytown	Linear Resource - 1 Contrib Resources	Eligible	
CR01158	RG	Bethune Education Center	Immokalee	FMSF Building Complex - 5 Contrib Resources	Not Eligible	
CR01303	AR	Kam Luck Drive Site	Naples		Insufficient Info	
CR01309	RG	SR 29	Immokalee	Linear Resource - 1 Contrib Resources	Not Eligible	
CR01398	RG	Lee Tidewater Main Tram	Golden Gate Estates	Linear Resource	Insufficient Info	
CR01503	RG	Cocohatchee Canal	Naples	Linear Resource - 1 Contrib Resources	Not Eligible	
CR01504	RG	Corkscrew Canal	Naples	Linear Resource - 1 Contrib Resources	Not Eligible	
LL02445	RG	CSX Railroad	Bonita Springs	Linear Resource	Insufficient Info	

Exhibit 17: Cultural, Historic, & Archaeological Resource Inventory



Source: State of Florida Division of Historical Resources

Contamination

Utilizing data from FDEP's Contamination Locator online map application, potential contamination concerns were identified in the study area that will be considered in the evaluation of trail alignment alternatives. The potential contamination locations in relation to the PCT conceptual corridor are depicted on **Exhibit 18**. Descriptions of the contamination categories depicted are found below.

Brownfields

Sites in this category are being cleaned up under Florida's Brownfields Redevelopment Program. Brownfields are properties that are abandoned or underutilized due to actual or perceived contamination. This program provides legal and financial incentives to persons who voluntarily clean up and redevelop brownfield sites in accordance with the program requirements.

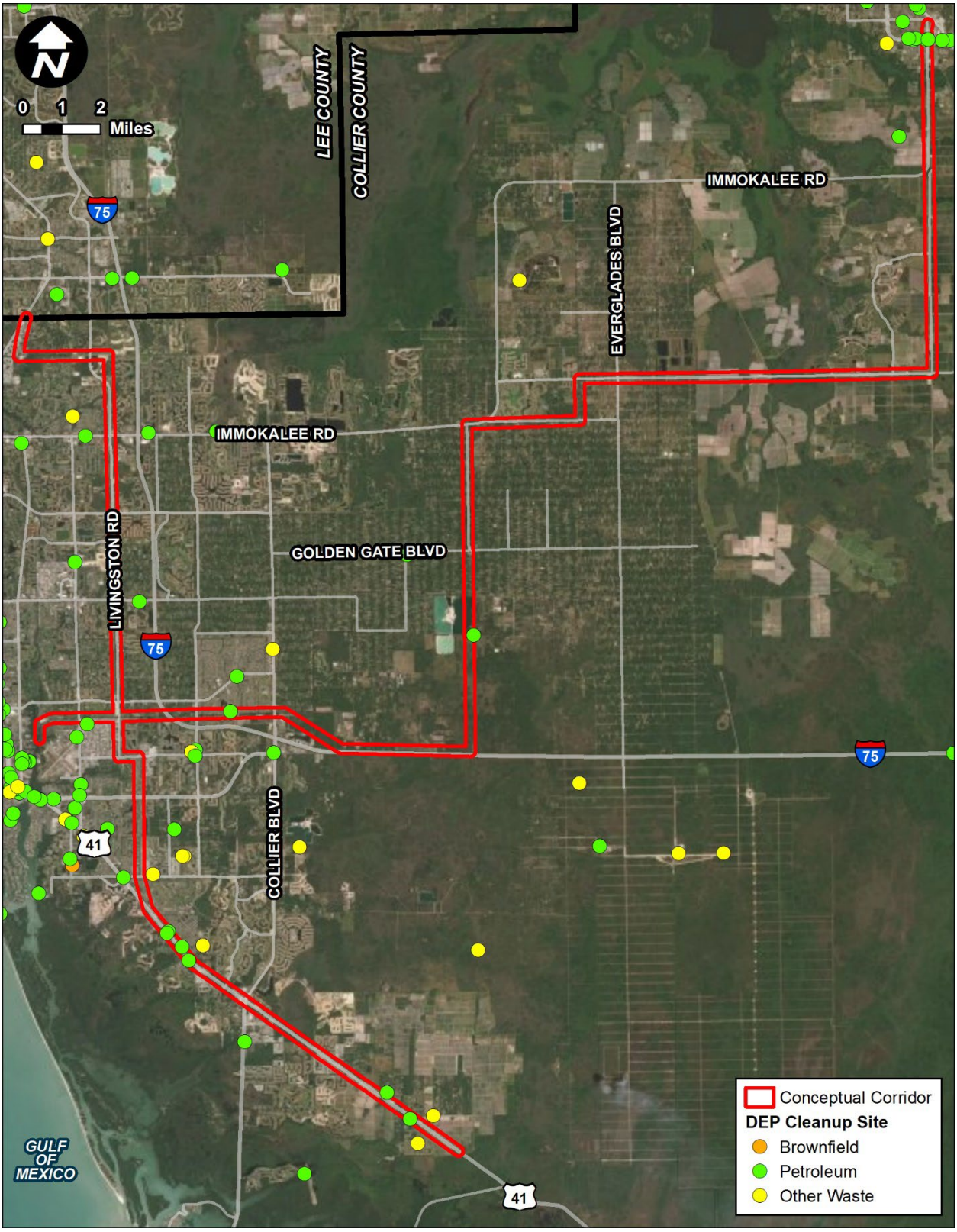
Petroleum

These are sites contaminated by discharges of petroleum and petroleum products from underground and above ground stationary petroleum storage systems. Many of these sites are eligible to be cleaned up by the FDEP (in priority order) while others will be cleaned up by the party responsible for the contamination, under FDEP's direction.

Other Waste

- Dry-cleaning: Sites contaminated with dry-cleaning solvents that are eligible to be cleaned up by the FDEP
- Responsible Party: Sites that will be cleaned up by the party responsible for the contamination or by a party that did not cause the contamination but has accepted responsibility for cleanup
- State Funded: Sites that will be cleaned up by the FDEP because there is no party identified that is responsible for the contamination or able to clean it up
- State-Owned Lands Cleanup: Sites on state properties (such as state parks or state-owned buildings) that will be cleaned up by the FDEP
- Hazardous Waste: Sites at regulated hazardous waste facilities that will be cleaned up by the facility owner or operator in accordance with the federal hazardous waste program.

Exhibit 18: Potential Contamination Sites



Chapter 3.
Systemwide Feasibility Analysis

This Systemwide Feasibility Analysis provides the results of the planning-level evaluation conducted to determine the initial feasibility of developing the Paradise Coast Trail (PCT) corridor as a shared use trail. This analysis, which builds on the existing conditions summary, public and stakeholder input, and partner agency guidance, utilizes a diverse set of evaluation criteria to evaluate the corridor and alternatives.

Methodology Overview

For purposes of feasibility analysis and based upon existing conditions evaluation, the PCT was divided into five major connections between key destinations. These five connections are:

- Connection 1 – Planned Estero-Bonita Rail Trail to Rich King Memorial Greenway
- Connection 2 – Rich King Memorial Greenway to Collier-Seminole State Park
- Connection 3 – Baker Park/Gordon River Greenway to Paradise Coast Sports Complex
- Connection 4 – Paradise Coast Sports Complex to Ave Maria Town Center
- Connection 5 – Ave Maria Town Center to Immokalee Community Park

These connections were identified with input from agency partners and in consideration of the major destinations to be connected. Each connection was evaluated, and potential alternatives were identified. For Connections 1 to 4, at least two alternative trail connections were identified based upon available opportunities. Connection 5 only consists of one alternative due to the lack of a viable alternative.

See **Exhibit 23** for an overview map of the PCT Connections and Alternatives.

Each of the alternatives was evaluated relative to more than 20 criteria within the following categories:

- Safety and Trail Experience
- Transportation Network
- Potential Environmental Effects
- Social/Economic Considerations
- Right-of-Way
- Cost Estimates

See **Table 12** for the Paradise Coast Trail – Alternatives Evaluation Matrix. Although the Evaluation Matrix includes a significant amount of information, it provides the ability to compare all connections and alternatives together. The results of the analysis for each of the five connections is presented below, inclusive of the respective alternatives. For each connection, the following information is provided:

- Connection Overview and Highlights
- Connection Map
- Table of Connection-specific Criteria from Alternatives Evaluation Matrix
- Descriptions of Alternatives

The five connection summaries are followed by a **comparison of key opportunities and challenges** for each of the connections and alternatives **(Table 18)**. This information provides the basis for the general recommendations in the Implementation Action Plan **(Chapter 4)**.

Locational Opportunities and Constraints

As described in Chapter 1, the proposed location of the PCT corridor was initially shaped by alignments identified in the Collier MPO Bicycle and Pedestrian Master Plan and related planning of regional and state trail systems. The subdivided development patterns in the vicinity of the proposed PCT offer limited linear corridor opportunities to locate the trail. Many subdivisions and communities within the County are gated and/or have enclosed roadway networks. Therefore, it is critical to maximize opportunities along existing linear corridors such as utility rights-of-way, canals, railroads, and roadways.

FPL's utility corridor was utilized for the Rich King Memorial Greenway and an 8+ mile FPL utility easement adjacent to Livingston Road is proposed as a major PCT segment. However, there are no other available utility corridors that would be an option for the PCT between the desired hubs that it is connecting.

While canals can sometimes be an appropriate linear facility to locate a trail, significant segments of the canals in the vicinity of the PCT are highly developed. For example, the westernmost one-mile section of Golden Gate Canal within the study area includes 48 separate private and commercial lots adjacent to the canal, many of which include docks and other facilities on or along the waterway.

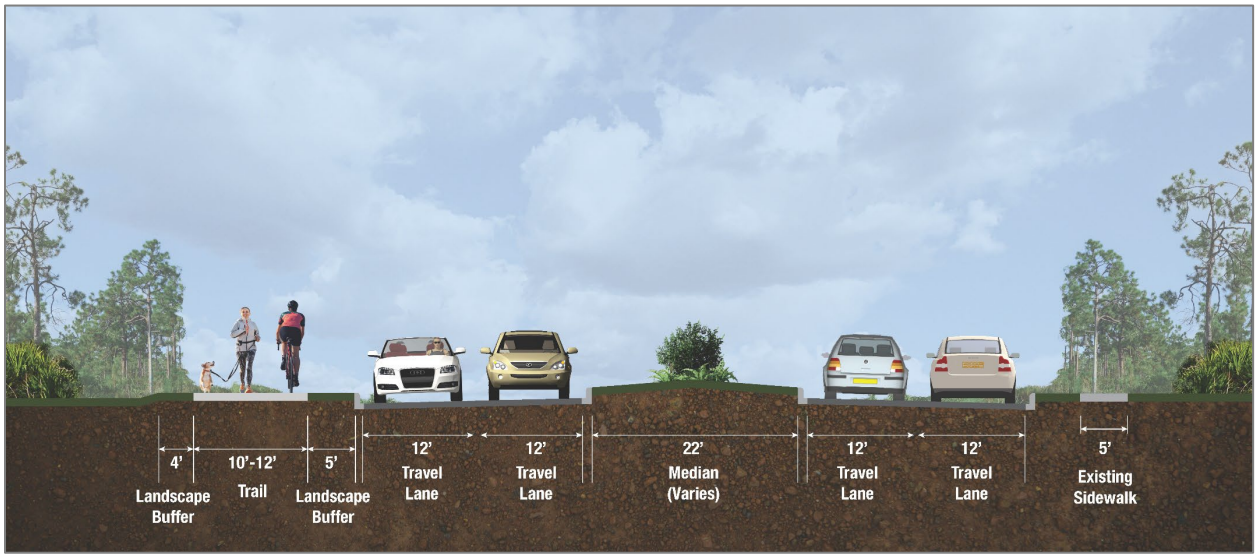
Options along railroads are also limited. While a 1+ mile section of the Seminole-Gulf Railway is included as a potential PCT corridor, recent work on a study for the Estero-Bonita Rail Trail by Lee County MPO suggests that this alignment may be a challenge from the perspective of the rail company's willingness to sell.

The result of the above is that a large portion of the PCT follows existing and proposed roadway alignments. It is recognized that shared use paths within a road's right-of-way, particularly larger arterials, present their own set of design and user experience challenges. However, through thoughtful planning and design, these facilities can still provide a safe and separated pathway. The current vision for the PCT is that these corridors be developed to form the spine network, from which other future connections and spurs will be developed.

Typical Sections

Exhibits 19 through 22 include conceptual typical sections to illustrate what the PCT may look like in various contexts throughout the corridor. The specific location and dimensions for the trail will be determined during future phases of the project and will be dependent upon multiple factors, including selected alternatives, available right-of-way, and environmental considerations. These conceptual typical sections illustrate how the trail may be developed in various contexts and are not depictions of the trail in a specific location.

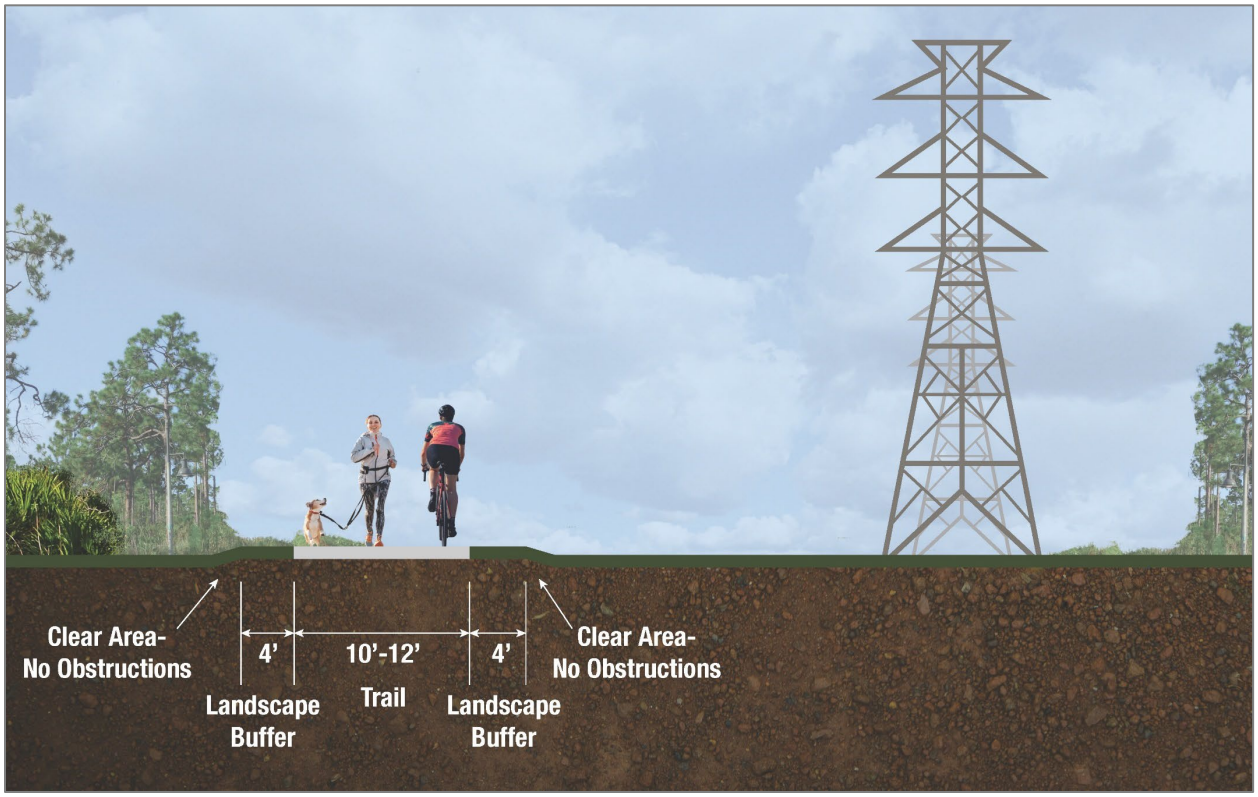
Exhibit 19: Conceptual Typical Section – Trail Adjacent to Roadway



Trail Adjacent to Roadway is the most common corridor profile proposed for locating the PCT.

- The concept illustrates a 10-12' wide paved shared use pathway separated from the roadway by a 5' landscape buffer. In constrained situations, this buffer may be narrower, and in situations with available right-of-way, the buffer may be wider than 5'.
- Important considerations in these corridors will be ensuring a high level of safety and comfort in the context of intersection crossings, driveway crossings, and the potential for bicyclist and pedestrian interactions with motor vehicles.
- Trail user experience is generally better in roadway corridors with lower vehicle speed limits, lower volumes of traffic, and fewer crossings. Specific corridor design can also contribute to improved trail user experience such as implementation of a Complete Streets context-sensitive approach to design that incorporates all transportation modes.

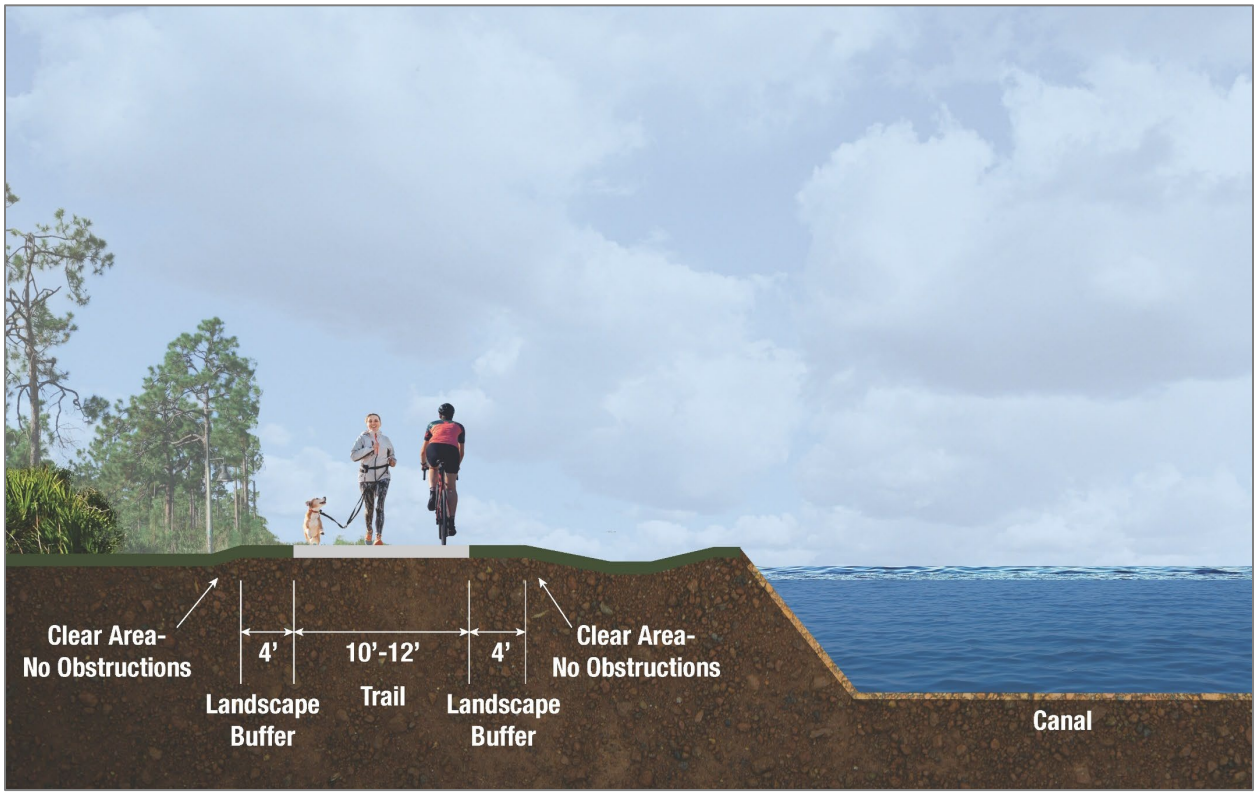
Exhibit 20: Conceptual Typical Section – Trail Within Utility Corridor



Trail within Utility Corridor is the second most common corridor profile proposed for the PCT.

- This concept illustrates a 10-12' wide paved shared use pathway within an existing utility corridor.
- This type of profile currently exists with the Rich King Memorial Greenway and is proposed for much of the FP&L corridor that parallels Livingston Road.
- Principal considerations in these corridors include effective placement of the trail relative to any existing and proposed utility facilities.
- These types of trails require very close design coordination with the utility provider to ensure the trail is not a constraint on long-term planning and maintenance of the facilities. Since these corridors are often easements over other private and public lands, they require coordination with all entities that hold some type of interest in the property.
- Trail user experience in this context can be favorable from the perspective of fewer interactions with motor vehicles because of the separated nature of the corridors. However, it is important to consider that this profile may have limited opportunity to provide shade for trail users because of the need for utility providers to limit vegetation that could impact their facility. For the FPL corridor parallel to Livingston Road, there may be potential to locate the trail along the eastern edge which includes a line of trees and vegetation in some segments, enhancing the aesthetics for the trail.

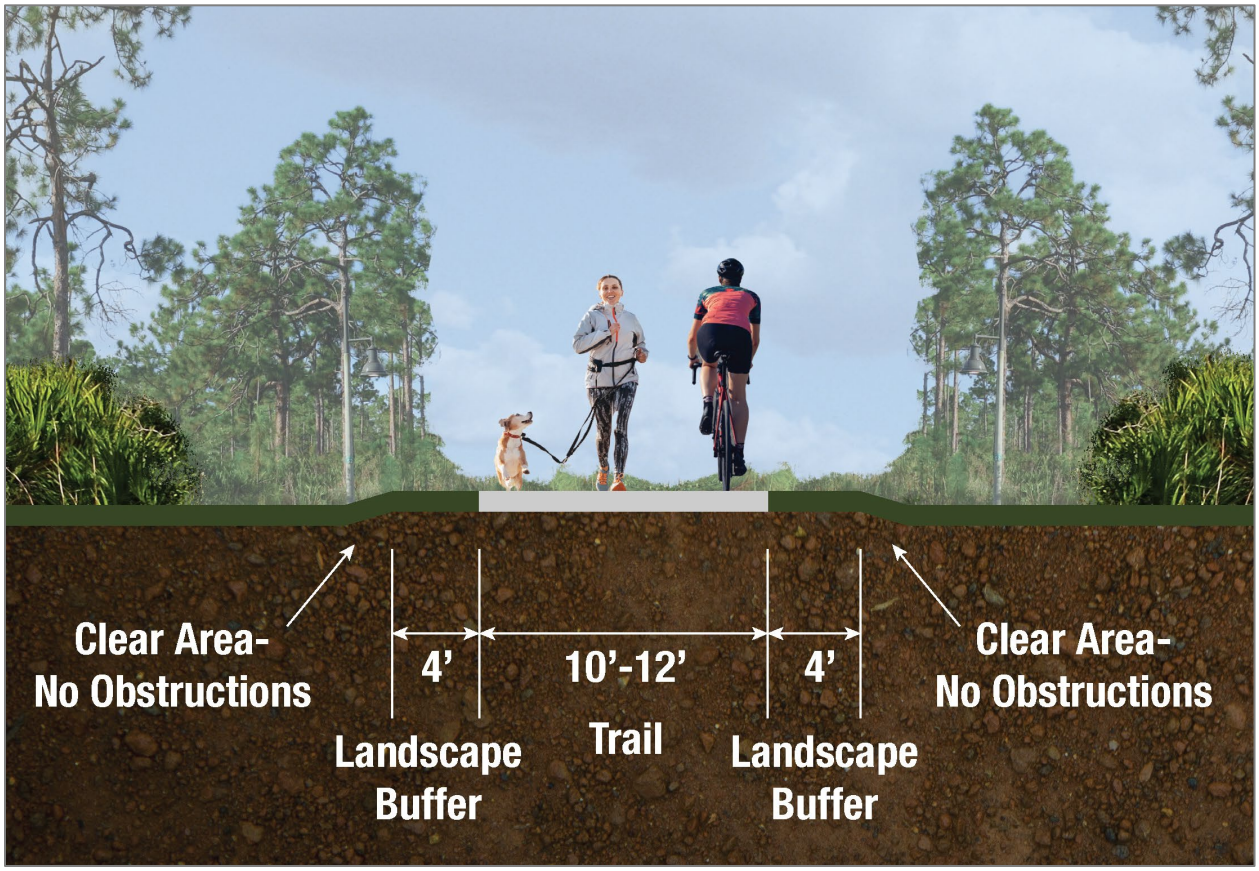
Exhibit 21: Conceptual Typical Section – Trail Adjacent to Canal



Trail Adjacent to Canal is presently limited to two potential locations that represent limited mileage.

- This concept illustrates a 10-12' wide paved shared use pathway along a drainage canal.
- This type of profile is proposed in a couple of portions of the PCT with the most notable segment along the Golden Gate Canal behind Golden Gate High School and Mike Davis Elementary School.
- Principal considerations in this type of profile include how a trail can most appropriately be located parallel to a constructed waterway, given the hydrologic and environmental purpose of these corridors. Trails along canals often require coordination with and approval of a water control or management district. Depending upon location, they may also require coordination with adjacent or other underlying ownerships. Design challenges may include how to locate the trail relative to water control facilities and connecting waterways that may be associated with the canal.
- Trail user experience in this context can be desirable from the perspective of a setting along a linear water feature. Depending upon the specific setting, there may be opportunity for trail users to observe wildlife and adjacent habitats. This experience also has the benefit of motorized vehicle interactions being limited to areas where a trail adjacent to canal might need to cross perpendicular roadways.

Exhibit 22: Conceptual Typical Section – Standalone Trail



Standalone Trail is presently limited to existing trails within managed lands and is not specifically proposed for any notable segment in the proposed connection alternatives due to a lack of opportunities.

- This concept illustrates a 10-12' trail that is outside of a pre-defined linear corridor such as a roadway, utility corridor, or canal. While a standalone trail segment might intermittently coincide with other linear features, its location is not contingent upon the presence of a linear facility.
- This type of profile currently exists within Baker Park and Gordon River Greenway where the trail has been located based upon the overall plan for managing these areas.
- Avoidance of environmentally sensitive areas, consideration of suitable topography, and connectivity to key destinations are the types of factors that are considered in site planning for location of a standalone trail.
- Trail user experience in this context can be among the most desirable, particularly where a standalone trail is within a managed area. The trail will often be designed to take advantage of the best user experience and provide views of vistas, natural features, and wildlife habitats, as well as access to associated recreational amenities and experiences.

Destinations, Trailheads, and Connectivity

Parks serve as important destinations and wayside areas for trail users, providing restrooms, amenities, and experiences. Parks that connect to or are near a long-distance trail like the PCT also serve as trailheads by providing access and parking for the many visitors who will reach the trail by vehicle. While analysis of parking and trailhead needs will be addressed in more detail as individual segments are evaluated and designed in the future, this study considered proximity to existing parks and related sites in the delineation and prioritization of connections and alternatives.

Within each of the five (5) connection summaries below, major parks and the number of parks within one mile of each trail alternative are identified in the corresponding evaluation matrices. **Table 11** also provides an overview of select parks within one mile of each connection alternative to illustrate the breadth of facilities that exist today to serve as destinations, waysides areas, and trailheads. Parks that are not directly connected to the trail would require consideration of how trail visitors would reach the trail from the park or alternatively reach the park from the trail.

Table 11: Key Parks in Close Proximity to Alternatives

Park	Alternative									
	1A	1B	2A	2B	3A	3B	3C	4A	4B	5A
North Collier Regional Park	✓	✓								
Sugden Regional Park			✓							
Collier-Seminole State Park			✓	✓						
Serenity Walk Park				✓						
Gordon River Greenway					✓	✓	✓			
Fred W. Coyle Freedom Park					✓	✓	✓			
Baker Park					✓	✓	✓			
Fleischmann Park					✓	✓	✓			
Golden Gate Community Park					✓	✓	✓			
Golden Gate Community Center					✓	✓	✓			
Wheels BMX and Skatepark					✓	✓	✓			
Paradise Coast Sports Complex					✓	✓	✓	✓	✓	
South Park (Ave Maria)								✓	✓	
Immokalee Community Park										✓
Immokalee Sports Complex										✓

The relationship of long-distance trails and park systems is symbiotic. While parks serve and support trails, trail systems like the PCT provide the benefit of connecting parks into a broader network of recreational areas, destinations, and experiences.

Beyond parks, the importance of connectivity extends to a wide range of other destinations, attractions, and economic centers. For example, as the trail is further defined and planned, consideration should be given to how the trail will interface with and leverage the destinations in Downtown Naples, Golden Gate Community, Ave Maria Town Center, Immokalee, and other areas. Specific sites of interest in the vicinity of the proposed PCT provide rich opportunities for experiences and include:

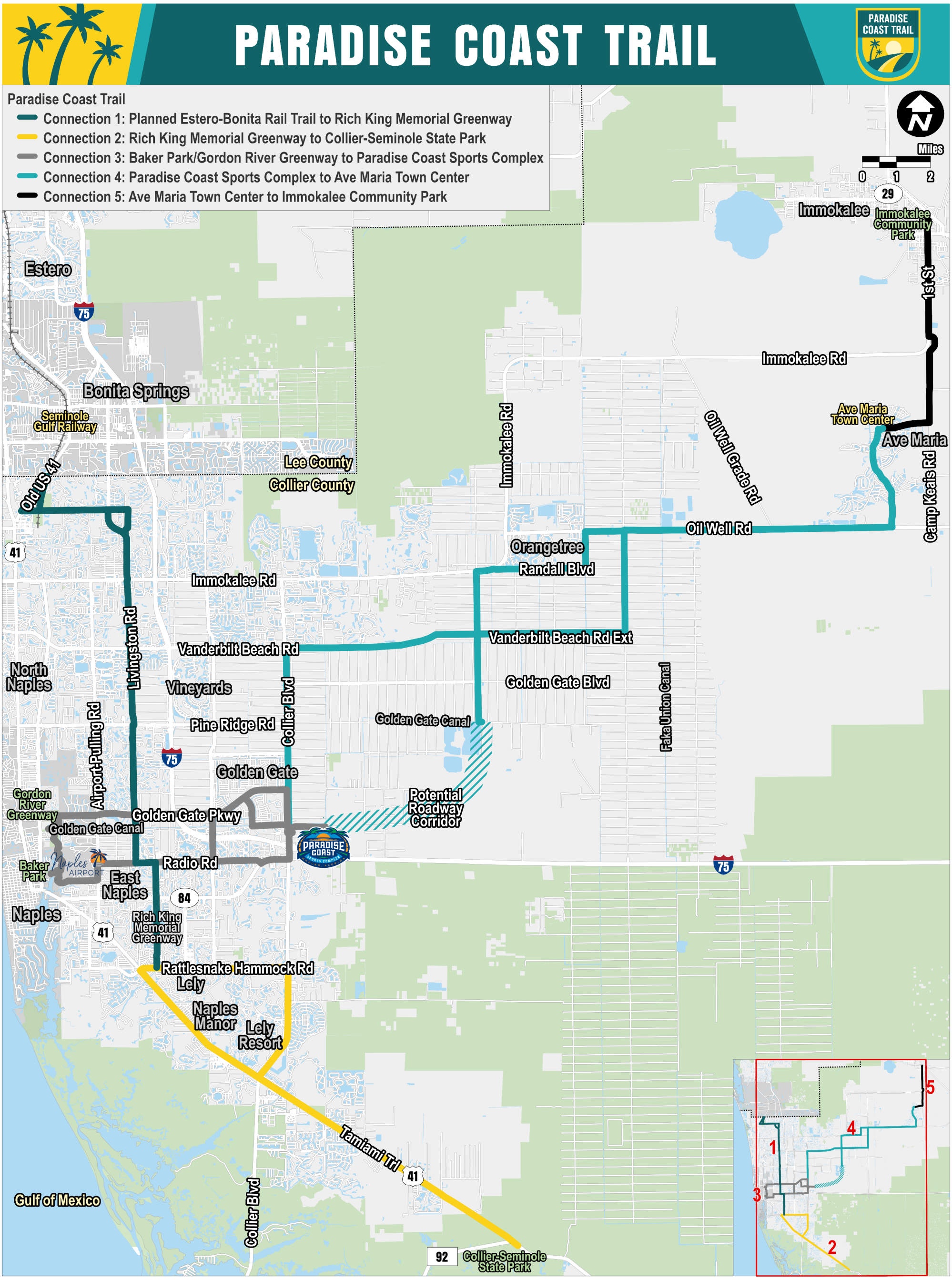
- Artis–Naples, The Baker Museum
- Collier County Museum
- Conservancy of Southwest Florida Nature Center
- Golisano Children's Museum of Naples
- Immokalee Pioneer Museum at Roberts Ranch
- Mother Teresa Museum at Ave Maria University
- Naples Botanical Garden
- Naples Zoo
- Naples Depot Museum
- Seminole Casino

Potential connections to areas like Marco Island and Everglades City, a state-designated Trail Town, will also be important long-term considerations.

Construction Cost Estimates

- The planning-level estimates of probable construction cost conducted for this analysis are based on the FDOT Per Mile Model for Shared Use Paths. The base of the estimated cost range includes 25% contingency for alignment specific needs and the top of the range includes an additional 25% to consider variability in prices and economic factors.
- Because of the high level and broad scope of this study, the same method for estimating costs was used throughout the corridor. Site specific variables and the type of corridor where the trail will be developed (e.g. roadway, utility, canal) were not defined at this stage.
- Construction estimates do not include right-of-way or amenities such as trailheads, parking, and wayside areas.
- Construction cost estimates for this analysis were developed in December 2021.

Exhibit 23: PCT Connections and Alternatives Overview



PARADISE COAST TRAIL - ALTERNATIVES EVALUATION MATRIX

Major Trail Connections		Connection 1		Connection 2		Connection 3			Connection 4		Connection 5
		Planned Estero-Bonita Rail Trail to Rich King Memorial Greenway		Rich King Memorial Greenway to Collier-Seminole State Park		Baker Park/Gordon River Greenway to Paradise Coast Sports Complex			Paradise Coast Sports Complex to Ave Maria Town Center		Ave Maria Town Center to Immokalee Community Park
Alternative		**1A**	**1B**	**2A**	**2B**	**3A**	**3B**	**3C**	**4A**	**4B**	**5A**
Estimated Alternative Length (miles)		**17 miles**	**18 miles**	**13 miles**	**15 miles**	**11 miles**	**11 miles**	**13 miles**	**29 miles**	**26 miles**	**7 miles**
Safety and Trail Experience											
Corridor Type		Railroad Utility Roadway	Utility Roadway	Roadway	Roadway	Public Land Roadway	Public Land Roadway	Public Land Roadway Canal	Roadway Canal	Roadway	Roadway
Driveway Crossings	#	14	16	49	28	76	35	82	118	113	31
Intersection Crossings (Total)	#	28	29	31	35	29	35	36	36	33	13
Major Intersection Crossings	#	6	5	2	2	6 (includes crossing I-75)	4 (includes crossing I-75)	4	3	1	0
Adjacent Roadway Traffic Volume (Weighted Daily Average)	# of trips	24,962	24,336	15,839	14,424	33,203	22,283	22,719	13,904	6,523	4,996
Adjacent Roadway Posted Speed Limit	MPH (Range)	45 MPH	45 MPH	45 - 60 MPH	45 - 60 MPH	35 - 55 MPH	30 - 45 MPH	30 - 45 MPH	25 - 50 MPH	25 - 50 MPH	25 - 55 MPH
Transportation Network											
Estimated Existing Shared Use Path (10' or greater)	Miles	3.0 miles (Rich King Memorial Greenway)	3.0 miles (Rich King Memorial Greenway)	6.3 miles (US 41)	8.3 miles (Rattlesnake Hammock Rd.; Collier Blvd.; US 41)	2.6 miles (Baker Park; Gordon River Greenway)	2.8 miles (Baker Park; Gordon River Greenway)	2.8 miles (Baker Park; Gordon River Greenway)	2.6 miles (Ave Maria Blvd.)	2.6 miles (Ave Maria Blvd.)	0.2 miles (Pope John Paul II Blvd.)
Alignment with SUN Trail Network	%	70%	64%	65%	54%	0%	0%	0%	0%	0%	0%
Includes segment within roadway corridor with currently programmed or planned roadway improvement or new roadway that includes a 10' or greater shared use path	Y/N	Yes (Old US 41; Veterans Memorial Blvd.)	Yes (Old US 41; Veterans Memorial Blvd.)	No	No	Yes (Golden Gate Parkway Complete Streets; Santa Barbara Canal Bridge Replacement; Collier Blvd. Widening)	No	Yes (Golden Gate Parkway Complete Streets; Santa Barbara Canal Bridge Replacement)	Yes (Collier Blvd. Widening; Vanderbilt Beach Rd. Extension; Wilson Blvd.; Randall Blvd.; Oil Well Rd.)	Yes (Potential New Roadway; Wilson Blvd.; Vanderbilt Beach Rd. Extension; Everglades Blvd.; Oil Well Rd.)	Yes (Future Immokalee Rd. Planning Study)
Existing Bridge Crossings (Canal/Water or Roadway Overpass)	#	2 canal crossings	2 canal crossings	4 canal/water crossings	3 canal/water crossings	2 canal/water crossings 1 overpass (Golden Gate Pkwy & I-75)	0	4 canal/water crossings 1 overpass (Santa Barbara Blvd. & I-75)	4 canal/water crossings	2 canal/water crossings	0
Potential Above-Ground Utility Conflicts	Ranking	Minor	Minor	Minor	Significant	Moderate	Moderate	Moderate	Minor	Significant	Minor
Potential Environmental Effects											
Estimated Potential Wetland Impacts	Acres	15.0 acres	19.0 acres	13.6 acres	15.4 acres	1.3 acres	1.8 acres	1.7 acres	25.8 acres	51.5 acres	14.9 acres
Estimated Potential Listed Species and Likelihood of Occurrence	Ranking	Low	Low	High	High	High	High	High	High	High	Medium
Estimated Potential Cultural, Archaeological, Historic Sites	#	0	0	6	7	1	1	1	0	0	0
Estimated Public Conservation Lands Impacted	Acres	1.9 acre	0.6 acre	0.5 acre	0.5 acres	0.4 acre	0	0	0	0	0
Estimated Contamination Sites	Ranking	Low	Low	Medium	Low	Medium	High	=High	Low	Low	Medium
Anticipated Permit Requirements	Ranking	Low	Low	High	High	Medium	High	High	High	High	Medium
Social/Economic Considerations											
Households within 0.5 mile	#	19,189	19,114	10,669	12,059	6,881	10,502	12,028	7,297	3,214	1,648
Within 0.25 mile of defined area of minority and low-income populations	Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Schools/educational facilities within 1 mile	#	27	27	7	7	34	29	44	11	3	8
Parks/recreation facilities within 1 mile	#	3	3	6	3	19	16	19	5	2	6
Major parks within 1 mile		North Collier Regional Park	North Collier Regional Park	Collier-Seminole State Park, Sugden Regional Park	Collier-Seminole State Park	Baker Park Gordon River Greenway Freedom Park Paradise Coast Sports Complex	Baker Park Gordon River Greenway Freedom Park Paradise Coast Sports Complex	Baker Park Gordon River Greenway Freedom Park Paradise Coast Sports Complex	Paradise Coast Sports Complex	Paradise Coast Sports Complex	Immokalee Community Park Immokalee Sports Complex
Right-of-Way											
Estimated Right-of-Way Requirement	Acres (Range)	Less than 5 acres	Less than 5 acres	Less than 5 acres	Less than 5 acres	Between 15 - 20 acres	Less than 5 acres	Between 5 - 10 acres	Between 5 - 10 acres	Less than 5 acres	Less than 5 acres
Estimated number of parcels from which right-of-way is required (total)	#	30	30	6	19	118	42	83	28	33	29
Estimateed number of non-residential parcels impacted	#	4	4	6	14	68	39	71	19	3	18
Estimated number of residential parcels impacted	#	26	26	0	5	50	3	12	9	30	11
Cost Estimates (Based on FDOT Per Mile Model for Shared Use Paths. Base of range includes 25% contingency for alignment specific needs and top of range includes additional 25% to consider variability in prices and economic factors. Does not include right-of-way or amenities such as trailheads, wayside areas, etc.)											
Estimated Design Cost (20% of Construction Cost)	$	$1,760,000 - $2,200,000	$1,900,000 - $2,375,000	$1,220,000 - $1,525,000	$1,660,000 - $2,075,000	$2,520,000 - $3,150,000	$960,000 - $1,200,000	$3,000,000 - $3,750,000	$3,780,000 - $4,725,000	$3,260,000 - $4,075,000	$820,000 - $1,025,000
Estimated Construction Cost	$	$8,800,000 - $11,000,000	$9,500,000 - $11,875,000	$6,100,000 - $7,625,000	$8,300,000 - $10,375,000	$12,600,000 - $15,750,000	$4,800,000 - $6,000,000	$15,000,000 - $18,750,000	$18,900,000 - $23,625,000	$16,300,000 - $20,375,000	$4,100,000 - $5,125,000

Table 12: Paradise Coast Trail Alternatives Evaluation Matrix

Connection 1

Planned Estero-Bonita Rail Trail to Rich King Memorial Greenway

Connection 1 **(Exhibit 24)** includes two alternatives (1A/1B) and generally follows a north-south alignment that begins at the boundary of Collier and Lee Counties and ends at the southern terminus of the Rich King Memorial Greenway at Rattlesnake Hammock Road. Connection 1 primarily traverses developed areas and provides connections to destinations including Railhead Scrub Preserve, multiple education facilities, North Collier Regional Park, and a number of residential developments.

Connection 1 Highlights

- Envisioned to utilize utility corridor for a large portion of trail alignment
- Leverages existing Rich King Memorial Greenway
- Provides regional connection to planned trails in Lee County
- Aligns with segment of SUN Trail Network (1A = 70%; 1B = 64%)

The alignment of both alternatives is envisioned to primarily follow the utility corridors, including the Florida Power and Light (FPL) easement located along the west side of Livingston Road, and the existing Rich King Memorial Greenway which is also located within a utility corridor. The portion of this connection along the Livingston Road corridor will be studied as part of the the Livingston FPL Trail Extension from Radio Road to Collier County Line Project Development & Environment (PD&E) Study (FPN 447514-1) currently scheduled to begin in FY 2026, funded through SUN Trail. Recommended alignments and determination of right-of-way needs within this segment will be developed during the PD&E process.

The primary variation between alternatives 1A and 1B are their respective alignments at the northern part of the Connection. Alternative 1A follows the Seminole Gulf Railway right-of-way from the Collier/Lee County line where it heads east on Veterans Memorial Boulevard before meeting the FPL utility corridor. Alternative 1B follows Old 41 (CR 887) south from the county line before heading east on Veterans Memorial Boulevard and then follows Livingston Road south before meeting the FPL utility corridor. Where the trail follows Veterans Memorial Boulevard, it is envisioned to utilize a shared use pathway that would be constructed as part of the extension of this roadway. Considerations in this portion of Connection 1 are environmental and right-of-way constraints associated with Old 41 and Veterans Memorial Boulevard.

Connection 1 follows the utility corridor south until the intersection with Golden Gate Parkway where the trail is envisioned to continue south within the right-of-way of Livingston Road before heading east along Radio Road to the northern entrance of the Rich King Memorial Greenway. While a large portion of Connection 1 is intended to be located within a utiltity corridor to provide a comfortable and separated trail experience, the alignment of both alternatives would interact with a number of major intersections such as those of Livingston Road at Immokalee Road, Vanderbilt Beach Road, Pine Ridge Road, and Golden Gate Parkway. This can present safety concerns for trail users. Collier County has approved a major intersection improvement at Livingston Road and Immokallee Road that would include an overpass bridging over Immokalee Road, as well as a Continuous Flow Intersection (CFI) at Livingston Road and Pine Ridge Road. Locations like these, across all connections, will require detailed assessment as to the appropriate design solution for a safe crossing. Additonal unique considerations for Connection 1 include two canal bridge crossings at both the Cocohatchee and Golden Gate Canals which are likely to present additional constraints.

Exhibit 24: Connection 1 - Planned Estero-Bonita Rail Trail to Rich King Memorial Greenway

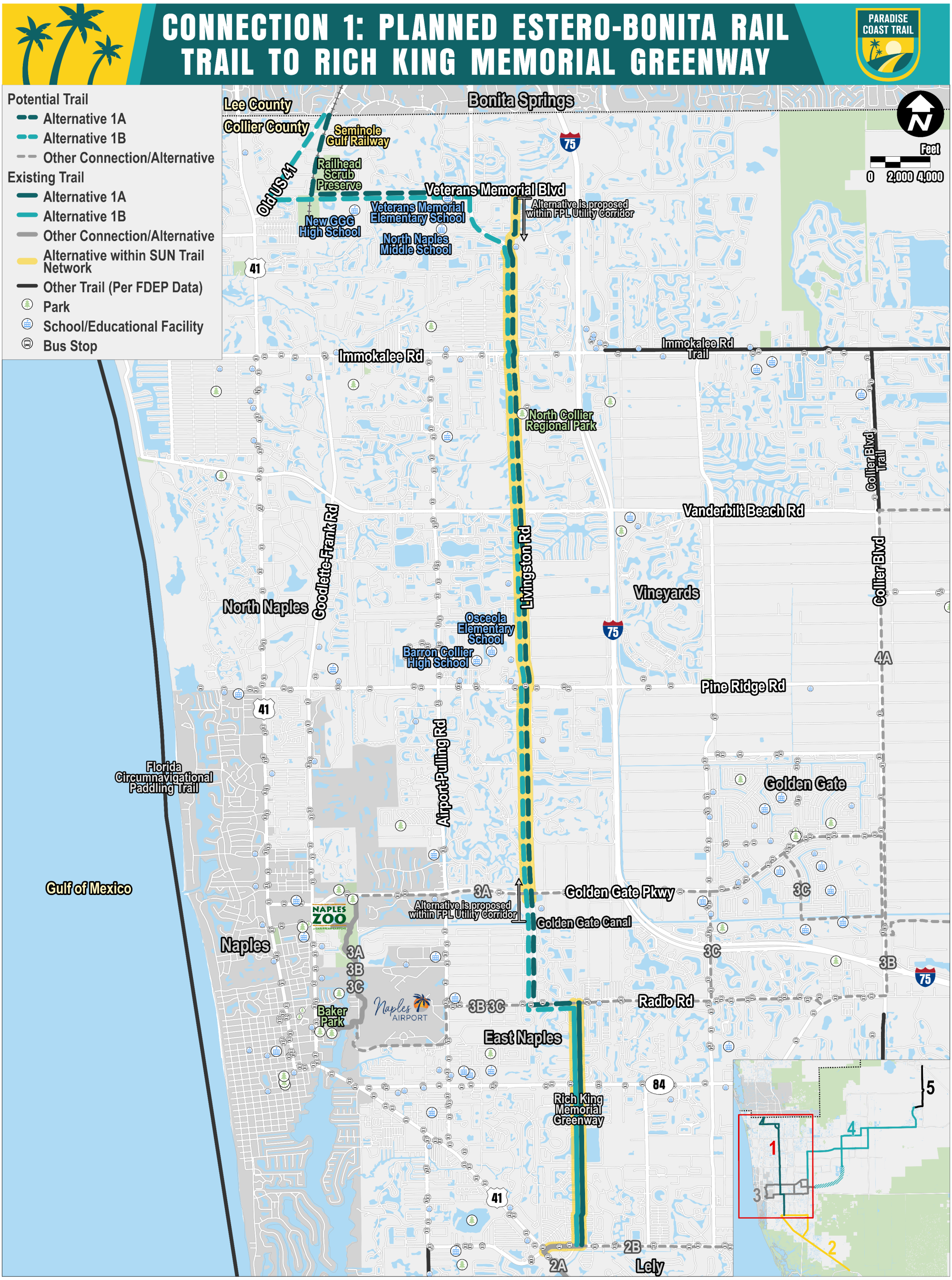


Table 13: Connection 1 Alternatives Evaluation Matrix

Alternative		1A	1B
Estimated Alternative Length (miles)		17 miles	18 miles
Safety and Trail Experience			
Corridor Type		Railroad; Utility; Roadway	Utility; Roadway
Driveway Crossings	#	14	16
Intersection Crossings (Total)	#	28	29
Major Intersection Crossings	#	6	5
Adjacent Roadway Traffic Volume (Weighted Daily Average)	# of trips	24,962	24,336
Adjacent Roadway Posted Speed Limit	MPH (Range)	45 MPH	45 MPH
Transportation Network			
Estimated Existing Shared Use Path (10' or greater)	Miles	3.0 miles (Rich King Memorial Greenway)	3.0 miles (Rich King Memorial Greenway)
Alignment with SUN Trail Network	%	70%	64%
Includes segment within roadway corridor with currently programmed or planned roadway improvement or new roadway that includes a 10' or greater shared use path	Y/N	Yes (Old US 41; Veterans Memorial Blvd.)	Yes (Old US 41; Veterans Memorial Blvd.)
Existing Bridge Crossings (Canal/Water or Roadway Overpass)	#	2 canal crossings	2 canal crossings
Potential Above-Ground Utility Conflicts	Ranking	Minor	Minor
Potential Environmental Effects			
Estimated Potential Wetland Impacts	Acres	15.0 acres	19.0 acres
Estimated Potential Listed Species and Likelihood of Occurrence	Ranking	Low	Low
Estimated Potential Cultural, Archaeological, Historic Sites	#	0	0
Estimated Public Conservation Lands Impacted	Acres	1.9 acre	0.6 acre
Estimated Contamination Sites	Ranking	Low	Low
Anticipated Permit Requirements	Ranking	Low	Low
Social/Economic Considerations			
Households within 0.5 mile	#	19,189	19,114
Within 0.25 mile of defined area of minority and low-income populations	Y/N	Yes	Yes
Schools/educational facilities within 1 mile	#	27	27
Parks/recreation facilities within 1 mile	#	3	3
Regional and state parks within 1 mile		North Collier Regional Park	North Collier Regional Park
Right-of-Way			
Estimated Right-of-Way Requirement	Acres (Range)	Less than 5 acres	Less than 5 acres
Estimated number of parcels from which right-of-way is required (total)	#	30	30
Estimated number of non-residential parcels impacted	#	4	4
Estimated number of residential parcels impacted	#	26	26
Cost Estimates			
Estimated Design Cost (20% of Construction Cost)	$	$1,760,000 - $2,200,000	$1,900,000 - $2,375,000
Estimated Construction Cost	$	$8,800,000 - $11,000,000	$9,500,000 - $11,875,000

Alternative 1A

Alternative 1A is approximately 17 miles and generally follows the Seminole Gulf Railway right-of-way, Veterans Memorial Boulevard, FPL utility corridor parallel to Livingston Road, Livingston Road, Radio Road, and the existing Rich King Memorial Greenway.

Safety & Trail Experience

This alternative is aligned within railroad, utility, and roadway corridors providing a varied experience for trail users. When considering the traffic volumes and speeds on roadways adjacent to the trail alignment, specifically Livingston Road, it should be noted that the trail is envisioned to be within the parallel FPL utility corridor and separated and buffered from the roadway providing a more comfortable experience. This alternative does involve multiple crossings at major intersections as well as canal crossings that must be considered during design. The trail's interaction with future major intersection improvements along the Livingston Road corridor such as the approved overpass over Immokalee Road and a Continuous Flow Intersection at Pine Ridge Road will also be a major consideration.

Transportation Network

Of the total 17-mile length of this alternative, three miles are existing shared use path (Rich King Memorial Greenway) and notably 70% aligns with the SUN Trail Network. The segment of the trail adjacent to Veterans Memorial Boulevard is to be included with the associated roadway improvement project.

Potential Environmental Effects

Estimated impacts to the natural environment are generally anticipated to be low based on the prevalence of development in the vicinity of this alternative and considering the planned and existing trail within utility corridors. This alternative's proximity to Railhead Scrub Preserve should be considered and analyzed during any future study and design phases.

Social/Economic Considerations and Benefits

There are more than 19,000 households within ½ mile of the alignment of Alternative 1A, giving a large population potential access to the trail. In addtion, there are 27 schools/educational facilities and three parks/recreation facilities within one mile. This alternative would provide the benefit of serving a large resident population and being in the vicinity of destinations such as:

- North Collier Regional Park

Right-of-Way

The right-of-way requirements for this alternative will be primarily determined during the analysis of the Livingston Road/FPL utility corridor during the programmed PD&E study. Along Veterans Memorial Boulevard, the trail would be located within right-of-way already included within current roadway improvement projects within that corridor.

Cost Estimates

The estimated costs for Alternative 1A range between $8,800,000 - $11,000,000 for construction and between $1,760,000 - $2,200,000 for design (20% of construction costs). The final cost for this alternative, if eventually pursued, would also be particularly impacted by any costs associated with utilizing the Seminole Gulf Railway right-of-way.

Alternative 1B

Alternative 1B is approximately 18 miles and generally follows Old 41, Veterans Memorial Boulevard, Livingston Road, the FPL utility corridor parallel to Livingston Road, Radio Road, and includes the existing Rich King Memorial Greenway.

Safety & Trail Experience

This alternative is aligned within roadway and utility corridors providing a varied experience for trail users. When considering the traffic volumes and speeds on roadways adjacent to the trail alignment, specifically Livingston Road, it should be noted that the trail is envisioned to be within the parallel FPL utility corridor, separated and buffered from the roadway providing a more comfortable experience. This alternative does involve multiple crossings at major intersections, as well as canal crossings that must be considered during design. The trail's interaction with future major intersection improvements along the Livingston Road corridor such as the approved overpass over Immokalee Road and a Continuous Flow Intersection at Pine Ridge Road will also be a major consideration.

Transportation Network

Of the total 18-mile length of this alternative, three miles are existing shared use path (Rich King Memorial Greenway) and 64% aligns with the SUN Trail Network, which is slightly less than Alternative 1A. The segment of the trail adjacent to Old 41 and Veterans Memorial Boulevard is to be included with the associated roadway improvement projects.

Potential Environmental Effects

Estimated impacts to the natural environment are generally anticipated to be low based on the prevalence of development in the vicinity of this alternative and considering the planned and existing trail within utility corridors. This alternative's proximity to Railhead Scrub Preserve should be considered and analyzed during any future study and design phases.

Social/Economic Considerations and Benefits

There are more than 19,000 households within ½ mile of the alignment of Alternative 1B, giving a large population potential access to the trail. In addition, there are 27 schools/educational facilities and three parks/recreation facilities within one mile. This alternative would provide the benefit of serving a large resident population and being in the vicinity of destinations such as:

- North Collier Regional Park

Right-of-Way

The right-of-way requirements for this alternative will be primarily determined during the analysis of the Livingston Road/FPL utility corridor during the programmed PD&E study. Along Veterans Memorial Boulevard, the trail would be located within right-of-way already included as part of current roadway improvement projects within that corridor. The portion of the trail aligned with Old 41 will be evaluated as part of the Old 41 (CR 887) PD&E Study (FPN 435110-1).

Cost Estimates

The estimated costs for Alternative 1B range between $9,500,000 - $11,875,000 for construction and between $1,9000,000 - $2,375,000 for design (20% of construction costs).

Connection 2

Rich King Memorial Greenway to Collier-Seminole State Park

Connection 2 **(Exhibit 25**) includes two alternatives (2A/2B) and generally follows a north-south alignment that begins at the southern terminus of the Rich King Memorial Greenway at Rattlesnake Hammock Road and ends at the entrance to Collier-Seminole State Park on US 41 (Tamiami Trail). Connection 2 primarily traverses developed areas between the southern terminus of Rich King Memorial Greenway at Rattlesnake Hammock Road and the Collier Boulevard/US 41 intersection, while the context is more rural further to the south as it nears the entrance to the state park. This portion of the connection south of Collier Boulevard aligns with the SUN Trail network. In addition to Collier-Seminole State Park, this connection also provides access to destinations such as Eagle Lakes Community Park, multiple education facilities, a number of residential developments, and commercial centers.

Connection 2 Highlights

- Connects directly from Rich King Memorial Greenway
- Leverages significant segments of existing shared use pathways
- Aligns with segment of SUN Trail Network (1A = 65%; 1B = 54%)
- Access to Collier-Seminole State Park
- 2B includes portion of US Bicycle Route

The alignment of both alternatives is envisioned to primarily utilize roadway corridors. The primary variation between alternatives 2A and 2B is their respective alignments between Rattlesnake Hammock Road and the intersection of Collier Boulevard and US 41. Alternative 2A follows Rattlesnake Hammock Road west for a short distance and then heads south on US 41. Alternative 2B is about two miles longer than Alternative 2A and follows Rattlesnake Hammock Road east before meeting Collier Boulevard and continuing south to US 41. The remaining portion of the corridor is the same for both 2A and 2B as they continue south to north of the entrance to Collier-Seminole State Park. The need for an additional segment to connect into the state park is addressed in the Implementation Action Plan on **Page 107**.

The entirety of Connection 2 is likely to be located adjacent to roadways, with both alternatives including significant segments of existing shared use path facilities, along portions of US 41, Collier Boulevard, and Rattlesnake Hammock Road. The alternative alignments are not associated with any planned roadway improvements at the time of this study, however there are gaps in the existing shared use paths that would need to be closed, as well as the potential for needed improvements to bring existing paths up to standard. The alignment of both alternatives would interact with a number of major intersections particularly those of US 41 at Rattlesnake Hammock Road and Collier Boulevard which can present safety concerns for trail users. Additonal unique considerations for Connection 2 include four canal/water crossings on Alternative 2A and three canal/water crossing on Alternative 2B to be considered in the future design and construction of new or improved segments of the trail.

Since US 41 is a major component of both alternatives, it will be important to coordinate trail development and improvements to existing paths along this corridor with FDOT's resiliency efforts for the state highway system, which includes identifying risks related to storm events and flooding, assessing potential impacts, and employing strategies to avoid, mitigate, or eliminate impacts. A small segment of existing shared use path along US 41 north of Collier-Seminole State Park can flood during routine storm events. Issues like these will require full consideration of how to effectively develop a resilient trail system. It will also be important in this corridor to consider results of the county's US 41 East Corridor Zoning Overlay Project.

CONNECTION 2: RICH KING MEMORIAL GREENWAY TO COLLIER-SEMINOLE STATE PARK

PARADISE COAST TRAIL

Potential Trail
- Alternative 2A
- Alternative 2B
- Other Connection/Alternative

Existing Trail
- Alternative 2A
- Alternative 2B
- Other Connection/Alternative
- Alternative within SUN Trail Network
- Other Trail (Per FDEP Data)
- Park
- School/Educational Facility
- Bus Stop

Rich King Memorial Greenway
1A
1B
Rattlesnake Hammock Rd
Lely Elementary School
Lely
Florida Southwestern State College
Tamiami Trail Corridor
Naples Manor Neighborhood Park
Naples Manor
41
Lely High School
951
Parkside Elementary School
Donna Fiala Eagle Lakes Community Park
Lely Resort
Collier Blvd
Picayune Strand State Forest Trail
Picayune Strand State Forest
Picayune Strand State Forest Trail
N
Feet
0 2,500 5,000
Manatee Middle School
Manatee Elementary School
Tamiami Trail Corridor
41
Florida Circumnavigational Paddling Trail
Gulf of Mexico
Collier Blvd
Collier-Seminole State Park Trail
Tamiami Trl
San Marco Rd
Collier-Seminole State Park
92
5
4
1
3
2

Exhibit 25: Connection 2 - Rich King Memorial Greenway to Collier-Seminole State Park

Table 14: Connection 2 Alternatives Evaluation Matrix

Alternative		2A	2B
Estimated Alternative Length (miles)		13 miles	15 miles
Safety and Trail Experience			
Corridor Type		Roadway	Roadway
Driveway Crossings	#	49	28
Intersection Crossings (Total)	#	31	35
Major Intersection Crossings	#	2	2
Adjacent Roadway Traffic Volume (Weighted Daily Average)	# of trips	15,839	14,424
Adjacent Roadway Posted Speed Limit	MPH (Range)	45 - 60 MPH	45 - 60 MPH
Transportation Network			
Estimated Existing Shared Use Path (10' or greater)	Miles	6.3 miles (US 41)	8.3 miles (Rattlesnake Hammock Rd.; Collier Blvd.; US 41)
Alignment with SUN Trail Network	%	65%	54%
Includes segment within roadway corridor with currently programmed or planned roadway improvement or new roadway that includes a 10' or greater shared use path	Y/N	No	No
Existing Bridge Crossings (Canal/Water or Roadway Overpass)	#	4 canal/water crossings	3 canal/water crossings
Potential Above-Ground Utility Conflicts	Ranking	Minor	Significant
Potential Environmental Effects			
Estimated Potential Wetland Impacts	Acres	13.6 acres	15.4 acres
Estimated Potential Listed Species and Likelihood of Occurrence	Ranking	High	High
Estimated Potential Cultural, Archaeological, Historic Sites	#	6	7
Estimated Public Conservation Lands Impacted	Acres	0.5 acre	0.5 acres
Estimated Contamination Sites	Ranking	Medium	Low
Anticipated Permit Requirements	Ranking	High	High
Social/Economic Considerations			
Households within 0.5 mile	#	10,669	12,059
Within 0.25 mile of defined area of minority and low-income populations	Y/N	Yes	Yes
Schools/educational facilities within 1 mile	#	7	7
Parks/recreation facilities within 1 mile	#	6	3
Major parks within 1 mile		North Collier Regional Park, Sugden Regional Park	Collier-Seminole State Park, Sugden Regional Park
Right-of-Way			
Estimated Right-of-Way Requirement	Acres (Range)	Less than 5 acres	Less than 5 acres
Estimated number of parcels from which right-of-way is required (total)	#	6	19
Estimated number of non-residential parcels impacted	#	6	14
Estimated number of residential parcels impacted	#	0	5
Cost Estimates			
Estimated Design Cost (20% of Construction Cost)	$	$1,220,000 - $1,525,000	$1,660,000 - $2,075,000
Estimated Construction Cost	$	$6,100,000 - $7,625,000	$8,300,000 - $10,375,000

Alternative 2A

Alternative 2A is approximately 13 miles and follows west from the southern terminus of Rich King Memorial Greenway along Rattlesnake Hammock Road for a small distance and then continues south for the majority of the alternative along US 41 (Tamiami Trail).

Safety & Trail Experience

This alternative is aligned within roadway corridors and is almost entirely along US 41. A prevalence of driveways and crossings, particularly north of Collier Boulevard, and higher vehicle speed limits may impact the trail user experience. This alternative does involve crossings at major intersections as well as canal/water crossings that must be considered during design.

Transportation Network

Of the total 13-mile length of this alternative, there is a total of more than six miles of existing shared use path along US 41 with 65% aligning with the SUN Trail Network. There is a gap along US 41 between Bella Tesoro Street and Six L's Farm Road. At the time of this analysis, there were no programmed or planned phases or roadway improvement projects that would include a shared use path. There is also a minor gap that would still necessitate state land approval for use of a 0.1 mile section within the Collier-Seminole State Park boundary in order to fully connect the trail to the entrance of the state park, which is the southern terminus of the PCT.

Potential Environmental Effects

Estimated impacts to the natural environment are generally anticipated to be low within the segment of the alternative north of the Collier Boulevard/US 41 intersection. However, the context of the alternative south of Collier Boulevard and the proximity to Collier-Seminole State Park may include additional environmental considerations and result in particular permit requirements.

Social/Economic Considerations and Benefits

There are more than 10,000 households within ½ mile of the alignment of Alternative 2A, giving a large population potential access to the trail. In addtion, there are seven schools/educational facilities and six parks/recreation facilities within one mile. This alternative also provides access to commerical nodes at the US 41/Rattlesnake Hammock and US 41/Collier Boulevard intersections. This alternative would provide the benefit of serving a large resident population and being in the vicinity of destinations such as:

- Collier Seminole State Park
- Sugden Regional Park

Right-of-Way

This alternative is primarily adjacent to US 41 and envisioned to be located within existing right-of-way and initially leverages segments of existing shared use path along the corridor. A preliminary evaluation found that potential right-of-way impacts of this alternative are not anticipated to be substantial based on preliminary planning-level estimates. Right-of-way requirements for the trail near the entrance to Collier-Seminole State Park may vary based on the determination of the actual route in this area.

Cost Estimates

The estimated costs for Alternative 2A range between $6,100,000 - $7,625,000 for construction and between $1,220,000 - $1,525,000 for design (20% of construction costs).

Alternative 2B

Alternative 2B is approximately 15 miles and generally follows Rattlesnake Hammock Road, Collier Boulevard, and US 41 (Tamiami Trail).

Safety & Trail Experience

This alternative is aligned within multiple roadway corridors. Although this alternative is longer than Alternative 2A, it features fewer driveway crossings, less commercial facilities, and includes segments of an existing shared use path on the east side of Collier Boulevard. Factors like this may potentially provide an improved user experience. In addition to crossings at major intersections and canal/water crossings that must be considered during design, this alternative has increased potential for significant above-ground utility conflicts.

Transportation Network

Of the total 15-mile length of this alternative, there is a total of more than eight miles of existing shared use path along Collier Boulevard and US 41, with 54% of the alternative aligning with the SUN Trail Network. Along Collier Boulevard and US 41, Alternative 2B also aligns with the proposed extension of U.S. Bicycle Route 15 through Collier County. At the time of this analysis, there were no programmed or planned roadway improvement projects that include shared use path. There is a minor gap that would still necessitate state land approval for use of a 0.1 mile section within the Collier-Seminole State Park boundary in order to fully connect the trail to the entrance of the state park, the southern terminus of the PCT.

Potential Environmental Effects

Estimated impacts to the natural environment are not anticipated to be significant within the segments of the alternative along Rattlesnake Hammock Road and Collier Boulevard based on the prevalence of existing development. However, the context of the alternative south of Collier Boulevard and the proximity to Collier-Seminole State Park may result in additional environmental considerations and permit requirements. Closing the 0.1 mile gap into the park entrance will require state land approval for use of the property for this purpose. This connection would be expected to have minimal impact since it follows directly alongside US 41. The state park manager has expressed potential support for the concept but has emphasized the need to formally request approval through the FDEP Division of Recreation and Parks.

Social/Economic Considerations and Benefits

There are more than 12,000 households within ½ mile of the alignment of Alternative 2B, giving a larger population potential access to the trail as compared to Alternative 2A. In addition, there are seven schools/educational facilities, including Florida Southwestern State College, and three parks/recreation facilities within one mile. This alternative also provides access to the commerical node at the intersection of US 41 and Collier Boulevard. This alternative would provide the benefit of serving a large resident population and being in the vicinity of destinations such as:

- Collier Seminole State Park
- Serenity Walk Park

Right-of-Way

Alternative 2B is longer than Alternative 2A and adjacent to three separate roadway corridors, resulting in the potiental for impacts to more parcels based on a preliminary evaluation of right-of-way impacts. Along Collier Boulevard and US 41, the trail is envisioned to be located within existing right-of-way and initially leverages segments of existing shared use path along the corridor. Right-of-way requirements for the trail near the entrance to Collier-Seminole State Park may vary based on the determination of the actual route in this area.

Cost Estimates

The estimated costs for Alternative 2B range between $8,300,000 - $10,375,000 for construction and between $1,660,000 - $2,075,000 for design (20% of construction costs).

Connection 3

Baker Park/Gordon River Greenway to Paradise Coast Sports Complex

Connection 3 **(Exhibit 26)** includes three alternatives (3A/3B/3C) that connect Baker Park and Gordon River Greenway to the Paradise Coast Sports Complex (Sports Complex). Connection 3 generally follows a east-west alignment, primarily traverses developed urban areas, and also provides connections to other key destinations such as the Naples Airport, other park facilities (e.g. Golden Gate Community Park), and a number of residential communities. The alignments of each of the three alternatives are envisioned to primarily utilize roadway corridors, although each would leverage more than 2.5 miles of the existing shared use path within Baker Park and the Gordon River Greenway.

Connection 3 Highlights

- Leverages existing showcase trails in Baker Park/Gordon River Greenway on west end
- Anchored by Paradise Coast Sports Complex on east
- Within a mile of the highest number of schools and parks of any connection
- 3A and 3C include portion of US Bicycle Route
- 3C includes one-mile segment along Golden Gate Canal

At the western termini of this connection, all three alternatives follow this existing trail network. From the Gordon River Greenway Park entrance, Alternative 3A continually follows Golden Gate Parkway east to Collier Boulevard where it heads south to City Gate Drive and east again to the Sports Complex. Alternative 3A includes a number of major intersection crossings, including at the Livingston Road corridor where it would intersect with the north-south alignment of Connection 1 and a crossing of I-75.

Alternatives 3B and 3C utilize the existing trail on the south and east sides of the Naples Airport property prior to heading east on Radio Road. Between Livingston Road and the northern entrance of the existing Rich King Memorial Greenway, these alternatives align with Alternatives 1A and 1B. The primary variation between Alternatives 3B and 3C are their respective alignments where they meet Santa Barbara Boulevard. Alternatives 3B and 3C diverge at the intersection of Radio Road and Santa Barbara Boulevard. Alternative 3B continues east on Radio Road before heading north on Collier Boulevard and crossing under I-75 before reaching City Gate Drive and the Sports Complex.

Alternative 3C heads north on Santa Barbara Boulevard where it crosses over I-75 on the existing bridge structure. It is noted that there is currently not an interchange at Santa Barbara Boulevard and I-75. The alignment of 3C continues north to Golden Gate Parkway where, like Alternative 3A, it could leverage the recommended 10’ shared use path within the Golden Gate Parkway Complete Streets Study and the 12’ wide paths associated with the planned replacement of the bridge over the Santa Barbara Canal before heading south on Tropicana Boulevard, then utilizing an alignment adjacent to Golden Gate Canal behind Golden Gate High School and Mike Davis Elementary School before reaching Collier Boulevard.

The implementation of Connection 3 may include some unique challenges based upon whichever proposed alternative, or combination of alternatives, is ultimately pursued. These challenges are primarily associated with 1) traversing an I-75 interchange (3A and 3B) which would involve safety concerns for users, as well as specific design and permitting requirements; and 2) potential challenges with locating a shared use path on portions of roadway segments that may be constrained.

CONNECTION 3: BAKER PARK/GORDON RIVER GREENWAY TO PARADISE COAST SPORTS COMPLEX

PARADISE COAST TRAIL

Potential Trail
- Alternative 3A
- Alternative 3B
- Alternative 3C
- Other Connection/Alternative

Existing Trail
- Alternative 3A
- Alternative 3B
- Alternative 3C
- Other Connection/Alternative
- Alternative within SUN Trail Network
- Other Trail (Per FDEP Data)
- Park
- School/Educational Facility
- Bus Stop

N

Feet
0 1,000 2,000

Airport-Pulling Rd
Livingston Rd
Santa Barbara Blvd
Collier Blvd
Tropicana Blvd
Goodlette-Frank Rd
1A
1B
4A
4B
75
84
41
Golden Gate Pkwy
Golden Gate Canal
Radio Rd
Golden Gate
Aaron Lutz Neighborhood Park
Golden Gate Community Center
Golden Gate Middle School
BridgePrep Academy of Collier
Golden Gate Community Park
Golden Gate High School
Mike Davis Elementary School
Gordon River Greenway
NAPLES ZOO
Alternatives 3A, 3B, and 3C follow the same existing trail network in Gordon River Greenway and Baker Park
City of Naples Bicycle Loop
Naples AIRPORT
Baker Park
Gulf Coast Charter Academy South
East Naples
Rich King Memorial Greenway
PARADISE COAST SPORTS COMPLEX
1
2
3
4
5

Exhibit 26: Connection 3 - Baker Park/Gordon River Greenway to Paradise Coast Sports Complex

Table 15: Connection 3 Alternatives Evaluation Matrix

Alternative		3A	3B	3C
Estimated Alternative Length (miles)		11 miles	11 miles	13 miles
Safety and Trail Experience				
Corridor Type		Public Land; Roadway	Public Land; Roadway	Public Land; Roadway; Canal
Driveway Crossings	#	76	35	82
Intersection Crossings (Total)	#	29	35	36
Major Intersection Crossings	#	6 (includes crossing I-75)	4 (includes crossing I-75)	4
Adjacent Roadway Traffic Volume (Weighted Daily Average)	# of trips	33,203	22,283	22,719
Adjacent Roadway Posted Speed Limit	MPH (Range)	35 - 55 MPH	30 - 45 MPH	30 - 45 MPH
Transportation Network				
Estimated Existing Shared Use Path (10' or greater)	Miles	2.6 miles (Baker Park; Gordon River Greenway)	2.8 miles (Baker Park; Gordon River Greenway)	2.8 miles (Baker Park; Gordon River Greenway)
Alignment with SUN Trail Network	%	0%	0%	0%
Includes segment within roadway corridor with currently programmed or planned roadway improvement or new roadway that includes a 10' or greater shared use path	Y/N	Yes (Golden Gate Parkway Complete Streets; Santa Barbara Canal Bridge Replacement; Collier Blvd. Widening)	No	Yes (Golden Gate Parkway Complete Streets; Santa Barbara Canal Bridge Replacement)
Existing Bridge Crossings (Canal/Water or Roadway Overpass)	#	2 canal/water crossings 1 overpass (Golden Gate Pkwy & I-75)	0	4 canal/water crossings 1 overpass (Santa Barbara Blvd. & I-75)
Potential Above-Ground Utility Conflicts	Ranking	Moderate	Moderate	Moderate
Potential Environmental Effects				
Estimated Potential Wetland Impacts	Acres	1.3 acres	1.8 acres	1.7 acres
Estimated Potential Listed Species and Likelihood of Occurrence	Ranking	High	High	High
Estimated Potential Cultural, Archaeological, Historic Sites	#	1	1	1
Estimated Public Conservation Lands Impacted	Acres	0.4 acre	0	0
Estimated Contamination Sites	Ranking	Medium	High	High
Anticipated Permit Requirements	Ranking	Medium	High	High
Social/Economic Considerations				
Households within 0.5 mile	#	6,881	10,502	12,028
Within 0.25 mile of defined area of minority and low-income populations	Y/N	Yes	Yes	Yes
Schools/educational facilities within 1 mile	#	34	29	44
Parks/recreation facilities within 1 mile	#	19	16	19
Major parks within 1 mile		Baker Park; Gordon River Greenway; Freedom Park; Paradise Coast Sports Complex	Baker Park; Gordon River Greenway; Freedom Park; Paradise Coast Sports Complex	Baker Park; Gordon River Greenway; Freedom Park; Paradise Coast Sports Complex
Right-of-Way				
Estimated Right-of-Way Requirement	Acres (Range)	Between 15 - 20 acres	Less than 5 acres	Between 5 - 10 acres
Estimated number of parcels from which right-of-way is required (total)	#	118	42	83
Estimated number of non-residential parcels impacted	#	68	39	71
Estimated number of residential parcels impacted	#	50	3	12
Cost Estimates				
Estimated Design Cost (20% of Construction Cost)	$	$2,520,000 - $3,150,000	$960,000 - $1,200,000	$3,000,000 - $3,750,000
Estimated Construction Cost	$	$12,600,000 - $15,750,000	$4,800,000 - $6,000,000	$15,000,000 - $18,750,000

Alternative 3A

Alternative 3A is approximately 11 miles and generally follows the existing shared use path within Baker Park and Gordon River Greenway to Golden Parkway where it continues east until it reaches Collier Boulevard, proceeding south to City Gate Drive and the entrance of the Paradise Coast Sports Complex.

Safety & Trail Experience

The existing shared use paths within Baker Park and Gordon River Greenway provide a unique and comfortable user experience and are important components of all alternatives within Connection 3. As Alternative 3A continues east along with Golden Gate Parkway, specifically prior to the intersection with Santa Barbara Boulevard, there are are a number of user safety and experience challenges based on high traffic volumes, generally high speeds, and major intersection crossings. Alternative 3A also requires traversing the I-75 interchange at Golden Gate Parkway which would present a considerable challenge to providing a safe, separated trail in this area. Between Santa Barbara Boulevard and Collier Boulevard, the Golden Gate Parkway Complete Street Study recommends a 10' shared use path on each side of the road which would provide a safer and more user-friendly experience.

Transportation Network

Other than the alignment of the trail utilizing the existing Baker Park and Gordon River Greenway trails, Alternative 3A aligns with roadway corridors. As noted above, a Complete Street Study for Golden Gate Parkway in Golden Gate Estates recommends inclusion of 10' wide shared use paths along both sides of the road. The replacement of the Santa Barbara Canal Bridge on Golden Gate Parkway will include 12' wide paths on each side and is estimated to be completed in Fall 2023. The widening of Collier Boulevard between Golden Gate Parkway and the Golden Gate Canal also includes plans for a 10' shared use path as well. Alternative 3A does not align with the existing SUN Trail Network, but does intersect with the north-south SUN Trail alignment adjacent to Livingston Road (Connection 1). The portion of this alternative along Golden Gate Parkway between Livingston Road and Santa Barbara Boulevard aligns with the proposed extension of U.S. Bicycle Route 15 through Collier County.

Potential Environmental Effects

Estimated impacts to the natural environment are generally anticipated to be low based on the prevalence of existing development in the vicinity of this alternative. An preliminary evaluation did identify the potential for the presence of listed species and cutural/archaeologiccal/historic sites which should be evaluated further in any other study of this alignment. Additionally, the alignment of trail within public land such as Baker Park and Gordon River Greenway utilizes previously constructed pathway.

Social/Economic Considerations and Benefits

There are nearly 7,000 households within ½ mile of the alignment of Alternative 3A, which is less than Alternatives 3B and 3C. However, similar to Alternatives 3B and 3C, there is a large number of schools/educational facilities (34) and parks/recreation facilities (19) within one mile of Alternative 3A. This alternative will provide the benefit of being in the vicinity of destinations that include:

- Baker Park
- Gordon River Greenway
- Freedom Park
- Fleischmann Park
- Golden Gate Community Park
- Golden Gate Community Center
- Wheels BMX and Skatepark
- Paradise Coast Sports Complex

Right-of-Way

Based on a preliminary evaluation of overall right-of-way requirements, Alternative 3A is estimated to require more right-of-way and result in impacts to more parcels in comparison to Alternatives 3B and 3C. Within the portion of this alternative along Golden Gate Parkway between Santa Barbara Boulevard and Collier Boulevard, and the segment along Collier Boulevard, right-of-way requirements for a shared use path have also been considered as part of the Golden Gate Parkway Complete Street Study and the planned widening of Collier Boulevard. Right-of-way requirements for the trail to traverse the interchange at I-75 would require additional evaluation.

Cost Estimates

The estimated costs for Alternative 3A range between $12,600,000 - $15,750,000 for construction and between $2,520,000 - $3,150,000 for design (20% of construction costs).

Alternative 3B

Alternative 3B is approximately 11 miles and, from west to east, generally follows the existing shared use path within Baker Park and Gordon River Greenway, existing trail on the Naples Airport Property, and continues along Radio Road and Collier Boulevard to City Gate Drive to reach the entrance to the Paradise Coast Sports Complex.

Safety & Trail Experience

The existing shared use paths within Baker Park and Gordon River Greenway provide a unique and comfortable user experience and are important components of all alternatives within Connection 3. While the shared use path on the airport property is currently less than 10', in the interim it provides an 8' facility separated from the roadway. The Alternative 3B alignment may pose user safety and experience challenges based on the existing constraints of the roadways, relatively high traffic volumes and high speeds, and a number of major intersection crossings. Alternative 3B also requires traversing the I-75 interchange at Collier Boulevard which would present a considerable challenge to providing a safe, separated trail in this area.

Transportation Network

Other than the alignment of the trail utilizing the existing Baker Park and Gordon River Greenway paths and trail on the Naples Airport property, Alternative 3B primarily aligns with Radio Road before heading north on Collier Boulevard. At the time of this analysis, there were no programmed or planned roadway improvement projects on Radio Road or this segment of Collier Boulevard that include a shared use path. Alternative 3B does not align with the existing SUN Trail Network, but does connect with the north-south SUN Trail alignment (Connection 1) at the entrance to the the existing Rich King Memorial Greenway on Radio Road. The portion of this alternative along Radio Road between Santa Barbara Boulevard and Collier Boulevard aligns with the proposed extension of U.S. Bicycle Route 15 through Collier County.

Potential Environmental Effects

Estimated impacts to the natural environment are generally anticipated to be low based on the prevalence of existing development in the vicinity of this alternative. A preliminary evaluation did identify the potential for the presence of listed species and cutural/archaeological/historic sites which should be evaluated further in any other study of this alignment. Additionally, the alignment of trail within public land such as Baker Park and Gordon River Greenway utilizes previously constructed pathway.

Social/Economic Considerations and Benefits

There are more than 10,000 households within ½ mile of the alignment of Alternative 3B, which is more than Alternative 3A, but less than Alternative 3C. However, similar to Alternatives 3A and 3C, there is a large number of schools/educational facilities (29) and parks/recreation facilities (16) within one mile of Alternative 3B. This alternative will provide the benefit of serving a large resident population and being in the vicinity of destinations that include:

- Baker Park
- Gordon River Greenway
- Freedom Park
- Fleischmann Park
- Golden Gate Community Park
- Golden Gate Community Center
- Wheels BMX and Skatepark
- Paradise Coast Sports Complex

Right-of-Way

Based on a preliminary evaluation of overall right-of-way requirements, Alternative 3B is estimated to require less right-of-way in comparison to Alternatives 3A and 3C, but would impact a greater number of parcels than 3C.

Cost Estimates

The estimated costs for Alternative 3B range between $4,800,000 - $6,000,000 for construction and between $960,000 - $1,200,000 for design (20% of construction costs).

Alternative 3C

Alternative 3C is approximately 13 miles and generally follows the existing shared use path within Baker Park and Gordon River Greenway, existing trail on the Naples Airport Property, Radio Road, Santa Barbara Boulevard, Tropicana Boulevard, Golden Gate Canal alignment, and Collier Boulevard to City Gate Drive and the entrance to the Paradise Coast Sports Complex.

Safety & Trail Experience

The existing shared use paths within Baker Park and Gordon River Greenway provide a unique and comfortable user experience and are important components of all alternatives within Connection 3. While the shared use path on the airport property is currently less than 10', in the interim it provides an 8' facility separated from the roadway. The Alternative 3C alignment may pose user safety and experience challenges based on the existing constraints of the roadways, relatively high traffic volumes and high speeds, and a number major intersection crossings. A one-mile segment along the Golden Gate Canal behind Golden Gate High School and Mike Davis Elementary School would provide a unique user experience to this alternative.

Transportation Network

Other than the alignment of the trail utilizing the existing Baker Park and Gordon River Greenway paths and trail on the Naples Airport property, Alternative 3C is aligned with multple roadway corridors and a portion of the Golden Gate Canal. Between Santa Barbara Boulevard and Collier Boulevard, the Golden Gate Parkway Complete Street Study recommends a 10' shared use path on each side of the road for this portion of the alternative. The replacement of the Santa Barbara Canal Bridge on Golden Gate Parkway will include 12' wide paths on each side and is estimated to be completed in Fall 2023. Alternative 3C does not align with the existing SUN Trail Network, but does connect with the north-south SUN Trail alignment (Connection 1) at the entrance to the the existing Rich King Memorial Greenway on Radio Road. The segment along Santa Barbara Boulevard between Radio Road and Golden Gate Parkway aligns with the proposed extension of U.S. Bicycle Route 15 through Collier County.

Potential Environmental Effects

Estimated impacts to the natural environment are generally anticipated to be low based on the prevalence of existing development in the vicinity of this alternative. A preliminary evaluation did identify the potential for the presence of listed species and cutural/archaeological/historic sites which should be evaluated further in any other study of this alignment. Additionally, the alignment of trail within public land such as Baker Park and Gordon River Greenway utilizes previously constructed pathway. A site plan was previously prepared for the section along Golden Gate Canal which included consideration of environmental requirements.

Social/Economic Considerations and Benefits

There are more than 12,000 households within ½ mile of the alignment of Alternative 3C, which is more than both Alternative 3A and 3B. Similar to Alternatives 3A and 3B, there is a large number of schools/educational facilities (44) and parks/recreation facilities (19) within one mile of Alternative 3C. This alternative will provide the benefit of serving a large resident population and being in the vicinity of destinations that include:

- Baker Park
- Gordon River Greenway
- Freedom Park
- Fleischmann Park
- Golden Gate Community Park
- Golden Gate Community Center
- Wheels BMX and Skatepark
- Paradise Coast Sports Complex

Right-of-Way

Alternative 3C is approximately two miles longer than both Alternatives 3A and 3B, however a preliminary evaluation indicated right-of-way requirements and potential impacts comparable to the other alternatives. Within the portion of this alternative along Golden Gate Parkway between Santa Barbara Boulevard and Tropicana Boulevard, right-of-way requirements for a shared use path have also been considered as part of the Golden Gate Parkway Complete Street Study. Right-of-way requirements for the segment along Golden Gate Canal were evaluated during a prior study.

Cost Estimates

The estimated costs for Alternative 3C range between $15,000,000 - $18,750,000 for construction and between $3,000,000 - $3,750,000 for design (20% of construction costs).

Connection 4

Paradise Coast Sports Complex to Ave Maria Town Center

Connection 4 **(Exhibit 27)** includes two alternatives (4A/4B) and begins at the entrance to the Paradise Coast Sports Complex (Sports Complex) and ends at Ave Maria Town Center. Connection 4 is the longest of this study's five connections and primarily traverses a large and generally rural area, with the exception of portions of Collier Boulevard in Alternative 4A and Ave Maria Boulevard close to each respective termini of the Connnection. While providing a link between two key desintations in the County, Connection 4 is also in the vicinity of destinations such as Big Corkscrew Island Regional Park and recent development near the interesection of Immokalee Road and Randall Boulevard.

Connection 4 Highlights

- Provides a new connection between key destinations
- Potential for new shared use path facilities constructed as part of planned roadway improvements
- Leverages existing 12' shared use path in Ave Maria

The alignment of both alternatives is envisioned to primarily utilize roadway corridors. The primary variation between Alternatives 4A and 4B is their respective alignments between Paradise Coast Sports Complex and the intersection of Wilson Boulevard and the planned Vanderbilt Beach Road Extension. Alternative 4A follows Collier Boulevard north from the Sports Complex before heading east on Vanderbilt Beach Road, whereas Alternative 4B is envisioned to utilize a potential future new roadway corridor that would generally travel northeast from the Sports Complex before connecting with Wilson Boulevard near the Golden Gate Canal. The location of this future new roadway was conceptual for the purposes of this study and does not represent a final alignment.

The two alternatives diverge at the Wilson Boulevard/Vanderbilt Beach Road Extension. Alternative 4A heads north on Wilson Boulevard, east on Randall Boulevard, and north along a canal alignment located between 16th Street NE and Everglades Boulevard before heading east on Oil Well Road. Alternative 4B continues east to follow the alignment of the future Vanderbilt Beach Road Extension and north on Everglades Boulevard before meeting Oil Well Road. Both alternatives follow the same alignment from the intersection of Everglades Boulevard and Oil Well Road where they follow Oil Well Road east before heading north on Ave Maria Boulevard to the Town Center. The segment of this connection adjacent to Ave Maria Boulevard would leverage an existing shared use path, of which a significant portion is 12' wide.

The implementation of the trail within Connection 4 is unique in that is envisioned to be primarily associated with future roadway improvement projects, with the exception of the existing pathways in Ave Maria. Right-of-way and environmental analysis and permitting are also anticipated to be undertaken as part of these roadway projects. Where the Sports Complex and Ave Maria provide logical end points for this segment, the overall length and rural context of this portion of the trail would require special consideration of the location of future trailheads and user amenities.

CONNECTION 4: PARADISE COAST SPORTS COMPLEX TO AVE MARIA TOWN CENTER

PARADISE COAST TRAIL

Potential Trail
- Alternative 4A
- Alternative 4B
- Alternative 4B Area
- Other Connection/Alternative

Existing Trail
- Alternative 4A
- Alternative 4B
- Other Trail (Per FDEP Data)
- Park
- School/Educational Facility
- Bus Stop

Lee County
Collier County
Immokalee Rd
Golden Gate Canal
Everglades Blvd
Oil Well Grade Rd
Ave Maria Town Center
5
Ave Maria
Feet
0 2,500 5,000
Ave Maria Blvd
Camp Keais Rd
Big Corkscrew Island Regional Park
Corkscrew Elementary School
Corkscrew Middle School
Palmetto Ridge High School
Oil Well Rd
Orangetree
Collier Charter Academy
Randall Blvd
Immokalee Rd
Immokalee Rd Trail
Collier Blvd Trail
Vanderbilt Beach Rd Ext (Consists of Improvement and Future Road)
Big Cypress Elementary School
Golden Gate Blvd
Max A. Hasse Jr. Community Park
Collier Blvd
Golden Gate Canal
Faka Union Canal
Golden Gate
3A
3C
3A 3B 3C
3B
75
Potential Roadway Corridor
1
2
3
4
5

Exhibit 27: Connection 4 - Paradise Coast Sports Complex to Ave Maria Town Center

Table 16: Connection 4 Alternatives Evaluation Matrix

Alternative		4A	4B
Estimated Alternative Length (miles)		29 miles	26 miles
Safety and Trail Experience			
Corridor Type		Roadway; Canal	Roadway
Driveway Crossings	#	118	113
Intersection Crossings (Total)	#	36	33
Major Intersection Crossings	#	3	1
Adjacent Roadway Traffic Volume (Weighted Daily Average)	# of trips	13,904	6,523
Adjacent Roadway Posted Speed Limit	MPH (Range)	25 - 50 MPH	25 - 50 MPH
Transportation Network			
Estimated Existing Shared Use Path (10' or greater)	Miles	2.6 miles (Ave Maria Blvd.)	2.6 miles (Ave Maria Blvd.)
Alignment with SUN Trail Network	%	0%	0%
Includes segment within roadway corridor with currently programmed or planned roadway improvement or new roadway that includes a 10' or greater shared use path	Y/N	Yes (Collier Blvd. Widening; Vanderbilt Beach Rd. Extension; Wilson Blvd.; Randall Blvd.; Oil Well Rd.)	Yes (Potential New Roadway; Wilson Blvd.; Vanderbilt Beach Rd. Extension; Everglades Blvd.; Oil Well Rd.)
Existing Bridge Crossings (Canal/Water or Roadway Overpass)	#	4 canal/water crossings	2 canal/water crossings
Potential Above-Ground Utility Conflicts	Ranking	Minor	Significant
Potential Environmental Effects			
Estimated Potential Wetland Impacts	Acres	25.8 acres	51.5 acres
Estimated Potential Listed Species and Likelihood of Occurrence	Ranking	High	High
Estimated Potential Cultural, Archaeological, Historic Sites	#	0	0
Estimated Public Conservation Lands Impacted	Acres	0	0
Estimated Contamination Sites	Ranking	Low	Low
Anticipated Permit Requirements	Ranking	High	High
Social/Economic Considerations			
Households within 0.5 mile	#	7,297	3,214
Within 0.25 mile of defined area of minority and low-income populations	Y/N	Yes	Yes
Schools/educational facilities within 1 mile	#	11	3
Parks/recreation facilities within 1 mile	#	4	1
Major parks within 1 mile		North Collier Regional Park	Paradise Coast Sports Complex
Right-of-Way			
Estimated Right-of-Way Requirement	Acres (Range)	Between 5 - 10 acres	Less than 5 acres
Estimated number of parcels from which right-of-way is required (total)	#	81	33
Estimated number of non-residential parcels impacted	#	19	3
Estimated number of residential parcels impacted	#	9	30
Cost Estimates			
Estimated Design Cost (20% of Construction Cost)	$	$3,780,000 - $4,725,000	$3,260,000 - $4,075,000
Estimated Construction Cost	$	$18,900,000 - $23,625,000	$16,300,000 - $20,375,000

Alternative 4A

Alternative 4A is approximately 29 miles and generally follows Collier Boulevard, Vanderbilt Beach Road, Wilson Boulevard, Randall Boulevard, Oil Well Road, and Ave Maria Boulevard. Between Randall Boulevard and Oil Well Road, this alternative is aligned adjacent to Golden Gate Canal.

Safety & Trail Experience

This alternative follows multiple roadway corridors, however the fact that most of the this portion of the trail would be associated with roadway improvement projects presents an opportunity for the design of these projects to provide appropriate separation from the road to benefit the trail user experience. This alternative does include a large number of driveway crossings, three crossings at major intersections, and four canal/water crossings that should be considered during design.

Transportation Network

Within this alternative, there are approximately 2.6 miles of shared use path located along Ave Maria Boulevard. This alternative does not align with the SUN Trail network but does connect to other trail facilities, such as the Collier Boulevard and Immokalee Road Trails to the north. The alignment of the trail is associated with shared use paths anticipated to be included as part of the future improvements to Collier Boulevard, Vanderbilt Beach Road, Wilson Boulevard, Randall Boulevard, and Oil Well Road.

Potential Environmental Effects

Based on the length and location of this alternative, estimated potential impacts to wetlands or the occurance of wildlife habitat would be expected to be higher than for other alternatives. However, environmental analysis and permitting associated with the trail are anticipated to be undertaken as part of the planned roadway projects listed above.

Social/Economic Considerations and Benefits

There are just over 7,000 households within ½ mile of the alignment of Alternative 4A, which is significantly less than some other alternatives identified for the trail. However, this alternative does provide access to key attractors like the Sports Complex. There are 11 schools/educational facilities and four parks/recreation facilities within one mile of the alternative. This alternative will provide the benefit of being in the vicinity of destinations that include:

- Paradise Coast Sports Complex
- South Park (Ave Maria)

Right-of-Way

The right-of-way requirements associated with the trail within this alternative are envisioned to be included within the rights-of-way that are already part of each of the respective planned roadway projects. Right-of-way requirements for the small segment adjacent to the Golden Gate Canal may require additional evaluation.

Cost Estimates

The estimated costs for Alternative 4A range between $18,900,000 - $23,625,000 for construction and between $3,780,000 - $4,725,000 for design (20% of construction costs).

Alternative 4B

Alternative 4B is approximately 26 miles and generally follows conceptucal future roadway alignment, Wilson Boulevard, Vanderbilt Beach Road Extension, Everglades Boulevard, Oil Well Road, and Ave Maria Boulevard.

Safety & Trail Experience

This alternative follows multiple roadway corridors, however the fact that most of this portion of the trail would be associated with roadway improvement projects and a potential new roadway presents an opportunity for the design of these projects to provide appropriate separation from the road to benefit the trail user experience. This alternative does include a large number of driveway crossings, one major intersection crossing, and two canal/water crossings that should be considered during design.

Transportation Network

Similar to Alternative 4A, there are approximately 2.6 miles of shared use path located along Ave Maria Boulevard. This alternative does not align with the SUN Trail network. The alignment of the trail is associated with shared use paths anticipated to be included as part of the construction of potential future new roadway corridors and future improvements to Wilson Boulevard, Everglades Boulevard, and Oil Well Road.

Potential Environmental Effects

Based on Alternative 4B's alignment along a potential new roadway corridor, estimated potential impacts to wetlands or the occurance of wildlife habitat would be expected to be higher than for other alternatives. However, environmental analysis and permitting associated with the trail are anticipated to be undertaken as part of the planned roadway projects listed above.

Social/Economic Considerations and Benefits

There are just over 3,000 households within ½ mile of the alignment of Alternative 4B, which is less than half of the population in Alternative 4A. A principal factor for this alignment is that it includes a major segment of potential new roadway in an area with limited existing households. There are three schools/educational facilities and two park/recreation facilities within one mile of the alternative. This alternative will provide the benefit of being in the vicinity of destinations that include:

- Paradise Coast Sports Complex
- South Park (Ave Maria)

Right-of-Way

The right-of-way requirements associated with the trail within this alternative are envisioned to be included within the rights-of-way that are already part of each of the respective roadway improvement projects. The location and alignment of the trail should be considered in the right-of-way associated with the potential new roadway corridor east of Parasdise Coast Sports Complex.

Cost Estimates

The estimated costs for Alternative 4B range between $16,300,000 - $20,375,000 for construction and between $3,260,000 - $4,075,000 for design (20% of construction costs).

Connection 5

Ave Maria Town Center to Immokalee Community Park

Connection 5 **(Exhibit 28)** includes only one alternative (5A) and begins at Ave Maria Town Center and ends at Immokalee Community Park. Connection 5 is the shortest of this study's five connections (approximately seven miles) and primarily traverses a generally rural area, with the exception of portions within Ave Maria and Immokalee at each respective termini.

This portion of the trail would provide a link between two key destinations and community centers in the northeast part of Collier County, and is envisioned to eventually connect to Lee and Hendry counties via future trail facilities following SR 29 and SR 82 north of Immokalee.

The alignment of Connection 5 is envisioned to primarily utilize roadway corridors. The Connection follows John Paul II Boulevard east from Ave Maria Town Center before heading north on Camp Keais Road and Immokalee Road/1st Street.

Connection 5 Highlights

- Connects Immokalee into the PCT and countywide trail system
- Sets stage for PCT to connect north to Lee and Hendry counties
- Provides opportunity to leverage bicycle and pedestrian investments in Immokalee Complete Streets
- Shortest of the five PCT connections

Exhibit 28: Connection 5 - Ave Maria Town Center to Immokalee Community Park

Table 17: Connection 5 Alternatives Evaluation Matrix

Alternative		5A
Estimated Alternative Length (miles)		7 miles
Safety and Trail Experience		
Corridor Type		Roadway
Driveway Crossings	#	31
Intersection Crossings (Total)	#	13
Major Intersection Crossings	#	0
Adjacent Roadway Traffic Volume (Weighted Daily Average)	# of trips	4,996
Adjacent Roadway Posted Speed Limit	MPH (Range)	25 - 55 MPH
Transportation Network		
Estimated Existing Shared Use Path (10' or greater)	Miles	0.2 miles (Pope John Paul II Blvd.)
Alignment with SUN Trail Network	%	0%
Includes segment within roadway corridor with currently programmed or planned roadway improvement or new roadway that includes a 10' or greater shared use path	Y/N	Yes (Future Immokalee Rd. Planning Study)
Existing Bridge Crossings (Canal/Water or Roadway Overpass)	#	0
Potential Above-Ground Utility Conflicts	Ranking	Minor
Potential Environmental Effects		
Estimated Potential Wetland Impacts	Acres	14.9 acres
Estimated Potential Listed Species and Likelihood of Occurrence	Ranking	Medium
Estimated Potential Cultural, Archaeological, Historic Sites	#	0
Estimated Public Conservation Lands Impacted	Acres	0
Estimated Contamination Sites	Ranking	Medium
Anticipated Permit Requirements	Ranking	Medium
Social/Economic Considerations		
Households within 0.5 mile	#	1,648
Within 0.25 mile of defined area of minority and low-income populations	Y/N	Yes
Schools/educational facilities within 1 mile	#	8
Parks/recreation facilities within 1 mile	#	6
Major parks within 1 mile		Immokalee Community Park Immokalee Sports Complex
Right-of-Way		
Estimated Right-of-Way Requirement	Acres (Range)	Less than 5 acres
Estimated number of parcels from which right-of-way is required (total)	#	29
Estimated number of non-residential parcels impacted	#	18
Estimated number of residential parcels impacted	#	11
Cost Estimates		
Estimated Design Cost (20% of Construction Cost)	$	$820,000 - $1,025,000
Estimated Construction Cost	$	$4,100,000 - $5,125,000

Alternative 5A

Alternative 5A is approximately 7 miles and generally follows Pope John Paul II Boulevard within Ave Maria, Camp Keais Road, and Immokalee Road/1st Street.

Safety & Trail Experience

This alternative follows multiple roadway corridors. Along John Paul II Boulevard within Ave Maria, the trail aligns with existing shared use pathway and sidewalk facilities separated from the roadway. Along Camp Keais Road and Immokalee Road, it would be anicipated that any future roadway improvement projects would be designed to accommodate a shared use path with appropriate separation from the roadway to benefit the trail user experience. This alternative does not include any major intersection crossings or canal/water crossings.

Transportation Network

The segment of this alternative located along Pope John Paul II Boulevard includes approximately 0.2 miles of shared use path and existing 8' sidewalk. At the time of this analysis, there were no programmed or planned roadway improvement projects that include a shared use path along Camp Keais Road or Immokalee Road. However, the future implementation of the Immokalee Complete Street Project and associated improvements should be considered in the determination of the ultimate trail alignment and terminus within Immokalee.

Potential Environmental Effects

Estimated impacts to the natural environment are generally anticipated to be low within the segments of the alternative within Ave Maria and Immokalee based on the presence of existing development. The segment of the trail between Pope John Paul II Blvd and Eustis Avenue may involve environmental impacts. However, environmental review for the trail would be anticipated to be included in future roadway improvements to Camp Keais Road and Immokalee Road.

Social/Economic Considerations and Benefits

There are more than 1,600 households with ½ mile of the the alignment of Alternative 5A. There are eight schools/educational facilities and six parks/recreation facilities within one mile of the alternative. This alternative will provide the benefit of being in the vicinity of destinations that include:

- Immokalee Community Park
- Immokalee Sports Complex

Right-of-Way

This alternative leverages segments of existing shared use path along Pope John Paul II Boulevard. A preliminary evaluation of potential right-of-way impacts of the trail along Camp Keais Road and Immokalee Road are not anticipated to be substantial based on preliminary planning-level estimates. A planned future planning study for improvemments to Immokalee Road should consider right-of-way needs for the trail.

Cost Estimates

The estimated costs for Alternative 5A range between $4,100,000 - $5,125,000 for construction and between $820,000 - $1,025,000 for design (20% of construction costs).

Table 18: Alternatives Opportunities and Challenges Summary

	Alternative	Opportunities	Potential Challenges
Connection 1	1A	• Connects with planned Lee County trail to the north • Leverages existing Rich King Memorial Greenway and incorporates separate trail within utility corridor • Accessible from largest number of households vs other connections • Significant alignment within SUN Trail	• User safety at major intersections and canal crossings • Utility corridor crossing of Livingston Road at Entrada Avenue/Royal Palm Academy • Right-of-way costs associated with utilizing rail right-of-way
	1B	• Connects with planned Lee County trail to the north • Leverages existing Rich King Memorial Greenway and incorporates separate trail within utility corridor • Accessible from largest number of households vs other connections • Proposed as new SUN Trail alignment • Uses Livingston Road for more direct connection to utility corridor from Veterans Memorial Boulevard	• User safety at major intersections and canal crossings • Would require trail to cross US 41 at Veterans Memorial Boulevard Extension
Connection 2	2A	• Leverages significant existing segments of shared use pathway along Collier Blvd and US 41 • Significant alignment within SUN Trail • Primarily located within right-of-way already envisioned for a trail facility	• User safety at major intersections and canal/water crossings • Trail user experience along US 41 with higher traffic volumes and speeds • Minor flooding with current shared use path segment on US 41 • Ensuring state land approval for connection to Collier-Seminole State Park entrance road
	2B	• Leverages significant existing segments of shared use pathway along Rattlesnake Hammock Rd, Collier Blvd, and US 41 • Proposed as new SUN Trail alignment • Potential for comparatively more comfortable user experience relative to 2A which includes a longer portion of US 41	• User safety at major intersections and canal/water crossings • Potential for increased right-of-way requirements based on longer alternative • Trail user experience along US 41 with higher traffic volumes and speeds • Minor flooding with current shared use path segment on US 41 • Ensuring state land approval for connection to Collier-Seminole State Park entrance road
Connection 3	3A	• Anchored by Baker Park/Gordon River Greenway with existing showcase trails (west) and Paradise Coast Sports Complex (east) • Golden Gateway Parkway Complete Street Study recommends 10' shared use paths on both sides of the roadway • Can leverage Collier Boulevard widening improvement to include pathway	• User safety at major intersections • Successfully navigating the trail through the interchange at I-75 and Golden Gate Parkway

	Alternative	Opportunities	Potential Challenges
Connection 3	3B	• Anchored by Baker Park/Gordon River Greenway with existing showcase trails (west) and Paradise Coast Sports Complex (east) • Utilizes existing path on Naples Airport property	• Primarily aligned with Radio Road which may be constrained in accommodating a 10' shared use path • Multiple major intersection crossings • Successfully navigating the trail through the interchange at I-75 and Collier Boulevard
	3C	• Anchored by Baker Park/Gordon River Greenway with existing showcase trails (west) and Paradise Coast Sports Complex (east) • Utilizes existing path on Naples Airport property • Golden Gateway Parkway Complete Street Study recommends 10' shared use paths on both sides of the roadway • Segment along Golden Gate Canal has prior site development plan and would provide a unique user experience • I-75 bridge crossing on Santa Barbara Boulevard in lieu of I-75 interchanges associated with 3A and 3B	• Longer distance (2 additional miles) than 3A and 3B • User safety at major intersections • Alignment with Radio Road and Santa Barbara Blvd which may have constrained right-of-way to accommodate a 10' shared use path
Connection 4	4A	• Trailheads at key destinations • Significant portions of the trail to be constructed in conjunction with roadway improvement/extension projects • Leverages more than 2 ½ miles of existing shared use path in Ave Maria	• Long overall distance between major destinations • User safety at major intersections and canal/water crossings • Right-of-way associated with segment aligned with Golden Gate Canal
	4B	• Trailheads at key destinations • Significant portions of the trail to be constructed in conjunction with roadway improvement/extension projects • Leverages more than 2 ½ miles of existing shared use path in Ave Maria	• Long overall distance between major destinations • User safety at major intersections and canal/water crossings • Large segment dependent on timing and development of new county roadway corridor
Connection 5	5A	• Connects to key community hubs in the north portion of Collier County • Alignment can integrate with future improvements part of the Immokalee Complete Streets Plan • Connection to future trail extensions north to Lee and Hendry counties	• Currently no programmed or planned roadway improvement projects that include a shared use path along Camp Keais Road or Immokalee Road • Primarily existing 8' sidewalk on Pope John Paul II Boulevard

Chapter 4.
Implementation Action Plan

This Implementation Action Plan defines steps to follow completion of the PCT Feasibility Study to continue the momentum forward in the development of this extensive project. As noted in Chapter 2, alternatives were not formally selected or identified as preferred due to the high-level planning nature of the study. However, based upon criteria factors and input from the public and stakeholders and existing conditions, this Action Plan does include recommendations related to the priority of connections and alternatives.

The order of recommended actions does not imply a step-by-step progression, but rather denotes priority importance to focus implementation efforts.

Systemwide Actions

Priority Recommended Action – Develop PCT Signage and Wayfinding Guidance: Coordinate and develop initial PCT signage and wayfinding guidance in coordination with Collier County, City of Naples, and FDOT to ensure consistency with the appropriate standards. This should entail establishing an accepted signage approach among the principal agencies (FDOT, Collier County, City of Naples) for identifying the PCT in the context of different locations. Below are examples of signage developed for the Coast to Coast Trail/River to Sea Loop and East Coast Greenway.

Priority Recommended Action – Promote the *PCT Pathway Report and Feasibility Study*: Post the completed *Pathway Report and Feasibility Study* to NPC and partner agency websites and promote it through social media. Present the findings of the report to the Collier County Commission, Collier MPO Board, and Naples City Council for their consideration. Continue to promote the PCT to stakeholders and the public.

Recommended Action – Distribute PCT Corridor GIS Data: Submit the PCT GIS data to FDEP, FDOT, Collier County, City of Naples, Collier MPO, and other organizations, as appropriate.

Recommended Action - Pursue Designation of Existing Segments: Review and pursue, where appropriate, the designation of existing PCT trail segments, such as Rich King Memorial Greenway,

Baker Park, and Gordon River Greenway, as *National Recreation Trails* and as components of the *Florida Greenways and Trails System*.

Focusing the Effort

The PCT is an extensive project with many needs and segments to complete. One of the greatest benefits of this Feasibility Study is the information it provides to determine where efforts should be focused. Major factors that aid in prioritizing specific connections and recommending alternatives are:

- Highest public support received
- Proximity to the largest number of Collier County residents
- Proximity to the largest number of parks
- Proximity to the largest number of schools
- Presence of existing trail segments that can be delineated as PCT immediately
- Other factors

When considering these factors, the two highest priority connections are:

- Connection 3 (Baker Park/Gordon River Greenway to the Paradise Coast Sports Complex)
- Connection 1 (Planned Estero-Bonita Rail Trail to Rich King Memorial Greenway)

Although Connection 1 is a priority above Connection 2, it is recommended that both Connection 1 and Connection 2 be considered together for work planning purposes since they collectively serve as Collier County's portion of the state identified Shared Use Nonmotorized (SUN) Trail Network. Trails within the SUN Trail Network are eligible for SUN Trail funding and are identified as state priorities by the Florida Greenways and Trails Council, Florida Department of Environmental Protection, and FDOT. Therefore, it is warranted to treat them in companion with one another in this Implementation Action Plan.

Following are At-A-Glance summaries and recommended actions for:

- Connection 3 – the highest recommended priority based upon this Feasibility Study
- Combination of Connection 1 and Connection 2 (SUN Trail) – the second highest recommended priority based upon this Feasibility Study and highest state priority

Connection 4 and Connection 5 are longer term priorities where opportunities for near-term successes can also be identified. Some general recommended actions are also identified for these connections.

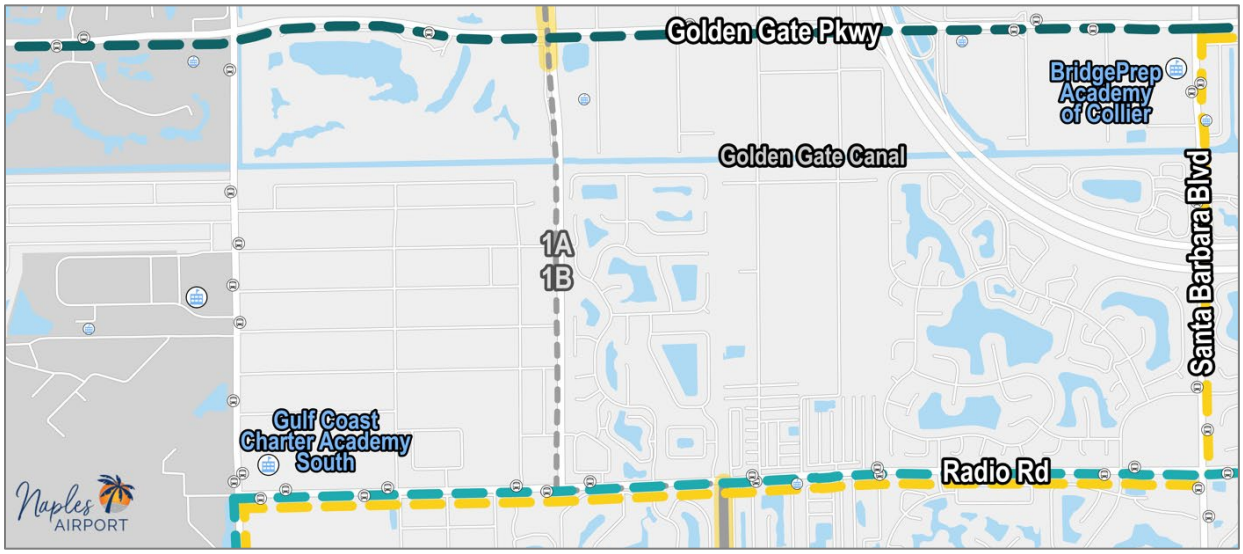
Connection 3

At a Glance:

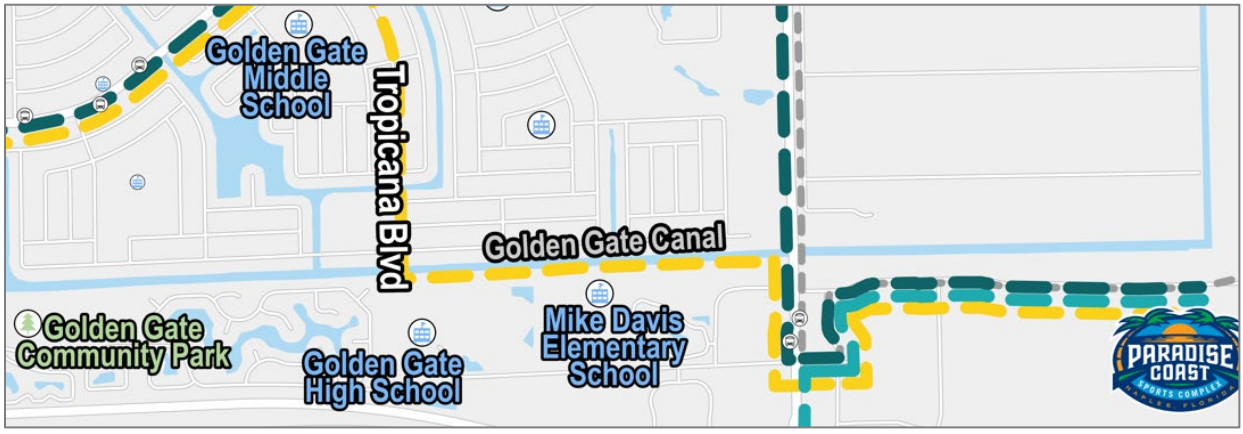
- The highest recommended priority from this Feasibility Study.
- Alternative 3C is the currently recommended alternative due to multiple factors. Dominant among them is that this alternative avoids having to navigate the trail through an interchange at I-75, which would be necessary for both Alternatives 3A and 3B.
- Radio Road is a key component of Alternative 3C. If this roadway is determined to be too severely constrained to accommodate a 10' shared use path, then a segment of Alternative 3A (Golden Gate Parkway from Gordon River Greenway to Santa Barbara Boulevard) is recommended to serve as the contingency.
- The trail segments in Baker Park and Gordon River Greenway are up to standard to be designated as PCT today.
- The shared use path on the Naples Airport property is currently less than 10' wide so would need to be widened.
- The segment along Golden Gate Canal (behind Golden Gate High School and Mike Davis Elementary School) has a prior study and site plan completed.
- The Golden Gateway Parkway section within the community of Golden Gate was the focus of a Complete Street study that recommended 10' shared use paths on both sides of the roadway.
- Major intersection crossings may include Airport Road at Radio Road and Radio Road at Santa Barbara Road.

Priority Recommended Action – Define Baker Park and Gordon River Greenway Trails as Components of the PCT: Delineate the PCT in these areas by placing signage, pursuant to completed guidance, on identified trail segments of Baker Park and the Gordon River Greenway (2.8 miles).

Priority Recommended Action – Analyze Reconfiguration of Radio Road and Santa Barbara Boulevard: Conduct detailed study of Radio Road (Naples Airport to Santa Barbara Boulevard) and Santa Barbara Boulevard (Radio Road to Golden Gate Parkway) to determine whether these corridors can be reconfigured to accommodate a 10' shared use path.



Priority Recommended Action – Advance Golden Gate Canal Segment: Coordinate with Collier County to support the funding and programming of the next phases of work and completion of this segment.



Recommended Action – Advance Shared Use Paths within Roadway Corridors: Coordinate with Collier County to support the funding and programming of shared use pathways within the Alternative 3C portions of:

- Radio Road
- Santa Barbara Boulevard
- Golden Gate Parkway
- Tropicana Boulevard
- Collier Boulevard

Recommended Action – Widen Naples Airport Trail: Coordinate with the Naples Airport Authority to widen the trail to PCT's desired minimum width of 10' or greater from Baker Park trail connection to Airport Road.

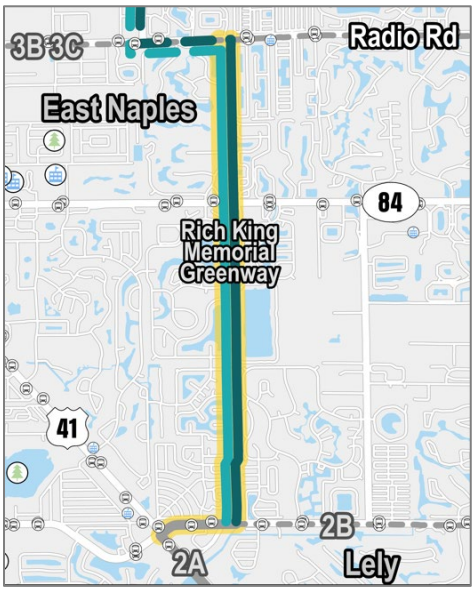
Connections 1 and 2 (SUN Trail Network)

At a Glance:

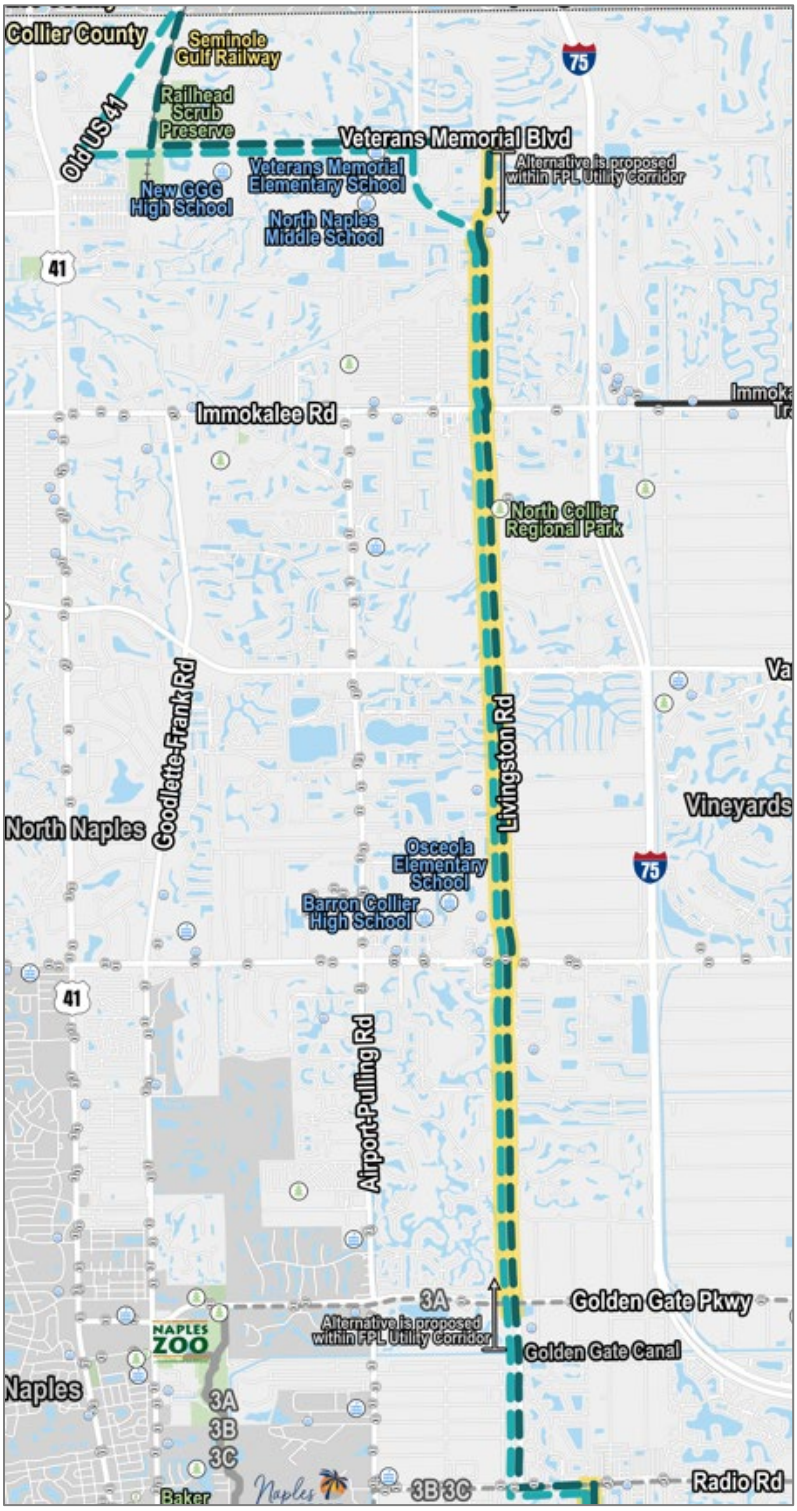
- Combined, these connections represent the second highest recommended priority from this Feasibility Study and the highest state priority as Collier County's portion of SUN Trail. The target width for SUN Trail funded segments is 12 feet. Deviations below that will require FDOT approval.
- Alternatives 1B and 2B are the currently recommended alternatives within Connections 1 and 2.
- Connections 1 and 2 encompass the proposed SUN Trail Network segment in Collier County.
- The Old 41 segment is currently under a Project Development and Environment (PD&E) Study which is to be completed by Winter 2023. The current build alternatives in this study include a 10' shared use path. Design and Construction funding are not identified at this time.
- Veterans Memorial Blvd is currently in development to include 6' sidewalks on each side of the roadway.
- The FPL/Livingston Road segment is programmed for a PD&E in 2026 through SUN Trail funding.
- There is currently a very short ownership gap along US 41 within Collier-Seminole State Park at the southern end of Connection 2.
- Rattlesnake Hammock Road and Collier Boulevard currently include significant segments of 10' shared use path.

Priority Recommended Action – Update State Priority/SUN Trail Maps: Submit map updates to FDEP Office of Greenways and Trails to revise the State Priority/SUN Trail alignment in Collier County to coincide with the combination of PCT Alternatives 1B and 2B. See **Exhibit 29** for a map of the corridor that was submitted to FDEP.

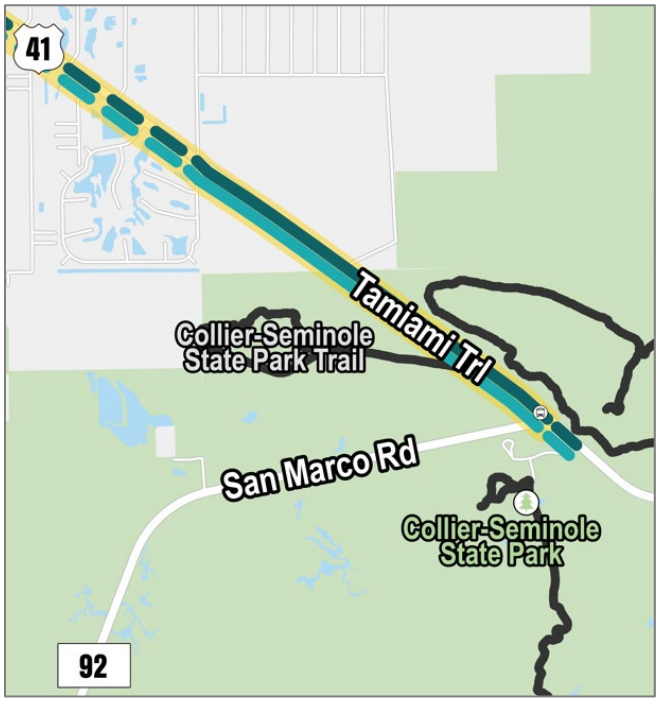
Priority Recommended Action – Define Rich King Memorial Greenway as Component of PCT: Delineate the PCT along this segment by placing signage, pursuant to completed guidance, on the Rich King Memorial Greenway (3 miles).



Priority Recommended Action – Pursue Earlier Start to FPL/Livingston Road PD&E: Coordinate with FDOT to determine potential to advance PD&E funding for the Livingston Road FPL Trail (Collier/Lee County Line to Radio Road/Rich King Memorial Greenway) FM# 447514-1 from 2026 to earlier year (11 miles).



Priority Recommended Action – Close Public Land Gap at Collier-Seminole State Park Entrance: Obtain formal approval from Collier-Seminole State Park for location of the trail across state owned lands (less than 0.1 mile) along US 41 to ensure direct connection to the State Park entrance road.

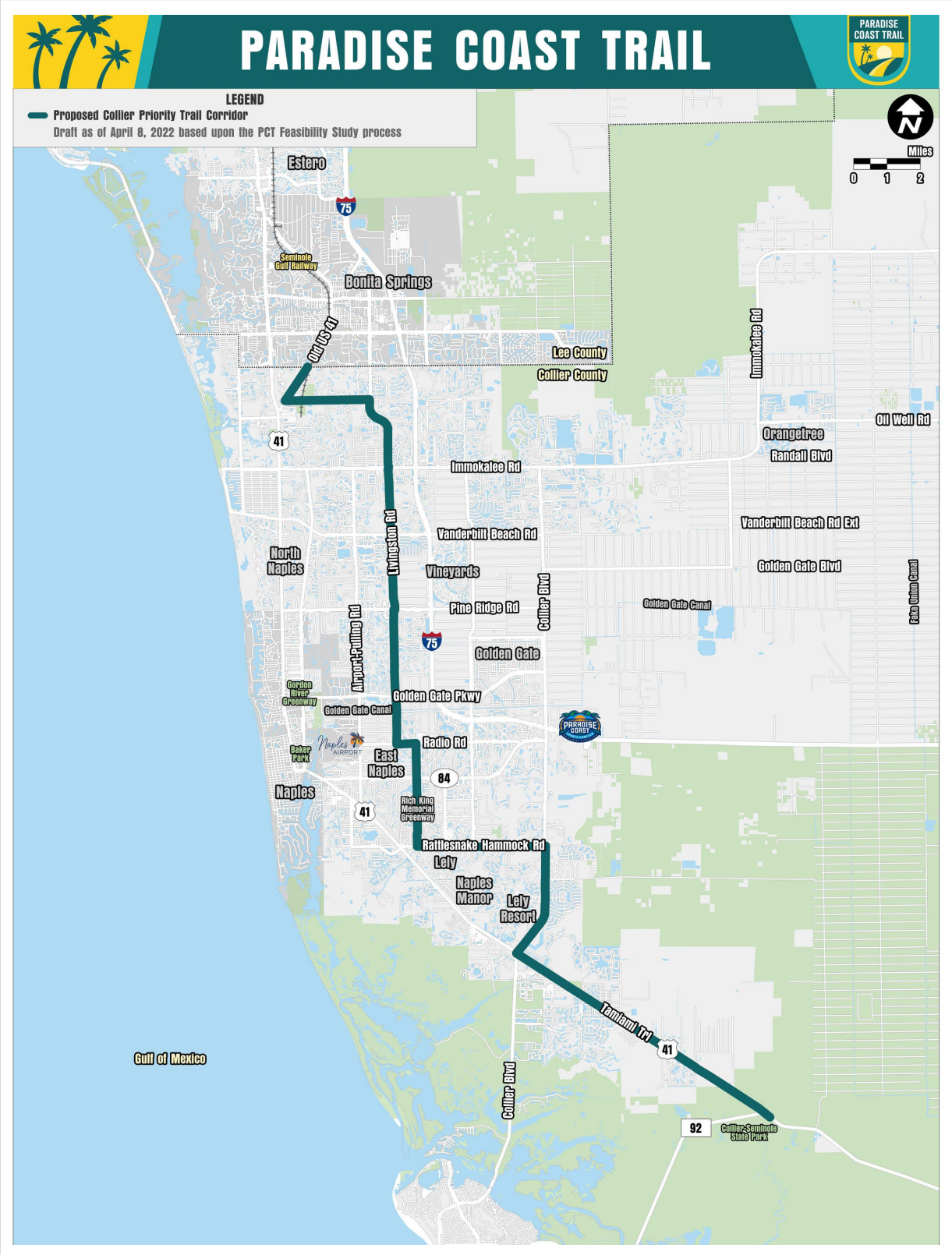


Recommended Action – Advance Old US 41 Segment: Coordinate and support the funding and programming of the next phase of work (Design) for the Old US 41 segment.

Recommended Action – Advance Remaining SUN Trail Gaps: Coordinate and support the funding and programming of the next phase of work for the remaining SUN Trail Gaps in Connection 2:

- Along US 41 between Bella Tesoro Street and Six L's Farm Road
- Along Collier Boulevard between Winding Cypress Boulevard and Sabal Palm Road
- Along Rattlesnake Hammock Road between the Rich King Memorial Greenway and Santa Barbara Boulevard

Exhibit 29: State Priority/SUN Trail Alignment in Collier County



Connections 4 and 5

While it is recommended to focus on Connection 3 and Connections 1 & 2 (SUN Trail) in the near term, efforts can still be pursued regarding Connection 4 and Connection 5.

Preliminary Recommended Actions related to Connection 4 and Connection 5 include:

- Monitor the long-term development of a new county road from the Sports Complex to Wilson Boulevard to determine viability of Alternative 4B.
- Coordinate with Collier County to support the funding and programming of shared use pathways for roadway corridors within Alternatives 4A, 4B, and 5A.
- Coordinate with Barron Collier Companies and Study Team partners to determine the appropriateness of delineating the 10-12' wide shared use paths within Ave Maria as portions of PCT through signage, pursuant to completed guidance (2.8 miles).
- Explore the integration of the future PCT alignment within Immokalee with the forthcoming improvements under the Immokalee Complete Streets Design/Build Project that are funded by a federal TIGER Grant.

Updated Recommendations from the 2019 PCT Vision

During development of the PCT Vision in 2019, the Action Plan at the time included recommendations. With completion of the PCT Pathway Report and Feasibility Study, the following reflect updated recommendations that build upon those from the original Action Plan:

Recommended Action – Consistent Message: Deliver a consistent message for the PCT that focuses on the priorities identified in this Implementation Action Plan.

Recommended Action – Continued Coordination and Outreach: Continue targeted coordination and outreach to key agencies, organizations, and stakeholders to promote the PCT and advance priorities.

Recommended Action – PCT Champions: Identify PCT Champions who can serve as leading voices and advocates for the project locally, regionally, and at the state level.

Recommended Action – Celebrate Successes: Leverage milestones such as segment groundbreakings and completions through community and media events that celebrate the project and engender more interest and support.

Other Implementation Considerations

The Collier MPO's next prioritization of bicycle and pedestrian projects

The next adoption of new bicycle and pedestrian projects to be added to Collier MPO's list will be in June of 2025. It will be important to coordinate with the MPO to be prepared with the right PCT project(s) for that cycle and to determine any other possible funding opportunities in the interim.

Key sources of funding used for trails in Florida include:

- *SUN Trail (State – Administered by FDOT)* – Provides $25 million annually for the development of a statewide system of paved multi-use trails. Is exclusively for project development phases for trails within the defined SUN Trail Network. Portions of Connection 1 and Connection 2 are within the SUN Trail Network and are eligible for funding. Much of Connection 1 is funded for a PD&E Study in 2026 through SUN Trail.

- *Transportation Alternatives (Federal – Administered by FDOT)* – Provides funding for transportation alternatives including on and off-road pedestrian and bicycle facilities and conversion of abandoned railroad corridors for non-motorized use. Florida's annual apportionment in recent years has been nearly $50 million.
- *Recreational Trails Program (Federal – Administered by FDEP)* - A set-aside under Transportation Alternatives, the program provides funding to renovate, develop, or maintain recreational motorized, nonmotorized, and mixed-use trails and trailside facilities. Florida's annual apportionment varies.
- *Florida Communities Trust (State – Administered by FDEP)* - The Florida Communities Trust Parks and Open Space Program provides grants for the acquisition of conservation lands, urban open spaces, parks and greenways. The program is a component of Florida Forever and the annual funding amount varies.

Private support can also help to make trails happen

Sponsorships and support from private partners can also be a supplementary source of funds. Examples from other locations include:

- In Tallahassee, Capital Health Plan insurance company provided $600,000 to help fund walking and biking trails in Cascades Park.
- In Little Rock, Arkansas, two dozen physicians from the state's largest cardiac clinic led an effort to fundraise over $2 million to build the Medical Mile trail.
- Privately driven funding organizations like the PATH Foundation (pathfoundation.org) in Atlanta can be effective at raising significant private dollars to leverage public funds for trails. In 2018 alone, the PATH Foundation provided over $10 million for trail construction.

When funds are not available today but will be in later years

If a project is ready to be constructed but funding won't be available for a period of time, a State Infrastructure Bank (SIB) loan through FDOT might be an option. A SIB loan was utilized to develop the Coastal Trail in Wakulla County.

The process for completing a trail is similar to that for roadway projects

It is important to view the process to develop the PCT as a combination of individual trail segments and phases that will come together to complete the broader trail. After the Feasibility Study is complete, the project development phases for PCT segments will likely include:

- *Environmental Review/Project Development & Environment (PD&E) Study* – A PD&E Study is a formal process to determine the environmental, social, and economic impacts of a proposed project. The PD&E fulfills necessary requirements of the National Environmental Policy Act (NEPA), as well as other federal and state laws and regulations. It is a necessary and important step for a project that might receive federal funds at any time during its lifecycle. Although there is a similar state review process that can be applied to projects, it is typically the exception for paved multi-use trails because of the likelihood that federal funds may be used.
- *Design* – This phase includes the analysis and design work to produce construction plans, specifications, and cost estimates. The Design phase will provide trail alignment specifics, identify site needs, and include coordination with state and federal permitting agencies. It is critical for the agency that will ultimately manage the project to be closely involved in the Design phase, if not overseeing it.

- *Right-of-Way (ROW) Acquisition* – The Feasibility Study, PD&E, and Design will progressively narrow down the planned location for the PCT to identify whether additional ROW is needed. It is expected that the PCT will likely be built on a combination of property types and ownerships. Overall planning will need to account for the additional time required to ensure that the necessary land can be purchased to effectively complete the trail.
- *Construction* – The Construction phase will consist of building the trail following the accepted Design. It is important for the extent and termini of construction segments to align with those of prior phases to ensure consistency in planning and programming.

An important step for each segment as it moves into project development will be to clearly define the entity that will serve as long-term manager.

Planning trailheads, parking and amenities

As discussed at the opening of Chapter 3, it will be important to consider related support facilities and amenities such as parking areas, wayside areas, restrooms, and other facilities when planning individual PCT segments. Depending upon the scale and type, these features may be included in the design of the trail or may be designed separately. Regardless of the approach, it is critical to ensure that funding is identified and available for these facilities. Trail construction estimates often do not include these facilities, and certain funding sources, like SUN Trail, do not provide money for these needs because they are intended to focus on development of the paved trail. The planning, development, and maintenance of these facilities should be coordinated with Collier County Parks & Recreation, City of Naples Parks & Recreation, and other potential trail managers.

The Vision for the PCT Experience

Nearly 15 total miles of shared use path within the overall PCT corridor exist today. Some of these segments provide an idea of the aspirational vision of what the entire experience will strive to be. These include the Gordon River Greenway, Baker Park, Rich King Memorial Greenway, and in Ave Maria. See **Exhibit 30** for examples.

Exhibit 30: Examples of Existing Shared Use Path within PCT Corridor

Connecting Destinations

As noted at the openings of Chapter 3 and this chapter, recommended actions were developed with consideration for connecting the PCT to many important destinations such as regional and community parks, and schools. **Exhibit 31** provides just a few examples of those destinations that will help define the collective PCT experience.

Exhibit 31: Example Destinations

Closing

The recommendations outlined in this Implementation Action Plan are the culmination of the extensive planning effort to develop this Pathway Report and Feasibility Study. They help define the path forward to make the PCT a reality.

The Study Team expresses its appreciation to the many partners, stakeholders, and members of the public who contributed to this study.

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PARADISE COAST TRAIL

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